

2007

# CENSUS OF AGRICULTURE

## History

**Volume 2 ■ Subject Series ■ Part 7**



United States Department of Agriculture  
National Agricultural Statistics Service

## Acknowledgments

The U.S. Department of Agriculture (USDA), National Agricultural Statistics Service (NASS) is committed to working with farm and ranch operators, farm organizations, businesses, State departments of agriculture, and the public at large to provide timely, accurate, and useful statistics in service to U.S. agriculture. NASS strives to ensure the public trust through transparency, public participation, and collaboration.

Many people participated in the various activities of the 2007 Census of Agriculture and deserve recognition for their contributions to the program. Their cooperation and support helped make the 2007 Census of Agriculture the most successful count in history.

NASS pays special tribute to the 2.2 million farm and ranch operators who furnished the information requested. Other USDA agencies and representatives from State departments of agriculture offered significant advice during the planning, data collection, and processing phases of the census. They provided invaluable assistance at the local level to farmers and ranchers completing census report forms. Also, NASS acknowledges our partnership with the U.S. Department of Commerce, Bureau of the Census, National Processing Center in Jeffersonville, IN and the services they provided to collect and capture data.

Members of the Advisory Committee on Agriculture Statistics and representatives of both public and private organizations made significant recommendations that helped establish data content. NASS appreciates their strong and consistent support for census programs.

NASS expresses gratitude to the press, farm magazines, radio and television stations, farm organizations, State departments of agriculture, and enumerators from the National Association of State Departments of Agriculture (NASDA) for their help in publicizing the census and encouraging cooperation of farmers and ranchers. The partnership with several Community-Based Organizations (CBOs) helped us reach many farmers and ranchers unfamiliar with NASS. We hope this partnership continues to mature over time and strengthen our working relationship.

If you would like to learn more about the statistics available from NASS or have questions concerning this report, visit our Web site at [www.usda.nass.gov](http://www.usda.nass.gov), send e-mail to [nass@usda.gov](mailto:nass@usda.gov), or call the Agricultural Statistics Hotline at 800.727.9540.

The United States Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, political beliefs, genetic information, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD).

To file a complaint of discrimination, write to USDA, Assistant Secretary for Civil Rights, Office of the Assistant Secretary for Civil Rights, 1400 Independence Avenue, S.W., Stop 9410, Washington, DC 20250-9410, or call toll-free at (866) 632-9992 (English) or (800) 877-8339 (TDD) or (866) 377-8642 (English Federal-relay) or (800) 845-6136 (Spanish Federal-relay). USDA is an equal opportunity provider and employer.

# 2007 | CENSUS OF AGRICULTURE

## History

**Volume 2 • Subject Series • Part 7**

**AC-07-S-7**

Issued April 2011

United States Department of Agriculture  
**Tom Vilsack**, Secretary  
National Agricultural Statistics Service  
**Cynthia Z.F. Clark**, Administrator



---

## Contents

---

### Chapters

Page

1. Introduction.....	3
2. Planning and Preliminary Operations .....	13
3. Preparatory Operations .....	21
4. Public Awareness Program.....	31
5. Data Collection .....	43
6. Data Processing.....	53
7. Data Quality .....	63
8. 2007 Puerto Rico Census of Agriculture .....	71
9. Censuses of Agriculture for American Samoa (2008), the Commonwealth of Northern Mariana Islands (2007), Guam (2007), and the U.S. Virgin Islands (2007).....	83
10. Publication Program.....	91

### Appendixes

A. Provisions Relating to the 2007 Census of Agriculture.....	99
B. 2007 Census of Agriculture Report Form and Data Changes.....	105
C. Volume of 2007 Census of Agriculture Mailout and Follow-up Mailings.....	147
D. Summary of U.S. Nonresponse and Coverage Adjustments .....	149
E. Abbreviations .....	151
F. Sources.....	155



---

## Chapter 1. Introduction

---

	Page
Historical Background .....	4
Legal Authority .....	4
Organization and Structure .....	5
Uses of Agriculture Census Data.....	6
Farm Definition.....	6
Overview of Census Operations .....	7
Scope and Reference Dates.....	7
Data Collection .....	8
Data Processing.....	8
Data Publication.....	8
Special Enumerations and Census Follow-on Programs .....	9
American Indian Reservations.....	9
Citrus Caretakers.....	9
Volume 3, Special Studies Series .....	9
2010 Census of Aquaculture and 2010 Tenure, Ownership, and Transition of Agricultural Land Survey .....	10
Program Cost .....	10

## HISTORICAL BACKGROUND

The collection of agricultural census data were initially authorized by the United States Constitution in Article 1, Section 2, which required a census of population to be conducted every 10 years to proportionately distribute the representation of each State in the House of Representatives. While the delegates to the conventions that produced the Constitution discussed its various provisions, James Madison, its principle author, urged that the census be used for something more than just counting heads. Nothing came of his recommendations until 1810, after he became President Madison.

The agriculture census continued to unfold from the decennial population census as follows:

- **1810:** Additional information was collected on manufacturing establishments and a single item asked whether the person interviewed was engaged in agricultural activities. Another 30 years passed before the census program included information on agricultural activities.
- **1840:** The first agricultural census attempted to collect more detailed information on manufacturing, mining, and agriculture, with limited success. Because the value of agriculture data were so obvious, the census program was permanently expanded to cover economic and agricultural activities.
- **1850 through 1920:** The agriculture census remained part of the decennial census program.
- **1915:** Congress authorized the collection of agriculture data every 5 years.
- **1925:** Economic data added to 5-year collection.
- **Through 1940:** U.S. Census Bureau conducted the agriculture census and other economic censuses, but changed their respective schedules.
- **By 1950:** To use the Census Bureau's resources more efficiently and to distribute the workload over the 10-year census cycle, the agriculture census collected information for years ending in "4" and "9," while the economic censuses covered years ending in "2" and "7."
- **1976:** Public Law 94-229 shortened the period after the 1974 agriculture census to 4 years, restoring the agriculture census to a schedule concurrent with the 1982 and later economic censuses.
- **1982 to Present:** Agriculture census conducted concurrently with economic censuses for years ending in "2" and "7."
- **1997:** Public Law 105-113 transferred the responsibility for conducting the 1997 Census of Agriculture and subsequent agriculture censuses from the U.S. Department of Commerce (DOC), Bureau of the Census (BOC), to the U.S. Department of Agriculture (USDA), National Agricultural Statistics Service (NASS).

The agriculture census is the only source of statistics on American agriculture showing comparable data, by county and classifying farms by size, tenure, type of organization, primary occupation, age of operator, market value of agricultural products sold, combined government payments and market value of agricultural products sold, and North American Industry Classification System (NAICS) code. The 2007 Census of Agriculture covered agricultural operations meeting the definition of a farm in the 50 States, Puerto Rico, Commonwealth of Northern Mariana Islands (CNMI), Guam, the U.S. Virgin Islands, and American Samoa.

## LEGAL AUTHORITY

The 2007 Census of Agriculture is required by law under the "Census of Agriculture Act of 1997," Public Law 105-113 (Title 7, United States Code, Section 2204g). The law directs the Secretary of Agriculture to conduct a census of agriculture in 1998 and in every fifth year after, covering the prior year. The census of agriculture



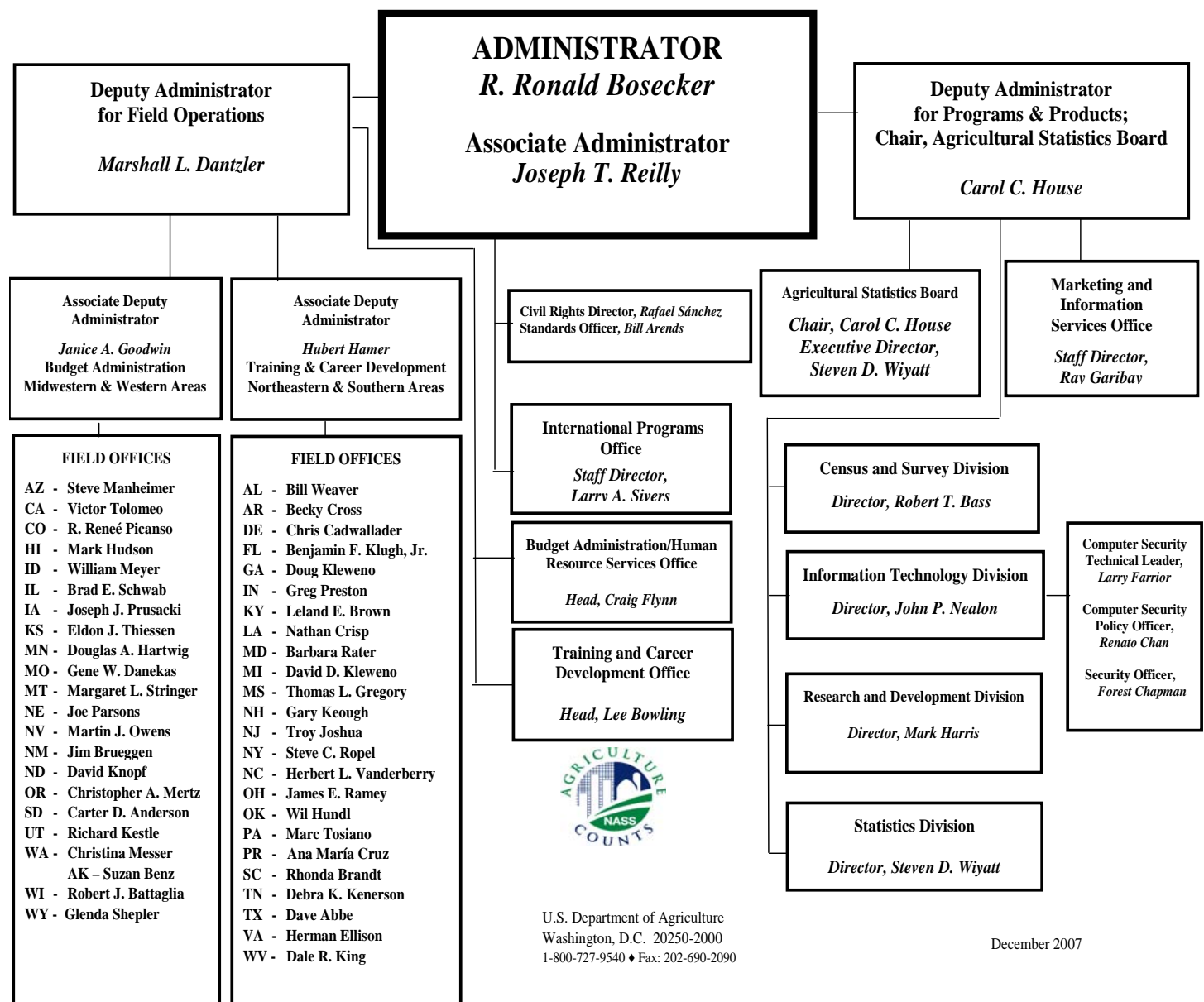
includes each State, Puerto Rico, Guam, the U.S. Virgin Islands, the CNMI, and American Samoa. (See Appendix A for excerpts of Title 7 applicable to the agriculture census.)

## ORGANIZATION AND STRUCTURE

NASS is a key information agency within the Research, Education, and Economics (REE) mission area of the USDA. NASS has collected information on U.S. agriculture since USDA was founded in 1862. The responsibilities of NASS have increased and the statistical program and organizational structure evolved into a headquarters unit that consisted of four divisions and 46 field offices serving all 50 States and Puerto Rico.

Census processes associated with handling nonrespondents follow-up activities, editing report forms, and reviewing and analyzing tabulated data fully utilized NASS's field organization and State-level knowledge of farm operations. There were no significant organizational structure changes that occurred in NASS between 2002 and 2007 censuses. Below is the organizational structure of NASS in December 2007.

Organizational Chart 1. 2007 National Agricultural Statistics Service



## **USES OF AGRICULTURE CENSUS DATA**

The census of agriculture is the leading source of facts and statistics about the Nation's agricultural production. It provides a detailed picture of U.S. farms and ranches every five years and is the only source of uniform, comprehensive agricultural data for every county or county equivalent in the U.S.

Agriculture census data are routinely used by Congress; Federal, State, and local government organizations; the business community; scientific and educational institutions; and farm organizations for the purposes of:

- Evaluating, changing, promoting, and formulating farm and rural policies and programs that help agricultural producers;
- Studying historical trends, assessing current conditions, and planning for the future;
- Formulating market strategies, providing more efficient production and distribution systems, and locating facilities for agricultural communities;
- Making energy projections and forecasting needs for agricultural producers and their communities;
- Developing new and improved methods to increase agricultural production and profitability;
- Allocating local and national funds for farm programs, e.g. extension service projects, agricultural research, soil conservation programs, and land-grant colleges and universities;
- Planning for operations during drought and emergency outbreaks of diseases or infestations of pests; and
- Analyzing and reporting on the current state of food, fuel, feed, and fiber production in the U.S.

In addition, agricultural news media and agricultural associations use census data as background material for stories and articles on U.S. agriculture and the foods we produce.

Within the USDA, NASS employs agriculture census statistics to develop benchmarks and comparisons for its current estimates, and to evaluate particular problems or situations. The Economic Research Service (ERS), a sister agency to NASS, uses census of agriculture data to evaluate the current economic situation, and to monitor and measure structural changes and adjustments in the farm sector. When a new disease outbreak occurs, the Animal and Plant Health Inspection Service of USDA uses census data as a first profile of the affected commodity. The data provide information on where the commodity is grown or raised and help determine where to quarantine or limit distribution.

## **FARM DEFINITION**

The definition of a farm used in the 2007 Census of Agriculture for the U.S. was any place from which \$1,000 or more of agricultural products were produced and sold, or normally would have been sold, during the census year. The definition has changed nine times since it was established in 1850. The definition used in 2007 was first used for the 1974 Census of Agriculture and was used in each subsequent agriculture census. This definition was consistent with the definition used for USDA surveys during the period.

**Puerto Rico:** The farm definition remained the same as in previous censuses, and defined a farm as any place from which \$500 or more of agricultural products were produced and sold, or normally would have been sold, during the 12-month period between January 1, 2007 and December 31, 2007. The census form requested total land, land use, production, expenditure, farm labor, and sales data for the 12 months between January 1 and December 31, 2007. Data on inventories of livestock, poultry, machinery and equipment, buildings and facilities, and number of hired farm workers, agregados, and sharecroppers were requested as of December 31, 2007.

**American Samoa:** The farm definition remained the same as in previous censuses, and defined a farm as any place that raised or produced any agricultural product for sale or consumption by family members. Crop and livestock production, sales, and expense data were collected for the 12-month period between January 1 and December 31, 2008. Inventory data were collected for the day of enumeration.

**Commonwealth of Northern Mariana Islands (CNMI):** The farm definition remained the same as in previous censuses, and defined a farm as any place that had sales of agricultural products of \$1,000 or more. Enumeration began in January 2008 for the 2007 production year. Acreage and inventory data (i.e., numbers of livestock and poultry) were collected as of the day of enumeration. Crop and livestock production, sales, and expense data were requested for the calendar year 2007.

**Guam:** The farm definition remained the same as in previous censuses, and defined a farm as any place that had sales of agricultural products of \$1,000 or more. Enumeration began in January 2008 for the 2007 production year. Acreage and inventory data (i.e., numbers of livestock and poultry) were collected as of the day of enumeration. Crop and livestock production, sales, and expense data were requested for the calendar year 2007.

**U.S. Virgin Islands:** The farm definition remained the same as in previous censuses, and defined a farm as any place from which \$500 or more of agricultural products were sold. Enumeration began in January 2008 for the 2007 production year. Acreage and inventory data (i.e., numbers of livestock and poultry, etc.) were collected as of the day of enumeration. Crop and livestock production, sales, and expense data were requested for the calendar year 2007.

## OVERVIEW OF CENSUS OPERATIONS

### Scope and Reference Dates

The 2007 Census of Agriculture program collected and published statistical data for all agricultural operations meeting the farm definition in the 50 States, Puerto Rico, Guam, the U.S. Virgin Islands, the Commonwealth of Northern Mariana Islands, and American Samoa. It also included a census of horticultural specialties and follow-on studies relating to farm irrigation. Separate funding was received for an Organic Production Survey and a survey on on-farm renewable energy. These surveys used the census respondents as a frame.

The reference periods for the 2007 Census of Agriculture were similar to those used in the 2002 Census of Agriculture. Reference periods used were:

- Crop production was measured for the calendar year, except for a few crops such as avocados, citrus, and olives for which the production year overlapped the calendar year.
- Livestock, poultry, and machinery and equipment inventories, market value of land and buildings, and grain storage capacity were measured as of December 31 of the census year.
- Crop and livestock sales, farm expenses, income from federal farm programs, irrigation, Commodity Credit Corporation loans, Conservation Reserve, Farmable Wetlands, Conservation Reserve Enhancement and

Wetlands Reserve Program participation, direct sales income, chemical and fertilizer use, farm-related income, and hired farm labor data were measured for the calendar year.

## **Data Collection**

The principal data collection method for the 2007 Census of Agriculture was mailout/mailback. It was supplemented with Electronic Data Reporting (EDR) on the Internet. Nonresponse follow-ups by telephone and personal enumeration also were conducted. The enumeration methods used in the 2007 census were similar to those used in the 2002 census. The data collection method for censuses conducted in American Samoa, the CNMI, Guam, and the U.S Virgin Islands was through personal interviews by field enumerators.

NASS replaced the 24-page sample and 20-page nonsample report forms used in the 2002 census with a 24-page regional report form with 7 regional versions and a 12-page national report form. The 24-page regionalized report forms were designed to facilitate reporting crops most commonly grown within the report form region. The 12-page national report was designed for operations throughout the country with few commodities. The national report form collected the same information as the regional form but it was formatted to fit on fewer pages. All of the forms allowed respondents to write in specific commodities that were not prelisted on their form.

After the removal of duplicate names and nonagricultural operations, the official Census Mail List (CML) was established on September 1, 2007. The initial mailout occurred at the end of December 2007. Approximately 3.2 million packets were mailed. The national form was mailed to approximately 514,000 addresses (about 16 percent) and the regional form was mailed to 2.67 million addresses (about 84 percent). Each packet contained a cover letter, instruction sheet, a labeled report form, and a return envelope. The mailout packet preparation, initial mailout, and two follow-up mailings to nonrespondents were handled by the Census Bureau's National Processing Center (NPC) in Jeffersonville, IN. A toll-free number was provided on the initial report form and on follow-up mailings to assist respondents with questions.

The first follow-up was mailed during the last two weeks of February 2008 to approximately 1.3 million nonrespondents. The second follow-up was mailed the beginning of April 2008 to approximately 1.0 million nonrespondents. Additionally, NPC received, checked-in, scanned, and keyed (from image) returned report forms. NASS statisticians on site at NPC provided technical guidance and monitored NPC processing activities.

## **Data Processing**

NPC received mail returns for each of the 50 States, entered individually reported data into the computer file, and resolved edit failures. Data analysis and resolution of questionable data and data relationships took place in the respective NASS field offices through the summer of 2008. Report forms from Puerto Rico were processed by the NPC.

## **Data Publication**

The Volume 1, Geographic Area Series publications provide data for more than 3,000 counties or county equivalents. In addition, selected data were tabulated and published at the five-digit ZIP Code level, for districts from the 110<sup>th</sup> Congress, for each 6-digit Hydrologic Unit Code (watershed), and for specialty crops.

Results of the 2007 Census of Agriculture were released February 4, 2009 and updated in December 2009. The updated version was due to the following data changes:

- Chapter 1, Table 2. Market Value of Agricultural Products Sold Including Landlord's Share and Direct Sales: 2007 and 2002 - Market value of agricultural products including landlords share. In some States, a suppressed data value could be derived because the corresponding percent column was published.
- Chapter 1, Table 48. Organic Agriculture – Age group breakouts were recalculated and placed in appropriate frequency categories;
- Chapter 1, Table 58. Summary by Size of Farm – Additional cross-tabulated data were included; and
- Index, II-34 to II-28 – Spearmint for oil was changed.

## **SPECIAL ENUMERATIONS AND CENSUS FOLLOW-ON PROGRAMS**

### **American Indian Reservations**

For the 2007 Census of Agriculture, NASS expanded their effort to collect more complete reservation-level data and included more reservations in all States. To maximize coverage of American Indian and Alaska Native farm and ranch operators, a concerted effort was made to get individual reports from every American Indian or Alaska Native farm or ranch operator in the country.

The American Indian Reservations publication provides data that supplement the 2007 Census of Agriculture. This publication presents selected operation and operator summary data for 73 American Indian reservations. This was the second report NASS published that focuses on agricultural activity on American Indian reservations based on individual farm and ranch reports.

### **Citrus Caretakers**

In conjunction with the 2007 Census of Agriculture, a Citrus Caretaker census was conducted in Arizona, Florida, and Texas. A citrus caretaker is an organization or person caring for or managing citrus groves for others. This special enumeration has been conducted since 1969 because of the difficulty identifying and enumerating absentee grove owners who often do not know the information that is needed to adequately complete the report form.

Enumeration activities were completed after harvest to facilitate the accuracy of reported data. Grove owners were counted as operators for farm count purposes. Citrus caretakers were perceived as performing an agricultural service for grove owners and were not considered agricultural operators if they provided only services to grove owners.

Caretakers were counted as agricultural operators if they made day-to-day decisions for their own operation in addition to providing services for grove owners. Data provided by caretakers were prorated to owners based on acreage and were transcribed onto the respective owner's census report form.

### **Volume 3, Special Studies Series**

The new 2007 History of Census Follow-on Activities (**AC-07-SS-7**) publication, scheduled for release in July 2011, will discuss the following census programs:

- 2008 Farm and Ranch Irrigation Survey;
- 2008 Organic Production Survey;
- 2009 Census of Horticultural Specialties; and
- 2009 On-Farm Renewable Energy Survey.

## 2010 Census of Aquaculture and 2010 Tenure, Ownership, and Transition of Agricultural Land Survey

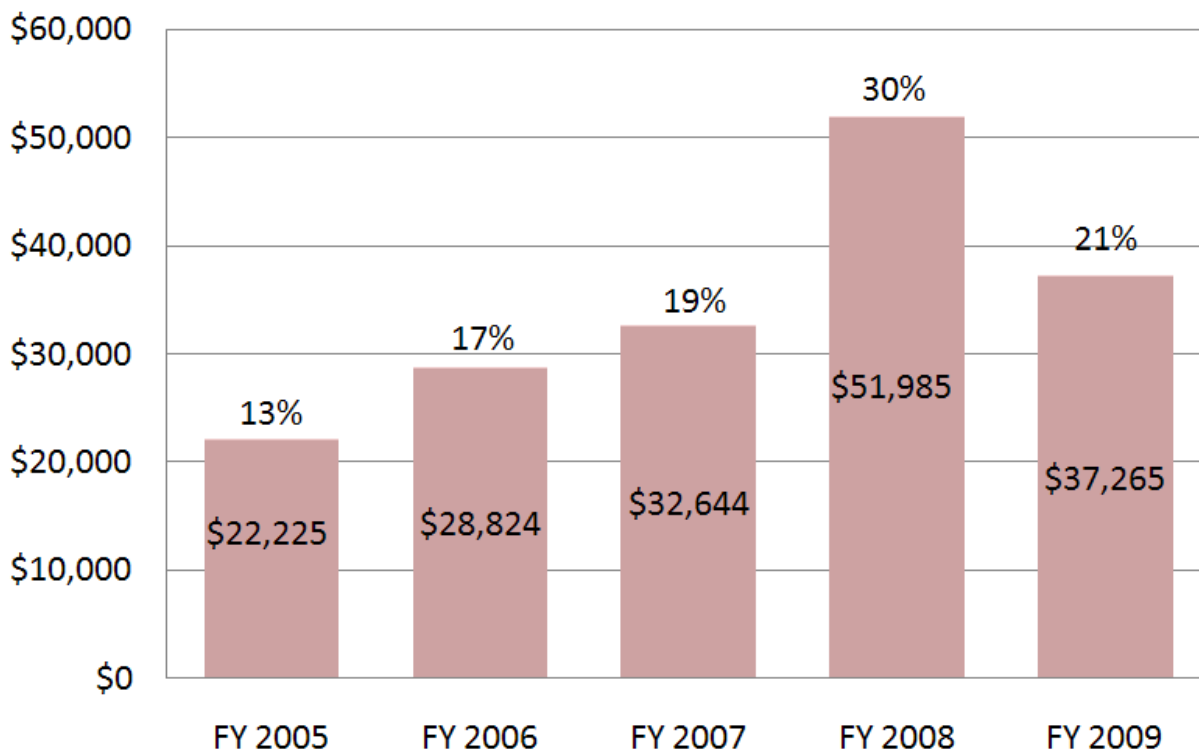
NASS planned to continue the census of aquaculture program and to introduce a new program in FY 2011 to collect detailed information about tenure, land ownerships, and transitioning agricultural land. However, due to budgetary constraints, both programs were postponed.

### PROGRAM COST

The cost of the 2007 Census of Agriculture was approximately \$172.9 million. Over the 5-year budget cycle, the funding varied from a low of \$22 million in fiscal 2005 to a high of \$52 million in fiscal 2008. Funding included costs for the census follow-on programs. Funds for the 2007 agriculture census were considered “no year,” meaning unspent funds in a given fiscal year could be carried forward to the next year.

Graph 1. 2007 Census of Agriculture – Total Obligations

### 2007 Census of Agriculture Total Obligations \$172.9 Million



Three separate contracts covered a significant portion of work for printing, data collection, and processing. Commercial vendors were used for printing and preparing mail packages. Data collection costs included a contract with NASDA for providing enumerators. Data processing costs included a contract with the National Processing Center for covering the handling of mail returns and capturing data.

The table below shows funding by fiscal year for major program areas.

**Table 1. 2007 Census of Agriculture Full-Cycle Costs by Line Item**

Line item	FY 2005 final (\$1,000)	FY 2006 final (\$1,000)	FY 2007 final (\$1,000)	FY 2008 final (\$1,000)	FY 2009 final (\$1,000)	Total estimated 2007 full- cycle cost (\$1,000)
Total obligations	22,225	28,824	32,644	51,985	37,265	172,943
Direction	6,250	6,754	6,490	6,765	6,900	33,159
Content determination and design (includes printing)	1,750	6,320	6,410	3,100	3,205	20,785
Mail list development and mailout	5,000	5,410	6,200	12,095	8,400	37,105
Collection and processing	6,625	7,150	11,500	25,500	9,460	60,235
Publication and dissemination	2,600	3,190	2,044	4,525	9,300	21,659





---

## Chapter 2. Planning and Preliminary Operations

---

	Page
Preliminary Planning.....	14
Review of 2007 Census Processing .....	14
Planning Teams and Committees.....	14
Marked Records for Unique Handling.....	15
Changes in Computer Hardware .....	15
Computer-Assisted Telephone Interviewing.....	15
Overview .....	15
Staff Training in Computer-Assisted Telephone Interviewing .....	16
Consultation on the Census.....	16
General Information .....	16
Advisory Committee on Agriculture Statistics .....	16
Governors, State Departments of Agriculture, and Land-Grant Universities .....	16
Federal Departments and Agencies.....	17
Content Selection Criteria .....	17
Content Test .....	17
Overview .....	17
Test Methodology .....	17

## **PRELIMINARY PLANNING**

### **Review of 2007 Census Processing**

The 2007 Census of Agriculture was conducted by USDA's National Agricultural Statistics Service (NASS). NASS made several changes to the 2002 census process. The most significant of these changes were:

- NASS's on-line reporting system allowed census of agriculture respondents the option of reporting via the Internet for the first time. Over 96,000 respondents completed their report form on-line.
- NASS created a dedicated website, [www.agcensus.usda.gov](http://www.agcensus.usda.gov). The website was a repository for all types of census information, including basic background materials, previous years' census data, sample report forms, news releases, and other publicity materials.
- NASS worked with Community-Based Organizations (CBOs) not only to improve list coverage for minorities but also to increase census awareness and participation.
- Imputation for nonresponse on the 2007 census was redesigned to improve both data quality and editing performance. A program was developed to stratify donor records, i.e., records whose data could be used to provide missing information for partial nonresponse. This stratification allowed the imputation program to run more efficiently by searching for a donor only within a stratum of operations with characteristics similar to those of the recipient.
- Key components of the information technology (IT) infrastructure were improved to facilitate processing for the 2007 Census of Agriculture. These included increasing bandwidth using the Universal Telecommunications Network (UTN), implementing a new UNIX server for census processing, installing new file servers in our field offices, and migrating to the Microsoft server operating system. Also, there were significant improvements made in the design and implementation of the computer processing systems, including databases, over what was used in the 2002 census.
- Area frame sampling focused on improving under-coverage estimates for minorities and specialty crops, with a particular emphasis on Indian reservations in the Southwestern States. In addition, the area frame was used to measure under-coverage in Hawaii for the first time.
- The 24-page regionalized report forms and a single 12-page national report form replaced the 24-page sample and 20-page nonsample report forms used in the 2002 census. The national form was only 12 pages. It was designed for operations throughout the country with few commodities and was mailed to approximately 16 percent of the census mail list (CML).

The changes to the 2007 Census of Agriculture led to significant improvements in overall processing efficiency and data quality.

### **Planning Teams and Committees**

NASS began preparation for the 2007 Census of Agriculture by chartering the 2007 Census Data Content Team in April 2004. The team was tasked with content determination and report form development. They reviewed the 2002 report form content, solicited input from internal and external customers, developed criteria for determining

acceptance and/or rejection of content for the 2007 Census of Agriculture report forms, tested the effectiveness of the report forms for various modes of data collection (mail, telephone, personal interview, and electronic data reporting), and made recommendations to NASS senior executives for final determination.

Throughout the planning process, NASS sought advice and input from the data user community. Integral partners included the Advisory Committee on Agriculture Statistics, State departments of agriculture and other State government officials, Federal agency officials, land-grant universities, agricultural trade associations, media, and various CBOs.

## **MARKED RECORDS FOR UNIQUE HANDLING**

During the final phase of the census mail list development process, each field office reviewed the names and addresses of respondents on the census list frame for their respective State and electronically marked records that they thought would be better handled by personal enumeration rather than by the traditional mailout/mailback approach. Criteria used to select records for marking included, but were not necessarily limited to:

- Coordination with other on-going NASS surveys;
- A respondent's desire to be contacted by personal interview;
- Knowledge of other needs for special handling; and
- Relative importance of the operation to the State's agriculture.

Each field office was responsible for the data collection of these records. The method of enumeration (face-to-face enumeration, telephone enumeration, or mailout/mailback from the field office) of marked records was at the discretion of the field office. Marked records were excluded from all census mailouts and follow-up operations conducted at NPC. It was imperative that the field offices managed the enumeration of these records effectively and tracked their progress. About 72,000 records were marked. See Appendix C, Table C-1, for additional details.

## **CHANGES IN COMPUTER HARDWARE**

Computer access and security issues were critically important throughout the census process. The computers used to process the 2007 census were owned and operated by NASS. However, an exception was the Bureau of the Census computers at the NPC used for Optical Mark Recognition (OMR) data capture and transmission of files to NASS. Only sworn NASS employees could gain access to census data. This system was very effective in protecting the confidentiality of the data and allowed timely processing of the census.

In preparation for the census, and as a result of technological advancements, necessary upgrades were made to the computer system's hardware, software, infrastructure, and architecture.

## **COMPUTER-ASSISTED TELEPHONE INTERVIEWING**

### **Overview**

NASS's field offices used a computer-assisted telephone interview (CATI) system to enumerate or resolve all nonresponse records deemed to be critical to prevent distortion of the census statistics. These records were referred to as "must" records. "Must" records were mostly composed of those agriculture operations that were so large that failure to include their data might distort the census statistics. CATI calling was conducted between March 2008 and June 2008. Once enumerated, the report forms were either sent to NPC for check-in and data capture or the data were keyed directly from the form at the field office. For additional information on "must" records see chapter 5.

## **Staff Training in Computer-Assisted Telephone Interviewing**

Field office personnel were responsible for training the CATI enumerator staff for the census follow-up work. Training included an introduction to the census and an overview of the paper report forms and special instructions for the 2007 Census of Agriculture. There was a practice area in the CATI application that enumerators used to familiarize themselves with the various options and to practice different scenarios provided by headquarters personnel. Enumerators were also given reference materials to use during the interviews to help guide them through various procedures. Many enumerators who made CATI data collection calls were familiar with the census form and had prior training with instruments similar to CATI.

## **CONSULTATION ON THE CENSUS**

### **General Information**

NASS's mission is to provide timely, accurate, and useful statistics to the public. Therefore, NASS must determine which statistical information is most needed. Since the data compiled in the statistical tabulations must be supplied by individuals and/or organizations outside the agency, NASS must know whether the respondents to its census of agriculture and surveys will be able to supply the information requested.

In planning for the 2007 Census of Agriculture, NASS sought advice from data users on current and future data needs, the ability of respondents to supply the data, general data collection methods, content and format of report forms, and publicity programs to support the census. NASS maintained regular contact with its advisory committee, Governors, and departments of agriculture in all 50 States, land-grant (agricultural) universities, Federal departments and agencies, and other data users and suppliers via an extensive outreach program and welcomed their advice and suggestions.

### **Advisory Committee on Agriculture Statistics**

The Advisory Committee on Agriculture Statistics drew on the experience and expertise of its members to form a collective judgment concerning agriculture data needs and the statistics issued by NASS. This input was vital to keeping current with shifting data needs in the rapidly changing agricultural environment and keeping NASS informed of emerging developments and issues in the agriculture community that could affect agriculture statistics activities.

The Committee, appointed by the Secretary, consisted of 25 members who represented a broad range of interests, including agricultural economists, rural sociologists, farm policy analysts, educators, State agriculture representatives, agriculture-related business and marketing experts, and members of major national farm organizations. In addition, a representative of the Bureau of the Census, U.S. Department of Commerce, and a representative of the Economic Research Service, USDA, served as ex-officio members of the Committee.

### **Governors, State Departments of Agriculture, and Land-Grant Universities**

Agriculture is the most important industry in a number of States and is a significant industry in all 50 States, as well as in Puerto Rico and the outlying areas. NASS routinely asks State governments for assistance in publicizing the census. Both the Governors and the State departments of agriculture have a considerable interest in the content of the census report forms and in the completeness and accuracy of the enumeration. Letters were mailed to the State Governors and departments of agriculture, as well as to their land-grant universities, asking for their requests and recommendations on data content for the 2007 census. The responses were considered in the design of the census form.

## Federal Departments and Agencies

Numerous Federal departments and agencies use census of agriculture data. Consequently, appropriate Federal departments and agencies, including all U.S. Department of Agriculture agencies, were contacted and asked to define their data needs, provide a justification for why data were needed at the county level, and make suggestions for change.

## Content Selection Criteria

As a part of the preparation process for each census of agriculture, each data item on the report form was evaluated. For the 2007 Census of Agriculture, each department, agency, group, and organization was asked to identify and justify relevant data needs and indicate if the data item was:

- Directly mandated by Congress or if the item had strong Congressional support;
- To be used in proposed or pending legislation;
- Needed for evaluation of existing Federal programs;
- Essential, such that if omitted from the census of agriculture, would result in additional respondent burden and cost for a new survey for other agencies or users;
- Required for classification of farms by historical groupings; and
- Needed to provide information on current problems.

## CONTENT TEST

### Overview

Prior to most agriculture censuses, the census staff engaged in detailed studies and planning aimed at obtaining the most complete and efficient enumeration. Typically, this planning process included one or more field tests of materials and/or data-collection methodologies, and provided an opportunity to evaluate suggested changes in data content, forms design, changes in instructions to respondents, and other factors that might affect the accuracy and completeness of the enumeration. In preparation for the 2007 Census of Agriculture, a content test was conducted that focused on several major proposed changes. These changes involved not only report form design and content, but also the data capture method and changes associated with data editing and processing procedures. Specific changes for evaluation included:

- The addition of new sections for organic agriculture and practices;
- The redesign of the production contract section;
- Separate sections for sheep and bees on the regionalized report forms;
- Write-in spaces and prelisted entries in the field crops section of the regionalized report forms; and
- Open table format in the crop and livestock section of the national report form.

### Test Methodology

**Phase 1, Cognitive Interviews** - Approximately 140 personal interviews were conducted across the Nation during the summer of 2005 to cognitively test the two versions of the 2005 Census of Agriculture Content Test report forms. These interviews were performed by survey statisticians who had been trained on how to conduct pretest interviews and by headquarters staff on the Content Team. The two versions of the report form that had been developed were form 05-A0114 (national form) and form 05-A0214 (regionalized form). The main difference between the two forms was the format used for collecting crop and livestock information and the total number of pages. The regionalized form used specific sections for collecting crop and livestock information and most of the items in these sections were either prelisted in the tables or listed below the tables. This form was 24-pages

long. The national form used an open table format to collect crop and livestock information and was 12-pages long. Respondents had to write down the crops and/or livestock they had on the blank tables provided on the report form. A third form, 05-A0314, which was an updated version of the 2002 Census of Agriculture sample report form, was used as a control form for data comparisons. This form was not included in the cognitive test.

All kinds of farming operations were visited for the pretest including some specialty farms and organic producers. Respondents were asked to complete the report forms as if they had just received it by mail. They were instructed to estimate their responses since actual figures were not needed for the test. After they had completed the report form they were asked specific questions about the report form. The objective was to determine what sections or questions were confusing to respondents and which data items respondents thought would be difficult to obtain. Particular importance was given to the testing of the national form since there was a concern about people omitting some of their crop and/or livestock items given the limited space provided on the tables. Results from this pretest helped to further refine the questions on these forms.

**Phase 2, National Mailout** - The second phase consisted of a national mailout of the report forms that simulated the procedures that were being considered for the 2007 Census of Agriculture. The printing and mailing of the report forms was performed by the Bureau of the Census at the NPC in Jeffersonville, IN

A sample of 30,000 cases was distributed the following way: 2,000 agricultural operations received form 05-A0314 (the control group), 14,995 operations were mailed the regionalized form (05-A0214) and another 12,905 operations were mailed the national form (05-A0114). On-line electronic data reporting (EDR) instruments were available for all regionalized form and national form respondents. A subset of the sample was specifically asked to complete the form electronically.

The initial mailout took place on December 30, 2005. This mailout was followed by the mailing of a postcard/reminder card to all cases on January 17, 2006. Finally, a nonresponse follow-up mailing containing a replacement report form was mailed to all nonrespondents on February 9, 2006. Completed forms were returned to NPC where they were checked in, scanned for image, and data were keyed from images. The records were processed through the format program but not edited for consistency or missing data.

*Test Sample Design.* Once a record was sampled from a category, it was removed from further sampling. List codes with small populations were sampled first with hopes that the needed sample sizes would be met for all categories. Populations were sorted in State Person Operator Identification (StPOID) order (unique farm operator number within state) with selection done systematically to ensure a spread across States.

*Incoming Telephone Call (ITC) System.* The Incoming Telephone Call (ITC) system was used during Phase 2 to answer questions, handle complaints, or collect data from respondents via the telephone. The toll-free number was printed on both the front and back pages of each of the three versions of the report form. The majority of the calls were answered by enumerators in the Wyoming and Oklahoma NASS field offices.

The ITC system was designed to store particular information about the reason for calling and the final outcome of the call. This information was used at a later time to determine which sections and questions seemed to be more problematic to the respondent. The outcome of the calls was tabulated in the Management Information System (MIS) reports that were available to NASS managers.

A total of 777 calls were made to the census content test toll-free number. Of these calls, 366 were respondents asking for help on how to fill out the form. Seventy-six respondents called with questions on the land section, 70 respondents called with questions on the economic questions, and 220 respondents called with other types of questions (these groups were not mutually exclusive). The total national form respondents who called the toll-free

number was 306 (2.4 percent of the short form sample). The total long form respondents who called the toll-free number was 412 (2.7 percent of the long form sample). Fifty-nine of those who received the 2002 Census form (control group) made calls to the toll-free number (3.0 percent of the control group sample.)

**Phase 3, Follow-Up Interviews** - The third phase of the content test consisted of follow-up interviews of approximately 600 respondents to the Census of Agriculture 2005 Test. These interviews were conducted during February and March, 2006 by Headquarters and field office statisticians who had been trained on conducting cognitive interviews. Personal interviews were conducted with the person who had completed the Census of Agriculture 2005 Test report form. Prior to conducting the follow-up interviews, the interviewer reviewed the respondent's completed Census of Agriculture 2005 Test report form. Interviewers were required to mark in the Phase 3 follow-up interview report forms the sections or questions that needed to be asked based on the data reported on the Census of Agriculture 2005 Test report form. Photocopies of the respondents' completed census test forms that were selected for re-interviews were sent to the field offices directly from headquarters. The field offices printed the follow-up interview report forms and gathered all the materials needed for the re-interviews. In addition, they keyed all the data from the follow-up interview report forms using program files.

Three hundred of the interviews focused on six target types of operations where it was felt that more information about reporting was needed. The six target operations included these with production contracts, organic agriculture, berries, farms with land used on an Animal Unit Month (AUM) basis, farms located on Indian reservations, and farms reporting government payments. The remaining 300 follow-up interviews were selected from the early mail returns. A small sample of respondents reporting via the Internet were also contacted during the follow-up interviews.

These follow-up interviews attempted to measure response accuracy by asking respondents specific questions about their completed report form. The goal was to find out if respondents understood what was asked and if they answered the questions correctly. This phase was particularly important because it provided information about the potential reporting problems that were obvious from a review of the data. Results from Phase 3 combined with a review of the data collected in Phase 2 were used to develop the final versions of the 2007 Census of Agriculture report forms and the edit.





---

## Chapter 3. Preparatory Operations

---

	Page
General Information .....	22
Report Form Supporting Instructions.....	22
Census Mail List Preparations.....	22
Overview .....	22
Census Mail List Development.....	22
Not on the Mail List .....	23
Sources .....	23
Agricultural Identification Survey .....	24
Record Unduplication and Address Quality.....	24
Finalizing the Census Mail List .....	26
Printing and Labeling of Report Forms.....	27
Printing of Forms and Supporting Materials.....	27
Mailing Packets Preparation.....	28
Quality Control.....	28
Labeling.....	28

## **GENERAL INFORMATION**

Preparatory operations for the 2007 Census of Agriculture began in 2003 and consisted of four major activities:

- Report form supporting instructions;
- Preparation of the census mail list (CML);
- Printing and preparations of report forms for mailing, and related enumeration materials; and
- Formulation of a promotional program to encourage cooperation by agricultural operators.

## **REPORT FORM SUPPORTING INSTRUCTIONS**

Once report form content was finalized (See Chapter 2, section on “Consultation on the Census” and “Content Test” for details), the various supporting documents were prepared. Table 3.2 provides descriptions and quantities of these commercially printed materials.

## **CENSUS MAIL LIST PREPARATIONS**

### **Overview**

A mailout/mailback data collection method has been used to collect census information since the 1969 Census of Agriculture. The self-enumeration procedure reduces costs compared to a personal-interview methodology, but requires a complete and accurate name and address list for operations meeting the census farm definition.

To reduce costs and respondent burden, it was essential to eliminate as many duplicate and nonfarm records from the list as possible. This was accomplished during the list building process. The final 2007 CML contained approximately 3.2 million names and addresses.

### **Census Mail List Development**

The development of the 2007 CML began in 2003. The CML was built by obtaining a variety of outside source lists. These lists were matched to NASS’s list frame using record linkage programs. Records not found on the list were added as potential farm records. Records that were known to have agricultural activity as well as potential agricultural records were included in the CML.

Between 2004 and 2007, NASS conducted a series of Agricultural Identification Surveys (AIS) on approximately 1.7 million records, which included nonrespondents from the 2002 census and newly added records from outside list sources. The AIS report form collected information that was used to determine whether an operation had enough agricultural activity to meet the NASS farm definition. If agricultural activity was reported, the operation was added to the NASS list frame and subsequently to the CML. Respondents who reported no reported agriculture were excluded from the CML. Nonrespondents to the AIS were also added to the CML.

Measures were taken to improve name and address quality. Additional record linkage programs were run to detect and remove duplicate records both within each State and across States. List addresses were processed through the U.S. Postal Service’s National Change of Address Registry (NCOA) and the Locatable Address Conversion System (LACS) to ensure they were correct and complete. Records on the list with missing or invalid phone numbers were matched against a nationally available telephone database to obtain as many phone numbers as possible.

## **Not on the Mail List**

To account for farming operations not on the CML, NASS used its area frame. The NASS area frame covers all land in the U.S. and includes all farms. The land in the U.S. is stratified by characteristics of the land. Land area of approximately equal size, called segments, are delineated within each land use stratum and designated on aerial photographs. A probability sample of segments was drawn within each land use strata for the NASS 2007 annual area frame survey, known as the 2007 June Agricultural Survey (JAS). The JAS sample of segments was allocated to strata to provide accurate measures of acres planted for widely grown crops and account for inventories of hogs and cattle. Sampled segments in the JAS were personally enumerated. Each operation identified within a segment boundary was known as a tract. The 2007 JAS consisted of 10,912 regular sampled segments, supplemented with 3,692 segments from the 2007 Agricultural Coverage Evaluation Survey (ACES) – segments selected to improve measures of small and minority owned farms. These additional ACES segments targeted farming demographics that typically had lower coverage rates on the list.

The information from each tract (operation) within a segment was matched against operations on the NASS list frame to determine the amount of under coverage that existed for a wide range of farming sectors and operator demographics. The names and addresses collected in the 2007 JAS and 2007 ACES were matched to the CML and checked for duplication. Farms from the 2007 JAS that did not match were determined to be Not on the Mail List (NML) and sent a report form of a different color to be easily distinguished from CML operations. Data from the NML operations provided a measure of the under coverage of the CML operations. If duplicate forms were received by a respondent, instructions on the census report form guided the respondent to complete the CML form and mail back both CML and NML forms together. Those who returned a CML census form and an NML census form were erroneously classified as NML and were removed from the NML – the percentage of farms not represented on the CML varied considerably by State. In general, farms not on the mail list tended to be small in acreage, production, and sales of agricultural products. Farm operations were missed for various reasons, including the possibility that the operation started after the mail list was developed, the operation was so small that it did not appear in any agricultural related source lists, or the operation was erroneously classified as a nonfarm prior to mail out.

The NML consisted of 12,821 tracts. The NML was used with the CML in multiple frame estimation to represent all farming operations in all States, except Alaska. It was financially and logistically unfeasible to maintain an area frame in Alaska due to its vast land mass and relatively sparse agriculture.

## **Sources**

NASS built and improved the list frame by obtaining outside source lists. List sources included various State and Federal government lists, producer association lists, seed grower lists, pesticide applicator lists, veterinarian lists, marketing association lists, and a variety of other agricultural related lists.

NASS also obtained special commodity lists to address specific list deficiencies. These outside source lists were matched to the NASS list using record linkage programs. Most names on newly acquired lists were already on the NASS list, but records not on the NASS list were treated as potential farms until NASS could confirm their existence as a qualifying farm. Staff in NASS field offices routinely contacted these potential farms to determine whether there was agricultural activity.

For the 2007 Census of Agriculture, NASS made a concerted effort to work with CBOs not only to improve list coverage for minorities but also to increase census awareness and participation.

## Agricultural Identification Survey

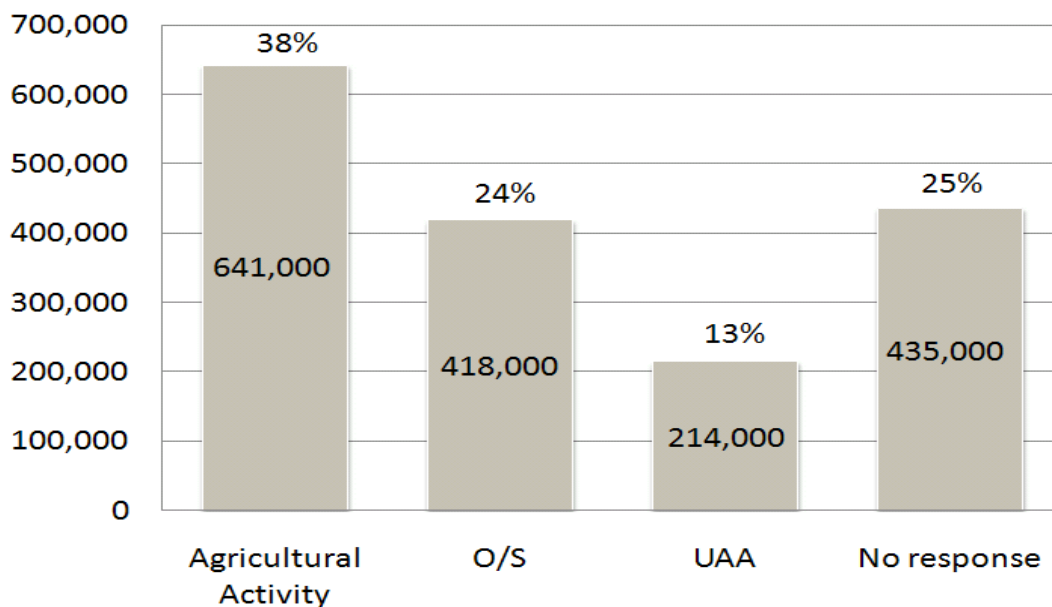
For the 2007 census, the Agricultural Identification Survey (AIS) was used to screen list records before the final CML. Beginning in November 2004, NASS conducted the first of a series of four Agricultural Identification Surveys that eventually screened approximately 1.7 million potential farms, before placing them on the CML. These records were typically mailed a four-page report form with a nonresponse follow-up mailing. The final and largest AIS was extracted on November 19, 2006 and mailed on January 2, 2007. The AIS form was designed to screen out respondents who did not have any agricultural acreage, production, Federal farm program payments, or the potential for future agricultural sales.

Of the 1.7 million records included in the entire series of screeners, there were 641,000 operations that indicated agricultural activity that were added to the CML. Approximately 418,000 names were confirmed as out of scope (O/S) and were excluded from the CML.

Names returned as Undeliverable As Addressed (UAA) totaled just over 214,000 and were excluded from further census mailings. The remaining approximately 435,000 names did not respond and were included in the final CML.

Graph 3. **Agricultural Identification Survey**

### Agricultural Identification Survey Results



## Record Unduplication and Address Quality

During the spring and summer of 2007, NASS prepared the records that would ultimately be included in the 2007 Census Mail List (CML). The field offices improved name and address quality and removed duplication both within their State and across the U.S. They identified records with special operating arrangements that needed special treatment either during the census data collection or during the census analysis.

Because of the process of building and maintaining the NASS List Sampling Frame (LSF), duplication was sometimes inadvertently, introduced onto the frame. To minimize the duplication, each field office's list sampling frame was unduplicated using probabilistic record linkage techniques. This process brought together records with the same Social Security Number (SSN), Employee Identification Number (EIN), and phone number together for field office personnel to review. In addition to these records, records with similar names and addresses were brought together for review. The processing and review were done just before the CML was compiled in the summer of 2007.

In addition to removing duplication within each State, an attempt was also made to identify duplication across States. The cross State duplication for the 2007 census was more sophisticated than cross State duplication checks in previous censuses. In the past, potential duplicates were identified based on common SSNs, EINs, or phone numbers. For 2007, potential duplicates were also identified based on common name and addresses. The potential cross State duplicates were also reviewed by field office personnel.

NASS undertook another effort to ensure that addresses for its records were as complete and accurate as possible. In August 2007, NASS contracted with infoUSA to provide data conversion and mail list processing services. These services included processing the entire NASS list frame through the NCOA, LACS, and field office personnel reviewed the output of this work for accuracy.

A number of records on the NASS list frame had missing or invalid phone numbers. These records were matched against a nationally available phone database to obtain as many phone numbers as possible. This match process was done just before the mail list was pulled in the summer of 2007.

Headquarters personnel created a number of reports that field offices could review to identify and correct potential problems prior to the pull of the final 2007 CML. These reports generated errors that were classified as critical or warning errors. The critical error reports included the following types of records:

- Records with multiple people associated with the same operation (only one person should report data for the same operation);
- Records with no person name or operation name;
- Records with a city or ZIP code that was not a valid US Postal Service place/zip combination;
- Indian Reservation records that were not marked;
- Records that did not have a county code;
- Records with a foreign address that were not marked;
- Records that were marked as Institutional, research, experimental, and American Indian reservation farms, but did not meet the criteria for the final 2007 CML;
- Potential farm records that are identified as partnership, multiple operation, or special handling arrangements; and
- Active records with both the farm and agbusiness flags equal to 0.

The warning error reports included the following types of records:

- Records with a city, State, and ZIP Code, but no address;
- Records with a person name that contained two or more contiguous numbers;
- Records with an operation name that contained two or more contiguous numbers; and
- Records with agricultural data indicating that the record may have been agbusiness that was on the final 2007 CML.

### Finalizing the Census Mail List

NASS had budgeted for a CML of approximately 3.2 million records. Analyses and projections by early 2007 indicated that the number of CML eligible records may be over 3.4 millions. Consequently, NASS developed procedures to trim the CML using data mining. During the summer of 2007, the NASS field offices aggressively reviewed the CML eligible records and about 55,000 records were trimmed in eight States.

The official CML was established on September 1, 2007. The list contained 3,194,373 records. There were 2,198,410 records that were thought to meet the NASS farm definition and 995,963 potential farm records, which included AIS nonrespondents, other records added to the CML by the NASS field offices, and late adds to the CML that were not included in any previous AIS or State screening survey.

**Table 3.1 Census Mail List, 2007 Census of Agriculture**

Breakdown by mail list status	Number of records
Total	3,194,373
Active farm records	2,224,262
Potential farm records	825,698
Farms previously inactive	51,236
CRP only	93,177

## PRINTING AND LABELING OF REPORTING FORMS

### Printing of Report Forms and Supporting Materials

NASS contracted through the U.S. Census Bureau's National Processing Center (NPC) in Jeffersonville, IN with commercial printers to print report forms, letters, information sheets, mailout and return envelopes, and other enumeration materials. The contractors printed the various forms and assembled mailout packets for the initial and follow-up mailings using written specifications provided by NASS and NPC. Quality control was conducted at the printing plants by NPC, NASS, and Government Printing Office (GPO) quality control personnel. Completed packets were shipped to the NPC warehouse in Jeffersonville, IN for final preparation (essentially ink-jetting mailing labels and postal order sort) and mailout. Quantities of commercially printed report forms and supporting materials are provided in Table 3-2.

**Table 3-2. Quantities of Commercially Printed Mailout Materials (excludes Alaska)**

Designation	Description	Quantity
<b>Information Sheets and Form Letters:</b>		
07-A01(I), 07-A02(I), and A03(I)	Instruction sheets – Regions 1 – 7	7,418,800
07-A01(L1) and (L1A)	Initial and Undeliverable as Addressed (UAA) mailout letters	3,800,300
07-A01(L3)and 07-A01(L4)	Follow-up letters	3,514,500
<b>Envelopes:</b>		
07-A7.1, (P), and (MU); 07-A7.2; 07-A7.2/3(P) and (MU); 07-A7.3; 07-A7(UAA), P, and MU; 07-A7(GR), P, and MU; 07-A7(BL), P, and MU; 07-A7(NML)	Outgoing envelopes, including partners, multi-units, UAAs, general request, and blanks	7,545,000
07-A8(L), 07-A8(S), 07-A8(NML), and 07-A8(BL)	Return envelopes	7,514,700
<b>Report Forms:</b>		
07-A0100	National report form	1,297,500
07-A0201 through A0207	Regionalized report forms	7,541,900

Note: Special multi-unit letters and flyers were printed by NPC.

## Mailing Packets Preparation

Mailing packet contents for the initial mailout in December 2007 are shown in Table 3-3.

**Table 3-3. Summary of Mailing Packages for the Initial Mailout**

Type	Report form	Information sheet	Outgoing envelope	Return envelope	Cover letter
Regionalized	07-A0201 thru 02-A0207	07-A02(I) 07-A03(I)	07-A7.1	07-A8(L)	07-A01(L1)
Multi-units	07-A0201 thru 07-A0207	07-A02(I) 07-A03(I)	07-A7.1(MU)	07-A8(L)	07-A01(L1)
Partners	07-A0201 thru 07-A0207	07-A02(I) 07-A02(I)	07-A7.1(P)	07-A8(L)	07-A01(L1)
National	07-A0100	07-A01(I)	07-A7.1	07-A8(S)	07-A01(L1)
Multi-units	07-A0100	07-A01(I)	07-A7.1(MU)	07-A8(S)	07-A01(L1)
Partners	07-A0100	07-A01(I)	07-A7.1(P)	07-A8(S)	07-A01(L1)

## Quality Control

The contractors printed and assembled the 2007 Census of Agriculture mailing packets to specifications supplied by NASS and NPC. NASS staff along with a Government Printing Office specialist and teams of two or three NPC quality control (QC) personnel made on-site inspections at each contractor's printing facility when the forms and packets were being printed and assembled. Report forms and envelopes were subject to a visual and quality assurance (QA) equipment review to make certain the printing was of acceptable quality using the ink density level stated in the contracts. Random samples of individual package types were opened and examined to ensure that the contractors adhered to the specifications.

The contractors boxed and shipped a sample of each day's production of assembled packets for QC review at NPC. NPC's QC staff specified that a day's QC sample size was determined by the total number of boxes of packets produced by that day's printing run. The QC staff then pulled three packets at random from each box for inspection. When an error was identified, the remainder of the packets in the box involved were checked as well. If similar or other errors were found, the packets from surrounding boxes also were inspected. Examples of errors discovered were: 1) missing staples, 2) volume shortages, 3) torn envelopes, and 4) defective adhesives. All detected errors had to be corrected before the packets were accepted and stored in the NPC warehouse prior to labeling and mailing.

## Labeling

The 2007 Census of Agriculture mail list was comprised of approximately 3.2 million names and addresses. NASS created a computerized mailing list, and then electronically transmitted the list to NPC. The NPC staff used the address list files to ink-jet the labels directly onto the report forms using high-speed printers. Mail labels for all mailings were printed by form number in ZIP Code sequence. As labels were printed for the initial and both follow-up mailings, NPC Quality Control (QC) clerks monitored the printing to ensure that the address and bar



codes were properly formatted, legible, and that the bar codes were visible through the envelope window. QC clerks checked the initial set of labels from each file for each form type from each printer. Quality control problems with any file resulted in partial or complete reprinting, as needed.

Labeling equipment at the NPC facility ink-jeted the labels through the open windows of the outgoing envelopes. The equipment labeled mailing packets at the rate of up to 10,000 per hour. QC staff inspected the labeling machines prior to each production run and checked at random intervals during each run to ensure that the labels were printed on the correct forms. Packets that were incorrectly or illegibly labeled were removed and replaced with valid packets.

The labeling for the initial mailout began in late September 2007 and was completed by the end of November 2007. NASS released approximately 3.2 million mailing packets to the U.S. Postal Service for mailing. The initial mailing from the NPC took place on December 28, 2007.



---

## Chapter 4. Public Awareness Program

---

	Page
The Challenge .....	32
Campaign Implementation.....	32
Research and Planning.....	32
Partnership .....	33
Public Relations .....	34
Paid Advertising.....	36
Producer Contact.....	36
Results.....	37
Census Numbers .....	37
Media Impressions.....	37
Awards and Accolades for Campaign Implementation and Results.....	38
Intangibles.....	38
Data Release.....	38
Goals .....	38
Data Release Events.....	39
Social Media .....	40
Outreach Materials.....	40
Results.....	41
Awards for Data Release .....	41
Group Honor Award .....	41

## **THE CHALLENGE**

Unlike NASS's ongoing sample survey programs, the success of the 5-year census depends upon the participation of all U.S. farmers and ranchers, not just the large producers who operate the majority of the land, produce the majority of the agricultural products and are responsible for the majority of sales. However, results from the 2002 Census of Agriculture indicated significant under-coverage of farms and ranches in the lowest value-of-sales categories. These categories include a high concentration of small farms and farms with disadvantaged or minority operators.

Traditionally, these individuals have been difficult for NASS and USDA to identify. Many of them do not avail themselves of USDA services such as loan, price support and conservation programs. They are also less likely than other farmers to join traditional farming organizations or to read farm-related magazines. In addition, they may face language barriers or cultural barriers such as mistrust of government or reluctance to share personal or financial information with a government entity.

In an effort to improve its coverage of previously undercounted populations, NASS worked to expand the 2007 census mailing list to include more minority, female, limited-resource, part-time and small farm operators. NASS reached out to several Community-Based Organizations (CBOs) and other groups that served these populations, seeking their assistance in identifying potential farm and ranch operators who might not have been counted in the past. As a result, the 2007 census mailing list included a total of 3,194,373 names and addresses or a 12.41 percent increase, compared to 2,841,788 in 2002.

In conducting the 2007 census, NASS engaged in an unprecedented level of public outreach effort to help all farmers and ranchers understand the importance and benefits of census participation, and to improve awareness and response among previously under-represented populations. Since the NASS staff only included two full-time public affairs specialists at the time, the agency engaged the services of Osborn & Barr Communications (O&B), a marketing and communications firm specializing in outreach to agricultural and rural audiences. O&B worked with NASS and developed and implemented a national census marketing plan that assisted NASS's 46 field offices with local outreach.

## **CAMPAIGN IMPLEMENTATION**

### **Research and Planning**

As a starting point, O&B conducted a series of focus groups on NASS's behalf, including three comprised of farmers and ranchers who represented various racial and ethnic groups, geographic areas, and types of agricultural production. The producer focus groups were held in Des Moines, Iowa, Fresno, California, and Waco, Texas, during August 2006.

The focus groups showed that many agricultural producers were cynical about the value and purpose of the census of agriculture and that this attitude aligned with their unfavorable attitudes towards USDA and government as a whole. Participants found it difficult to articulate the benefits of taking part in the census. Also, while they were familiar with USDA, participants exhibited little or no awareness of NASS.

Focus group participants were asked to evaluate various potential messages and images relating to the census. They responded most positively to the concepts of "benefiting one's community," "shaping the future," and "having a voice."

Based on this feedback, NASS made the strategic decision to focus not on generating awareness of NASS as a government agency, but rather on the creation of a census "brand." O&B assisted NASS in developing the various brand elements, including a distinct census logo and accompanying artwork, as well as themes and key messages.

All were designed to help counteract negative perceptions, create positive feelings, and emphasize the benefits of census participation to the agricultural industry, local communities, and farmers themselves.



## 2007 CENSUS OF AGRICULTURE

**YOUR VOICE. YOUR FUTURE. YOUR RESPONSIBILITY.**

The theme “Your Voice, Your Future, Your Responsibility,” along with supporting messages and artwork, was the driving force behind the census outreach campaign. NASS strove to reinforce brand identity in the minds of farmers and ranchers by using a variety of communications channels before, during, and after the data collection period. Through an integrated marketing communications campaign that incorporated partnership building, public relations, advertising, and Internet outreach, NASS sought to significantly increase response rates among targeted populations and generate a record number of responses overall.

The 2007 census marketing campaign was organized around four key strategies, which are described in the following subsections:

- Partnership
- Public Relations
- Paid Advertising
- Producer Contact

Another key element of the campaign was a dedicated census of agriculture website that was separate from, but linked to, NASS’s agency website. The site, [www.agcensus.usda.gov](http://www.agcensus.usda.gov), incorporated the 2007 census artwork and themes and was designed to be a user-friendly, “one-stop shop” for all census-related information. It included answers to frequently asked questions, sample census report forms, news releases, video and audio files, downloadable publicity materials and graphics, and links to past census results. All of NASS’s other census-related communications were designed to drive people back to the website for more information.

### **Partnership**

To promote the 2007 Census of Agriculture, NASS was faced with the challenge of reaching out to all types of farmers and ranchers nationwide, including many individuals with whom the agency and USDA had not previously communicated. Not only did NASS need to find these people, but the agency needed to establish some level of credibility among them. Therefore, NASS actively sought the cooperation and support of entities that had existing relationships with these farmers and ranchers and had already earned their trust and respect. Such organizations included farming and ranching associations, businesses that provide goods and services to the agricultural sector, and CBOs that serve small, minority and limited-resource farmers and ranchers.

NASS officials met with the leaders of more than 30 national farm organizations and agribusinesses. At these meetings, the NASS representative spoke about the importance of the Census of Agriculture to these entities and their constituents or customers, providing concrete examples wherever possible. NASS also provided a “promotional partners’ toolkit” of turnkey materials – including talking points, news releases, newsletter articles, and camera-ready artwork – that they could easily incorporate into their regular communications with their members or customers.

NASS also reached out to CBOs and other minority-serving institutions. These groups were critical partners, since they understand the needs and cultural nuances of the populations they served and had already earned their trust. Approximately six weeks before the census was mailed, NASS hosted a workshop attended by representatives from 32 CBOs nationwide. In addition to learning more about NASS and the census, participants worked together and developed preliminary partnering plans for promoting the census among their constituents. By the end of the workshop, 21 plans had been developed and many more were submitted in the days and months that followed.

Most of the CBO partnering plans focused on setting up “Census Days” across the country. At these events, local farmers and ranchers could receive hands-on assistance – in languages other than English, when necessary – with filling out their census forms. NASS provided up to \$2,500 in support for each of these local events, to be used for publicity, workshop materials, facility rental, refreshments, and related expenses. In total, 188 Census Days were conducted in 28 States.

In addition to partnering with farm organizations, agribusinesses and CBOs, NASS also worked closely with other agencies within the Department of Agriculture. NASS is a relatively small agency, with staff concentrated in Washington, DC, and 46 State-level offices. Meanwhile, several of NASS’s sister agencies deliver programs and services directly to farmers and therefore have a strong county-level presence. NASS worked with these agencies and provided their local personnel with the tools and information needed to answer farmers’ questions about the census. Outreach tactics included an educational webcast for county Extension agents and local USDA staff.

## **Public Relations**

NASS employed an aggressive public relations strategy as the cornerstone of NASS’s 2007 Census of Agriculture outreach campaign. Given the limited budget for Census communications, the goal was to generate as much free, or “earned,” media coverage as possible. Fortunately, U.S. agriculture has an active trade media, with numerous print, broadcast, and online outlets dedicated to reporting news for and about the farming industry. NASS definitely benefited from having ongoing working relationships with many of these media outlets and with professional media organizations such as the National Association of Farm Broadcasting (NAFB) and the American Agricultural Editors’ Association. NASS drew on these contacts for assistance in promoting the 2007 census nationwide. However, the agency also needed to look beyond the traditional farm media because it also sought non-traditional audiences.

A primary challenge was maintaining a consistent national message and “brand” for the census, while meeting the field offices’ needs for flexibility and customization. Since NASS’s field offices are staffed by statisticians rather than public affairs specialists, it was also important that they had turnkey, easy-to-use tools to help them communicate effectively. From customizable news releases, to radio public service announcements, to sample newsletter articles and letters to the editor, all materials were designed to ensure that the field offices could effectively deliver the census message to local media and that media outlets could easily carry the message on to their farming and ranching audiences.

Following are some of the specific tools and tactics NASS deployed as part of its public relations strategy.

**News Releases** – News releases were timed to coincide with a variety of events, including holidays, planting and harvesting seasons, and census milestones and deadlines. To increase the opportunity for media pick-up, some news releases were issued not just in print, but also in audio and video formats. All national-level materials were distributed electronically and posted to the census website for download. At the State level, NASS field offices customized the news releases with locally relevant information before distributing them to their own media contacts.

To broaden its media reach, NASS utilized external services for production and distribution of certain releases. For instance:

- To reach Spanish-speaking audiences, NASS disseminated news releases via Hispanic PR Wire, a service that reached more than 2,000 Spanish-language publications across the United States.
- Since most U.S. farmers cite radio as their primary source of daily information, NASS collaborated with the NAFB's News Service to produce and distribute audio news releases, in MP3 format, to hundreds of radio broadcasters nationwide.
- To improve visibility in small media outlets, including rural, daily and weekly newspapers, NASS distributed print-ready feature news stories – also called mat releases – through the North American Précis Syndicate.

Finally, NASS used O&B's services to produce and distribute a video news release that aired on local news stations and on several syndicated and cable television programs.

**Radio Public Service Announcements** – Given the prevalence of radio use in rural America, radio public service announcements (PSAs) were an important element of the census campaign. NASS and O&B created several 30- and 60-second PSAs that were distributed to broadcast outlets and posted on the census website for download. Many stations donated airtime and ran the spots free of charge.

- To put a more local face on the census, a series of PSAs featured individual State secretaries of agriculture discussing the importance of the census to the rural communities in their respective States. These were distributed prior to the census mailing.
- During the data collection period, NASS distributed national PSAs featuring Baxter Black, a nationally known “cowboy poet” and humorist.
- After the census response deadline, NASS distributed PSAs featuring Ed Schafer, who had just taken over as the new U.S. Secretary of Agriculture. He thanked the farmers and ranchers who had already responded to the census and gave a final reminder to those who had not yet responded.
- To reach non-English-speaking audiences, NASS also distributed PSAs in Spanish and Navajo. The Spanish versions were produced in cooperation with the University of California and the Navajo spots were produced in cooperation with local leaders of the Navajo Nation, the largest American Indian tribe in the United States.

**Print Public Service Announcements** – To help meet the varying needs of print publications, NASS and O&B created a series of camera-ready print advertisements in various configurations and file formats that echoed the census theme and artwork. The ads were provided to NASS's 46 field offices for inclusion in local newspapers, magazines, and organization newsletters and were also posted on the census website for easy download and use.

**Letters to the Editor and Opinion Columns** – NASS and O&B created sample letters to the editor and opinion articles (op-eds) that could be customized by local agricultural leaders. These pieces were used by NASS field offices and partner organizations and published in a variety of local newspapers, trade publications, farm organization newsletters, and other outlets.

## **Paid Advertising**

Because certain target audiences were difficult to reach through partnership or public relations and budget constraints, NASS also employed a limited paid media strategy that was narrowly targeted to reach previously under-represented populations. Osborn & Barr's media buyers first analyzed these previous Census of Agriculture data to determine where there were high concentrations of minority farmers and where 2002 census response rates were low. Based on data, NASS created broad-based awareness about the census using a media mix of print, radio, and Internet advertising prior to the February 4, 2008 response deadline.

**Print Advertising** – To target advertising dollars most effectively, the print media mix included a combination of horizontal publications (those covering a variety of topics but focused on a specific State or geographical region), and vertical publications (those focused on a specific agricultural sector or topic but having more of a national reach). The horizontal publications were predominantly regional farming publications in areas with higher minority populations and/or historically low census response rates. The vertical publications were those targeted at lifestyle and hobby farmers, minority farmers, and beef and fruit producers.

**Radio Advertising** – Limited air time was purchased on rural and Spanish-speaking radio stations in the four top States with the highest concentrations of minority farmers: Texas, California, Florida, and Oklahoma. The radio ads provided a final “call to action” prior to the census response deadline. To trigger an emotional connection with listeners, they featured a dialogue between a father and a daughter, conveying that farmers' participation in the census will help ensure a brighter future for their community, their farm, and their own children.

**Internet Advertising** – NASS turned to Internet advertising during the data collection period primarily to reach organic and small farmers. Online outreach, via banner and pay-per-click advertisements, aimed to drive Web surfers to the census of agriculture website for more information. NASS ran banner ads on agriculture.com, one of the leading agricultural websites; Grower Magazine Online, a site targeted to fruit and vegetable growers with content in both Spanish and English; and OrganicGardening.com. In addition, NASS used pay-per-click advertising on Google and Yahoo, the top two Internet search engines, targeting people searching for information relating to minority farmers or hobby farming.

## **Producer Contact**

To further reinforce the census messages being disseminated through the media, partner organizations and other channels, NASS sought to establish a visible presence at the establishments and events that agricultural producers frequented. NASS created point-of-purchase materials, including brochures, posters, tent cards, counter displays, and window decals, all of which featured the census theme and artwork. NASS's 46 local field offices distributed these materials to local banks, retailers and grain elevators and other places where farmers conducted their day-to-day business. In addition, the materials were distributed at USDA's county-level service centers, where farmers went for local program support and assistance.

In addition, NASS had a visible presence at hundreds of national and local conferences, trade shows, and other agricultural events attended by farmers and agribusiness leaders. Display banners featured the census artwork and messaging and these elements were also incorporated into promotional literature and inexpensive, yet useful, giveaway items such as insulated can/bottle holders, memo pads, magnetic message boards, and pencils.

NASS representatives exhibited and spoke to groups ranging from the American Farm Bureau Federation (the nation's largest farm organization) to the National Beekeeping Federation, and from the National Congress of



American Indians to the American AgriWomen. These events provided the opportunity for more personal contact with farmers and farm-related organizations and an additional chance to reinforce the census messages being conveyed through a variety of other media.

## **RESULTS**

Like most organizations, NASS struggles to quantify the impact of its public relations efforts. However, a look at 2007 census results indicates that NASS's outreach to previously underrepresented populations yielded significant benefits, enabling us to do a much better job of reaching and counting small, minority and women farm operators.

### **Census Numbers**

The overall 2007 census response rate was 85.2 percent, which was on par with past censuses despite the overall decline in response rates for government surveys. Because of the expanded mailing list, the 2007 census generated a record number of usable responses, improving the quality of the data overall. Unfortunately, NASS could not calculate response rates among specific subgroups, including women and minority farmers, since the agency did not know census participants' demographic details when mailing out the census forms to them.

The 2007 census counted 2,204,792 farms in the United States. This represented a 4-percent increase from 2002 and indicated leveling off of a downward trend in U.S. farm numbers over the past 70 years. The results show that America's farm operators are becoming more diverse, with the increase in female and minority farm operators significantly outpacing the increase in farm operators overall. When compared to 2002, the 2007 census counted:

- 30 percent more farms with female principal operators;
- 10 percent more farms with principal operators of Spanish, Hispanic, or Latino origin;
- 124 percent more farms with American Indian or Alaska Native principal operators;
- 78 percent more farms with Asian operators;
- 64 percent more farms with principal operators of more than one race; and
- 5 percent more farms with Black or African American principal operators.

The 2007 results also showed significant growth in the number of farms in the lowest value-of-sales categories, including a 16-percent increase in the number of farms with sales of less than \$1,000. These lower sales categories included a high concentration of farms with disadvantaged or minority operators.

The changes in farm numbers were part of a normal cycle of new farms starting business and existing farms going out of business. However, procedural changes – including methodological improvements, expanded outreach, and list building activities – also appeared to have contributed to the growth in farm numbers, particularly among previously undercounted groups.

### **Media Impressions**

As far as quantifiable media coverage, NASS's public relations efforts generated more than 26 million media impressions (individuals who may have seen an article, heard something on the radio or in a podcast, watched something on television, or read something on a web page or blog), far surpassing the initial goal of 15 million impressions. This included coverage in magazines and newspapers generated via news releases, direct pitches and other means. This figure does not capture coverage provided in newsletters and other communications by partner organizations, nor does it capture radio or television coverage.

In addition to the free or “earned” media generated through public relations efforts, the limited print advertising purchased by NASS generated an additional 2.7 million print impressions in publications targeted to reach minority growers, low-response States and part-time or “hobby” farmers. The online banner and pay-per-click advertisements generated an additional 2.6 million impressions, with nearly 10,000 Web surfers clicking through for more information.

## **Awards and Accolades for Campaign Implementation and Results**

The U.S. Department of Agriculture cited NASS’s 2007 Census of Agriculture outreach efforts to minority, limited-resource and other underserved farmers and ranchers as one of the Department’s top civil rights accomplishments of 2008. These efforts also garnered accolades from the Rural Coalition, an alliance of regionally and culturally diverse organizations whose mission is to support small and minority farmers, farm workers, and rural communities. At its 30<sup>th</sup> anniversary gala, the organization presented NASS with a national award citing NASS’s “partnership and dedicated and invaluable service to CBOs and people.”

In addition, NASS’s efforts to brand the 2007 census garnered recognition from the National Agricultural Marketing Association (NAMA). In the 2008 “Best of NAMA” competition, NASS and Osborn & Barr were named first-place winners and national finalists in the Corporate Identity category for their census theme and accompanying artwork. NASS competed against major corporations for this award, which was the first for a government agency.

## **Intangibles**

Finally, while it is impossible to measure, one of the most important results of NASS’s 2007 Census of Agriculture outreach is the relationships that have been developed with key individuals and organizations. Community-based and minority-serving organizations, farm groups large and small, agricultural and mainstream media outlets, USDA employees nationwide, and farmers and ranchers of all types, races and income levels are now more aware of the census of agriculture and its importance to the entire agricultural sector.

The relationships that have been formed, the trust that has been built and the awareness that has been fostered will continue to yield dividends for NASS and the entire U.S. Department of Agriculture in the 2012 Census of Agriculture and beyond.

## **DATA RELEASE**

### **Goals**

Before and during the data collection phase of the 2007 census, NASS’s outreach efforts involved communicating to farmers, the media and other stakeholders about the importance of participating in the census of agriculture. The release of the results, on February 4, 2009, was the culmination of all prior marketing efforts which provided NASS with an opportunity to demonstrate the value of the census to all those who took part.

The release involved extensive planning and coordination by NASS’s Marketing and Information Services Office (MISO), in conjunction with the NASS Census Planning Branch and with the support of Osborn & Barr Communications.

The goals for the census data release included:

- Showing respondents how their participation in the census benefited them;
- Creating awareness of the vast wealth of information available from the census and how it could be accessed and used; and
- Highlighting particularly interesting and newsworthy information from the census in an attractive, easy-to-understand format.

To do this, NASS not only created a variety of publicity/informational materials, but held a national news event on the date of the data release and several smaller events in the months after the release.

## **Data Release Events**

For the first time in the history of NASS's responsibility for the census of agriculture, embargoed briefings were held the morning of the official data release on February 4, 2009 for the Secretary of Agriculture, his staff, and other USDA principals. A private briefing was held for the secretary to provide him with highlights of the census results and an opportunity to ask questions. Another invitation-only briefing was held for USDA principals that provided them with an overview of the key census findings. Both embargoed briefings followed strict security guidelines enforced by the Agricultural Statistics Board.

The data release event, which took place in USDA's Jefferson Auditorium on February 4, 2009, was aimed at both internal and external audiences. Internal audiences included NASS staff, departmental officials, and leaders and staff from many of NASS's sister USDA agencies. External audiences included representatives from many of the stakeholder organizations – including farm groups and community-based/minority-serving organizations – that had partnered with NASS to promote the census, as well congressional staff and the media.

The planning process for the event included refining key messages, creating attractive visuals and graphics to help support those messages, scripting and staging the event, assembling press kits, alerting the media and stakeholders, and engaging Obama Administration officials (who had taken office just weeks before) and helping them to understand the importance of the census.

The data release event was a great success. It was attended by approximately 350 people, including an excellent cross-section of stakeholders, USDA employees, and media. Many others watched the event online. Media coverage and attendee excitement were greatly boosted by the fact that Tom Vilsack led the speaker line-up, in one of his very first public appearances as Secretary of Agriculture.

In his remarks, Secretary Vilsack called the Census of Agriculture “a valuable tool that provides the general public with an accurate and comprehensive view of American agriculture. It's also a set of benchmarks against which this Department must measure and demonstrate its performance to agriculture and the taxpayer.”

Immediately following the event in the Jefferson Auditorium, Secretary Vilsack hosted a small press conference to answer questions from the members of the press attending the data release event. Later in the afternoon, a media audio bridge was held with NASS leadership (Administrator Cynthia Clark, Deputy Administrator Carol House, and Statistics Division Director Joseph Prusacki) to provide broadcasters from across the country an opportunity to call-in and ask questions about the census results. The media audio bridge was arranged through USDA's Broadcast, Media and Technology Center and moderated by USDA's Deputy Director of Communications Larry Quinn.

NASS also coordinated with USDA's Broadcast, Media and Technology Center to provide a video news release (VNR) highlighting the results of the 2007 Census of Agriculture. The VNR, titled “U.S. Farming Growing,

Becoming More Diverse,” incorporated clips of Secretary Vilsack’s speech. Shortly after the release event, USDA distributed the VNR via satellite feed to broadcasters around the country and hosted a link to the video in the newsrooms of the USDA, NASS, and census websites.

In conjunction with the Washington, DC, release event, NASS’s 46 field offices were encouraged to hold similar release events involving their State secretaries of agriculture and local media and stakeholder groups. To assist the field offices, MISO created a detailed planning kit that included everything from an event checklist to a sample media advisory.

In the weeks following the February 4 data release, NASS took advantage of other major meetings and conferences to generate additional awareness and coverage of the census results. The census was a major focus of the USDA’s Agricultural Outlook Forum, held February 26-27, 2009 in Arlington, Virginia. NASS also hosted a census session at the 2009 Commodity Classic, the joint trade show of the corn, sorghum, soybean, and wheat industries, held in Grapevine, Texas, March 4-6, 2009.

## **Social Media**

The release of the 2007 Census of Agriculture results also provided the perfect opportunity for NASS to venture into the emerging world of social media. The Marketing staff collaborated with members of the Internet Support Group to establish a NASS Twitter account and posted its first tweets during the data release event. With little to no publicity, NASS accumulated more than 1,500 followers on Twitter in the ensuing 18 months – making it one of the most successful USDA Twitter accounts.

NASS also took advantage of the opportunity to explore the possibilities of YouTube, another social media tool. The MISO staff coordinated with USDA’s Broadcast, Media and Technology Center to post a census video news release, “U.S. Farming Growing, Becoming More Diverse,” on the USDA YouTube channel. This provided another venue for the public to learn about the results of the 2007 Census of Agriculture.

## **Outreach Materials**

To further highlight census data and continue the momentum generated by the February 4 event, the MISO staff continued to create, release, and publicize Census-related informational products, including fact sheets and news releases highlighting key data and focusing on such topics as demographics, farm numbers, economics, specific sectors of agricultural production, and other issues of interest such as conservation and beginning farmers.

To enhance the news value of these products, the MISO staff tried to time their release to specific events or observances, for example issuing information about Black farmers during Black History Month, or releasing a fact sheet on pork production in conjunction with the World Pork Expo. In all more than 20 fact sheets were created that provide glimpses into the valuable information contained in the census of agriculture through December 2010.

MISO also worked closely with the Census Planning Branch to create new templates for the State, county, and ethnicity profiles to ensure a consistent look and feel with the other 2007 Census of Agriculture publications and products. As a result, NASS could produce packets or folders of complementary materials targeted at specific industries or geographic areas that were cohesive as a unit.

These packets were especially useful to the MISO staff when working with Secretary Vilsack’s speechwriters. Following the release of the 2007 Census of Agriculture results, MISO staff formed a close working relationship with the secretary’s speechwriters and provided them with key statistics to accompany the secretary on his travel and be incorporated into his speeches. The secretary was able to refer to the State and county profiles for background information on the state of the agriculture industry in the area he was visiting.

## **Results**

During the first half of February 2009, media coverage of the census release reached an approximate 10,190,191 circulation. Momentum was sustained throughout the year, with a total circulation of 40,036,215 as of September 30, 2009.

### **Awards for Data Release**

In the 2009 “Best of NAMA” competition, NASS and Osborn & Barr Communications were named merit winners and national finalists in the Events category for the February 4, 2009 roll-out of the census results. NASS’s entry highlighted how the release event was designed to show stakeholders the benefits of their participation in the census and to create interest in the wealth of census data available. Judges looked at the entire event, from planning and publicity, to audio-visual materials and signage, stakeholder and media outreach, and talking points and press kits. NASS competed against major corporations for this award.

### **Group Honor Award**

In October 2008, the Secretary of Agriculture presented a group honor award for excellence to the 2007 Census of Agriculture Edit Processing Team “for improving the 2007 Census of Agriculture edit process from design through implementation, resulting in better data quality, enhanced processing stability, and increased employee productivity.”



---

## Chapter 5. Data Collection

---

	Page
General Information.....	44
Agricultural Identification Survey .....	44
Marked Records for Unique Handling.....	44
Census Report Forms.....	44
2007 Census Regions.....	45
Initial Mailout and Follow-up Mailings.....	45
Background .....	45
Initial Mailout.....	46
Follow-up Mailings .....	46
Telephone Operations .....	47
Follow-up Activities .....	48
Background .....	48
Suspicious Out-of-Scope Follow-up .....	48
Advance Follow-up .....	48
Must Case Follow-up .....	48
Low Response County Follow-up.....	49
Data Capture .....	49
Citrus Caretaker Census.....	50
Background .....	50
List Building.....	50
Data Collection .....	50

## **GENERAL INFORMATION**

Data collection methodology for the 2007 Census of Agriculture in the 50 States was similar to that employed during the 2002 Census of Agriculture. Data collection was accomplished primarily by mailout/mailback, but was supplemented with Electronic Data Reporting (EDR) on the Internet, and personal enumeration. Personal interviewing involved the use of both Computer-Assisted Telephone Interviewing (CATI) and traditional face-to-face enumeration. NASDA enumerators under contract with NASS conducted the personal interviews with respondents.

Enumeration for censuses conducted in Puerto Rico, American Samoa, the Commonwealth of Northern Mariana Islands (CNMI), Guam, and the U.S. Virgin Island was done through personal interviewing by a field enumerator. See chapters 8 and 9 for details.

The U.S. Bureau of the Census, National Processing Center (NPC) in Jeffersonville, IN, under contract with NASS, carried out the mailout operations. The NPC mailed approximately 3.2 million census report forms in December 2007 and carried out two follow-up mailings to nonrespondents.

## **AGRICULTURAL IDENTIFICATION SURVEY**

For the 2007 census, the Agricultural Identification Survey (AIS) was used to screen list records before the final census mail list (CML). The final and largest AIS was mailed on January 2, 2007. The AIS form was designed to identify respondents who did not have any agricultural acreage, production, Federal farm payment program payments, or the potential for future agricultural sales. There were four AIS mailings between late 2004 through January 2007. (For the 2007 AIS information detail, see Chapter 3: Preparatory Operations, Agricultural Identification Survey section.)

## **MARKED RECORDS FOR UNIQUE HANDLING**

Prior to the initial mailout, NASS's field offices selected records from the census mail list that they were to be directly responsible for enumerating. These records were referred to as marked records. Records so identified included operations that had existing data collection agreements with the field offices, multi-report form census packages with 3 or more report forms, partnership operations with 7 or more partners, and 2007 Agricultural Resources Management Study (ARMS) survey records.

There were approximately 72,000 marked in the census that were labeled at NPC and shipped to the field offices for enumeration. The field offices enumerated the marked records via personal interviews, telephone interviews, or in some cases via mail from the field office. Marked records were excluded from the NPC initial mailout and both form follow-ups. Once enumerated, report forms for marked records were sent to NPC for data capture.

## **CENSUS REPORT FORMS**

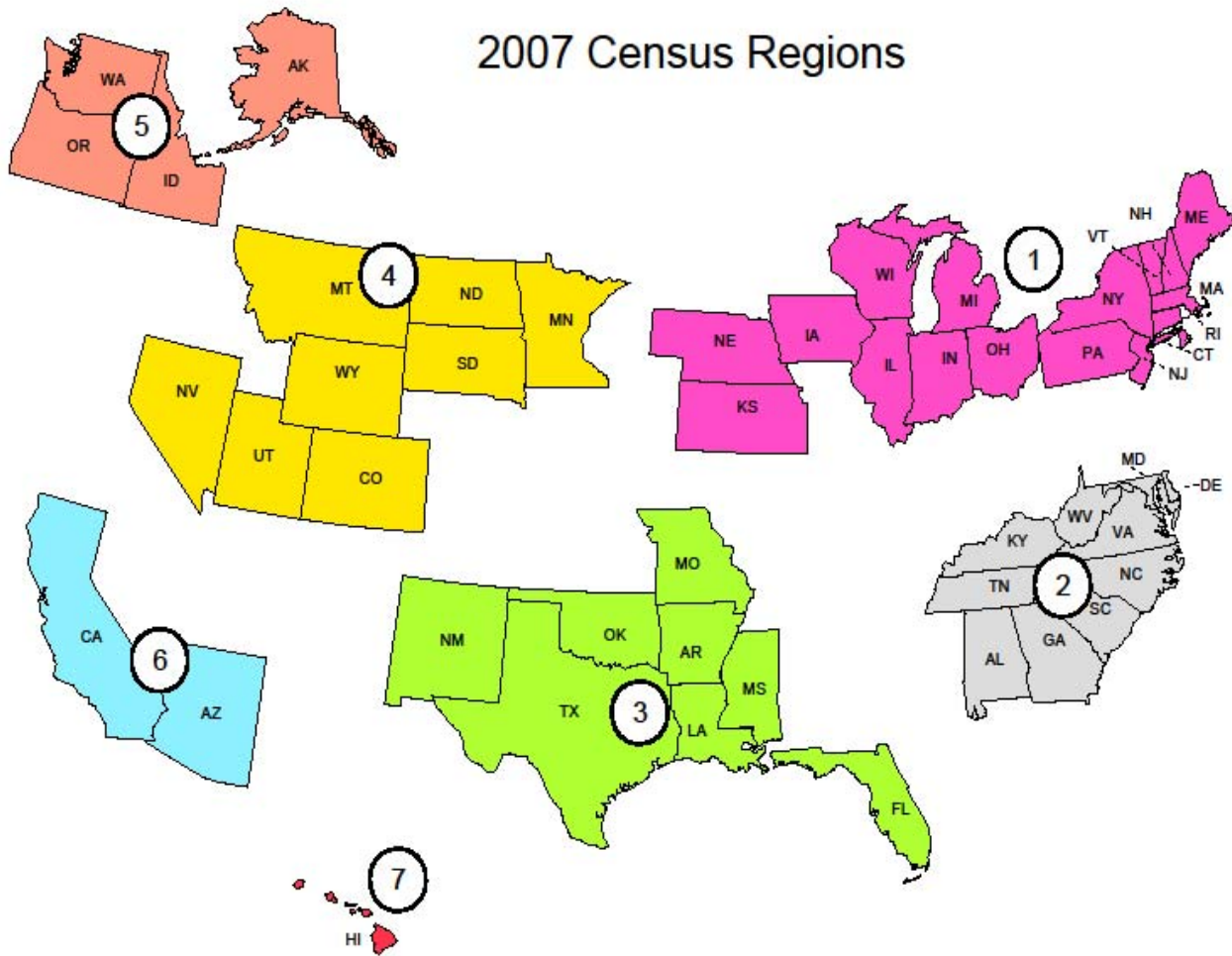
For the 2007 Census of Agriculture, the United States was divided into 7 separate regions. All name and address records on the final CML received a report form. The form number defines the region and version. There were two types of report forms used in the 2007 census – a regionalized report form with 7 versions and a national report form. Each of the 24-page regionalized report forms (07-A0201, 07-A0202, 07-A0203, 07-A0204, 07-A0205, 07-A0206, 07-A0207) were designed to facilitate reporting crops most commonly grown within the report form region.



The 12-page national report form (07-A0100) was designed for operations throughout the country thought to have few commodities. The national report form collected nearly the same information as the regional form, but it was formatted to fit on fewer pages. Sixteen percent of the census population received the national form and 84 percent received a regionalized form.

The States included in each regional grouping for 2007 are shown below.

Map 5. 2007 Census Regions



## INITIAL MAILOUT AND FOLLOW-UP MAILINGS

### Background

NASS contracted with NPC to handle the mailout, check-in, and data capture processes for the census. The NPC received assembled mail packets from a private print contractor, addressed the report forms using name and address files provided by NASS, and conducted the mailings of the initial postcard, and two follow-up report form mailings.

Each mail package contained a cover letter, instructions, a labeled census report form, and a return envelope. The report forms for partnership operations on the census mail list received special handling by printing the

partnership names on the front of the report form in addition to the name and address label. Also, two report forms going to the same address were combined in one outgoing mail package with a special cover letter explaining to respondents how to complete the report form for the individual operations.

The initial mailout cover letter asked the addressees to respond by February 4, 2008. Two follow-up mailings to nonrespondents were also conducted by NPC. The first follow-up was mailed in mid-February 2008 and involved 1.3 million report form packages. The second follow-up occurred in late March 2008 when 1 million nonrespondents were sent a third report form package.

**Table 5-1. Summary of 2007 Census of Agriculture Initial and Follow-up Mailouts**

Initial Mailout and Follow-up Mailings	Material sent	Mailing dates	Report Forms Mailed (1,000)
Initial Mailout	Letter and Report Form	December 28, 2007	3,122
Follow-up Mailouts:			
First	Letter and Report Form	February 12–26, 2008	1,302
Second	Letter and Report Form	March 24 –April 10, 2008	1,018

### Initial Mailout

The initial mailout took place December 28, 2007 and totaled 3.2 million packages. The mailout was managed by NASS staff in NPC and NPC staff. Standard A postage was used for most of the mailing packets, partnerships, and Hawaii addresses. First-class postage was used for packets addressed to multi-units (respondents with more than one operation) and for late/new mail list additions and remaining Undeliverable As Addressed (UAA) records. Quantities mailed by form type during the initial mailing are detailed in Appendix C.

### Follow-up Mailings

Two follow-up mailings to nonrespondents were also conducted by NPC. The first follow-up was mailed in mid-February 2008 and involved 1.3 million report forms. The second follow-up occurred in late March 2008 when 1 million nonrespondents were sent a third report form package.

Not all mail packets were deliverable as originally addressed. Mail packets that were Undeliverable As Addressed (UAA) were returned to the NPC. Those UAAs received from the post office with address corrections were checked-in, the addresses were updated, and they were included in the UAA re-mail operation. If no corrected address was available, electronic files of these UAAs were transferred to the field offices where field office resources were used to determine if a better address was available. If a better address was found, the address was corrected and a mail package was sent from the NPC facility in Indiana to the new address. Since this was the first time these respondents received the census report form, the mail packets included a special cover letter. A total of 98,000 UAAs were received during census processing and 21,000 of these were updated with corrected addresses and remailed.

Based on a total Census Mail List of approximately 3.2 million respondents, (report forms mailed/delivered to respondents) the disposition of the report forms based on check-in results is shown in Table 5-2.

**Table 5-2. Summary of Check-in Results: 2007**

Disposition	Records
Total census mail list	3,194,000
Total receipts	2,432,000
Responding farms	1,529,000
Responding nonfarms	900,000
Receipts not processed	3,000
Nonresponse	664,000
Undeliverable as addressed	98,000

## **TELEPHONE OPERATIONS**

Two kinds of telephone operations were used for the 2007 Census of Agriculture (except in Alaska), an Incoming Telephone Call (ITC) system was primary utilized in two NASS field offices, and Computer Assisted Telephone Interview instrument (CATI) was conducted in NASS field offices. The ITC system assisted respondents with questions throughout the census data collection period. The CATI instrument was developed with different branching for the regionalized and national report forms. CATI was used as an alternative face-to-face enumeration. When possible, ITC operators used the CATI instrument to complete report forms.

**Incoming Telephone Call System (ITC)** - As an alternative to written correspondence, a toll-free telephone number was established and printed on every report form. The intent of the toll-free number was to answer respondent questions and concerns pertaining to the census, and to assist respondents in completing their report forms. The majority of the calls were answered by enumerators in the Wyoming and Oklahoma NASS field offices. To assist ITC operators with respondent questions and requests, the ITC system provided guidance on how to handle the various types of calls, e.g. respondent's considered themselves as not involved in agriculture, refused to complete the report form, needed a replacement report form sent, etc.

If an ITC operator could not resolve the caller's question, a call back form was completed by the operator and e-mailed to the respective State field office census coordinator to use to follow-up on the respondent's call. The coordinator either called the respondent back or forwarded the request for a call back to another statistician in the office for resolution of complex issues. If the request for a call back was directed to an incorrect field office, it was e-mailed to the coordinator in the correct field office.

The ITC system also recorded the kind of calls received, e.g. "not in agriculture business", refusals, receipt of two or more report forms and not sure which to complete, needs a report form, name and address changes, etc. Each kind of call, along with the number of call backs, was entered into a data base and tallied. This information was available on the NASS intranet in the Management Information System reports. The ITC help line was operational throughout the entire data collection period.

**Computer-Assisted Telephone Interview Instrument (CATI)** - The CATI instrument was used, not only by ITC operators, but by the field offices throughout the data collection phase of the census. All CATI operations were conducted from the NASS field offices.

The field offices used CATI for Advanced Follow-up, "must" cases follow-up, and Low Response County (LRC) follow-up. The LRC phase was a combination of follow-up work in low response counties (i.e., those counties

with response rates below 75 percent) and for nonresponse follow-up work. CATI collected data were electronically transmitted by the field offices to the main census data file. The data then were processed electronically, eliminating the need for paper report forms.

Field office personnel were responsible for training CATI enumerator staff. Training included an introduction to the census, overview of the paper report form versions, and all special instructions. The CATI enumerator staff was given walk-through training during each different phase of data collection. Training included practice training modules that helped them get a feel for exactly how the CATI instrument worked. In addition, enumerators were given reference materials for use during the interviews to help guide them through various procedures. CATI interviewing began in February 2008 and continued through June of the same year.

## **FOLLOW-UP ACTIVITIES**

### **Background**

Operating concurrently with NPC's data collection efforts, the field offices targeted selected groups of census nonrespondents for enumeration. These efforts were referred to as:

- Suspicious Out of Scope (SOS) Follow-up
- Advance Follow-up (ADVFU);
- Must Case Follow-up; and
- Low Response County (LRC) Follow-up

### **Suspicious Out-of-Scope Follow-up**

The Suspicious Out-of-Scope Follow-up (SOS) phone follow-up began in February 2008 and was conducted through April 2008. This included records that mailed their form back with a response that they were no longer farming. These operations had previously reported agricultural information in another survey within a prescribed time period. Records that met the criteria were contacted with a special phone instrument that identified the reason for the phone call. During the phone enumeration, the respondent would either verify that they were not farming or provide the information over the phone.

### **Advance Follow-up**

The Advanced Follow-up (ADVFU) was conducted between February 2008 and April 2008. It focused on three groups of nonrespondents that included: 1) respondents least likely to respond because they were nonrespondents to the 1997 and 2002 Censuses of Agriculture, even though they may have responded to other NASS surveys; 2) respondents viewed as easy and quick interviews based on expected sales of zero, including respondents who received Conservation Reserve Program (CRP) payments and 3) respondents to the AIS with expected future sales; 4) and new records whose farm status was uncertain due to unsuccessful earlier screening attempts. The field offices conducted CATI and field enumeration for operations in their State. This phase was followed by Low Response County (LRC) follow-up to attempt to reach a minimum response rate of at least 75 percent in all counties. It was conducted by the field offices using CATI between March 2008 and June 2008.

### **Must Case Follow-up**

“Must” Case Follow-up was a very important component in ensuring a complete census. “Must” cases are known large operations, the absence of which may significantly affect the accuracy of census results. Each active “must” operation had to be enumerated, or if no longer in operation, their non-farm status documented. Because of the potential importance of “must” cases, they were not eligible for nonresponse weighting.

The field offices were responsible for enumerating or resolving all “must” cases. CATI calling of nonrespondent “must” cases was undertaken by field office staff between March 2008 and June 2008. Extensive efforts were made to contact and enumerate these operations.

“Must” cases not completed through CATI follow-up were eligible for replication, as long as replication was not used to complete the record for the 2002 census. Replication was accomplished by using existing control data and subsequently processing the record through the complex edit. Any data problems identified by the edit were resolved by the field office. “Must” records not enumerated by CATI and that could not be replicated due to lack of control data were completed using secondary sources. The total workload of replication was performed on approximately 169,000 records. The 169,000 “must” records fell into one of five groups. The first “must” group consisted of 46,000 records marked by the NASS field offices for personal enumeration rather than mailout and mailback enumeration. The second “must” group consisted of 4,000 specialized records including such operations as grazing associations, governmental units, research farms, college farms, etc. The third “must” group was characterized by location. All 3,000 records in Alaska and Rhode Island were identified as “must” records. Census statistics for these two States were based on responses to the CML only since nonresponse was not permitted. The last two groups consisted of a total of 116,000 records expected to have either a large number of acres in farm land or a large value of sales. Threshold levels were identified for each State. Field office “must” follow-up activities ended late June 2008.

### **Low Response County Follow-up**

The Low Response County (LRC) follow-up activity was used to increase the response rate in all counties to at least 75 percent. CATI was used for this follow-up activity. In early April 2008, NASS’s Sample Design Section identified nonresponse cases in counties with a response rate of less than 75 percent.

These names and addresses were transmitted electronically to the appropriate field office and incorporated into their CATI instrument. CATI follow-up activities began mid-April, 2008 and continued until all counties reached the 75 percent response rate. Automated procedures were employed to monitor the number of respondents needed and completed. When the required number of completions had been achieved for a given county, LRC activity was suspended.

### **DATA CAPTURE**

Data capture of the 2007 Census of Agriculture utilized the NPC iCADE software. This computer assisted data entry package accomplished data capture by keying the data from the scanned images of the report forms. This form of data capture provided an advantage over the Automated Data Capture technology utilized in the 2002 Census of Agriculture. The overall quality of the captured data was significantly higher than that realized in the previous census. Data capture error rates were well below 1 percent. After iCADE, the data were transmitted to NASS’s mainframe computer for subsequent processing steps.

Data capture was supplemented by the field offices use of CATI software to collect data for certain groups of nonrespondents. CATI data were electronically captured and submitted for processing via the NASS Local Area Network (LAN) to NASS’s mainframe computer. In addition, each field office used existing Blaise Data Capture software, modified for the content of the census report form, to key report form data, except CATI data that were not sent to NPC for scanning and data capture. The field offices were responsible for capturing respondent data that did not contain an NPC generated label, e.g. new adds, and completed report forms that could not be returned to NPC by their data capture close out date. For the most part, the CATI and Blaise data capture tools and activities were similar to those used during the 2002 Census of Agriculture.

## **CITRUS CARETAKER CENSUS**

### **Background**

During the summer and fall of 2007, NASS conducted a citrus caretaker census in Arizona, Florida, and Texas to obtain data on citrus production at the close of the growing season. The census was planned and managed by NASS headquarters staff and the NASS Florida field office.

The goal of the census was to obtain citrus data for groves operated by citrus caretakers in the most efficient and accurate way possible. Citrus producers whose groves were covered in the caretaker enumeration also received 2007 Census of Agriculture report forms in December so that they could report any other agricultural activities. Citrus caretakers were contacted because they, as a group, were the most knowledgeable source of the needed information. Grove owners, except for the caretakers that also own groves, whom are typically absentee owners, were not contacted because they typically have less knowledge about the day-to-day operations of the groves and are more difficult to contact.

### **List Building**

NASS field offices in Florida, Texas, and Arizona updated their list of citrus caretakers during the summer of 2007. This activity involved making contact with previously known and newly identified citrus grove caretakers based on information obtained from the 2002 Citrus Caretaker Census and recent NASS citrus surveys to:

- Explain the purpose of the 2007 Census of Agriculture and the reason for obtaining information from caretaker operations;
- Obtain cooperation for data collection; and
- Obtain/update the list of grove owners from the 2006-07 season.

The name and address of each identified grove owner, whose groves were managed by a caretaker, was researched to ensure that owner was listed on the field offices' list frame and linked to the correct caretaker. New names and links were added to the list frame as needed. Information was updated as appropriate. The Citrus Grover Owner Listing was used to facilitate this work.

### **Data Collection**

For the 2007 Citrus Caretaker Census, a special citrus caretaker report form (Form 07-A0215) was used to enumerate the caretakers. A citrus caretaker report form was completed for every caretaker that had any citrus operation during the 2006-2007 crop year. This report form was equivalent to the general regionalized form (07-A0200) used in the census and contained detailed production expense questions in addition to detailed citrus production questions. The citrus caretaker's report form was essentially a shorter version of the general regionalized report form used in the 2007 census. It contained only those questions from the report form that pertained to grove management operations. There was also an extra section in which to list any other agricultural operations a caretaker might have.

When the caretaker enumeration was completed, data were manually transcribed by the field offices onto keyable regionalized census report forms (07-A0203 for Florida and Texas; and 07-A0206 for Arizona). Once caretaker data were transcribed by the field offices from the citrus caretaker report forms to census report forms, the field offices sent them to NPC for keying. Data were computer edited along with other data. Caretaker census report forms were then sent back to field offices with other report forms for their State.

Data collection activities involved both NASS headquarters and field office staffs. Headquarters staff, with input from the field offices, developed the:

- Citrus Caretakers report form;
- Citrus Grove Owner listing;  
Interviewer's Manual; and
- Caretaker Pre-contact letter.

The Florida field office printed and shipped copies of the Citrus Grove Owner Listing forms and the Citrus Caretaker report form to the Arizona and Texas field offices by late May 2007. Individual field offices reproduced and addressed the pre-contact letters and, if needed, printed additional copies of the Citrus Grove Owners listing sheet.





---

## Chapter 6. Data Processing

---

	Page
Introduction .....	54
Automated Tracking and Control System.....	54
Receipt, Check-in, and Resolution of Associated Problems.....	54
Post Office Box Numbers and the 56-Packet Mechanical Sorter .....	55
Remove Contents and Sort .....	55
Problem Resolution of Returned Report Forms.....	57
Correspondence.....	57
Special Cases.....	57
2+ Processing .....	58
Data Capture.....	58
Overview .....	58
Implementation and Production .....	59
Transmission of Data and Images .....	59
Computer Processing.....	59
General Information .....	59
Format .....	60
Computer Edit .....	60
2007 Census of Agriculture System Flow.....	61
Disclosure Review .....	62

## **INTRODUCTION**

The 2007 census data processing system was designed to handle a large volume of paper report forms and a large number of report form images resulting from the use of key from image data capture. Components of the census data processing system included:

- 1) Receipt and check-in of respondent reported data;
- 2) Resolution of problems associated with returned report forms (e.g. blank forms, correspondence included, or 2 or more report forms (2+) returned for a single operation);
- 3) Data capture;
- 4) Editing of information on the report forms; and
- 5) Data tabulation and application of nondisclosure requirements.

Receipt and digitizing of data, review and resolution of data errors and inconsistencies, and data tabulation for the 2007 census were split between three locations.

Receipt of approximately 2.2 million respondent report forms and capturing the reported data was the responsibility of the National Processing Center (NPC) in Jeffersonville, IN. A significant portion of data review and resolution of data errors and inconsistencies was completed by NASS field offices. A portion of the data review and analysis effort was completed at NASS headquarters in Washington, DC. Data tabulation and application of the disclosure analysis was completed by headquarters staff and reviewed by the field offices.

## **AUTOMATED TRACKING AND CONTROL SYSTEM**

The Automated Tracking and Control System (ATAC) was developed to track each report form throughout each step of processing so NPC could control document handling during processing. ATAC served multiple purposes including the following:

- Identified the location of each report form during processing;
- Provided daily status updates to NASS headquarters;
- Produced batches for scanning; and
- Generated processing reports.

ATAC utilized an Oracle® database that contained records for all cases on the census of agriculture mail list. This database was populated initially from mail files provided by NPC's Document Services Branch and updated continuously from NASS headquarters. ATAC database records included both a unit location and status field. The initial unit location for all records was set to Unit 00 and Status 00. As the report forms were received in the mail from the respondents and moved through the processing pipeline, both the unit location and the status field were updated to reflect each report form's location and status. ATAC also was used to produce real time progress reports. ATAC tracked work through all of the NPC processing steps up to Integrated Computer Assisted Data Entry (iCADE).

## **RECEIPT, CHECK-IN, AND RESOLUTION OF ASSOCIATED PROBLEMS**

Activities conducted at the NPC included:

- Received and checked-in the report forms;
- Sorted the returned report forms and removed the contents from the envelopes;
- Evaluated and responded to census-related correspondence;
- Reviewed nonagricultural reports and 2+ reports;

- Scanned the report forms and created images;
- Captured reported data from scanned images using key from image and Optical Mark Recognition (OMR) technology;
- Transmitted data and image files to NASS headquarters; and
- Maintained electronic file cabinet of scanned report forms.

## **Post Office Box Numbers and the 56-Pocket Mechanical Sorter**

For the 2007 census, NASS replaced the 24-page sample and 20-page nonsample report forms used in the 2002 census with a 24-page regional report form with 7 regional versions and a 12-page national report form. The report forms were mailed out with return envelopes that had different post office box numbers printed on their postage-paid return envelopes. Separate post office boxes ensured the form types were separated by the post office before delivery to NPC. This allowed NPC to efficiently sort by type all census report forms. Upon receipt trays were visually scanned to ensure that each tray contained one type of report form. The trays were placed on rolling bins and moved to the 56-pocket mechanical sorter.

The sorter operator jogged the receipts to make certain they did not stick together and that the address barcodes were visible through the windows of the envelopes. The forms were then placed upside down facing the laser, and the sorter was started. The laser read the barcode showing through the address windows on the return envelopes which generated a check-in action and State sorted the forms into one of the pockets on the sorter.

The unit also received materials that were unable to be processed with automated check-in equipment (e.g. nonvisible barcodes, correspondence, etc.). Correspondence was scanned to determine whether it was a congressional, i.e., the return envelope or the letterhead was from a Senator or Member of the House of Representatives, or any representative of the legislative or executive branch of the Federal government, or if the letter was from a respondent and indicated that a copy had been sent to a Senator or Member of the House of Representatives. Congressional cases were referred to the unit supervisor. All other cases required the clerical staff to transcribe the State Person Operator Identification (StPOID) of the case on the upper right hand corner of the letter and staple the correspondence to the back of the report form. Correspondence was referred daily to the Problem Solving Unit

Agriculture census receipts (in envelope) and UAA (undeliverable as addressed) were checked in on the 56-pocket sorter. Check-in transmittal sheets were attached to each bin of work upon completion. The bins of mail receipts were then flowed in a “first in-first out” principle to the Remove Contents and Sort Unit. Report forms that could not be checked in and sorted on the 56-pocket mechanical sorter because the barcode was not visible through the window of the envelope or because the barcode could not be read by the laser were wanded or keyed in order to check them in. After completing check-in, the report forms were sent on to the Remove Contents and Sort Unit for further processing.

## **Remove Contents and Sort**

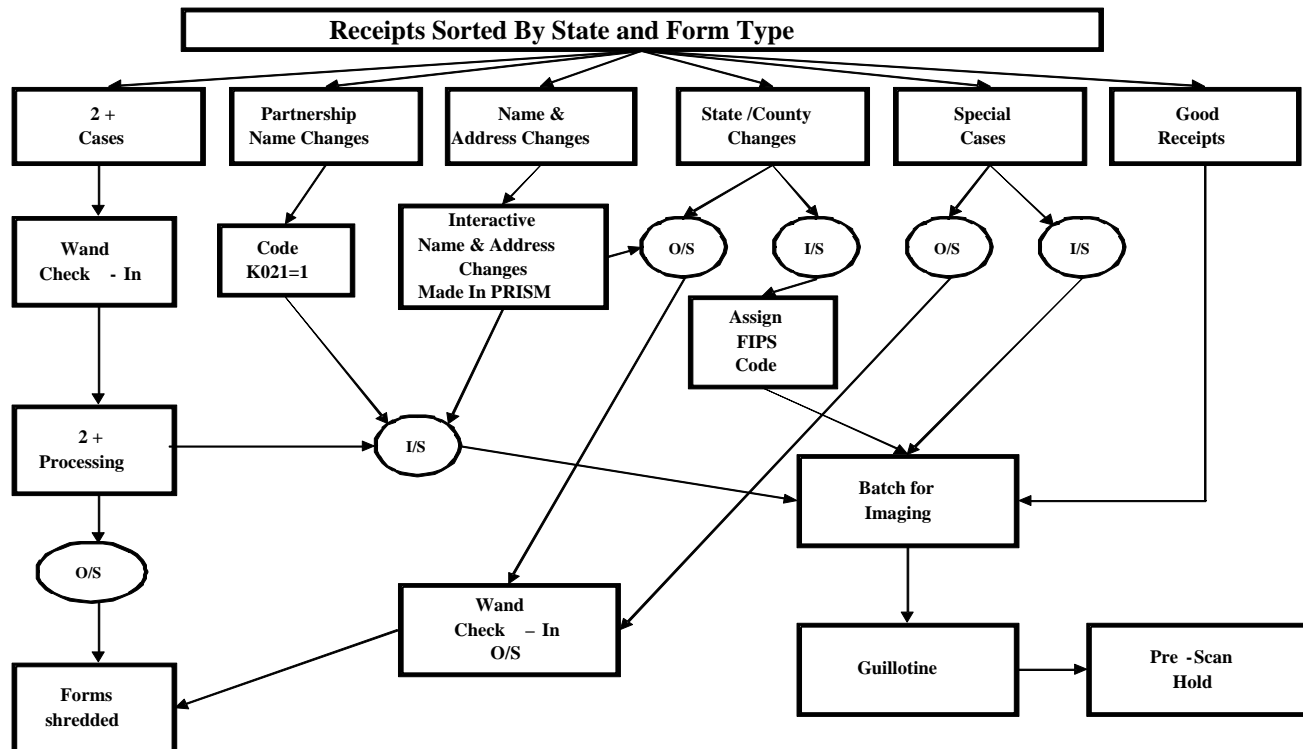
Once report forms were checked in, the contents were processed in the order in which they were received. The contents of each envelope were removed, examined, and sorted into the categories shown in Table 6-1.

**Table 6-1. Receipts Sort Categories: 2007**

Category	Description
2+ cases	Two or more reports received in the same envelope or reports received with additional identification (ID) numbers written in the 2+ boxes on the front of the report form.
Partnership name changes	Any report form with changes in the pre-printed partnership name area on the front of the report form.
Name & address changes	Any report form with changes to the mail label.
State/county changes	Any report form with a different principal county reported than the pre-printed county name in the mail label.
Special cases	Any report form with attached correspondence or remarks on the front or back, any report form returned blank, and damaged report forms that prevented scanning.
Good receipts	All report forms not meeting the above criteria.

Sorted work was maintained by State and was transmitted to the proper unit for further processing. The 2+ cases were sent to the Problem Solving Unit and the special cases to the Special Case Processing Unit. Good receipts were sent to the Batching Unit where they were wanded into scanning workunits and then sent to the Scanning Hold area awaiting scanning. Below is a graphic detailing the remove contents and sort process.

**Graph 6-1. 2007 Census of Agriculture - Remove Contents and Sort Process**



## PROBLEM RESOLUTION OF RETURNED REPORT FORMS

### Correspondence

Correspondence generated in processing the 2007 Census of Agriculture totaled approximately 11,000 pieces. The need for recontacting a respondent was determined by the staff in the NPC Problem Solving Unit where the correct form letter was assigned. The letters and forms needed for mailing the correspondence were printed and assembled in the mailout area.

### Special Cases

Special cases were report forms identified in the Remove Contents and Sort Unit that had attached correspondence, remarks on the front or back, were blank, or reports that were determined to be unscannable. The special case processing staff reviewed the report forms and attached materials using a condition action table based procedure. The use of this procedure resulted in the clerks determining if the special case was in-scope of the census of agriculture and the form was ready for imaging and data capture or if the respondent did not meet the farm definition and was out of scope of the census. Of the approximately 330,000 special cases processed, 34 percent were in-scope, 63 percent were out-of-scope of the census, and 3 percent were referred for additional processing such as correspondence or telephoning the respondent.

**Table 6-2. Special Cases Disposition: 2007**

Priority groups	Disposition
In-Scope (I/S)	Batched for imaging
2+ cases	Ag. Problem solving
REM, R-AG, or R-LL <sup>1</sup>	Ag. Problem solving
Form letter assigned	Ag. Problem solving
Correspondence analyst	NASS agriculture analyst
Successor, partnership, or claims filed	Ag. Problem solving
Out-of-Scope (O/S)	O/S wandering within unit
Conservation Reserve Program (CRP) and Wetlands Reserve Program (WRP)	Hold in unit

<sup>1</sup>A case was coded REM when attached correspondence conflicted with data reported on the form; code R-AG indicated doubt about farm status, or that the place was a partnership, but the name of the senior partner was not provided; code R-LL indicated that some land was rented out, but that crops were reported.

## **2+ Processing**

2+ cases were identified in the Remove Contents and Sort Unit and occurred when:

- Two or more report forms were mailed to the same individual;
- Two or more report forms were mailed to different individuals involved in the same operation; and
- Unrelated report forms were mailed to an accountant or a bank trust manager who returned multiple report forms together in the same envelope.

All 2+ cases were reviewed by the staff in the Problem Solving Unit to determine whether they involved a single or multiple farm operation, and to ensure that all related report forms were checked-in and the records and farms were properly linked within the census mail file.

The clerical staff performing 2+ processing had to determine whether all the report forms involved in a specific 2+ folder had to be linked to prevent duplication of data. If so, did all the forms received together represent the same operation? Clerks interactively assigned linkage codes to each report form ID that required linking. A primary-linkage code was assigned to the report form that had been completed by the respondent while a secondary-linkage code was assigned to any duplicate reports returned by the respondent. Approximately 50,000 cases were resolved during 2007 Census processing at the NPC.

## **DATA CAPTURE**

### **Overview**

The 2007 Census of Agriculture data capture operation utilized the iCADE software. The goals of iCADE were the following:

- Capture a higher volume of data faster and more efficiently than previous censuses;
- Improve the level of quality of captured data from the previous census; and
- Increase access to respondent reported data.

This form of data capture provided a significant advantage over the previous Automated Data Capture (ADC) technology utilized during the 2002 Census of Agriculture. The iCADE system proved to be a cost-efficient and time saving method of data capture. All report forms returned to NPC were immediately checked in, using bar codes printed on the mailing label, and removed from follow up mailings. Forms with any data were scanned and an image was made of each page of a report form. Optical Mark Recognition (OMR) was used to capture categorical responses and to identify the other answer zones in which some type of mark was present. The images were presented to the keying staff and any data were entered electronically.

During the preliminary phases of census planning, several tests were made to ensure that iCADE and imaging would in fact be a better approach. Throughout the development process, several tests were undertaken to ensure that imaging would capture and transmit the volume of report forms necessary for the census and meet the goals of tracking and cost effectiveness.

## **Implementation and Production**

Production was scheduled to begin early January 2008. Planning for the clerical operations occurred during the summer of 2007. These preparations included, but were not limited to, developing the requirements for pre-scanning and post scanning operations. Operational units to meet these needs were staffed mid-December 2007. To achieve a smooth flowing operation, the following clerical units were established:

- Check-in – Receipt and sorting of report forms from the postal service;
- Open and Sort – Sorted forms were forwarded to open and sort from check-in. Forms were removed from the envelopes and the contents were reviewed and sorted into good receipts or a special case category;
- Clerical Special Handling – This operation involved both the Special Case Processing and Problem Solving Units. These units reviewed report forms identified in the Open and Sort Unit with a high probability of being out of scope (O/S) – not meeting the definition of a farm – of the census of agriculture. Scope determinations were made and only those cases determined to be in-scope (I/S) – meeting the definition of a farm – were sent to data capture. The Problem Solving Unit was also responsible for repairing report forms rejected from data capture because they were determined to be unscannable;
- Batch for Imaging – Batching clerks batched in-scope forms into scanning batches of 30 forms. Bins of batched work were taken to the guillotine area, where the left spine was guillotined from the forms. After guillotining, batches were placed in pre-scan hold;
- Post-scan Hold – After scanning, batches were held for 3 days in post-scan hold, and then sent to be shredded after confirmation was received that data and images were successfully transmitted; and
- Pre-scan Hold – The pre-scan hold area had steel shelving for batches by State and form type. Batches from guillotining were removed from the bins and placed on the shelving.

## **Transmission of Data and Images**

A computer program was designed to electronically transmit completed data and image files from NPC to a remote server at the USDA, National Information Technology Center (NITC). From NITC, the images were swept into the NASS image file cabinet and made available to the NASS field offices. Respondent entries captured by the iCADE system were transmitted as American Standard Code for Information Interchange (ASCII) files separate from the image files. Data file transmission was synchronized to occur with the image file transmission. Data transmissions were programmed to take place four times each day and image files were transmitted, when available, every 20 minutes throughout the day.

## **COMPUTER PROCESSING**

### **General Information**

After data were captured via the iCADE system and delivered to NITC along with the corresponding images, the data were formatted and edited. The data from each report form were edited, item-by-item, in a comprehensive check for consistency and reasonableness. During the edit, the computer corrected erroneous or inconsistent items, supplied missing data based on similar farms in the same county, and assigned any classification codes required.

## Format

Computer processing began with the format program. This program converted the data records into a series of fixed and variable portions. Historical data for individual items were added at this time and were compared to the reported data for completeness and reasonableness. The format program also carried the flags set during data entry to the formatted records and set new flags for any problems identified during the formatting cycle.

## Computer Edit

Computer editing was the automated process of checking and reviewing reported data to make it consistent and reasonable within the report form. The complex edit and imputation programs were designed to carry out hundreds of individual edit checks on each census record.

Prior to submission to the complex edit, formatted data files were sorted by State. The data from each record were subjected to a detailed, item-by item, computer edit. This edit:

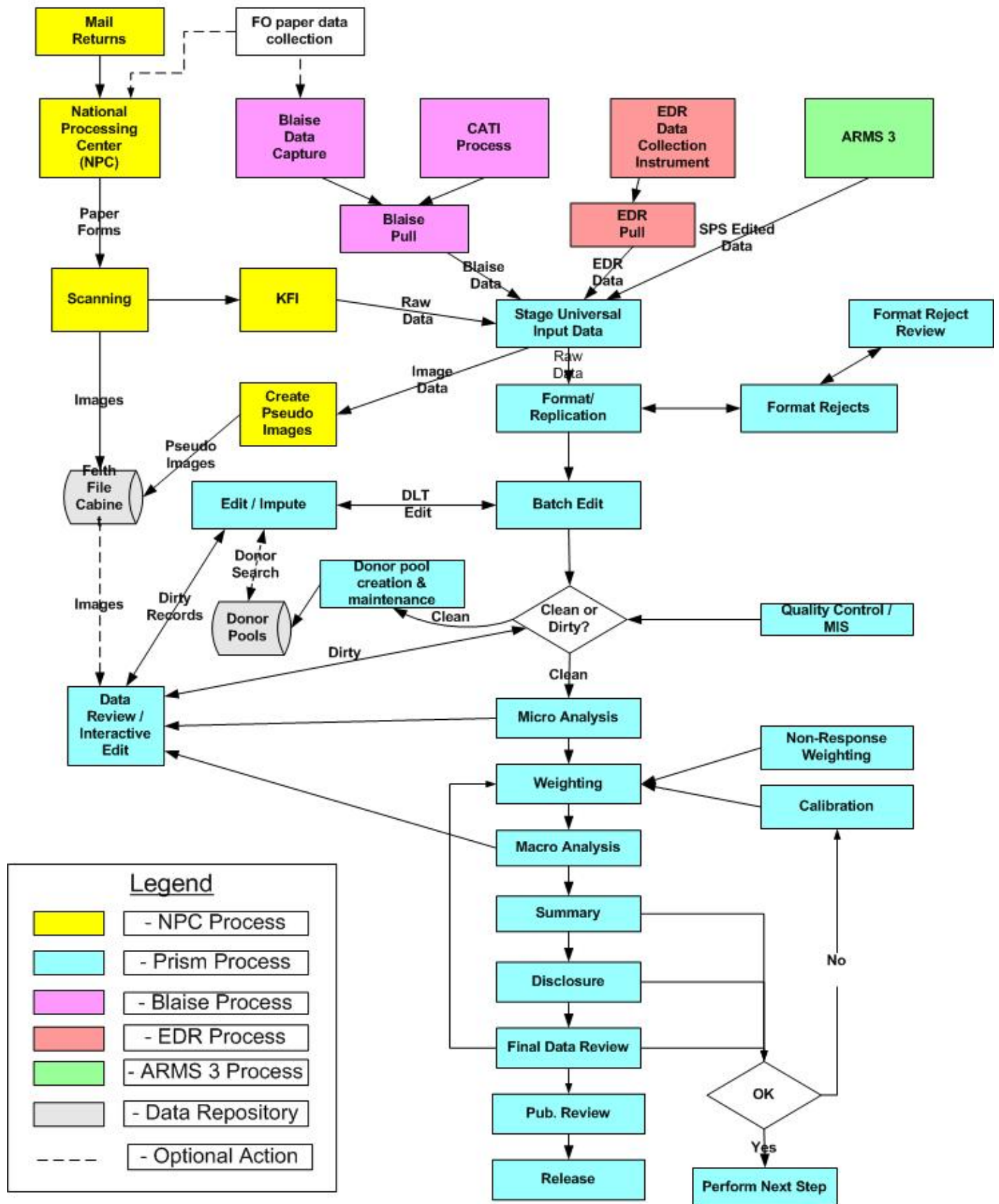
- Determined whether each record represented an agricultural operation meeting the census farm definition and deleted out-of-scope operations from the file;
- Assigned farm classification codes needed for tabulating the data, including size of farm, tenure, product sales, type of organization, and (NAICS);
- Identified nonsample farms representing farms that met the certainty criteria for each State, and converted these records to sample records;
- Checked consistency between and within sections of each record;
- Checked for reasonable relationships between and among data items, values for various sizes of farms, and combinations of commodities; and
- Checked that geographic, legal, and physical constraints were met.

The computer edit operation also imputed missing data for farms in the census files. Whenever possible, edit imputations, deletions, and changes were based on other data in the same record, or for some items on historical information from the previous census. Other missing items were calculated based on reported quantities and average commodity prices in the same State. When these methods could not be employed, the imputation program used information reported by another, similar farm operation in a nearby geographic area. Data records that failed to meet the census farm definition, or that had undergone substantial computer generated changes to the data were reviewed to ensure the data had been keyed correctly and/or that the changes were justified. Below is a graphic detailing the 2007 Census of Agriculture System Flow.



Graph 6.2. 2007 Census of Agriculture System Flow

### 2007 Census of Agriculture System Flow



## Disclosure Review

After tabulation and review of the aggregates, a comprehensive disclosure review was conducted. Under Title 7, United States Code (see Appendix A), NASS is obligated to withhold, any total that would reveal an individual's information or allow it to be closely estimated by the public. Cell suppression was used to protect the cells that were determined to be sensitive to a disclosure of information. Farm counts are not considered sensitive and are not subject to disclosure.

Based on agency standards, data cells were determined to be sensitive to a disclosure of information if they violated either of two criteria. First, the threshold rule was violated if the data cell contained less than three operations. For example, if only one farmer produced turkeys in a county, NASS could not publish the county total for turkey inventory without disclosing that individual's information. Second, a dominance rule was violated if the distribution of the data within the cell allowed a data user to estimate any respondent's data too closely. For example, if there are many farmers producing turkeys in a county and some of them were large enough to dominate the cell total, NASS could not publish the county total for turkey inventory without risking disclosing an individual respondent's data. In both of these situations, the data were suppressed and a "(D)" was placed in the cell in the census publication table. These data cells were referred to as primary suppressions.

Since most items were summed to marginal totals, primary suppressions within these summation relationships were protected by ensuring that there were additional suppressions within the linear relationship that provided adequate protection for the primary. A detailed computer routine selected additional data cells for suppression to ensure all primary suppressions were properly protected in all linear relationships in all tables. These data cells were referred to as complementary suppressions. These cells were not themselves sensitive to a disclosure but were suppressed to protect other primary suppressions. A "(D)" was also placed in the cell of the census publication table. This situation is referred to as a complementary suppression.

Field office analysts reviewed all complementary suppressions to ensure no cells had been withheld that were vital to the data users. In instances where complimentary suppressions were deemed critically important to a State or county, analysts requested an override and a different complement was chosen.

---

## Chapter 7. Data Quality

---

	Page
Introduction.....	64
2007 Nonresponse Adjustment.....	64
2007 Coverage Adjustment.....	65
Sampling Errors Associated with the Nonresponse and Coverage Adjustments .....	67
Coverage Error.....	67
Census Nonresponse Error.....	68
Respondent Error .....	68
Processing Error .....	68
Item Nonresponse .....	69
Matching Error.....	69
Classification Error .....	69

## **INTRODUCTION**

An important objective of the 2007 Census of Agriculture was to provide data with a high level of quality. In conducting the 2007 Census of Agriculture, efforts were expended to provide quality assurance measures in all processes. Extensive efforts were made to compile a complete and accurate mail list for the census, to elicit response to the census, to design an understandable report form with clear instructions, to minimize processing efforts through the use of quality control measures, to reduce matching error associated with the coverage adjustment procedure, and to minimize error associated with identification of a respondent as a farm operation (referred to as classification error).

However, every census of survey has the potential for error in its processes. These errors impact the quality of the data estimates. When feasible, measurements of these errors are used to make adjustments to the census or survey estimates. Measurements and assessments of census error are also developed to provide information for assessing the quality of the data and for evaluation the census processes. In the 2007 Census of Agriculture, statistical programs were implemented to provide adjustments for incompleteness of the list used to solicit response to the census and for nonresponse to the mail solicitation. Measurements of the quality of the adjusted estimates were also calculated. These measures are a component of census sampling error as sampling procedures were used in the adjustment process. Additionally, census error is composed of non-sampling errors such as respondent and enumerator error, processing error, item response error, matching error, and classification error.

This chapter discusses the adjustments that were made for census mail list (CML) coverage and for nonresponse to the census mail data collection request. It provides discussion of the sampling errors and nonsampling errors associated with the census adjusted estimates.

## **2007 NONRESPONSE ADJUSTMENT**

Whole farm nonresponse adjustments were necessary because some farm operators did not respond to the census, despite numerous attempts to contact them. Statistical estimation procedures were used to account for these census mail list (CML) nonrespondents. The objectives of the nonresponse adjustments included estimating the number of in-scope records (farms) included in the total number of nonrespondents of a similar size and type by weighting of reporting farms of that size and type. This procedure was intended to account for those farms that failed to return a report form. These procedures were applied in all States, except Alaska and Rhode Island where staff were required to submit data for every record on the CML due to the low level of farming operations in these States. Large or unique farms (“must” records) for which a report was required (and thus given a nonresponse weight of one) were exempt from this weighting procedure. These farms received intensive follow-ups. Data were imputed for the record if all follow-up contacts failed (rather than using the nonresponse weighting procedure).

After census data collection was completed, all CML records in a State were put into mutually exclusive weighting groups based on a list of farm characteristics known at the time of mailout and the census response status of the record. Data mining techniques systematically checked selected variables, identifying those groups with differences in response rates that were statistically significant. The algorithm took one characteristic, divided all names into two groups, and checked for statistical significance between the response rates of the two groups. If a significant difference was found, these groups became permanent and the next characteristic would be examined within those two groups. If the response rate between two groups was not statistically significant, the groups were rejoined and the next characteristic was tested. This stepwise process continued until all characteristics were checked and no further statistical significance was found. Since the “path” taken by the algorithm was driven by an individual State’s response pattern, the final breakout of nonresponse groups was customized for the State.

Within each nonresponse group, the percent of responding in-scope farms was computed. This rate was applied to the count of nonresponding farms with those characteristics to estimate the number of total in-scope nonrespondents. Weights were placed on in-scope farms in each nonresponse group to account for all nonresponding farms in that group.

This procedure was applied to all of the nonresponse groups except the one that consisted primarily of records who were included on the CML but had not responded to data collection efforts either during CML development activities or during the census data collection phase. The estimate of in-scope records (farms) within this group was not reliable. To get a more reliable estimate, NASS conducted a nonresponse follow-up activity. After scheduled census data collection efforts were completed, a target sample of 5,000 records from the population was selected from across all States. These 5,000 records were personally interviewed by NASS staff to determine if they were indeed in-scope records (farms) or out-of scope records (nonfarms). Each record fell into one of these two categories. The percent of in-scope records was used to form the weight for this group.

## **2007 COVERAGE ADJUSTMENT**

NASS used its area frame with the CML in a dual-frame estimation procedure to measure the number of farms in the population and key characteristics of those farms. Area frame segments were enumerated using field enumerators who personally visited the tract operators within a segment.

Because field enumeration was significantly more expensive than other modes of data collection, NASS's area frame sample allocation was designed to generate reliable estimates at the State, regional, and U.S. level. Therefore, in order to produce estimates that represented all farms at the county level, NASS used an allocation process known as "calibration" to distribute the dual-frame estimates across counties.

Once all CML and NML (Not-on-the Mail List) data were collected, NASS analysts went through an extensive process to generate adjusted estimates. The weights of the CML respondents had been previously adjusted to account for all of the CML nonrespondents, referred to as list plus nonresponse (CML+NR). Simultaneously, NASS summarized the NML tract records to generate State-level NML survey estimates. These two pieces were combined in a dual-frame estimation procedure to form State estimates of totals that represented all farms. These estimates are annotated as [(CML+NR) +NML]. The State-level totals for these variables were summed to yield national totals.

The whole farm nonresponse and list undercoverage record weighting processes were initially applied at the State level to produce adjusted estimates of farm numbers for 64 different categories of 8 characteristics of the farm operation or the farm operator plus land in farms:

- Value of agricultural sales (8);
- Age (2);
- Female (2);
- Race (4);
- Hispanic origin of principal farm operator; (2);
- Total number of farms and land in farms (2);
- Four sales categories for each of 10 major commodities (grains, oilseeds, dry beans, and dry peas; cattle and calves; poultry and eggs; milk and other dairy products from cows; fruits, tree nuts, and berries; hogs and pigs; nursery, greenhouse, floriculture, and sod; vegetables, melons, potatoes, and sweet potatoes; other crops and hay; and cotton and cottonseed)(40); and
- Farm type groups (7).

The national-level adjusted estimates were smoothed across States to get initial State farm operation coverage targets because State-level farm-count estimates based on this two-piece formula sometimes had unacceptably high State-level standard errors and apparent biases. This often occurs when estimating a rare item using a general purpose survey.

The smoothing process examined the proportion of the total 2007 June Agricultural Survey (JAS) estimate attributable to the NML, for each of the 65 variables in each State and the U.S. The smoothed NML value for each of the 65 variables in a given State was calculated as the product of the State-level NML value and the weighted average of the ratios of the NML for a given variable in the State to the overall NML in the State and the NML for the given variable in the U.S. to the overall NML in the U.S. The weighting factor was chosen to minimize the mean square error under a random effects model with the control that the sum of the State smoothed NML values was equal to the total NML estimate for each of the 65 variables. This methodology effectively draws the State-level NML undercoverage proportions of the JAS toward the national estimate of undercoverage with the most extreme values adjusted the most. The smoothed NML values for each variable were added to the (CML + NR) totals to form calibration targets for each variable. Subject-matter experts in headquarters reviewed all targets.

However, these State estimates were general purpose in that they did not provide any control over expected levels of commodity production of the farm operation. As a result of this limitation, the procedures could have over adjusted or under adjusted for commodity production. To address this, a second set of variables were added to the calibration algorithm, known as commodity coverage targets. These targets were commodity totals from administrative sources or from NASS surveys of non-farm populations (e.g. USDA's Farm Service Agency program data, Agricultural Marketing Service market orders, livestock slaughter data, cotton ginning data). The introduction of these commodity coverage targets strengthened the overall adjustment procedure by ensuring that major commodity totals remained within reasonable bounds of established benchmarks. Commodity coverage targets with acceptable ranges were established by subject-matter experts for each State with the New England States treated as a single State.

The calibration algorithm addressed farm operation undercoverage and commodity coverage concurrently. The algorithm was controlled by the 65 State farm operation coverage targets and the State commodity coverage targets. In order to ensure that the calibration process converged with so many constraints, it was desirable to provide some tolerance ranges for each target. Although full calibration to a single point estimate would assure that the weighted total among census respondents equaled its target for each calibration variable in either set, it was not always possible to calibrate to such a large number of target values while ensuring that farm weights were within a reasonable range and not less than one. Because of this and because calibration targets are estimates themselves subject to uncertainty, NASS allowed some tolerance in the determination of the adjusted weights. Rather than forcing the total for each calibration variable computed using the adjusted weights to equal a specific amount, NASS allowed the estimated total to fall within a narrow tolerance range. This tolerance strategy sometimes made it possible for the calibration algorithm to produce a set of satisfactory, adjusted weights that it would not have otherwise.

Ranges for the list farm operation coverage targets were determined differently from the commodity targets. The State target for number of farms had no tolerance range. The tolerance range for the 64 other State farm operation coverage targets was the estimated smoothed State total for the variable [(CML+NR)+NML] plus or minus one-half of one estimated standard error of NML estimate. This choice limited the cumulative deviation from the estimated total for a variable when State totals were summed to a U.S. level total. The commodity target tolerance ranges were determined by subject-matter experts, based on the amount of confidence in the source, and usually were less than plus or minus two percent of the target. Ranges were not necessarily symmetric around the target value.

Adjusted weights were obtained using truncated linear calibration which forced the final census record weights to fall in the interval [1,6]. Adjustments began with the nonresponse-adjusted weights and added a second stage weight to simultaneously satisfy all farm operation coverage and commodity coverage calibration targets. If a value within the tolerance range of any variable could not be achieved in a given State, the variable was removed as a target and the calibration algorithm was rerun. Additionally, the CML was assumed to be complete for very large and unique farms with their weight being controlled to 1 during the calibration adjustment process.

Weight computations in the nonresponse and final coverage calibration algorithms were performed to several decimals. Thus, the fully-adjusted weights were non-integer numbers. To insure that all subdomains for which NASS publishes summed to their grand total, fully-adjusted weights were integerized. This eliminated the need for rounding individual cell values and insured that marginal totals always added correctly to the grand total. As an example of how the integerization process worked, assume there were five census records in a county with final noninteger coverage weights of 2.2, for a total of 11. The integerization process randomly selected four of these records and rounded their final weight down to 2.0 and rounded the fifth record up to 3.0, for a total of 11.

The proportions of selected census data items that are due to coverage adjustments are displayed in the 2007 Census of Agriculture, Volume 1, Geographic Area Series, Part 51, Appendix A, Tables A and C. Some estimated coverage adjustments could be negative. The use of commodity targets in calibration indirectly exposed some duplication on the census list or over adjustment by the nonresponse algorithm resulting in negative coverage adjustments.

## **SAMPLING ERRORS ASSOCIATED WITH THE NONRESPONSE AND COVERAGE ADJUSTMENTS**

Sampling errors are introduced from the nonresponse and coverage adjustment procedures. This error was measureable. In conducting the 2007 Census of Agriculture, efforts were initiated to measure error associated with: 1) the adjustment for nonresponding census mail list (CML), 2) the coverage adjustment for farms not on the CML using the NML and calibration, and 3) the integerization process.

The 2007 Census of Agriculture process measured the error introduced by the nonresponse algorithm, the coverage algorithm, and integerization. The root mean squared error (RMSE) of an estimated data item from the census provides a measure of the error variation in the value of that estimated data item based on all possible outcomes of the census collection, including variants as to who was on the census list, who returned a census form, and which weights were chosen to be rounded up. The RMSE was used rather than the standard error because it could capture additional error arising from integerization and the potential for bias in the calibration targets. The RMSE is the square root of the sum of the weighted differences between the final recorded value and its expected value squared divided by the number of reports.

Table B, Reliability Estimates of U.S. Totals, in the 2007 Census of Agriculture, Volume 1, Geographic Area Series, Part 51, Appendix A, presents the fully adjusted total with the root mean squared error for selected items. The relative root mean squared error is obtained by dividing the root mean squared error by the value of the estimate and multiplying by 100. The table also includes the percent contribution to the mean squared error (the square of the root mean squared error) from nonresponse adjustment and from coverage adjustment.

## **COVERAGE ERROR**

The process of building and expanding the CML involved finding new list sources and checking for names not on the list. An automated processing system compared each new name to the existing CML names and “linked” like records for the purpose of preventing duplication. New names with strong links to a CML name were discarded and those with no links were added as potential farms. Names with weak links, possible matches, were reviewed by staff to determine whether the new name should be added. Despite this thorough review, some

new names may have been erroneously added or deleted. Additions could contribute to duplication (overcoverage) where as deletions could contribute to undercoverage. As a result, some names received more than one report form, and some farm operators did not receive a report form. Respondents were instructed to complete one form and return all forms so the duplication could be removed. An adjustment was made to compensate for list coverage.

## **CENSUS NONRESPONSE ERROR**

The response rate was an indicator of the quality of data collection. It was generally assumed that if a response rate was close to a full participation level of 100 percent, the potential for nonresponse bias was small. The response rate for the 2007 Census of Agriculture was 85.2 percent as compared with a response rate of 88.0 for the 2002 Census of Agriculture and 86.2 percent for the 1997 Census of Agriculture. There was no effort to measure nonresponse bias for the census. The census is, however, a data set that can be used to measure nonresponse bias in NASS surveys.

The response rate for the 2007 Census of Agriculture was calculated as the ratio of the total respondents after data collection was completed to the number of CML records after those that were undeliverable as addressed were removed.

## **RESPONDENT ERROR**

Incorrect or incomplete responses to the census report form or to the questions posed by an enumerator can introduce error into the census data. Steps were taken in the design and execution of the census of agriculture to reduce errors from respondent reporting. Poor instructions and ambiguous definitions lead to misreporting. Respondents may not remember accurately, may give rounded numbers, or may record an item in the wrong cell. To reduce reporting and recording errors, the report form was tested prior to the census using cognitive procedures. Detailed instructions for completing the report form were provided to each respondent. Questions were phrased as clearly as possible based on previous tests of the report form. Computer-assisted telephone interviewing software included immediate integrity checks of recorded responses so suspect data could be verified or corrected. In addition, each respondent's answers were checked for completeness and consistency by the complex edit and imputation system.

## **PROCESSING ERROR**

Processing of each census report form was another potential source of nonsampling error. All mail returns that included multiple reports, respondent remarks, or that were marked out of business and report forms with no reported data were sent to an analyst for verification and appropriate action. Integrity checks were performed by the imaging system and data transfer functions. Standard quality control procedures were in place that required that randomly selected batches of data keyed from image were re-entered by a different operator to verify the work and to evaluate the key entry operators. All systems and programs were thoroughly tested before going on-line and were monitored throughout the processing period.

Developing accurate processing methods was complicated by the complex structure of agriculture. Among the complexities are the many places to be included, the variety of arrangements under which farms are operated, the continuing changes in the relationship of operators to the farm operated, the expiration of leases and the initiation or renewal of leases, the problem of obtaining a complete list of agriculture operations, the difficulty of contacting and identifying some types of contractor/contractee relationships, the operator's absence from the farm during the data collection period, and the operator's opinion that part or all of the operation does not qualify and should not be included in the census. During data collection and processing of the census, all operations underwent a number of quality control checks to ensure results were as accurate as possible.



## **ITEM NONRESPONSE**

All item nonresponse actions provided another opportunity to introduce nonsampling errors. Regardless of whether it was previously reported data, administrative data, the nearest neighbor algorithm, or manually imputed by an analyst, some risk exists that the imputed value does not equal the actual value. Previously reported and administrative data were used only when they related to the census reference period. A new nearest neighbor was randomly selected for each incident to eliminate the chance of a consistent bias.

## **MATCHING ERROR**

Another chance for error came when comparing JAS tract operator names to the CML. Area operators whose names were not found on the CML were part of the measure of list incompleteness, or NML. Mistakes in determining overlap status resulted in overcounts (including a tract whose operator was on the CML) or undercounts (excluding a tract whose operator was not on the CML). All tracts determined to not be on the list were triple checked to eliminate, or at least minimize, any error. NML tract operators were mailed a report form printed in a different color. In order to attempt to identify duplication, all respondents who received multiple report forms were instructed to complete the CML version and return all forms so duplication could be removed.

## **CLASSIFICATION ERROR**

Classification error results when a response to the census is misclassified – either as a farm operation if it does not meet the definition or not as a farm operation when it meets the definition. The definition of a farm operation in the 2007 Census of Agriculture was an operation that had \$1,000 in agricultural sales or the potential for \$1,000 in agricultural sales. A Classification Error Study (CES) has historically been conducted after the census of agriculture. The objectives of a CES are to examine the procedures used to determine farm status (in-scope or out-of-scope) to see if they are producing accurate decisions, document the sources of errors resulting in overcounts and undercounts, and recommend strategies to eliminate them from future censuses. Census coverage error includes classification error and list incompleteness or duplication error. Historically, measures have indicated that the component of coverage due to classification is small. No attempt was made to incorporate this error measure in the coverage adjustment procedure for the 2007 Census of Agriculture. Prior to 1997, a list based re-interview sample of census respondents was used to measure classification error in the census – specifically the number of farms incorrectly classified as non-farms (undercount) and the number of duplicate farms (overcount).

Following the 1997 census, NASS conducted the CES for the 11 western States of Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming. The 1997 CES used information from JAS enumeration in lieu of re-interviews; estimates were based on the JAS. The 1997 CES results indicated a net undercount of 27,971 farms (non-farms incorrectly classified as farms minus duplicate farms and farms incorrectly classified as non-farms) in the eleven States. While the standard error of this estimate is not available to determine statistical significance, even if statistically significant, it represents a relatively small portion of the overall undercount.

Following the 2002 census, the CES similarly used an area-based approach that was conducted in all States. The 2002 CES matched census records to JAS records to identify the differences in farm status of an operation. The JAS area frame-based survey data were assumed to be truth and the estimates of misclassification (records which were incorrectly classified as farms or non-farms and duplicates) were based on this assumption. The 2002 CES results indicated a net overcount of 51,345 farms at the US level, with a standard error of 6,456. In this case, substantial resources were expended to estimate something relatively small. Estimates of overcount and undercount were computed but were not used to adjust totals. Results of the 2002 CES were documented in an internal NASS research report titled “Results from the 2002 Classification Error Study” dated April 2007.

For the 2007 Census of Agriculture, a classification error research study (CES) was conducted in five States (Arizona, Georgia, Minnesota, New York, and Washington.) Estimates of net error were not generated, as the CES was quality research and limited to the five States. Review of the 2002 CES indicated the assumption that the JAS was the truth was inappropriate and re-interviews were reinstated. The 2007 CES used data from the 2007 JAS and the 2007 census to examine farms incorrectly classified as nonfarms, nonfarms incorrectly classified as farms, and to examine records with significant discrepancies in reporting of land between the JAS and census reports. The overall objectives of the 2007 CES were to identify legitimate changes in operations and determine the source of potential errors in the data.

Records in these States in the 2007 JAS were matched to the 2007 census using probabilistic record linkage. From the set of matched records, three groups of interest were identified: 1) in-scope JAS records that were out-of-scope on the census, 2) census in-scope and JAS non-agricultural records, and 3) in-scope census and JAS records with acreage differences of more than 25 percent. Farms whose farm status was in disagreement were interviewed to determine which source was correct; a reason for the change of status on the census was recorded. For records with a discrepancy between the data reported on the 2007 JAS and the 2007 census forms, respondents were re-contacted and asked to verify their data and resolve the difference.

Results of the 2007 CES showed that true changes in size of operations between the JAS and census were rare. Most discrepancies in farm status were the result of errors in reporting with respondents indicating most often that the census data rather than the JAS data were correct, challenging the previous assumption that the JAS data were the truth and that the JAS enumeration provided complete coverage of the farm operations universe. Results of the 2007 CES will be used as input for redesign efforts for the JAS operational procedures and the 2012 census report form and instructions.

---

## Chapter 8. 2007 Puerto Rico Census of Agriculture

---

	Page
Introduction .....	72
Historical Background .....	72
Uses of Agriculture Census Data .....	72
Legal Authority and Special Agreement .....	73
Farm Definition .....	73
Census Methodology .....	73
Scope and Content .....	73
Reference Periods and Dates .....	73
Data Collection .....	74
Preparatory Operations .....	74
Interagency Working Group .....	74
Report Form .....	74
Major Data Changes .....	75
List Frame Development .....	76
Sample Design and Selection .....	76
Printing and Addressing Report Forms .....	77
Areas of Responsibility .....	77
Training .....	77
Reference Materials .....	78
Agricultural Extension Office Support .....	78
General Activities .....	78
Public Awareness Program .....	78
Data Collection .....	79
Data Processing .....	79
Estimation .....	80
Tabulation and Disclosure Analysis .....	80
Tabulations .....	80
Disclosure Analysis .....	80
Publication Program .....	81

## INTRODUCTION

### Historical Background

In 2007 the Puerto Rico Census of Agriculture was taken in accordance with a Cooperative Agreement signed by NASS, the Puerto Rico Department of Agriculture (PRDA), and the University of Puerto Rico Extension Service and was the Island's 16<sup>th</sup> census of agriculture. The Puerto Rico agriculture census continued to unfold from the every decennial population census to the current 5-year collection cycle as follows. Censuses prior to 1997 were taken by the U.S. Census Bureau. The responsibility was transferred to NASS by the 1997 Appropriation Act.

- **1910:** First Puerto Rico census of agriculture.
- **1910 through 1950:** Census of agriculture was taken every 10 years in conjunction with the decennial censuses.
- **1935:** A special census of Puerto Rico was taken by the Puerto Rican Reconstruction Administration.
- **1957:** An amendment was made to the law to include Puerto Rico in the 5 year census national census of agriculture.
- **1959:** First census under the 5 years census was taken separately from the 1960 decennial census.
- **1959 to 1974:** A census of agriculture was taken for the years ending in “4” and “9.”
- **1976:** Congress authorized the census of agriculture to be taken for **1978 and 1982** to adjust the data reference year to coincide with other economic censuses. This adjustment in timing established the agriculture census on a 5-year data collection cycle for the years ending in “2” and “7.”

Data for previous censuses in Puerto Rico had been collected on a fiscal year basis, rather than on a calendar year basis. The 1997 Census of Agriculture was the last one taken using this approach. Data were collected for a 12-month period beginning in July 1, 1997 and ending June 30, 1998. Because of that, the reference year on the publication was changed to 1998, to more accurately reflect the collection period. This was a change from the past practice of using the years “2” and “7” in the publication title.

To avoid this type of complication, and at the request of the local government agencies and other data users, the 2002 Census of Agriculture for Puerto Rico was the first taken on a calendar year basis, bringing the Puerto Rico census in line with the United States census. The 2007 census follows the same path as the 2002 census.

### Uses of Agriculture Census Data

The census of agriculture is the principal source of agricultural production data for Puerto Rico and is the only source of consistent, comparable data at the municipio level. Census data are used by:

- The Federal Government to administer programs, including relief efforts after hurricanes;
- Local governments to develop and change farm programs, measure the effects of these programs, benchmark their own data collection activities, and administer a variety of other programs. Also, to estimate damages to crops and livestock due to hurricanes, drought, and other natural disasters; and
- Private industry in planning production and distribution of its products, as well as in designing and implementing marketing programs aimed at the agricultural community.

## **Legal Authority and Special Agreement**

The census of agriculture is required by law under the “Census of Agriculture Act of 1997,” Public Law 105-113 (Title 7, U.S.C., Section 2204g). The law directs the Secretary of Agriculture to conduct a census of agriculture in 1997 and in every fifth year thereafter, covering the prior year. The census of agriculture includes each State, Puerto Rico, Guam, the U.S. Virgin Islands, and the Commonwealth of Northern Mariana Islands (CNMI). (See Appendix A for excerpts of Title 7 applicable to the agriculture census.)

The census data for Puerto Rico were collected in accordance with a Memorandum of Agreement approved by the Administrator of NASS and by the President of the Puerto Rico Planning Board. The census was conducted with the cooperation and assistance of the PRDA, the University of Puerto Rico, and the Cooperative State Research, Education, and Extension Service.

## **Farm Definition**

The statistics collected in the census relate to places with agricultural operations qualifying as farms according to the census definition. In Puerto Rico this included all places from which \$500 or more of agricultural products were produced and sold, or normally would have been sold, during the 12-month period between January 1, 2007 and December 31, 2007.

## **Census Methodology**

The 2007 Census of Agriculture for Puerto Rico was conducted using a multiple frame approach, consisting of a list frame and an area frame. The list frame was comprised of a list of all known farm operations. This list was compiled prior to the census, using the list of active farms from the 2002 Census of Agriculture, lists of farmers from the PRDA, plus names and addresses of farm operations identified through a screening of the area frame. Duplicate records, where one operation was included on more than one list, were identified and removed and a final list was developed with the goal of having every active farm operation included. Every address on this list, except for some special records which were enumerated person to person, was mailed a census report form. Those that did not respond to the first report form received a second report form through the mail. Enumerators from the Department of Agriculture and the Extension Service conducted a field follow-up to visit and enumerate operations that did not respond by mail.

## **Scope and Content**

The basis of the agriculture census was the individual operating unit, usually the individual farm. The census requested data on land, cuerdas (0.97122191 acre), and land use; crops, acres harvested, and production; irrigation, acres irrigated, type of equipment used, major source of water, and amount of water applied; livestock, poultry, aquaculture, and other animal specialties; organic production; practices; total value of sales (crops, livestock, and aquaculture); farm-related income; conservation program participation and crop insurance; type of organization; operator characteristics; fertilizers and agricultural chemicals used; production expenses; machinery and equipment; and hired farm workers, agregados, and sharecroppers.

## **Reference Periods and Dates**

The census requested land, land use, production, expenditure, farm labor, and sales data for the 12 months between January 1, 2007 and December 31, 2007. Data on inventory (livestock, poultry, and hogs), machinery and equipment, buildings and facilities, and number of hired farm workers, agregados, and sharecroppers were requested as of December 31, 2007.

## Data Collection

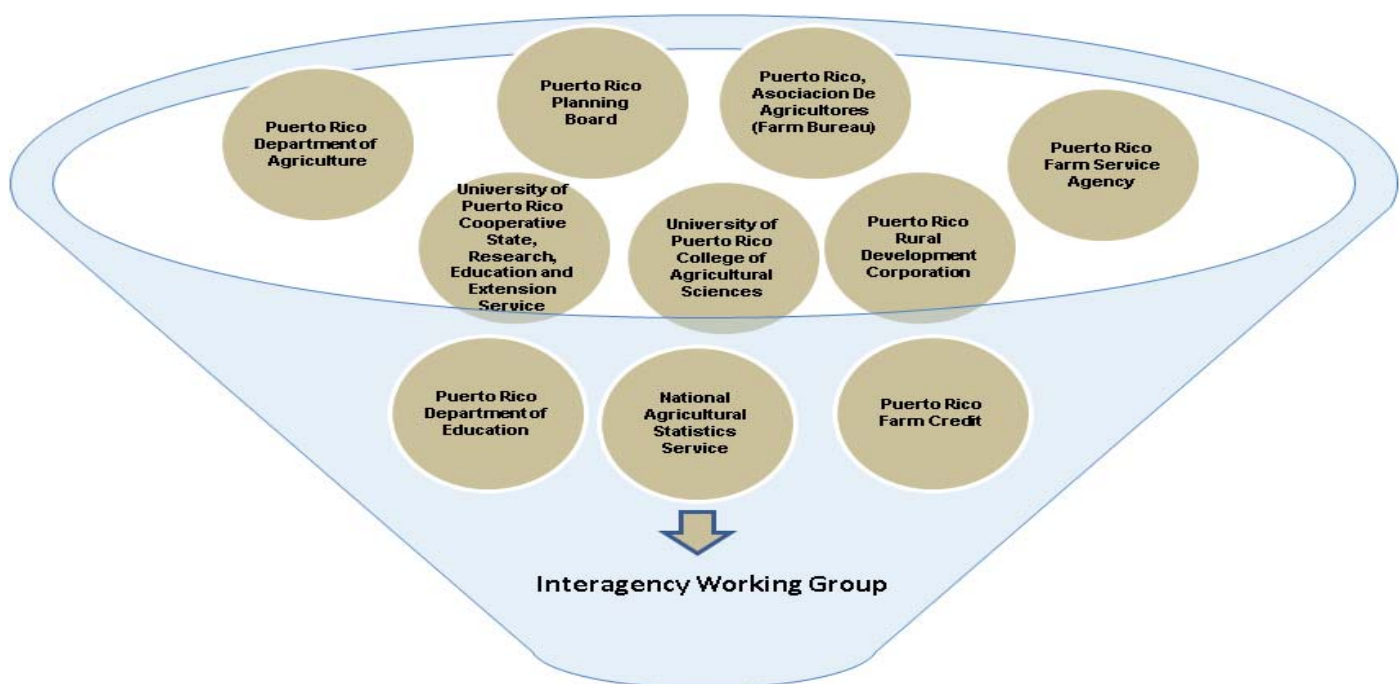
The 2007 Puerto Rico Census of Agriculture was primarily conducted by mail, with report forms sent to approximately 19,000 farm operators on the census mail list (CML) in December 2007. This mail list was supplemented by an area sample which accounted for farms Not-on-the Mail List (NML). A single version of the report form, in Spanish, was used for data collection. Enumerators from the Department of Agriculture and the Extension Service conducted a field follow-up effort to visit and enumerate operations that did not respond by mail.

## PREPARATORY OPERATIONS

### Interagency Working Group

The Puerto Rico Planning Board organized a committee composed of representatives of various agencies concerned with Puerto Rico agriculture to provide input to NASS on census issues affecting the island, such as special data needs or questions from the previous census which were not clearly understood by farmers. Offices and agencies represented on the committee were:

Graph 8. 2007 Puerto Rico Census of Agriculture - Interagency Working Group



Beginning in February 2006, NASS officials met with member agency and office representatives periodically and communicated with them on a continuing basis, to discuss plans for report form content and enumeration methodology.

### Report Form

The report form for the 2007 Census of Agriculture for Puerto Rico was prepared by NASS, in cooperation with the working group mentioned above. While similar to the report form used in 2002, changes were made to reflect changes in Puerto Rico's agriculture, to make the report form similar in scope to the U.S. report form, and to make it easier to complete. The report form was available in both English and Spanish with the information sheet only in Spanish.

## Major Data Changes

Based on feedback from data users, the following changes were made to the 2007 report form:

**Table 8-1. Data Changes to 2007 Report Form**

<b>Section</b>	<b>Change from 2002 report</b>
3 – Irrigation	Added – Amount of water used
4 – Conservation Programs and Crop Insurance	Added – New section
8 – Nursery and Greenhouse	Added – Pajon grass, total acres irrigated and quantity harvested to grass section.
8 – Nursery and Greenhouse	Added – Total square feet and total acres irrigated, and coffee trees
8 – Nursery and Greenhouse	Dropped – Vegetable, flowering seed, and tree seedling
9 – Vegetable and Melon	Added – Total acres harvested and irrigated
10 – Hydroponic Crops	Edited – Made separate from last census.
10 – Hydroponic Crops	Dropped – Peppers
11 – Fruit	Added – Total irrigated chironjas, and quenepas as separate items
12 – Root Crops	Added – Total acres harvested and irrigated and ginger root as separate item
13 – Other Crops	Added – New section
14 – Cattle and Calves	Dropped – Gross value of sales by weight class
15 – Poultry	Added – Guineas as separate item
16 – Hogs and Pigs	Edited – Added breeding item
16 – Hogs and Pigs	Dropped – Gross sales by age group
17 – Aquaculture	Added – Ornamental fish
17 – Aquaculture	Dropped – Gross value of sales by individual type
18 – Other Animals and Livestock Products	Dropped – Gross value of sales by individual species
20 – Organic Agriculture	Added – New section
21 – Federal and Commonwealth Agricultural Program Payments	Added – New section
23 – Production Expenses	Added – Cost of water used for irrigation and cost of professional services
28 – Practices	Added – New section
30 – Operator Characteristics	Added – Multiple operator and new demographics questions on race and ethnicity
	Dropped – Section on Sugar Cane as a major crop

For 2007, several items and phrases were revised to better serve the data users:

- Crayfish – renamed Prawns in the aquaculture section;
- Horticultural specialties – renamed Nursery, Greenhouse, Floriculture, Sod, and Seed Grown for Sale in 2007;
- Hydroponic sheds – in Machinery, Equipment and Building Section, added Greenhouses, e.g. Greenhouses/Hydroponic sheds; and
- Peppers – were erroneously called “peppers, hot” in 2002.

## List Frame Development

The mailing list for the 2007 Census of Agriculture in Puerto Rico was compiled prior to the census using the list of active farms from the 2002 census, the list of farmers from the Commonwealth Department of Agriculture, and names and addresses of farm operations identified through a screening of the area frame. Duplicate records were identified and removed from the list.

## Sample Design and Selection

In addition to mailing report forms to all farm operations on the census list, the agriculture census in Puerto Rico used an area frame sample to collect data and develop statistical estimates of agricultural operations at the municipio and Island levels. The purpose of the area sample was to account for farms not on the census list and farms not responding to the initial census data collection efforts.

Within each municipio, land was classified into five different strata based on land use or the amount of agricultural activity present. The strata were defined as:

- Land areas with dense agriculture;
- Sparse agriculture with few houses;
- Sparse agriculture with many houses;
- Cities with no agricultural activity; and
- Areas with no agriculture (such as parks and military installations).

Municipios were grouped together to form clusters based on agricultural similarity. Municipios with a large number of cuerdas of coffee in the previous census formed a cluster, as did municipios with large numbers of cattle and areas of pasture. Primary Sampling Units (PSUs) were created based on specific size requirements and permanent boundaries. An additional sampling enhancement involved the grouping of municipios with similar agriculture into nine clusters. Within each stratum and cluster, a random sample of PSUs was selected and then further subdivided into target sampling units called segments. Of approximately 7,500 segments available for sampling, 300 were selected into sample. Aerial photography and maps for the 300 segments were provided to support field data collection. All NML farms discovered within the 300 sampled segments were included in the area sample.



## Printing and Addressing Report Forms

Private contractors printed the report forms, envelopes, instructions sheet, and other enumeration materials and assembled the mailing packages before delivering them to the National Processing Center (NPC) in Jeffersonville, IN. The quantities of report forms and associated materials printed are shown in table 8-2.

Table 8-2. **Report Forms, Envelopes, Letters and Other Printed Enumeration Materials**

Form	Description	Quantity
07-A1(PR)SP	Report form (Spanish)	43,000
07-A1(PR)SP(L1)	Initial cover letter	26,000
07-A1(PR)SP(I)	Instruction sheet	43,000
07-A1(PR)SP(L2)	Thank-you postcard (printed at NPC)	19,000
07-A1(PR)SP(L3)	Follow-up cover letter	17,000
07-A7.1(SP)	Return envelope	43,000
07-A7.2(SP)	Follow-up mailout envelope	26,000
07-A8(SP)	Follow-up outgoing envelope	17,000

NASS prepared a mail label for each address on the list. Each label contained the printed address and a machine-readable barcode containing the address as well as size and farm-type codes for the addressee. The Puerto Rico field office provided the mail-address file to the NPC in the second week of November 2007. NPC used high-speed Printronix printers to print the address labels directly on to the report forms through the open window of the envelopes. Labeled mailing packages were packed in cartons (each containing approximately 125 mail packages) according to postal requirements for presorted first-class mailings (i.e., by 3- and 5 digit ZIP Code) and sent for mailout.

### Areas of Responsibility

A toll-free telephone number was printed on the first page of the report form. The Puerto Rico field office and the Extension Service provided assistance to farmers requesting information or asking for help in completing the census form.

The field office and the field enumeration staff conducted the enumeration of “must” records (operations that had to be enumerated because of their large size and value of production) which were not part of the mailout procedure. They also conducted the field follow-up, in coordination with the Extension Service, contacting and enumerating those who did not respond to the mail enumeration effort. The mail portion of the census began in December 2007. Field follow-up procedures continued through mid-May 2008. Respondents to the mail census returned their completed report forms to NPC. The report forms were processed by the staff at NPC and an electronic file containing the captured data was transmitted to headquarters in Washington, DC. All census forms and the electronic data were then sent to the field office in Santurce for further analysis and storage.

### Training

NASS conducted training sessions for approximately 100 Department of Agriculture and University of Puerto Rico Extension Service (ES) agents during December, 2007. Training was held at the ES regional offices in Rio Piedras and Lajas. The training goal was to familiarize the agents with the census program and to prepare them to answer questions from farmers. Topics covered during the training included:

- An overview of the census;
- Data collection methodology;
- Role of the extension service agent in the census;
- The Enumerator's Instruction Manual;
- Report form contents; and
- Frequently asked questions on the census.

## **Reference Materials**

Headquarters staff prepared training and reference guides for use in the agriculture census in Puerto Rico. The principal reference materials used in the field office were the Enumerator's Manual and the Telephone Follow-up Guidelines. These documents covered basic administrative procedures for the area office, including local telephone follow-up operations and processing activities. Headquarters staff were responsible for training all personnel assigned to work on the census.

Members of the PRDA, Office of Statistics, assigned to work on the census received a copy of the Enumerator's Manual as the primary reference for the field enumeration. They also were provided with the Telephone Follow-up Guidelines and a publicity package.

## **AGRICULTURAL EXTENSION OFFICE SUPPORT**

### **General Activities**

The University of Puerto Rico, Extension Service (ES) participation in the 2007 Census of Agriculture was part of a cooperative agreement signed between NASS and the University of Puerto Rico. The ES functions in the same fashion as the U.S. Department of Agriculture's Extension Service, i.e., local offices assist farmers with information and advice on agricultural programs, problems, legal questions, and the like. The local offices have considerable knowledge of farming practices and farmers within their areas. They assisted NASS by:

- Providing its own list of farms for the census list frame compilation;
- Producing posters and other publicity materials for the census;
- Distributing publicity materials provided by NASS and promoting the enumeration among farmers in personal contacts; and
- Providing help to farmers in completing the census report forms.

In addition, NASS provided ES agents lists of farms in their respective municipios that were mailed a report form in the December mailout, but no report form had been received. The agents, after signing a confidential certificate, visited the nonrespondents and completed a report form by personal interview or resolved the case in a consistent matter.

### **Public Awareness Program**

Census Planning Branch (CPB), Marketing and Information Services Office (MISO), Puerto Rico Extension Service, and Puerto Rico field office staff cooperated in developing the publicity plan for the 2007 Puerto Rico Census of Agriculture. Major objectives of the publicity program were to:

- Encourage cooperation and prompt response by farmers to the census enumeration; and
- Provide information to the public about the release of census data products.

Several items were developed specifically for the publicity effort in Puerto Rico. Printed materials included a poster, an agriculture census information packet, a newsletter article with general information about the census (including timing, data collected, uses of the data, and so on), and a series of press releases. In December 2007, approximately 1,000 copies of the poster were distributed through local government offices and businesses for display in windows and on bulletin boards. NASS assembled and shipped the information packets to the Puerto Rico field office for distribution to (and through) the Puerto Rico Planning Board, Department of Agriculture; local newspapers; the ES; and local colleges and agriculture-oriented organizations. The information packet contained:

- Mailout package transmittal letter;
- Frequently asked questions about the census, with answers;
- Puerto Rico report form and instruction sheet;
- Telephone contacts list; and
- Newsletter article.

In addition, at NASS's request the Governor of Puerto Rico issued an official proclamation about the census. On December 10, 2007, the Governor signed a proclamation designating December 2007 "Agriculture Census Month" in the Commonwealth.

## **DATA COLLECTION**

In December 2007, NASS mailed report forms to approximately 19,000 addresses on its census list, asking operators to complete and return the forms within 21 days. The agency mailed a friendly reminder/thank you card to all addresses on the census 3 weeks after the initial mailout. In February, nonrespondents received a second report form through the mail. Field staff telephoned or visited operations on the list that did not respond by mail. The overall enumeration achieved an 82 percent final response rate. An area frame was used to sample for coverage improvement. A total of 15,745 farms were counted for 2007.

## **DATA PROCESSING**

Farmers were instructed to complete and return the form to the NPC in Jeffersonville, IN for processing. Returned mail cases were checked-in by optical scanning equipment that identified each report form by the bar code on the mailing label, while report forms completed by personal interview were checked in using assigned identification numbers keyed directly to the database. After check-in, report forms were routed to the batching control unit where control clerks batched the report forms into work units of up to 95 report forms. The first receipts arrived at the NPC office in January 2008 and continued on a flow basis until the last week of May 2008. The report forms were then scanned and photocopied to preserve the forms and to create images used for data keying. Report forms returned to the NASS office in San Juan were logged in and sent to NPC for further processing.

Once keyed, the data from each report form were sent to NASS headquarters in Washington, DC via electronic media, for computer editing. Data from each report were subjected to a detailed item-by-item computer edit. This edit performed comprehensive checks for consistency and reasonableness, corrected erroneous or inconsistent data, supplied missing data based on similar farms, determined if the operation met the farm definition and, if so, assigned farm classification codes necessary for tabulating the data.

After the initial computer edit, all keyed reports not meeting the census farm definition were reviewed to ensure that the data were keyed correctly. Edit referrals were generated for about 60 percent of the reports whose operations were validated as farms. These referrals were transmitted to the Puerto Rico field office where all

substantial changes to the data were reviewed and verified by analysts. These cases were also reviewed for keying accuracy and to ensure that computer edit actions were correct. If the results of the computer edit were not acceptable, corrections were made and the record reedited.

Whenever possible, edit imputations, deletions, and revisions were based on component data, for a sum, or else on other related data provided in the respondent's report form. For certain missing items, such as operator characteristics, 2002 census data were used when available. Values for other data items, either missing or reported and rejected by the edit, were calculated based on reported quantities and known fixed price parameters. When these and similar methods were not available and values had to be supplied, the imputation process used other local information available on the particular item in question. For example, a farm operation that reported acres of pigeon peas harvested but failed to report quantity harvested was assigned a quantity based on an average pound per cuerda of pigeon peas harvested. This average came from the PRDA and previous census data.

Prior to publication, tabulated totals were reviewed by statisticians to identify inconsistencies and potential coverage problems. Comparisons were made with previous census data, as well as other available data. Tallies of all selected data items for various sets of criteria which included, but were not limited to, geographic levels, farm types, and sales levels were reviewed. When necessary, data inconsistencies were resolved.

## **ESTIMATION**

After weighting adjustment of the CML farm records, for nonresponse, and of the NML farm records, for sample expansion and municipio allocation, the CML and NML components were combined to provide a single estimate. Since the CML and NML contingents are mutually exclusive, our combined estimate should reflect complete and unduplicated coverage, provided that there is no significant nonresponse bias, and no other nonsampling error is operative.

## **TABULATION AND DISCLOSURE ANALYSIS**

### **Tabulations**

NASS prepared and published data tables for all data items on the report form. The report included data for all farms in the Commonwealth and the 78 individual municipios. Tables 1-21 (see Volume 1, Geographic Area Series, Part 52, Puerto Rico) contained data for all agricultural operations in Puerto Rico; tables 22-76 showed municipio-level data; and tables 77-82 presented more detailed tabulations for major data items at the Island-level. The basic data shown for all farms included number of farms; land in farms and land use; tenure, characteristics, and main occupation of operator; hired farm workers, agregados, and sharecroppers; selected data on machinery, equipment, and buildings; use of agriculture chemicals and fertilizers; irrigation; selected farm production expenses; market value of agricultural products sold; farm-related income; livestock and poultry inventory and sales (including sales of livestock and poultry products); crops harvested, including horticultural specialties; and fish and other aquaculture.

### **Disclosure Analysis**

NASS is prohibited by law from publishing information that could be used to identify individual respondents in any of its censuses or surveys. To ensure that this confidentiality was maintained, all tabulations were checked prior to publication in a procedure called disclosure analysis. This involved a review of all data tables that identified and suppressed specific items that, if published, would result in direct disclosure of datum reported by a particular respondent or company or reveal information about an individual by derivation.

## **PUBLICATION PROGRAM**

The 2007 Puerto Rico Census of Agriculture was published in Volume 1, Geographic Area Series, Part 52, Puerto Rico. It was created using the computer software Pub-Tool at NASS headquarters in Washington, DC. Results of the Puerto Rico census were released February 4, 2009. Puerto Rico census data are available through the Internet, printed reports, and DVD.



---

## Chapter 9. Censuses of Agriculture for American Samoa, the Commonwealth of Northern Mariana Islands, Guam, and the U.S. Virgin Islands

---

	Page
Introduction .....	84
Historical Background.....	84
Uses of Agriculture Census Data .....	84
Legal Authority and Scope.....	84
Reference Periods and Dates.....	85
Farm Definitions .....	85
Preparatory Operations.....	85
General Information .....	85
Special Agreements.....	86
Report Form Content.....	86
Preparation of Enumerator Materials .....	87
Printing Report Forms and Enumeration Materials .....	87
Staffing and Training .....	87
Data Collection.....	87
Enumeration Methodology.....	87
Call Backs .....	88
Refusals .....	88
Field Review .....	88
Results .....	88
Data Processing .....	88
General Information .....	88
Precomputer Processing .....	89
Computer Processing.....	89
General Information .....	89
Computer Edit and Tabulation .....	89
Disclosure Analysis and Table Review.....	90
Publication Program.....	90

## **INTRODUCTION**

### **Historical Background**

The agricultural censuses for the U. S. territories and protectorates have been conducted since 1917, with varying degrees of regularity. In 1917, after purchasing the Virgin Islands from Denmark, a special census that included an agricultural enumeration was conducted. The next agriculture census in the U. S. Virgin Islands was not conducted until 1930, when the Federal Government incorporated an enumeration of the islands into the decennial census program. The 1959 Census of Agriculture was the first agriculture census of the U.S. Virgin Islands not taken as a part of a decennial census.

The first agriculture census on Guam was carried out in 1920, as part of the decennial census of that year. From 1930 through 1960, agriculture censuses continued to be done in conjunction with the decennial census program for both Guam and the U. S. Virgin Islands. Beginning in 1964, censuses on Guam as well as the U.S. Virgin Islands were conducted as part of the quinquennial censuses of agriculture, and have been enumerated on a 5-year cycle for the years ending in 2 and 7. The 2007 census is the 14th census of agriculture for both Guam and the U.S. Virgin Islands.

The agriculture censuses for American Samoa and the Commonwealth of Northern Mariana Islands (CNMI) also began as part of the decennial census operation. The 2008 Census of American Samoa is the eleventh census of agriculture of American Samoa, and the third conducted strictly as a census of agriculture, which is scheduled for release in April 2011. The first nine agriculture censuses in American Samoa were taken in conjunction with the decennial census, and agriculture information was collected only for those households that answered affirmatively to a question about agricultural activities asked at the end of the decennial questionnaire. The 2007 census of CNMI is the sixth census of agriculture of CNMI. The first agriculture census was taken in 1970 in conjunction with the decennial census and the practice continued in 1980 and 1990. This is the third agriculture census taken in the CNMI that was not done as part of the population census.

### **Uses of Agriculture Census Data**

The census of agriculture is the leading source of agricultural production data for American Samoa, the CNMI, Guam, and the U.S. Virgin Islands, and is the only source of consistent, comparable data at the detailed geographic level. Census statistics are used to measure agricultural production and to identify trends in an ever-changing agricultural sector. Many local programs use census data as a benchmark for designing and evaluating programs. Private industry uses census statistics to provide a more effective production and distribution system for the agricultural community.

### **Legal Authority and Scope**

The census of agriculture is required by law under the “Census of Agriculture Act of 1997,” Public Law 105-113 (Title 7, United States Code, Section 2204g). The law directs the Secretary of Agriculture to conduct a census of agriculture in 1998 and in every fifth year thereafter, covering the prior year. The census of agriculture includes each State, Puerto Rico, Guam, the U.S. Virgin Islands, and the CNMI, and States that the Secretary may include other territories or protectorates in the census program. (See Appendix A for excerpts of Title 7 applicable to the agriculture census.)



## Reference Periods and Dates

Reference periods and dates in the CNMI, Guam, and the U.S. Virgin Islands were the same. The enumerations began in January 2008, and collected inventory data (i.e., acreage, numbers of livestock and poultry, etc.) as of the day of enumeration. Crop and livestock production, sales, and expense data were requested for the calendar year 2007.

The agriculture census for American Samoa is currently conducted one year after the U.S. census of agriculture. This lag is due to the fact that American Samoa was not included in the quinquennial program until 1997, which did not allow time to develop and conduct the census for that year. To maintain consistency in the data, and for reasons of availability of enumerator resources in American Samoa, this one year lag in conducting the census was maintained in 2002 and 2007. Crop and livestock sales, production, and expense data were for calendar year 2008, and inventory data were for the day of enumeration.

## Farm Definitions

**American Samoa:** The farm definition used was any place that raised or produced any agricultural product for sale or consumption by family members. Crop production, crop and livestock sales, production, and expense data were collected for the 12-month period between January 1 and December 31, 2008, and inventory data were collected for the day of enumeration.

**Commonwealth of Northern Mariana Islands:** The farm definition used was any place that had sales of agricultural products of \$1,000 or more in 2007. Enumeration began in January 2008, and collected acreage and inventories data (i.e., acreage, numbers of livestock and poultry, etc.) as of the day of enumeration. Crop and livestock production, sales, and expense data were requested for the calendar year 2007.

**Guam:** The farm definition used was any place that had sales of agricultural products of \$1,000 or more in 2007. Enumeration began in January 2008, and collected acreage and inventories data (i.e., acreage, numbers of livestock and poultry, etc.) as of the day of enumeration. Crop and livestock production, sales, and expense data were requested for the calendar year 2007.

**U.S. Virgin Islands:** The farm definition was any place from which \$500 or more of agricultural products were sold in 2007. Enumeration began in January 2008 and collected acreage and inventories data (i.e., acreage, numbers of livestock and poultry, etc.) as of the day of enumeration. Crop and livestock production, sales, and expense data were requested for the calendar year 2007.

## PREPARATORY OPERATIONS

### General Information

The 2007 agriculture censuses was a cooperative effort of NASS and the respective territorial governments. Special agreements governing the conduct of the census in each area and general plans for the enumeration were agreed to the year prior upon the census. NASS prepared the procedures, edit programs, and tabulation programs for handling the information.

The overall designs for the censuses varied slightly among the areas. In Guam and the U.S. Virgin Islands, lists of farmers were compiled by the local departments of agriculture based on information available to them through their own efforts at collecting information on agriculture activity in their areas. In the CNMI, the U.S. Department of Commerce was able to provide a listing of all agricultural producers through their business licensing records. In all three areas, this use of list-based enumeration resulted in the most efficient method of data collection. In American Samoa, because of the broad farm definition and the high percentage of households

that have agricultural activities, a combination of a list of commercial farms provided by the American Samoa Department of Agriculture, and a sample of all remaining households were enumerated. General plans for the censuses were formalized in special agreements negotiated by NASS and the respective area governments.

## **Special Agreements**

Prior to conducting the agriculture censuses, the responsible officials of the local government agencies signed memoranda of agreement with NASS for carrying out agriculture censuses in their jurisdictions. Under the terms of these agreements, the governments of the respective territories assumed responsibility for appointing a census coordinator (this can be either a person or an agency) and for conducting the field enumeration. The coordinating agency was responsible for:

- Recruiting qualified personnel for census jobs;
- Training persons hired for the census to follow procedures established by NASS;
- Determining local pay rates, subject to review by NASS for consistency and available funding;
- Arranging office space, equipment, and supplies required by the census operation within each jurisdiction;
- Maintaining administrative and financial records for the census and providing this information to NASS; and
- Publicizing the census locally (NASS provided promotional materials).

NASS was responsible for procuring and distributing manuals, supplies, and for the development of any special procedures that might be required for the enumeration within each territory, together with designing (in consultation with the respective local governments) and printing the report forms, instruction manuals, training materials, and related forms. In addition, the agency provided training for the enumerators and crew leaders, established a calendar of operations, and provided technical advice, as needed, to clarify concepts and procedures. NASS also bore the total cost of the agriculture censuses in each area, with the exception of American Samoa, where the cost was split between NASS and the U.S. Department of Interior's Office of Insular Affairs.

## **Report Form Content**

NASS designed the report forms for all the areas in cooperation with the respective governments. The report forms for Guam, the U.S. Virgin Islands, and the CNMI were similar in design and layout. Each form was a single sheet measuring 17" x 14" folded to 8-1/2" x 14", with four numbered pages. Each form requested information on land in farms and land use, farm labor, organization, crops harvested (acres and pounds) for sale, vegetables or melons (acres and pounds harvested for sale), fruits, nuts, and nursery crops (inventory and pounds harvested for sale), livestock and poultry (inventory and sales), fish and other aquaculture (number and acres of ponds, quantity (pounds), and value of sales), total value of agricultural products sold, expenditures, operator characteristics, and irrigation.

The report form for American Samoa was similar to the other report forms. It collected additional data on home consumption, sources of financing, fishing, and demographic data on members of the household.

## **PREPARATION OF ENUMERATOR MATERIALS**

### **Printing Report Forms and Enumeration Materials**

Report forms, materials for the enumerator record books, and administrative forms used in the 2007 agriculture censuses for Guam, the U.S. Virgin Islands, the CNMI, and American Samoa were printed by private contractors supervised by the U. S. Government Printing Office. NASS forwarded the materials to the respective census managers for distribution to the field staff.

### **Staffing and Training**

The area governments appointed census coordinators who were responsible to NASS for the conduct of the enumeration in their areas, i.e., Guam, the U.S. Virgin Islands, American Samoa, and the CNMI. The Department of Agriculture was the coordinating agency in the U.S. Virgin Islands and Guam, while the Department of Commerce was the coordinating agency in the CNMI and American Samoa. Their responsibilities were broad and included precensus preparatory activities such as securing office space, recruiting, testing, selecting personnel, and publicizing the census. They also had general supervisory responsibility for the enumeration and for informing NASS headquarters about the progress of the enumeration. Under the direction of the coordinating agency, the existing organization and staff were used to conduct the census.

Census staffs in all areas except Guam received salaries as temporary employees of the local governments. In Guam, the enumeration was done by permanent employees of the Guam Department of Agriculture on a reimbursable arrangement.

In Guam and the U.S. Virgin Islands, relatively little clerical work was done at the area offices. The census coordinators were responsible for ensuring that once the enumeration was complete all required materials were secured and forwarded to NASS headquarters for processing and tabulation.

In American Samoa, manual editing and keying of data were done in the local office. In CNMI, manual editing, keying, and computer editing and analysis were performed by local personnel.

NASS staff visited the CNMI, Guam, and the U.S. Virgin Islands in December 2007 and January 2008, to train the census coordinators, crew leaders, and enumerators. Some enumerators left the census operation prior to completing the census; replacements were hired and trained in enumeration procedures by the census coordinators.

## **DATA COLLECTION**

### **Enumeration Methodology**

The census employed personal interviewing by a field enumerator for the agriculture censuses for all the areas. When visiting a place for field enumeration, enumerators identified the "operator" as the person with day-to-day management of the farm and interviewed that person to obtain the necessary information. For partnerships, the partner-in-charge of the actual farm operations, or the senior partner, was listed as the operator.

In CNMI, Guam, and the Virgin Islands, the use of list-based enumeration resulted in a more efficient method of data collection. In American Samoa, because of the broad farm definition, and the high percentage of households which have agricultural activities, a combination of a list of commercial farms provided by the American Samoa Department of Agriculture, and a sample of all remaining households were enumerated.

For places with two or more tracts of land, the enumerator completed a single report form covering all the land operated by one person, regardless of location. The enumerator identified the location of each tract of land included on the form to avoid duplication of the data. Operators with land and agricultural activities in more than one geographical area were enumerated in the geographical area in which the primary agriculture activity was located. Once the enumerator identified the person who operated the farm, and could supply the requested information, he or she assigned the place a 10-digit farm serial number as a unique identification and wrote it into the appropriate space on the report form, then went ahead with the interview.

## **Call Backs**

For various reasons, other than an operator's outright refusal to respond, enumerators sometimes were unable to complete report forms during the first visit to a household. In these cases, the enumerator made arrangements for a return visit or a call back at a convenient time to the operator. Call backs were made as soon as possible after the initial visit, but enumerators were not to conduct more than two personal visit call backs to the same respondent unless the crew leader decided special circumstances warranted additional attempts.

## **Refusals**

When an operator refused to respond to the census, enumerators were instructed to first try to persuade the operator to provide the data needed and to explain the legal requirement for response. When individuals continued to refuse to cooperate, the enumerator identified the case either as a partial or complete refusal (some refusals did provide partial information) in the record book and reported the case to the crew leader or to the office supervisor. The crew leader was then responsible for determining the correct course of action for obtaining the data.

## **Field Review**

Crew leaders were responsible to the census coordinator for the actual conduct of the enumeration. They supervised and reviewed the work of their enumerators, and made periodic progress reports. In addition, crew leaders verified the cumulative figures reported by each enumerator.

## **Results**

In CNMI, the agriculture census counted 104 farms with 4,013 acres, of which 773 were in cropland. Guam's agriculture census enumerated 104 farms with 1,000 acres, of which 831 acres were in cropland. In the U.S. Virgin Islands, the census counted 219 farms, with 5,881 acres, of which 493 acres were cropland.

## **DATA PROCESSING**

### **General Information**

Data processing for all four censuses was done in the same manner. After check-in and review of any problem cases, the information was keyed from the report form to a computer data file. The resulting computerized records were subjected to a detailed computer edit for consistency and reasonableness. In addition, the edit corrected obviously erroneous or inconsistent data, supplied missing data based on imputation using characteristics from similar farms to impute information, and assigned farm classification codes needed in tabulating the data. Any significant change by the edit to respondent data was reviewed and verified by agricultural analysts.

Prior to publication, NASS statisticians reviewed the tabulations for inconsistencies and potential coverage problems. Totals were compared to previous census data, as well as other available information, and potential problems were examined. When necessary, the staff made corrections to the data records and retabulated the affected totals. In CNMI, the entire process of precomputer processing, keying, editing, and analysis was done by the census coordinator with only the final analytical review and tabulation being done by NASS staff in Washington, DC. In American Samoa, precomputer processing and data keying were done on-site before shipping files and materials back to NASS headquarters in Washington, DC. In Guam and the U.S. Virgin Islands, only the precomputer processing was done in the field; the census coordinator then boxed and shipped the report forms directly to NASS for data preparation and processing.

## **Precomputer Processing**

After the field enumeration was completed, individual report forms were reviewed to ensure that the form contained a valid farm serial number and enumeration district number, correct geographic area code, complete name and address of the operator, positive entry under land in agriculture, and values for either crop production or livestock/poultry inventory.

The edit identified operations that did not meet the farm definition; each case was verified by the census coordinator. Data for the remaining operations were reviewed for accuracy, consistency, and completeness. Errors in computations, units of measures, data inconsistencies, misplaced entries, and so on, were corrected. Missing information was derived from valid reported data for similar type and size farms in nearby areas.

After the precomputer processing review, data from each operation were keyed into a database on microcomputer equipment using an Integrated Microcomputer Processing System. The processing system was designed by the U.S. Department of Commerce, Bureau of the Census to key, edit, analyze, and tabulate data from censuses and surveys.

## **COMPUTER PROCESSING**

### **General Information**

After keying the data from each report form, an item-by-item computerized edit was conducted for each record. Analysts reviewed and verified any substantial changes generated by the computer edits to the data file prior to tabulation. The data were tabulated by geographic level and for each area as a whole, and NASS statisticians reviewed all tabulated totals to identify inconsistencies and potential coverage problems. The statisticians carried any required corrections to the individual data records and the specific totals involved were retabulated. After disclosure analysis, the data file was ready to be released for publication.

### **Computer Edit and Tabulation**

The data were edited by computer for completeness and consistency. Inconsistent entries or suspicious data were identified by the edit program and were reviewed by analysts. These data were then compared to previous census data, as well as to other available information, to determine if a problem existed with the data. The interactive computer system enabled analysts to review up-to-date tallies of selected data items for various criteria or sets of criteria which could include geographic levels, farm types, sales levels, or other specific characteristics. Errors or problems were reviewed and researched by reexamining individual data records. Corrections were keyed to the records and corrected data files re-edited.

Whenever possible, edit imputations, deletions, or other changes were based on related data from the respondent's report form. For some items, such as operator characteristics, data from previous censuses could be used. Values for missing or unacceptable reported data were calculated based on reported quantities and known prices, or by

using information from other, generally similar farm operations. The data from the individual records then were tabulated to produce the statistical table files that were used for publication.

## **Disclosure Analysis and Table Review**

NASS is prohibited by law from publishing any information that could be used to identify individual respondents to any of its censuses or surveys. To ensure that confidentiality is maintained, all data tabulations were checked prior to publication in a procedure called disclosure analysis. This involved a review of data tables that identified and suppressed specific items that, if published, would:

- Result in direct disclosure of data reported by a particular respondent; or
- Reveal information about an individual by derivation, i.e., by a user adding or subtracting a published subtotal from a published total.

After disclosure analysis was completed, appropriate suppressions were applied to the data. Final tables were then reviewed by NASS analysts for accuracy, consistency, and completeness of disclosure protection.

## **Publication Program**

The 2007 Census of Agriculture results for CNMI, Guam, and U. S. Virgin Islands were released and available to the public in February 2009. Results of the census for the American Samoa are scheduled for released in April 2011.

The census report for American Samoa published statistics for the territory, districts, and counties. For CNMI, data were published for the Commonwealth, the Island of Rota, the Island of Saipan, the Island of Tinian, and for the Northern Islands. The report for Guam published data for the island, and for 19 election districts. The report for the U.S. Virgin Islands published statistics for the territory, for Saint Croix, and for Saint John and Saint Thomas (combined). The statistical tables included data on number of farms, farm characteristics, land in farms and land use, operator characteristics, selected farm expenses, acres planted, amount harvested, sales value of fruits, nuts, vegetables, and field crops, selected machinery and equipment, and inventory and sales of livestock and poultry and their products.

---

## Chapter 10. Publication Program

---

	Page
Overview.....	92
Publication Media.....	92
Specific Reports.....	93
Geographic Area Series (Volume 1).....	93
Other Volume 1 Products.....	93
Subject Series (Volume 2).....	93
Special Studies (Volume 3).....	95
2007 Census Publications Release Date.....	96
Programs Postponed.....	97
2010 Census of Aquaculture.....	97
2009 Tenure, Ownership, and Transition of Agricultural Land.....	97

## OVERVIEW

The census of agriculture collects and disseminates comprehensive, complete statistics on U.S. agriculture to the general public, government offices, farm organizations, agribusinesses, and Congress.

Results of the 2007 Census of Agriculture were published in a series of reports that provide data at the national, State and county (or equivalent) levels for the United States. Data are also available for Puerto Rico, U.S. Virgin Islands, Guam, Commonwealth of Northern Mariana Islands, and American Samoa.

2007 Census of Agriculture data were released in the following three specific report volumes:

- GEOGRAPHIC AREA SERIES (Volume 1)
- SUBJECT SERIES (Volume 2)
- SPECIAL STUDIES (Volume 3)

## PUBLICATION MEDIA

The **2007 Census of Agriculture Publication Program** was designed to make census data available to users as economically and in as many formats as possible. Data were released in a variety of media formats including print, DVD, and on the NASS website in text, PDF, and CSV formats.

**Printed Reports** - Paper bound printed reports that include all data tables and text regarding applied methodology and general explanation of the census data collection for Volume 1; Volume 2, Parts 1, 5 and 6; and Volume 3, Parts 1 through 6.

**Census DVD-ROM** - Includes PDF files for all Volume 1, Geographic Area Series reports (with the exception of American Samoa) and Volume 2, Subject Series reports. In addition, data for Volume 1, Parts 1-52 are manipulable.

**Order Copies of the 2007 Census of Agriculture** – DVD-ROMs and printed copies were available through customer service at: NASS Customer Service, Room 5030 South Building, 1400 Independence Avenue, SW, Washington, DC 20250, by calling (800) 727-9540, or e-mailing [nass@nass.usda.gov](mailto:nass@nass.usda.gov).

**Internet** - All 2007 reports and selected data from the census were available online at the NASS website [www.agcensus.usda.gov/Publications/2007](http://www.agcensus.usda.gov/Publications/2007).

**Quick Stats** – Data in the Quick Stats application provides the public with an ad-hoc query tool to search and display the census of agriculture in an interactive and innovative format.

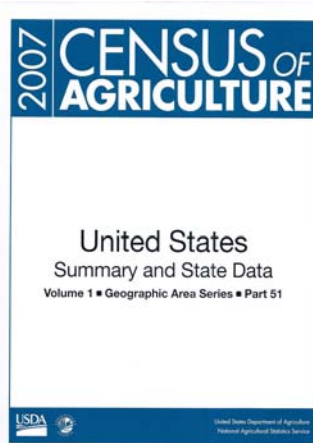
Internet data selected in the following formats:

- **TXT** – Document information in plain text only.
- **PDF** – Portable Document Format information that includes the text, fonts, images, and graphics which compose the document.
- **CSV** – Comma-Separated Values file in a simple text format for a database table. Each record in the table is one line of the text file. Each field value of a record is separated from the next with a comma. CSV is a simple file format that was widely supported and often used to transfer information from a database program to a spreadsheet.



## SPECIFIC REPORTS

### Geographic Area Series (Volume 1)



The 56-part Volume 1 Geographic Area Series, State and County Data series (AC-07-A-1 to 56), included final State and county (or equivalent) detailed data for the 50 States, United States Summary, Puerto Rico, Guam, the U. S. Virgin Islands, Commonwealth of Northern Mariana Islands, and American Samoa. The U.S., States, and Puerto Rico reports were released in print, on DVD, and on the Internet in text, PDF, and CSV formats. The Guam, U.S. Virgin Islands, and Commonwealth of Northern Mariana Islands reports were released in print and on the Internet in text and PDF formats. The American Samoa report is scheduled for release in April 2011 on the Internet in text and PDF formats.

These reports include data on number and size of farms; crop production; livestock, poultry, and their products; tenure, age, and principal occupation of operators and up to 3 operators; type of organization; value of products sold; government payments plus market value of agricultural products sold; production expenses; direct marketing; landlord expenses; computer use; production contracts; fertilizers and chemicals; machinery and equipment; farm labor and migrant workers; value of land and buildings; agricultural activity on American Indian reservations; grain and storage capacity; land use; irrigation; organic farming; the NAICS; and more.

#### U.S. Summary and State Report (AC-07-A-51)

Chapter 1. National-level data

Chapter 2. State-level data

#### State and County Reports (AC-07-A-1 to 50)

Chapter 1. State-level data

Chapter 2. County-level data

**Outlying Area Data (AC-07-A-52 to 56)** – Island and area-level data are published for Puerto Rico, U.S. Virgin Islands, Guam, Commonwealth of Northern Mariana Islands, and American Samoa.

#### Other Volume 1 Products

In addition, ranking and regional studies were developed using Volume 1 data. These included summaries of: U.S. farm operations and operators by State; county profiles; race; ethnicity; gender profiles; and ranking by market value agricultural products sold. Data products were released on the Internet in several different product formats.

#### Subject Series (Volume 2)

This 2007 census series included nine reports:

1. Agricultural Atlas
2. Ranking of Congressional Districts
3. ZIP Code Tabulations of Selected Items
4. Congressional District Tabulations
5. American Indian Reservations
6. Watersheds
7. History of Census of Agriculture

8. Specialty Crops
9. Specialty Crops for Puerto Rico, U.S. Virgin Islands, Guam, and Commonwealth of Northern Mariana Islands

**Agricultural Atlas (AC-07-S-1).** The Agricultural Atlas of the United States provides maps illustrating national agricultural statistics. It features a series of maps highlighting agricultural activities and characteristics such as:

- farm number and size;
- selected crops harvested;
- livestock and poultry inventories and sales;
- agricultural sales;
- production expenses;
- land use;
- irrigation patterns;
- fertilizer and chemical use; and
- machinery and equipment inventories.

Data display some changes from 2002-2007 and cover the United States, States, and counties. Data were released on DVD, and on the Internet.

**Ranking of Congressional Districts (AC-07-S-2).** The Congressional Districts Ranking report presents selected 2007 Census of Agriculture statistics ranked by the congressional district of the 110th Congress. Data were released on DVD and on the internet in text, PDF, and CSV formats.

**ZIP Code Tabulations of Selected Items (AC-07-S-3).** The ZIP Code Tabulations of Selected Items shows selected agricultural statistics by five-digit postal ZIP Code. Data were released on the Internet in CSV format.

**Congressional District Tabulations (AC-07-S-4).** The Congressional District Tabulations report presents selected 2007 Census of Agriculture statistics ranked by congressional districts of the 110th Congress. Data were presented by congressional district for all States, except Alaska, Delaware, Montana, North Dakota, South Dakota, Vermont, and Wyoming, which are considered “at large” States. The State total was presented for these seven States. Data were released on the Internet in text, PDF, and CSV formats.

**American Indian Reservations (AC-07-S-5).** The American Indian Reservations publication presents selected operation and operator summary data for 73 American Indian reservations. This was the second report NASS published that focuses on agricultural activity on American Indian reservations based on individual farm and ranch reports. Data were released on the Internet in text, PDF, and CSV formats. Reports were printed on-demand and were available through NASS Customer Service.

**Watersheds (AC-07-S-6).** The Watersheds publication provides data for 38 individual land characteristics that are published at the 6-digit Hydrologic Unit Code (HUC) for the contiguous 48 States, Alaska, and Hawaii. The data tables reflected the:

- number of farms;
- land in farms;
- cropland harvested;
- irrigated acres;
- acres treated with fertilizer;
- acres treated with chemicals;
- selected crop acreage;
- organic acreage; and
- inventory of selected livestock.

The maps used throughout the report were provided by the United States Geological Survey. Data were released on the Internet in text, PDF, and CSV formats. Reports were also printed on-demand and were available through NASS Customer Service.

**History (AC-07-S-7).** The 2007 History publication describes the major census operations for the 2007 Census of Agriculture, including the censuses of outlying areas. It was released on the Internet.

**Specialty Crops (AC-07-S-8).** The Specialty Crops publication complied with Section 10103 of the Food, Conservation, and Energy Act of 2008. As a service to agricultural and economic data users, the 2007 data for specialty crops were published at the U.S. and State-level. A specialty crop was defined by Section 3 of the Specialty Crops Competitiveness Act of 2004 (7 U.S.C. 1621 note; Public Law 108-465) as fruits and vegetables, tree nuts, dried fruits, and nursery crops (including floriculture). Maple syrup was included because some USDA agencies consider it a specialty crop. Data are provided that include and exclude maple syrup to accommodate either definition. Data were released on the Internet in text, and PDF formats. Reports were also printed on-demand and were available through NASS Customer Service.

**Specialty Crops for Outlying Areas (AC-07-S-9).** The Specialty Crop for the U.S. Outlying Areas includes data for the Commonwealth of Northern Mariana Islands, Guam, Puerto Rico, and the U.S. Virgin Islands and complied with Section 10103 of the Food, Conservation, and Energy Act of 2008. A specialty crop was defined by Section 3 of the Specialty Crops Competitiveness Act of 2004 (7 U.S.C. 1621 note; Public Law 108-465) as fruits and vegetables, tree nuts, dried fruits, and nursery crops (including floriculture). Data were released on the Internet in text, and PDF formats. Reports were also printed on-demand and were available through NASS Customer Service. Census data for American Samoa were collected in 2009 for the 2008 calendar year and scheduled for release in April 2011.

### **Special Studies (Volume 3)**

The Volume 3, Special Studies series consisted of the 2008 Farm and Ranch Irrigation Survey (FRIS), the 2008 Organic Production Survey and the 2009 Census of Horticultural Specialties. These publications were released in print and on the Internet in text, PDF, and CSV formats. In addition, the 2009 On-Farm Renewable Energy Production survey publication was released in print and on the Internet in text, PDF, and CVS formats.

**2008 Farm and Ranch Irrigation Survey (AC-07-SS-1).** The 2008 Farm and Ranch Irrigation (FRIS) Survey publication contains irrigation data for the United States, for individual States, and for the 20 Water Resources Areas (WRA). It represents the results from a sample survey of farm and ranch operators who reported using irrigation in the 2007 census. Data include:

- acres irrigated;
- yields of specified crops;
- method of distribution;
- quantity and source of water used;
- number and depth of wells;
- pumps used in moving water;
- energy use, and
- expenditures for maintenance and investment.

The report includes some comparative data from the 2003 FRIS. For the first time, horticultural specialty operations with sales of \$10,000 or greater were included in the survey. It was released in print and on the Internet in text and PDF files.

**2008 Organic Production Survey (AC-07-SS-2).** The 2008 Organic Production Survey responded to the intense need for detailed industry data. The survey collected data from operations that reported organic production of acres in transition to organic production in the census of agriculture. Data included crops, livestock and poultry production, production expenses, production practices, and marketing practices for the calendar year 2008.

The 2007 Census of Agriculture reported more than 20,000 farms engaged in organic production and over \$1.7 billion in sales in the U.S. The data will help shape future decisions regarding farm policy, funding allocations, and availability of goods and services and will help producers make informed decisions about the future of their own organic farming operation. It was released in print and on the Internet in text, PDF, and CSV files.

**2009 Census of Horticultural Specialties (AC-07-SS-3).** The 2009 Census of Horticulture Specialties includes tabulations on number of establishments, value of sales, type of horticultural products, and other data items for horticultural operations for the United States, each State, and leading counties. The report was released in print and on the Internet in text, PDF, and CSV files.

**2009 On-Farm Renewable Energy Survey (AC-07-SS-6).** The 2010 On-Farm Energy Production Survey was the first-ever survey focused on renewable energy. It represents the results from a sample survey of on-farm renewable energy production including the use of wind turbines, solar panels, anaerobic digesters, and other alternative energy sources. The report was released in print on the Internet in text, PDF, and CSV files.

## 2007 CENSUS PUBLICATIONS RELEASE DATE

Table 10. 2007 Census Publications Release Date

2007 Census Publications	Release Date
U.S. Summary and State Report (AC-07-A-51) Chapter 1. National-level data Chapter 2. State-level data	February 4, 2009
State and County Reports (AC-07-A-1 to 50) Chapter 1. State-level data Chapter 2. County-level data	February 4, 2009
Outlying Areas Data (AC-07-A-52 to 56) Puerto Rico (Part 52), Guam (Part 53), U.S. Virgin Islands (Part 54), and Commonwealth of Northern Mariana Islands (Part 56) American Samoa (Part 55)	February 4, 2009 April 2011
Agricultural Atlas (AC-07-S-1)	February 4, 2009
Ranking of Congressional Districts (AC-07-S-2)	May 29, 2009
ZIP Code Tabulations (AC-07-S-3)	July 31, 2009
Congressional District Tabulations (AC-07-S-4)	May 8, 2009
American Indian Reservations (AC-07-S-5)	June 19, 2009
Watersheds (AC-07-S-6)	May 29, 2009
History (AC-07-S-7)	April 2011
Specialty Crops (AC-07-S-8)	November 30, 2009
Specialty Crops for Outlying Areas (AC-07-S-9)	November 30, 2009
2008 Farm and Ranch Irrigation Survey (AC-07-SS-1)	November 30, 2009
2008 Organic Production Survey (AC-07-SS-2)	February 3, 2010
2009 Census of Horticultural Specialties (AC-07-SS-3)	December 13, 2010
2009 On-Farm Renewable Energy Survey (AC-07-SS-6)	February 23, 2011
History of Follow-on Activities (AC-07-SS-7)	July 2011

## **PROGRAMS POSTPONED**

Due to budgetary constraints, the 2010 Census of Aquaculture and the introduction of the 2010 Tenure, Ownership, and Transition of Agricultural Land Survey (formerly called the Agricultural Economics and Land Ownership Survey (AELOS)) were removed from the 2007 Census of Agriculture follow-on survey program.

### **2010 Census of Aquaculture**

The census of aquaculture was the primary source of aquaculture data at the State and national levels. Previous aquaculture census collected detailed data relating to production methods, surface water acres and sources, production sales, point of first sale outlets, aquaculture distributed for restoration or conservation purposes, and farm labor.

### **2010 Tenure, Ownership, and Transition of Agricultural Land (TOTAL) Survey**

The Tenure, Ownership, and Transition of Agricultural Land Survey would have reported detailed information on the Nation's farmland ownership, farm finance, farm inputs, and agricultural purchases by farm operators.



---

## Appendix A: Provisions Relating to the 2007 Census of Agriculture

---

### OVERVIEW

The 2007 Census of Agriculture and follow-on censuses and surveys are conducted under the provisions of Title 7 U.S.C. Previously, the census program was conducted under the provisions of Title 13 U.S.C. This change in legal authority resulted from the transfer of the census of agriculture from the U.S. Department of Commerce to the U.S. Department of Agriculture. Essentially, the provisions to conduct censuses and its components are the same under Title 7 as they were under Title 13 U.S.C.

In addition, the 2007 Census of Agriculture and follow-on censuses and surveys are conducted under the Confidential Information Protection and Statistical Efficiency Act of 2002 (Title V, Public Law 107-347, December 17, 2002).

Applicable sections of Title 7 U.S.C. as they relate to the 2007 Census of Agriculture follow.

### Provision of Title 7, Chapter 55, United States Code – Department of Agriculture

#### Section 2204g. Authority of Secretary of Agriculture to conduct census of agriculture

##### (a) Census of agriculture required

###### (1) In general

In 1998 and every fifth year thereafter, the Secretary of Agriculture shall take a census of agriculture.

###### (2) Inclusion of specialty crops

Effective beginning with the census of agriculture required to be conducted in 2008, the Secretary shall conduct as part of each census of agriculture a census of specialty crops (as that term is defined in section 3 of the Specialty Crops Competitiveness Act of 2004 (7 U.S.C. 1621 note; Public Law 108-465).

##### (b) Methods

In connection with the census, the Secretary may conduct any survey or other information collection, and employ any sampling or other statistical method, that the Secretary determines is appropriate.

##### (c) Year of information

The information collected in each census taken under this section shall relate to the year immediately preceding the year in which the census is taken.

##### (d) Enforcement

###### (1) Fraud

A person over 18 years of age who willfully gives an answer that is false to a question, which is authorized by the Secretary to be submitted to the person in connection with a census under this section, shall be fined not more than \$500.

###### Refusal or neglect to answer questions

A person over 18 years of age who refuses or willfully neglects to answer a question, which is authorized by the Secretary to be submitted to the person in connection with a census under this section, shall be fined not more than \$100.

**(2) Social Security number**

The failure or refusal of a person to disclose the person's Social Security number in response to a request made in connection with any census or other activity under this section shall not be a violation under this subsection.

**(3) Religious information**

Notwithstanding any other provision of this section, no person shall be compelled to disclose information relative to the religious beliefs of the person or to membership of the person in a religious body.

**(e) Geographic coverage**

A census under this section shall include—

**(1)** each of the several States of the United States;

**(2)** as determined appropriate by the Secretary, the District of Columbia, the Commonwealth of Puerto Rico, the Commonwealth of the Northern Mariana Islands, the United States Virgin Islands, and Guam; and

**(3)** with the concurrence of the Secretary and the Secretary of State, any other possession or area over which the United States exercises jurisdiction, control, or sovereignty.

**(f) Cooperation with Secretary of Commerce**

**(1) Information provided to Secretary of Agriculture**

On a written request by the Secretary of Agriculture, the Secretary of Commerce may provide to the Secretary of Agriculture any information collected under title 13 that the Secretary of Agriculture considers necessary for the taking of a census or survey under this section.

**(2) Information provided to Secretary of Commerce**

On a written request by the Secretary of Commerce, the Secretary of Agriculture may provide to the Secretary of Commerce any information collected in a census taken under this section that the Secretary of Commerce considers necessary for the taking of a census or survey under title 13.

**(4) Confidentiality**

Information obtained under this subsection may not be used for any purpose other than the statistical purposes for which the information is supplied. For purposes of sections 9 and 214 of title 13, any information provided under paragraph (2) shall be considered information furnished under the provisions of title 13.

**(g) Regulations**

A regulation necessary to carry out this section may be promulgated by—

**(1)** the Secretary of Agriculture, to the extent that a matter under the jurisdiction of the Secretary is involved; and

**(2)** the Secretary of Commerce, to the extent that a matter under the jurisdiction of the Secretary of Commerce is involved.

**Section 2276. Confidentiality of information**

**(a) Authorized disclosure**



In the case of information furnished under a provision of law referred to in subsection (d) of this section, neither the Secretary of Agriculture, any other officer or employee of the Department of Agriculture or agency thereof, nor any other person may—

- (1) use such information for a purpose other than the development or reporting of aggregate data in a manner such that the identity of the person who supplied such information is not discernible and is not material to the intended uses of such information;
- (2) disclose such information to the public, unless such information has been transformed into a statistical or aggregate form that does not allow the identification of the person who supplied particular information; or
- (3) in the case of information collected under the authority described in subsection (d)(12) of this section, disclose the information to any person or any Federal, State, local, or tribal agency outside the Department of Agriculture, unless the information has been converted into a statistical or aggregate form that does not allow the identification of the person that supplied particular information.

**(b) Duty of Secretary; immunity from disclosure; necessary consent**

- (1) In carrying out a provision of law referred to in subsection (d) of this section, no department, agency, officer, or employee of the Federal Government, other than the Secretary of Agriculture, shall require a person to furnish a copy of statistical information provided to the Department of Agriculture.
- (2) A copy of such information—
  - (A) shall be immune from mandatory disclosure of any type, including legal process; and
  - (B) shall not, without the consent of such person, be admitted as evidence or used for any purpose in any action, suit, or other judicial or administrative proceeding.

**(c) Violations; penalties**

Any person who shall publish, cause to be published, or otherwise publicly release information collected pursuant to a provision of law referred to in subsection (d) of this section, in any manner or for any purpose prohibited in section <sup>111</sup>(a) of this section, shall be fined not more than \$10,000 or imprisoned for not more than 1 year, or both.

**(d) Specific provisions for collection of information**

For purposes of this section, a provision of law referred to in this subsection means—

---

<sup>1</sup> So in original. Probably should be “subsection”.

- (1) the first section of the Act entitled “An Act authorizing the Secretary of Agriculture to collect and publish statistics of the grade and staple length of cotton”, approved March 3, 1927 (7 U.S.C. 471) (commonly referred to as the “Cotton Statistics and Estimates Act”);
  - (2) the first section of the Act entitled “An Act to provide for the collection and publication of statistics of tobacco by the Department of Agriculture”, approved January 14, 1929 (7 U.S.C. 501);
  - (3) the first section of the Act entitled “An Act to provide for the collection and publication of statistics of peanuts by the Department of Agriculture”, approved June 24, 1936 (7 U.S.C. 951);
  - (4) section 203(g) of the Agricultural Marketing Act of 1946 (7 U.S.C. 1622 (g));
  - (5) section 526(a) of the Revised Statutes (7 U.S.C. 2204 (a));
  - (6) the Act entitled “An Act providing for the publication of statistics relating to spirits of turpentine and resin”, approved August 15, 1935 (7 U.S.C. 2248);
  - (7) section 42 of title 13;
  - (8) section 4 of the Act entitled “An Act to establish the Department of Commerce and Labor”, approved February 14, 1903 (15 U.S.C. 1516);
  - (9) section 2 of the joint resolution entitled “Joint resolution relating to the publication of economic and social statistics for Americans of Spanish origin or descent”, approved June 16, 1976 (15 U.S.C. 1516a);
  - (10) section 3(e) of the Forest and Rangeland Renewable Resources Research Act of 1978 (16 U.S.C. 1642 (e));
  - (11) section 2204g of this title; or
  - (12) section 302 of the Rural Development Act of 1972 (7 U.S.C. 1010a) regarding the authority to collect data for the National Resources Inventory.
- (e) **Information provided to Secretary of Commerce**

This section shall not prohibit the release of information under section 2204g (f)(2) of this title.

**PROVISIONS OF TITLE, Public Law 107-347, United States. Code – Confidential Information Protection and Statistical Efficiency Act of 2002**

**Section 512. Limitations on Use and Disclosure of Data and Information**

- (a) **USE OF STATISTICAL DATA OR INFORMATION.**—Data or information acquired by an agency under a pledge of confidentiality and for exclusively statistical purposes shall be used by officers, employees, or agents of the agency exclusively for statistical purposes.
- (b) **DISCLOSURE OF STATISTICAL DATA OR INFORMATION.**—
- (1) Data or information acquired by an agency under a pledge of confidentiality for exclusively statistical purposes shall not be disclosed by an agency in identifiable form, for any use other than an exclusively statistical purpose, except with the informed consent of the respondent.
  - (2) A disclosure pursuant to paragraph (1) is authorized only when the head of the agency approves such disclosure and the disclosure is not prohibited by any other law.
  - (3) This section does not restrict or diminish any confidentiality protections in law that otherwise apply to data or information acquired by an agency under a pledge of confidentiality for exclusively statistical purposes.
- (c) **RULE FOR USE OF DATA OR INFORMATION FOR NONSTATISTICAL PURPOSES.**—A statistical agency or unit shall clearly distinguish any data or information it collects for nonstatistical purposes (as authorized by law) and provide notice to the public, before the data or information is collected, that the data or information could be used for nonstatistical purposes.
- (d) **DESIGNATION OF AGENTS.**—A statistical agency or unit may designate agents, by contract or by entering into a special agreement containing the provisions required under section 502(2) for treatment as an agent under that section, who may perform exclusively statistical activities, subject to the limitations and penalties described in this title.

**Section 513. Fines and Penalties**

Whoever, being an officer, employee, or agent of an agency acquiring information for exclusively statistical purposes, having taken and subscribed the oath of office, or having sworn to observe the limitations imposed by section 512, comes into possession of such information by reason of his or her being an officer, employee, or agent and, knowing that the disclosure of the specific information is prohibited under the provisions of this title, willfully discloses the information in any manner to a person or agency not entitled to receive it, shall be guilty of a class E felony and imprisoned for not more than 5 years, or fined not more than \$250,000, or both.



---

## **Appendix B. 2007 Census of Agriculture Report Form and Data Changes**

---

### **DEVELOPMENT OF THE CENSUS REPORT FORMS**

Prior to release of the results from the 2002 Census of Agriculture, NASS was preparing for the 2007 Census of Agriculture. The first team established was the 2005 Census Content Test Team. This team was tasked with content determination and report form development. They reviewed the 2002 report form content, solicited input from internal and external customers, developed criteria for determining acceptance and/or rejection of content for the 2007 Census of Agriculture report forms, tested the effectiveness of the report forms for various modes of data collection (mail, telephone, personal interview, and electronic data reporting), and made recommendations to NASS senior executives for final content determination and conduct of data collection.



Throughout development NASS sought advice and input from the data user community. Integral partners included the Advisory Committee on Agriculture Statistics, State departments of agriculture and other State government officials, USDA agencies, Federal agency officials, land grant universities, agricultural trade associations, media, and various CBOs.

NASS conducted the 2005 Census of Agriculture Content Test in early 2006. The test consisted of three phases: cognitive pretesting, national mailout, and follow-up interviews. Results from the testing produced two final report form types – a 24-page regionalized form with 7 versions (07-A0201 thru 07-A0207 regional forms and an 07-A0200 general version) and a 12-page national form version (07-A0100). The main difference between the form types is the format used to collect crop and livestock information. The regionalized report forms include crop sections designed to facilitate reporting crops most commonly grown within a report form region. Many items in these sections are either prelisted in the tables or listed below the tables. The national report form collected the same information as the regionalized forms, but it was formatted to fit on fewer pages. It includes an open table format to collect crop and livestock information. Respondents had to write in their crops and/or livestock information. A sample copy of the regionalized report form and instruction sheet is included in this appendix.

### **DATA CHANGES**

For descriptions of the report form changes from the 2002 report form and their effect on the publication tables, see the 2007 Census of Agriculture, Volume 1, Geographic Area Series, Part 51, Appendix B, General Explanation and Census of Agriculture Report Form. In addition, details are noted on pages 134–146.

# UNITED STATES 2007 CENSUS OF AGRICULTURE

<p>Form Number: 07-A0200 (11/27/06)</p>   <p>National Agricultural Statistics Service</p> <p>Please return your completed report to:</p> <p>Census of Agriculture 1201 East 10th Street Jeffersonville, IN 47132</p> <p><b>OFFICE USE ONLY</b></p>	<p style="text-align: center;">07-A0200</p> <p style="text-align: center; font-size: small;"><i>Please make corrections to name, address, and ZIP code if necessary.</i></p>															
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="3" style="padding: 2px;">0013</td> </tr> <tr> <td style="width: 33%;"></td> <td style="width: 33%;"></td> <td style="width: 33%;"></td> </tr> <tr> <td style="padding: 2px;">0011</td> <td colspan="2" style="padding: 2px;">0012</td> </tr> <tr> <td style="padding: 2px;">0014</td> <td style="padding: 2px;">0015</td> <td style="padding: 2px;">0016</td> </tr> <tr> <td style="padding: 2px;">0021</td> <td style="padding: 2px;">0022</td> <td style="padding: 2px;">0023</td> </tr> </table>	0013						0011	0012		0014	0015	0016	0021	0022	0023	
0013																
0011	0012															
0014	0015	0016														
0021	0022	0023														
<ul style="list-style-type: none"> <li>• Everyone who receives a form must return one by mail or via the Internet at <b>www.agcensus.nass.usda.gov</b></li> <li>• Your report is due by <b>February 4, 2008</b>.</li> <li>• To fill out the paper form, use a black or blue ballpoint pen.</li> <li>• <b>Duplicate forms?</b> If you received extra census report forms for the SAME farming operation, return all report forms in the same envelope with this completed report.</li> </ul> <p style="text-align: center;"><b>THANK YOU FOR YOUR COOPERATION.</b></p> <p style="text-align: center;"><b>Questions? Call us toll free at 1-888-424-7828.</b></p> <p style="text-align: center;">¿Preguntas? Llámenos libre de cargos al 1-888-424-7828.</p> <p><b>PENALTY FOR FAILURE TO REPORT</b></p> <p><small><b>NOTICE:</b> Response to this inquiry is required by law (Title 7, U.S. Code). By the same law, YOUR REPORT IS CONFIDENTIAL and it will only be used for statistical purposes. Your report CANNOT be used for purposes of taxation, investigation, or regulation. The law also provides that copies retained in your files are immune from legal process.</small></p>																

07200017 

**SECTION 1 ACREAGE IN 2007**

Report land owned, rented, or used by you, your spouse, or by the partnership, corporation, or organization named on the front of this form. Include ALL LAND, REGARDLESS OF LOCATION OR USE - cropland, Conservation Reserve Program (CRP) and Wetlands Reserve Program (WRP) land, pastureland, rangeland, woodland, idle land, farmsteads, etc.

	None	
1. All land owned. . . . .	0043 <input type="checkbox"/>	
2. All land rented or leased <b>from others</b> , including land worked by you on shares, used rent free, in exchange for services, payment of taxes, etc. Include Federal, State, and railroad land leased on a per-acre basis. Exclude land (i.e. private, Federal, State, railroad, etc.) used on a per-head or animal unit month (AUM) basis under a grazing permit. . . . .	0044 <input type="checkbox"/>	
3. All land rented or leased <b>to others</b> , including land worked on shares by others and land subleased. . . . .	0045 <input type="checkbox"/>	
4. <b>TOTAL ACRES</b> in this operation for this census - Add items 1 and 2, then subtract item 3. If the entry is zero, please refer to the enclosed Instruction Sheet, section 1.		
These acres are referred to as <b>THIS OPERATION</b> for the remainder of this report.		0046

	None	
5. How many acres rented or leased <b>to others</b> (Item 3 above) did this operation <b>own</b> ? . . . . .	0053 <input type="checkbox"/>	

6. Location of agricultural activity for this operation

a. In what county was the largest value of your agricultural products raised or produced?

0055	Principal County Name	0060	State	0056	Number of Acres

b. If you also had agricultural activity in any **other** county, enter the county name(s), etc.

	Other County Name(s)		State		Number of Acres
				0057	
				0058	
				0059	
				0042	

**SECTION 2 LAND**

Report how the acres reported in SECTION 1, item 4 were used in 2007. Include land in CRP, WRP, and other State and Federal programs. **Exclude land rented to others.** Report land only once, in the first item that applies. For example: Land that was both pastured and had a crop harvested should be reported only in cropland harvested (item 1a).

1. Cropland - Exclude cropland pasture.

a. Cropland harvested - Include all land from which crops were harvested or hay was cut, all land in orchards, citrus groves, vineyards, berries, and nursery and greenhouse crops, Christmas trees, and short rotation woody crops. . . . . 0787	None <input type="checkbox"/>	Number of Acres
b. Cropland on which all crops failed or were abandoned - Exclude land in orchards and vineyards. . . . . 0790	<input type="checkbox"/>	
c. Cropland in cultivated summer fallow. . . . . 0791	<input type="checkbox"/>	
d. Cropland idle or used for cover crops or soil-improvement but not harvested and not pastured or grazed. . . . . 1062	<input type="checkbox"/>	
2. Pasture		
a. Permanent pasture and rangeland - Exclude cropland pasture. . . . . 0796	<input type="checkbox"/>	
b. Woodland pastured. . . . . 0794	<input type="checkbox"/>	
c. Cropland used <b>only</b> for pasture or grazing - Include rotation pasture and grazing land that could have been used for crops without additional improvements. . . . . 0788	<input type="checkbox"/>	
3. Woodland not pastured - Include woodlots, timber tracts, and sugarbush. . 0795	<input type="checkbox"/>	
4. All other land - Include land in farmsteads, buildings, livestock facilities, ponds, roads, wasteland, etc. . . . . 0797	<input type="checkbox"/>	
5. <b>TOTAL ACRES</b> - Add the acres reported in items 1 through 4 above. Should be the same acres as those reported in SECTION 1, Item 4. . . . 0798	<input type="checkbox"/>	

**SECTION 3 IRRIGATION**

1. Were any of the acres on this operation irrigated by sprinklers, flooding, ditches or furrows, drip or trickle irrigation, etc. in 2007?

1065 1  **Yes** - Complete this section 3  **No** - Go to SECTION 4 below

2. Harvested land irrigated - Include irrigated land from which crops were harvested or hay was cut and land in bearing and nonbearing fruit, nut, and berry crops. . . . . 0680	None <input type="checkbox"/>	Acres Irrigated
3. Pastureland, rangeland, abandoned cropland, and other land irrigated. . . 0681	<input type="checkbox"/>	

**SECTION 4 CONSERVATION RESERVE PROGRAM AND CROP INSURANCE**

1. How many acres in this operation were enrolled in the Conservation Reserve Program (CRP), Wetlands Reserve Program (WRP), Farmable Wetlands Program (FWP), or Conservation Reserve Enhancement Program (CREP), on <b>September 30, 2007</b> ? . . . . . 0683	None <input type="checkbox"/>	Number of Acres
a. Amount received in 2007 for participation in these programs. . . . . 0685	<input type="checkbox"/>	Dollars
		\$ .00
2. How many acres in this operation were covered under a crop insurance policy in 2007? . . . . . 1067	<input type="checkbox"/>	Number of Acres

07200033 



- DO NOT report crops grown on land rented TO OTHERS -

<b>SECTION 5 FIELD CROPS</b>						
1. Were any field crops, such as corn, wheat, rice, etc., harvested from this operation in 2007? Include your landlord's share and crops grown under contract. Exclude crops grown on land rented to others.						
1011 1 <input type="checkbox"/> <b>Yes</b> - Complete this section 3 <input type="checkbox"/> <b>No</b> - Go to SECTION 6						
2. For those crops not printed in the following table, enter the crop name and code from the list below for any other field crop harvested in 2007. Report quantity harvested in the unit specified with the crop name.						
Field Crop	Code	Acres Harvested		Total Quantity Harvested	Acres Irrigated	
		Acres	Tenths		Acres	Tenths
Tobacco - all types (tenth acres)	0094			Lbs.		
Field Crop	Code	Acres Harvested		Total Quantity Harvested	Acres Irrigated	
Corn for grain or seed	0067			Bu.		
Corn for silage or greenchop	0070			Tons		
Oats for grain or seed	0076			Bu.		
Soybeans for beans	0088			Bu.		
Winter wheat for grain or seed harvested in 2007	0572			Bu.		
If more space is needed, use a separate sheet of paper.						
FIELD CROPS	CODE	FIELD CROPS	CODE	FIELD CROPS	CODE	
Alfalfa seed (pounds) . . . . .	0542	Hay - Report in SECTION 7.		Sorghum for silage or greenchop (tons) . . . . .	0085	
Austrian winter peas (hundredweight) . . . . .	0548	Herbs, dried (pounds) . . . . .	.0620	Sorghum for syrup (gallons) . . . . .	0704	
Bahia grass seed (pounds) . . . . .	0551	Joboba harvested (pounds) . . . . .	.0626	Sorghum-Sudan crosses - Report in SECTION 7.		
Barley for grain or seed (bushels) . . . . .	0079	Kentucky bluegrass seed (pounds) . . . . .	.0629	Sudangrass seed (pounds) . . . . .	0713	
Beans, dry edible excluding limas (hundredweight) . . . . .	0554	Lentils (hundredweight) . . . . .	.0635	Sugarbeets for seed (pounds) . . . . .	0716	
Beans, dry lima (hundredweight) . . . . .	0557	Lespedeza seed (pounds) . . . . .	.0638	Sugarbeets for sugar (tons) . . . . .	0719	
Bentgrass seed (pounds) . . . . .	0560	Mint, peppermint (pounds of oil) . . . . .	.0047	Sugarcane for seed (tons) . . . . .	0725	
Bermuda grass seed (pounds) . . . . .	0563	Mint, spearmint (pounds of oil) . . . . .	.0050	Sugarcane for sugar (tons) . . . . .	0722	
Birdsfoot trefoil seed (pounds) . . . . .	0566	Mustard seed (pounds) . . . . .	.0650	Sunflower seed, non-oil variety (pounds) . . . . .	0776	
Bromegrass seed (pounds) . . . . .	0569	Orchardgrass seed (pounds) . . . . .	.0653	Sunflower seed, oil variety (pounds) . . . . .	0773	
Buckwheat (bushels) . . . . .	0575	Peanuts for nuts (pounds) . . . . .	.0656	Sweet corn for seed (pounds) . . . . .	0740	
Canola, edible (pounds) . . . . .	0614	Peas, dry edible (hundredweight) . . . . .	.0659	Sweet potatoes - Report in SECTION 10.		
Clover, crimson clover seed (pounds) . . . . .	0593	Peas, dry Southern/cowpeas (bushels) . . . . .	.0584	Timothy seed (pounds) . . . . .	0746	
Clover, red clover seed (pounds) . . . . .	0671	Popcorn (pounds shelled) . . . . .	.0662	Triticale for grain (bushels) . . . . .	0749	
Cotton, Pima (bales) . . . . .	0644	Potatoes - Report in SECTION 10.		Vetch seed (pounds) . . . . .	0755	
Cotton, Upland (bales) . . . . .	0581	Proso millet for grain or seed (bushels) . . . . .	.0665	Wheat, Durum (bushels) . . . . .	0578	
Emmer and spelt (bushels) . . . . .	0599	Rice (hundredweight) . . . . .	.0677	Wheat, Spring (bushels) . . . . .	0728	
Fescue seed (pounds) . . . . .	0602	Rye for grain or seed (bushels) . . . . .	.0686	Other field crop, specify above. . . . .	0752	
Flaxseed (bushels) . . . . .	0605	Ryegrass seed (pounds) . . . . .	.0689			
		Safflower (pounds) . . . . .	.0692			
		Sorghum for grain or seed, including milo (bushels) . . . . .	.0082			

07200041 

**SECTION 6 GRAIN STORAGE CAPACITY**

1. Were any facilities to store whole grains or oilseeds on this operation on **December 31, 2007**?

<sup>1028</sup> 1  **Yes** - Complete this section 3  **No** - Go to SECTION 7 below

2. What was the total whole grains and oilseed storage capacity on this operation? Include capacity of all structures normally used for storing whole grains and oilseeds. . . . . <sup>1029</sup>

Bushels

**SECTION 7 HAY AND FORAGE CROPS**

1. Were any hay and forage crops cut or harvested from this operation in 2007? Include your landlord's share and crops grown under contract. Exclude crops grown on land rented to others.

<sup>1152</sup> 1  **Yes** - Complete this section 3  **No** - Go to SECTION 8 below

TOTAL HAY AND FORAGE CROPS - Exclude straw, corn silage, and sorghum silage.

2. All land from which dry hay, haylage, grass silage, or greenchop was cut or forage was harvested. . . . . <sup>1021</sup>  None

Acres Harvested	Acres Irrigated

For items 3 through 8, when both dry hay and haylage were cut from the same acres, report acres for each type. If two or more cuttings were made from the same acres, report acres for that item only once, but report total quantity harvested from all cuttings.

**ALFALFA HAY AND SILAGE**

3. Alfalfa and alfalfa mixtures for dry hay. . . <sup>0103</sup>  None

4. Haylage or greenchop from alfalfa or alfalfa mixtures. . . . . <sup>1070</sup>  None

Acres Harvested	Total Tons Harvested	Acres Irrigated
	Tons, dry	
	Tons, green	

**OTHER HAY AND SILAGE**

5. Small grain dry hay - barley, oats, rye, wheat, etc. . . . . <sup>0106</sup>  None

6. Other tame dry hay - clover, fescue, lespedeza, timothy, Bermuda grass, Sudangrass, etc. . . . . <sup>0109</sup>  None

7. Wild dry hay. . . . . <sup>0112</sup>  None

8. All other haylage, grass silage, and greenchop. . . . . <sup>1073</sup>  None

	Tons, dry	
	Tons, dry	
	Tons, dry	
	Tons, green	

**SECTION 8 WOODLAND CROPS AND MAPLE SYRUP**

1. Were any woodland crops grown, harvested, or tapped on this operation in 2007? Include your landlord's share and crops grown under contract. Exclude crops grown on land rented to others.

<sup>1153</sup> 1  **Yes** - Complete this section 3  **No** - Go to SECTION 9

2. Cut Christmas trees - cut or to be cut. Report live trees sold in SECTION 9. . . . . <sup>1023</sup>  None

Acres in Production	Number of Trees Cut	Acres Irrigated

3. Short rotation woody crops - Trees with growth cycles of 10 years or less. Report nursery stock in SECTION 9. . . . . <sup>1025</sup>  None

Acres in Production	Acres Harvested	Acres Irrigated

4. Maple syrup. . . . . <sup>0800</sup>  None

Number of Taps	Syrup Produced
	Gallons



**SECTION 9 NURSERY, GREENHOUSE, FLORICULTURE, SOD, MUSHROOMS, VEGETABLE SEEDS, AND PROPAGATIVE MATERIALS**

1. Were any nursery, floriculture, or greenhouse crops, including ornamental plants, flowers, mushrooms, aquatic plants, sod, food crops under protection, vegetable seeds, flower seeds, or other propagative materials, grown for sale on this operation in 2007? Include crops produced under contract and food crops grown in greenhouses, caves, and high tunnels where crops were always covered. Exclude personal or home use crops. Report food crops temporarily covered for early germination, frost protection, etc. in SECTION 10, 11, or 12.

<sup>1032</sup> 1  **Yes** - Complete this section 3  **No** - Go to SECTION 10

Area Irrigated		
Square Feet	Acres in the Open	
	Acres	Tenths

2. Nursery, greenhouse, floriculture, sod, mushrooms, and propagative materials irrigated. . . . . 0477  None

3. Enter the crop type and code from the list below for all crops grown in 2007. Report area grown and value of sales in the table.

Crop Type	Code	Square Feet Under Glass or Other Protection	Acres in the Open		Value of Sales (Dollars)
			Acres	Tenths	
					\$ .00
					\$ .00
					\$ .00
					\$ .00
					\$ .00
					\$ .00
					\$ .00
					\$ .00

If more space is needed, use a separate sheet of paper.

- FLORICULTURE AND BEDDING CROPS** CODE
- Bedding/Garden plants - annuals, herbaceous perennials, vegetable plants. . . . . 0479
  - Cut flowers and cut florist greens. . . . . 0485
  - Foliage plants, indoor. . . . . 0707
  - Potted flowering plants. . . . . 0710
  - Other floriculture and bedding, specify above. . . . . 1015

- NURSERY CROPS** CODE
- Nursery stock - ornamentals, shrubs, shade trees, live Christmas trees, fruit and nut trees, vines, palms, ornamental grasses, etc. . . . . 0488
  - Aquatic plants. . . . . 0880
  - Other nursery, specify above. . . . . 1017

- SOD** CODE
- Sod harvested. . . . . 0497

- PROPAGATIVE MATERIALS SOLD** CODE
- Bulbs, corms, rhizomes, and tubers, dry. . . . . 0482
  - Cuttings, seedlings, liners, plugs. . . . . 1002
  - Flower seeds. . . . . 0882
  - Tobacco plants sold for transplant to farm fields. . . . . 1004
  - Vegetable seeds. . . . . 0884
  - Vegetable transplants to farm fields. . . . . 1006

- FOOD CROPS GROWN UNDER GLASS OR OTHER PROTECTION** CODE
- Tomatoes. . . . . 1019
  - Other vegetables and fresh cut herbs. . . . . 0503
  - Fruits and berries. . . . . 1008

- MUSHROOM CROPS** CODE
- Mushrooms - Report growing area and sales. . . . . 0494
  - Mushroom spawn - Report sales only. . . . . 2495



**SECTION 10 VEGETABLES, POTATOES, AND MELONS**

1. Were any vegetables, potatoes, sweet corn, or melons harvested from this operation in 2007? Include crops grown under contract. Exclude personal or home use crops. Report crops grown under glass or other protection in SECTION 9.

1101 1  **Yes** - Complete this section 3  **No** - Go to SECTION 11

2. Acres from which vegetables, potatoes, and melons were harvested in 2007. Report multiple cropped acreage only once. . . . . 0375

Acres Harvested		Acres Irrigated	
Acres	Tenths	Acres	Tenths

3. For those crops not printed in the following table, enter the crop name and code from the list below for any other vegetables harvested in 2007.

- If more than one vegetable crop was harvested from the same acres, report acres for each crop.
- For two or more pickings of the same crop, report the area harvested only once.
- Processing refers to vegetables that have been altered by heat, pressure, or freezing.

Crop Name	Code	Total Acres Harvested		Acres Harvested for Fresh Market		Acres Harvested for Processing	
		Acres	Tenths	Acres	Tenths	Acres	Tenths
Potatoes	0097						
Sweet potatoes	0100						
Tomatoes in the open	0463						

If more space is needed, use a separate sheet of paper.

CROP NAME	CODE	CROP NAME	CODE	CROP NAME	CODE
Artichokes - Exclude Jerusalem. . . . .	0377	Eggplant. . . . .	0415	Peas, Chinese (sugar, snow). . . . .	0405
Asparagus, bearing age. . . . .	0418	Escarole and endive. . . . .	0417	Peas, green. . . . .	0441
Beans, Lima. . . . .	0429	Garlic. . . . .	0421	Peas, Southern (cowpeas). . . . .	0409
Beans, snap (bush and pole). . . . .	0381	Ginseng. . . . .	0446	Peppers, Bell - Exclude pimientos. . . . .	0443
Beets. . . . .	0383	Herbs, fresh cut. . . . .	0455	Peppers, other than Bell - Include chile. . . . .	0445
Broccoli. . . . .	0385	Honeydew melons. . . . .	0423	Pumpkins. . . . .	0449
Brussels sprouts. . . . .	0387	Horseradish. . . . .	0424	Radishes. . . . .	0451
Cabbage, Chinese. . . . .	0389	Kale. . . . .	0425	Rhubarb. . . . .	0453
Cabbage, head. . . . .	0391	Lettuce, head. . . . .	0428	Spinach. . . . .	0457
Cabbage, mustard. . . . .	0393	Lettuce, leaf. . . . .	0430	Squash, summer. . . . .	0468
Cantaloupes and muskmelons. . . . .	0395	Lettuce, Romaine. . . . .	0432	Squash, winter. . . . .	0470
Carrots. . . . .	0397	Mustard greens. . . . .	0431	Sweet corn. . . . .	0461
Cauliflower. . . . .	0399	Okra. . . . .	0437	Turnip greens. . . . .	0467
Celery. . . . .	0401	Onions, dry. . . . .	0433	Turnips. . . . .	0465
Chicory. . . . .	0403	Onions, green. . . . .	0435	Watercress. . . . .	0471
Collards. . . . .	0407	Parsley. . . . .	0439	Watermelons. . . . .	0473
Cucumbers and pickles. . . . .	0411			Vegetables, other, specify above. . . . .	0475
Daikon. . . . .	0413				



**SECTION 11 FRUIT AND NUTS**

1. Was there a combined total of 20 or more fruit or nut trees, including grapevines, on this operation in 2007? Include crops grown under contract. Exclude abandoned acres. Report berries in SECTION 12.

<sup>1047</sup> 1  **Yes** - Complete this section    3  **No** - Go to SECTION 12

Total Acres		Acres Irrigated	
Acres	Tenths	Acres	Tenths

2. Acres in bearing and nonbearing fruit orchards, citrus groves, vineyards, and nut trees. . . . . 0121

3. For those crops not printed in the following table, enter the crop name and code from the list below for any other fruit and nuts on this operation in 2007. Include acres even if not harvested because of low prices, damage from hail, frost, etc.

Crop Name	Code	Total Acres		Bearing Age Acres		Nonbearing Age Acres	
		Acres	Tenths	Acres	Tenths	Acres	Tenths
Apples	0123						
Grapes	0366						
Peaches, clingstone	0222						
Peaches, freestone	0216						
Oranges, Valencia	0150						
Oranges, other than Valencia	0174						

If more space is needed, use a separate sheet of paper.

NONCITRUS FRUIT	CODE	NONCITRUS FRUIT	CODE	CITRUS FRUIT	CODE	NUTS	CODE
Apricots. . . . .	0129	Olives. . . . .	0207	Grapefruit. . . . .	0267	Almonds. . . . .	0321
Avocados. . . . .	0135	Papayas. . . . .	0213	Kumquats. . . . .	0273	Chestnuts. . . . .	0324
Bananas. . . . .	0141	Passion fruits. . . . .	0219	Lemons. . . . .	0279	English walnuts. . . . .	0357
Cherries, sweet. . . . .	0345	Pears, Bartlett. . . . .	0234	Limes. . . . .	0285	Hazelnuts (Filberts). . . . .	0327
Cherries, tart. . . . .	0587	Pears, other than Bartlett. . . . .	0240	Tangelos. . . . .	0303	Macadamia nuts. . . . .	0333
Coffee. . . . .	0153	Persimmons. . . . .	0237	Tangerines. . . . .	0309	Pecans, improved. . . . .	0336
Dates. . . . .	0159	Plums. . . . .	0243	Temples. . . . .	0144	Pecans, native and seedling. . . . .	0342
Figs. . . . .	0165	Prunes. . . . .	0249	Other citrus fruit, specify above. . . . .	0315	Pistachios. . . . .	0351
Guavas. . . . .	0183	Pluots. . . . .	0264			Other nuts, specify above. . . . .	0363
Kiwifruit. . . . .	0189	Pomegranates. . . . .	0255				
Mangos. . . . .	0195	Other noncitrus, specify above. . . . .	0261				
Nectarines. . . . .	0201						



**SECTION 12 BERRIES**

1. Were any strawberries, cranberries, or other berries grown on this operation in 2007? Include crops grown under contract. Exclude personal or home use crops. Report crops grown under glass or other protection in SECTION 9.

<sup>1041</sup> 1  **Yes** - Complete this section    3  **No** - Go to SECTION 13

Acres Grown		Acres Irrigated	
Acres	Tenths	Acres	Tenths

2. Acres on which berries were grown in 2007. . . . . <sup>1045</sup>

3. Complete the following table for each berry crop grown on this operation in 2007. For two or more pickings of the same crop, report the acres only once.

Crop Name	Code	Total Acres		Acres Harvested		Acres not Harvested	
		Acres	Tenths	Acres	Tenths	Acres	Tenths
Blackberries and dewberries	0509						
Blueberries, tame	0512						
Blueberries, wild	0515						
Boysenberries	0518						
Cranberries	0521						
Currants	0524						
Loganberries	0530						
Raspberries, black	0490						
Raspberries, red	0491						
Strawberries	0536						
Other berries, specify below ↴ 	0539						
Other berries, specify below ↴ 	0539						
Other berries, specify below ↴ 	0539						
Other berries, specify below ↴ 	0539						

If more space is needed, use a separate sheet of paper.

07200090 

**SECTION 13 CATTLE AND CALVES**

1. Did you or anyone else have any cattle or calves, including dairy cattle, on this operation in 2007?

- Include** • Cattle on public or industrial property under a grazing permit.
- Cattle on land used rent free by this operation.
- Cattle grown or fed on this operation for others on a custom or contract basis.
- Exclude** cattle grown or fed by someone else on a custom or contract basis.

<sup>1201</sup> 1  **Yes** - Complete this section    3  **No** - Go to SECTION 14 below

**DECEMBER 31, 2007 INVENTORY**

<p>2. Of the total number of cattle and calves on hand, how many were -</p> <p>a. Beef cows? Include beef heifers that had calved. Exclude heifers that had not calved, steers, calves, and bulls. . . . . 0804</p> <p>b. Milk cows kept for production of milk? Include dry milk cows and milk heifers that had calved. . . . . 0805</p> <p>c. Other cattle? Include heifers that had not calved, steers, calves, and bulls. . . . . 1206</p> <p>3. <b>TOTAL</b> cattle and calves on hand December 31, 2007 - Add items 2a, 2b and 2c. . . . . 0803</p>	<p>None</p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>	<table border="1" style="width: 100%;"> <tr> <th style="text-align: center;">Number on this operation December 31, 2007</th> </tr> <tr><td style="height: 20px;"> </td></tr> <tr><td style="height: 20px;"> </td></tr> <tr><td style="height: 20px;"> </td></tr> <tr><td style="height: 20px;"> </td></tr> </table>	Number on this operation December 31, 2007				
Number on this operation December 31, 2007							

**CATTLE AND CALVES SOLD OR MOVED FROM THIS OPERATION**

<p>4. Of the cattle and calves sold or moved from this operation during 2007, how many were -</p> <p>a. Calves sold or moved in 2007 weighing less than 500 pounds? . . . . 0808</p> <p>b. Cattle sold or moved in 2007, including calves weighing 500 pounds or more? . . . . . 0810</p>	<p>None</p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>	<table border="1" style="width: 100%;"> <tr> <th style="text-align: center;">Number</th> </tr> <tr><td style="height: 20px;"> </td></tr> <tr><td style="height: 20px;"> </td></tr> </table>	Number		
Number					

**CATTLE IN FEEDLOTS** - Include animals for slaughter market fed a ration of grain or other concentrates that are expected to produce a carcass that will grade select or better. Exclude cattle that were pastured only.

<p>5. How many of the cattle on hand reported in Item 3 above were on feed December 31, 2007, and were or will be shipped directly from your feedlot to slaughter market? Exclude cattle being backgrounded. . . 1207</p> <p>6. How many of the cattle sold during 2007 reported in Item 4b above were shipped directly from your feedlot to slaughter market? Exclude any of your cattle being custom fed in feedlots operated by others. Exclude cattle sold as feeders. . . . . 0812</p>	<p>None</p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>	<table border="1" style="width: 100%;"> <tr> <th style="text-align: center;">Number</th> </tr> <tr><td style="height: 20px;"> </td></tr> <tr><td style="height: 20px;"> </td></tr> </table>	Number		
Number					

**SECTION 14 SHEEP AND LAMBS**

1. Did this operation **own** any sheep or lambs in 2007, regardless of location?

<sup>1103</sup> 1  **Yes** - Complete this section    3  **No** - Go to SECTION 15

	None	Number owned on December 31, 2007	Total number sold in 2007	Wool shorn in 2007 (pounds)
2. Sheep and lambs owned. . . . . 0824	<input type="checkbox"/>			
a. Ewes 1 year old or older. . . . . 0826	<input type="checkbox"/>			



**SECTION 15 POULTRY**

1. Did you or anyone else have any poultry, such as chickens, turkeys, ducks, emus, ostriches, etc., on this operation in 2007? Include poultry grown for others on a contract basis.

1217 1  **Yes** - Complete this section    3  **No** - Go to SECTION 16

2. Chickens -

a. Layers -

(i) Table egg types - Include layers for home use. . . . . 1229

None

Number on this operation December 31, 2007	Total number sold or moved from this operation in 2007

(ii) Hatching layers for meat-types - Include layers for broilers, roasters, and other meat-types. . . . . 1231

--	--

(iii) Hatching layers for table eggs. . . . . 1233

--	--

b. Pullets for laying flock replacement. . . . . 1221

--	--

c. Broilers, fryers, and other chickens raised for meat production, including capons and roasters. . . . . 0898

--	--

3. Turkeys -

a. Turkeys for meat production - Exclude breeders. . . . . 1225

--	--

b. Turkey hens kept for breeding. . . . . 1227

--	--

4. Ducks. . . . . 0904

--	--

5. Emus. . . . . 0845

--	--

6. Geese. . . . . 0906

--	--

7. Ostriches. . . . . 0878

--	--

8. Pheasants. . . . . 0910

--	--

9. Pigeons or squab. . . . . 0908

--	--

10. Quail. . . . . 0912

--	--

11. All other poultry - Include bantams, chukars, guineas, rheas, peacocks. Specify below

. . . 0914

--	--

12. All poultry hatched on this operation's hatcheries in 2007. Include chicks, poults, ducklings, etc., and those custom hatched for others. Specify kind(s) of poultry below

. . . 0916

None

Number





**SECTION 16 HOGS AND PIGS**

1. Did you or anyone else have any hogs or pigs on this operation in 2007? Include hogs grown for others on a contract basis. Contractors or integrators only report hogs on land you operate. Exclude hogs grown by someone else on a contract basis.

1211 1  **Yes** - Complete this section 3  **No** - Go to SECTION 17 below

**DECEMBER 31, 2007 INVENTORY**

2. Of the total number of hogs and pigs on hand, how many were -

- a. Hogs and pigs used or to be used for breeding? . . . . . 0816
- b. Other hogs and pigs, including market hogs? . . . . . 0817

None

Number on this operation  
December 31, 2007

3. **TOTAL** hogs and pigs on hand December 31, 2007 -  
Add items 2a and 2b. . . . . 0815

4. Number of hogs and pigs sold or moved from this operation in 2007,  
including feeder pigs. . . . . 0820

Number sold or moved

**TYPE OF OPERATION AND PRODUCER**

5. Mark the **one** item which best describes this operation -

- 1241  Farrow to wean 1242  Farrow to finish 1243  Finish only
- 1244  Farrow to feeder 1245  Nursery 1246  Other - specify →

6. Mark the **one** item which best describes this producer -

- 1214  Independent grower 1215  Contractor or integrator 1216  Contract grower (contractee)

**SECTION 17 AQUACULTURE**

1. Did you or anyone else have any aquaculture on this operation in 2007? Include production for others on a contract basis.

1157 1  **Yes** - Complete this section 3  **No** - Go to SECTION 18

2. Enter the aquaculture type and code from the list below for fish and other aquaculture products grown on this operation in 2007. Include all sizes for each type. For fish include food size, fingerlings, fry, and eggs. Report aquatic plants in SECTION 9.

Aquaculture Type	Code	Total pounds sold or moved	Total number sold or moved	Value of Sales (Dollars)
			OR	\$ .00
			OR	\$ .00
			OR	\$ .00
			OR	\$ .00

If more space is needed, use a separate sheet of paper.

AQUACULTURE TYPE	CODE	AQUACULTURE TYPE	CODE	AQUACULTURE TYPE	CODE
Catfish. . . . .	0860	Baitfish. . . . .	0900	Ornamental fish. . . . .	0980
Trout. . . . .	0863	Crustaceans (crayfish, shrimp, etc.). . . . .	0902	Sport or game fish. . . . .	0984
Other food fish - specify above . . . . .	0896	Mollusks (clams, oysters, etc.). . . . .	0978	Other aquaculture products - specify above. . . . .	0869



**SECTION 18 COLONIES OF BEES**

1. Did this operation **own** any bees in 2007, regardless of location?  
 1104 1  **Yes** - Complete this section 3  **No** - Go to SECTION 19 below

None	Number owned on December 31, 2007	Total colonies sold in 2007	Honey collected in 2007 (pounds)
2. Colonies of bees owned. . . . . 0839 <input type="checkbox"/>			

**SECTION 19 OTHER ANIMALS AND LIVESTOCK PRODUCTS**


1. Did you or anyone else have any horses, goats, other livestock, or livestock products on this operation in 2007?  
 1237 1  **Yes** - Complete this section 3  **No** - Go to SECTION 20

None	Number on December 31, 2007	Total number sold in 2007
2. Horses and ponies. . . . . 0830 <input type="checkbox"/>		
a. How many of these were <b>owned by</b> this operation? . . . . . 0872 <input type="checkbox"/>		
3. Mules, burros, and donkeys. . . . . 0833 <input type="checkbox"/>		
4. Milk goats. . . . . 0843 <input type="checkbox"/>		
5. Angora goats. . . . . 0847 <input type="checkbox"/>		
6. Meat goats and other goats. . . . . 0851 <input type="checkbox"/>		
7. Alpacas. . . . . 0876 <input type="checkbox"/>		
8. Llamas. . . . . 0874 <input type="checkbox"/>		
9. Bison. . . . . 0886 <input type="checkbox"/>		
10. Deer in captivity. . . . . 0888 <input type="checkbox"/>		
11. Elk in captivity. . . . . 0890 <input type="checkbox"/>		
12. Rabbits, including pelts. . . . . 0854 <input type="checkbox"/>		
13. Mink, including pelts. . . . . 0836 <input type="checkbox"/>		
14. Other livestock. Report emus and ostriches in section 15. Specify below $\square$ <input type="text"/> . . . 0857 <input type="checkbox"/>	<b>Number on December 31, 2007</b>	<b>Total number sold in 2007</b>
<b>LIVESTOCK AND ANIMAL PRODUCTS</b>		
15. Mohair. . . . . 0849 <input type="checkbox"/>	Pounds clipped in 2007 <input type="text"/>	
16. Other livestock products - Include semen, embryos, worm castings, manure sold, etc. Specify below $\square$ <input type="text"/> . . . 0970 <input type="checkbox"/>	<b>Quantity produced in 2007</b>	<b>Unit reported</b>



**SECTION 20 PRODUCTION CONTRACTS AND CUSTOM FEEDING**

1. During 2007, were you a production contract grower for a processor or contractor where you grew a crop, raised livestock or poultry, or custom fed any livestock that **you did not own**? A production contract is an agreement setting terms, conditions, and fees to be paid by the contractor to this operation for the production of crops, livestock, or poultry.

1301 1  **Yes** - Complete this section    3  **No** - Go to SECTION 21 



2. Report number of head, bushels, etc. that were raised under production contracts and moved from this operation in 2007. Exclude commodities raised for marketing contracts.

	None	Total quantity moved from this operation in 2007	Unit
a. Broilers and other meat-type chickens. . . . . 1304	<input type="checkbox"/>		birds
b. Chicken eggs. . . . . 1305	<input type="checkbox"/>		dozen
c. Pullets for laying flock replacement. . . . . 1306	<input type="checkbox"/>		birds
d. Turkeys. . . . . 1307	<input type="checkbox"/>		birds
e. Custom fed cattle shipped directly for slaughter - Exclude cattle custom fed for you by others. . . . . 1308	<input type="checkbox"/>		head
f. Hogs and pigs. . . . . 1309	<input type="checkbox"/>		head
g. Other cattle, livestock, poultry, or aquaculture - specify type $\nearrow$ <input type="text"/> . . . 1310	<input type="checkbox"/>		
h. Grains and oilseeds. . . . . 1311	<input type="checkbox"/>		bushels
i. Vegetables, melons, and potatoes - specify type $\searrow$ <input type="text"/> . . . 1312	<input type="checkbox"/>		
j. Other crops - specify type $\searrow$ <input type="text"/> . . . 1313	<input type="checkbox"/>		

3. What was the total dollar amount received in 2007 for delivering commodities under production contracts? . . . . . 1314

Total Dollars
\$ .00

4. Mark all inputs that were partially or completely paid or provided by contractor(s) -
- 1316  Feeder livestock and poultry    1320  Supplies    1323  Veterinary Services
- 1317  Feed    1325  Seed    1324  Breeding livestock
- 1318  Fertilizer and lime    1321  Fuels    1326  Other - specify  $\rightarrow$
- 1319  Chemicals    1322  Utilities    1315  None

5. Enter Contractor that provided inputs and owned the commodity  $\searrow$

1327



**SECTION 21 VALUE OF SALES**

Report gross value of agricultural products sold from this operation in 2007. Include the value of your landlord's share, marketing charges, taxes, hauling, etc. Exclude dollars for items produced under production contracts.

		None	Dollars
1.	Grains, oilseeds, dry beans, and dry peas -		
	a. Corn for grain, seed, or silage. . . . . 1391	<input type="checkbox"/>	\$ .00
	b. Wheat. . . . . 1392	<input type="checkbox"/>	\$ .00
	c. Soybeans. . . . . 1393	<input type="checkbox"/>	\$ .00
	d. Sorghum for grain, seed, or silage. . . . . 1394	<input type="checkbox"/>	\$ .00
	e. Barley. . . . . 1395	<input type="checkbox"/>	\$ .00
	f. Rice. . . . . 1398	<input type="checkbox"/>	\$ .00
	g. Other - canola, dry edible beans, dry edible peas, flaxseed, oats, popcorn, rye, safflower, sunflower seed, etc. . . . . 1399	<input type="checkbox"/>	\$ .00
2.	Tobacco. . . . . 1332	<input type="checkbox"/>	\$ .00
3.	Cotton and cottonseed. . . . . 1333	<input type="checkbox"/>	\$ .00
4.	Vegetables, melons, potatoes, and sweet potatoes, including beets, cabbage, cantaloupes, ginseng, pumpkins, sweet corn, tomatoes, watermelons, vegetable seeds and transplants, etc. . . . . 1334	<input type="checkbox"/>	\$ .00
5.	Fruit, tree nuts, and berries, including almonds, apples, blueberries, cherries, grapefruit, grapes, hazelnuts, kiwifruit, oranges, pears, pecans, strawberries, walnuts, etc. . . . . 1335	<input type="checkbox"/>	\$ .00
6.	Nursery, greenhouse, floriculture, and sod, including bedding plants, bulbs, cut flowers, flower seeds, foliage plants, mushrooms, nursery potted plants, shrubbery, etc. . . . . 1336	<input type="checkbox"/>	\$ .00
7.	Cut Christmas trees and short rotation woody crops. . . . . 1337	<input type="checkbox"/>	\$ .00
8.	Other crops and hay, including grass seed, hay, grass silage, hops, maple syrup, mint, peanuts, sugarcane, sugarbeets, etc. . . . . 1338	<input type="checkbox"/>	\$ .00
9.	Hogs and pigs. . . . . 1341	<input type="checkbox"/>	\$ .00
10.	Milk and other dairy products from cows. . . . . 1340	<input type="checkbox"/>	\$ .00
11.	Cattle and calves, including beef and dairy cattle for breeding stock, fed cattle, beef and dairy cull animals, stockers and feeders, veal calves, etc. . . . . 1339	<input type="checkbox"/>	\$ .00
12.	Sheep, goats, and their products, including wool, mohair, milk, and cheese. . . . . 1342	<input type="checkbox"/>	\$ .00
13.	Horses, ponies, mules, burros, and donkeys. . . . . 1343	<input type="checkbox"/>	\$ .00
14.	Poultry and eggs, including broilers, chickens, turkeys, ducks, eggs, geese, hatchlings, pheasants, poultry products, etc. . . . . 1344	<input type="checkbox"/>	\$ .00
15.	Aquaculture, including catfish, trout, ornamental and other fish, mollusks, crustaceans, etc. . . . . 1345	<input type="checkbox"/>	\$ .00
16.	Other animals and other animal products, including bees, embryos, fur-bearing animals, honey, horns, manure, rabbits, semen, other animal specialties, etc. . . . . 1346	<input type="checkbox"/>	\$ .00
17.	<b>TOTAL SALES</b> - Add items 1 through 16. . . . . 1347	<input type="checkbox"/>	\$ .00
a.	What was the value of your landlord's share of the total sales (item 17 above) produced by this operation? Exclude cash rent. . . . . 1349	None <input type="checkbox"/>	Dollars \$ .00



**DIRECT SALES FOR HUMAN CONSUMPTION**

18. During 2007, did you produce, raise, or grow any crops, livestock, poultry, or agricultural products that were **sold directly to individual consumers for human consumption**? Include sales from roadside stands, farmers markets, pick your own, door to door, etc. Exclude craft items and processed products such as jellies, sausages, and hams.

1409 1  **Yes** - Gross value of these direct sales. . . . . 0920 

Dollars
\$ .00

1410 Specify product(s) →

3  **No** - Go to SECTION 22 below

**SECTION 22 ORGANIC AGRICULTURE**

1. Did this operation produce organic products (according to the National Organic Standards) for sale in 2007?

1248 1  **Yes** - Complete this section    3  **No** - Go to item 7 below

2. Was this operation a certified organic operation?

1250 1  **Yes** - Specify agency or organization that certified the organic production below. ↴

1252

3  **No** - Organic sales were exempt from certification.

- |  |                          |                        |
|--|--------------------------|------------------------|
|  | None                     |                        |
|  |                          | <b>Number of Acres</b> |
| 3. How many acres were used for organic production? . . . . . 1430   | <input type="checkbox"/> |                        |
| a. Acres from which organic crops were harvested? . . . . . 1440   | <input type="checkbox"/> |                        |
| b. Acres of organic pastureland? . . . . . 1450  | <input type="checkbox"/> |                        |
|  |                          | <b>Dollars</b>         |
| 4. What was the total value of sales for <b>crops produced and sold as organic</b> by this operation in 2007? Include hay, fruits, vegetables, greenhouse products, grains, and oilseeds. . . . . 1460 | <input type="checkbox"/> | \$ .00                 |
| 5. What was the total value of sales for <b>livestock and poultry produced and sold as organic</b> by this operation in 2007? . . . . . 1470   | <input type="checkbox"/> | \$ .00                 |
| 6. What was the total value of sales for <b>livestock and poultry products produced and sold as organic</b> by this operation in 2007? Include eggs, milk, etc. . . . . 1480                           | <input type="checkbox"/> | \$ .00                 |
|  |                          | <b>Number of Acres</b> |
| 7. In 2007, how many acres were being converted to organic production? . . . . . 1490  | <input type="checkbox"/> |                        |

07200165

**SECTION 23 COMMODITY CREDIT CORPORATION LOANS (CCC)**

1. Did this operation receive any CCC loans in 2007? Include all CCC loans taken out in 2007, even if repaid.

<sup>1035</sup> 1  **Yes** - Complete this section 3  **No** - Go to SECTION 24 below

2. Total amount received in 2007 from CCC loans for all commodities. Include Austrian winter peas, barley, canola and other rapeseed, corn, cotton, crambe, dry edible peas, flaxseed, honey, lentils, mohair, mustard seed, oats, peanuts, rice, safflower, sesame seed, small chickpeas, sorghum, soybeans, sunflower seed, and wheat. . . . . 1411

None	Dollars
<input type="checkbox"/>	\$ .00

**SECTION 24 FEDERAL AND STATE AGRICULTURAL PROGRAM PAYMENTS**

1. Did this operation receive any Federal, State, or local agricultural program payments in 2007? Exclude CCC loan payments. Also exclude CRP, WRP, FWP, and CREP payments reported in SECTION 4.

<sup>1036</sup> 1  **Yes** - Complete this section 3  **No** - Go to SECTION 25 below

2. Amount received from -

- a. Direct payments as defined under the 2002 Farm Bill. . . . . 1420
- b. Counter-cyclical payments, loan deficiency payments (LDPs), marketing loan gains, and net value of commodity certificates. Include payments received through cooperatives. . . . . 1421
- c. Other Federal agricultural program payments. Include disaster payments and market loss payments, national dairy market loss payments, non-insured assistance program, EQIP (Environmental Quality Incentives Program), CSP (Conservation Security Program), livestock programs, and any other Federal programs. Exclude any type of insurance payments received. . . . . 1422
- d. State and local government agricultural program payments. . . . . 1423

None	Dollars
<input type="checkbox"/>	\$ .00
<input type="checkbox"/>	\$ .00
<input type="checkbox"/>	\$ .00
<input type="checkbox"/>	\$ .00

**SECTION 25 INCOME FROM FARM-RELATED SOURCES**

Report amount received before taxes and expenses in 2007.

- 1. Customwork and other agricultural services provided for farmers and others, such as plowing, planting, spraying, harvesting, preparation of products for market, etc. Exclude if customwork was an entirely separate business from your agricultural operation. . . . . 0992
- 2. Payments received from **cash rent** or **share payments** from renting out farmland or payments from lease of allotments. Include payments for livestock pastured on a per-head basis, per-month basis, AUM basis, etc. . . . . 0993
- 3. Sales of forest products. Include timber, firewood, etc. Exclude sales of Christmas trees, short rotation woody crops, and maple products. . . . . 0994
- 4. Agri-tourism and recreational services, such as farm or winery tours, hay rides, hunting, fishing, etc. . . . . 1401
- 5. Patronage dividends and refunds from cooperatives. . . . . 1402
- 6. Crop and livestock insurance payments received. Exclude payments received from casualty insurance, vehicle liability, blanket policies, and operator dwelling insurance. . . . . 1404
- 7. Other income which is closely related to the agricultural operation. Include renting and leasing farm machinery and trucks, renting and leasing of livestock, animal boarding, tobacco quota buyouts and settlements, state fuel tax refunds, farm-generated energy, etc. Specify below. ↴

<input type="checkbox"/>	Dollars
<input type="checkbox"/>	\$ .00



**SECTION 26 PRODUCTION EXPENSES**

Report total production expenses paid for this operation in 2007. Include expenses paid by your landlords and expenses connected with performing customwork for others. Exclude expenses not related to the farm business and any expenses paid by the contractor.

**EXPENSES PAID BY THIS OPERATION AND ITS LANDLORD(S)**

	None	Dollars
1. Fertilizer, lime, and soil conditioners purchased - Include cost of custom application and organic materials. . . . . 1501	<input type="checkbox"/>	\$ .00
2. Chemicals purchased such as insecticides, herbicides, fungicides, other pesticides, etc. - Include cost of custom application. . . . . 1502	<input type="checkbox"/>	\$ .00
3. Seeds, plants, vines, trees, etc. purchased - Include technology or other fees, seed treatments, and seed cleaning cost. Exclude items purchased for resale without additional growth. . . . . 1503	<input type="checkbox"/>	\$ .00
4. Breeding livestock purchased or leased, regardless of age - Include dairy cattle. . . . . 1504	<input type="checkbox"/>	\$ .00
5. All other livestock and poultry purchased or leased - Include stocker and feeder cattle, calves, sheep, lambs, feeder pigs, chicks, pullets, poult, horses, fish, goats, bee colonies, etc. Include livestock leasing expense. . . . . 1505	<input type="checkbox"/>	\$ .00
6. Feed purchased for livestock and poultry - Include grain, hay, silage, mixed feeds, concentrates, supplements, premixes, etc. . . . . 1506	<input type="checkbox"/>	\$ .00
7. Gasoline, fuels, and oils purchased for the farm business - Include diesel, natural gas, LP gas, motor oil and grease, etc. . . . . 1507	<input type="checkbox"/>	\$ .00
8. Utilities purchased for the farm business - Include electricity, farm share of telephone, water purchased, etc. . . . . 1508	<input type="checkbox"/>	\$ .00
9. Repairs, supplies, and maintenance costs for the farm business. . . . . 1509	<input type="checkbox"/>	\$ .00
10. Labor -		
a. Hired farm and ranch labor - Include employer's cost for social security, workman's compensation, insurance premiums, pension plans, etc. . . . . 1510	<input type="checkbox"/>	\$ .00
b. Contract labor - Include expenses for labor, such as harvesting of fruit, vegetables, berries, etc. performed on a contract basis by a contractor, crew leader, etc. . . . . 1511	<input type="checkbox"/>	\$ .00
11. Customwork and custom hauling, such as custom planting, harvesting, etc. and custom hauling of grain, livestock, milk, manure, etc. . . . . 1512	<input type="checkbox"/>	\$ .00
12. Rent -		
a. Cash rent paid in 2007 for land and buildings - Include grazing fees. . . . . 1513	<input type="checkbox"/>	\$ .00
b. Rent and lease expenses for machinery, equipment, and farm share of vehicles - Exclude custom hire. . . . . 1514	<input type="checkbox"/>	\$ .00
13. Interest paid on debts -		
a. Secured by real estate. . . . . 1515	<input type="checkbox"/>	\$ .00
b. Not secured by real estate. . . . . 1516	<input type="checkbox"/>	\$ .00
14. Property taxes paid in 2007 - Include farm real estate, machinery, livestock, etc. for the farm business. Exclude taxes paid by this operation's landlords. . . . . 1517	<input type="checkbox"/>	\$ .00
15. Other production expenses - Include animal health cost, storage and warehousing, marketing expenses, insurance, etc. Exclude health insurance premiums and payroll taxes. . . . . 1518	<input type="checkbox"/>	\$ .00

07200181 

**EXPENSES PAID BY LANDLORD(S)**

None 

Dollars	
\$	.00

16. How much did your landlord(s) pay for the production expenses for this operation in 2007? . . . . . 1519

**DEPRECIATION**

None 

Dollars	
\$	.00

17. What was the total depreciation expense claimed by this operation in 2007 for all capital assets? Estimate 2007 from 2006 if necessary. . . . . 1520

**SECTION 27 FARM LABOR**

1. How many hired farm or ranch workers, including paid family members and office workers -

None 

Number of Hired Workers

a. Worked less than 150 days on this operation in 2007? Exclude contract labor. . . . . 0941

b. Worked 150 days or more on this operation in 2007? Exclude contract labor. . . . . 0942

2. Were any migrant workers on this operation in 2007? Include hired and contract workers. A migrant worker is a farm worker whose employment required travel that prevented the migrant worker from returning to his/her permanent place of residence the same day. . . . . 1573 1  **Yes** 3  **No**

**SECTION 28 FERTILIZERS AND CHEMICALS APPLIED**

1. Were any fertilizers, manure, herbicides, insecticides, fungicides, nematicides, other pesticides, growth regulators, or other chemicals used on this operation during 2007? Include rock phosphate, lime, and gypsum as fertilizer.

<sup>1568</sup> 1  **Yes** - Complete this section 3  **No** - Go to SECTION 29

2. Commercial fertilizer and soil conditioners applied to -

None 

Number of Acres

a. Cropland in 2007 - Exclude cropland used only for pasture. . . . . 0932

b. Pastureland and rangeland acres in 2007 - Include cropland used only for pasture or grazing. . . . . 0933

3. Acres of cropland and pastureland on which animal manure was applied. . . . . 1569

4. Acres treated with chemicals to control the items listed below. The same acres can be reported in more than one item below. However, report acres only once for each item regardless of the number of applications.

Number of Acres

a. Insects. . . . . 0936

b. Weeds, grass, or brush - Include both pre-emergence and post emergence. . . . . 0939

c. Nematodes. . . . . 0937

d. Diseases in crops and orchards such as blight, smut, rust, etc. . . . . 0938

5. Acres of crops treated to control growth, thin fruit, ripen, or defoliate. . . . . 0940





**SECTION 29 MARKET VALUE OF LAND, BUILDINGS, MACHINERY, AND EQUIPMENT**

1. Report your estimate of the **current market value** of land and buildings reported in SECTION 1, items 1, 2, and 3 on page 2 for -

	None	Estimated Market Value (Dollars)
a. All land and buildings owned. . . . . 0996	<input type="checkbox"/>	\$ .00
b. All land and buildings rented or leased from others. . . . . 0997	<input type="checkbox"/>	\$ .00
c. All land and buildings rented or leased to others. . . . . 0998	<input type="checkbox"/>	\$ .00

2. What is your estimate of the **current value of all machinery, equipment, and implements** used for farm-related activities on this operation, regardless of ownership, on **December 31, 2007**? Include cars, trucks, tractors, tools, combines, plows, disks, harrows, dryers, pumps, motors, irrigation equipment, dairy equipment, tanks, feeders, grinding and mixing equipment, computers, etc. that were kept on this operation and used for this farm or ranch business in 2007. . . . . 0943

Estimated Market Value (Dollars)
\$ .00

**SECTION 30 MACHINERY AND EQUIPMENT**

1. For the items listed below, report the number on this operation on **December 31, 2007**. Include machinery, equipment, and implements used for the farm or ranch business in 2006 or 2007, and usually kept on the operation.

	None	Number on this operation December 31, 2007	None	Of these, the number manufactured in the last 5 years (2003-2007)
a. Trucks, including pickups. . . . . 0944	<input type="checkbox"/>		<input type="checkbox"/>	
b. Tractors less than 40 horsepower (PTO) - Exclude garden tractors. . . . . 0946	<input type="checkbox"/>		<input type="checkbox"/>	
c. Tractors 40 - 99 horsepower (PTO) . . . . . 0948	<input type="checkbox"/>		<input type="checkbox"/>	
d. Tractors 100 horsepower (PTO) or more. . . . . 0962	<input type="checkbox"/>		<input type="checkbox"/>	
e. Grain and bean combines, self-propelled. . . . . 0950	<input type="checkbox"/>		<input type="checkbox"/>	
f. Cotton pickers and strippers, self-propelled. . . . . 0956	<input type="checkbox"/>		<input type="checkbox"/>	
g. Forage harvesters, self-propelled. . . . . 0953	<input type="checkbox"/>		<input type="checkbox"/>	
h. Hay balers. . . . . 0960	<input type="checkbox"/>		<input type="checkbox"/>	

07200207 

**SECTION 31 AGRICULTURAL ACTIVITY WITHIN THE BORDERS OF AMERICAN INDIAN RESERVATIONS, PUEBLOS, AND SERVICE AREAS**

1. Did this operation use any land for livestock or cropland within the borders of an American Indian Reservation, Pueblo, or Service Area at any time during 2007?  
1050  **Yes** - Complete this section    3  **No** - Go to SECTION 32 below
2. Mark the type(s) of land this operation used within the American Indian Reservation, Pueblo, or Service Area.  
1058  owned or deeded    1059  trust (tribal or allotted)    1060  other, specify →
3. Enter the name and state of the American Indian Reservation, Pueblo, or Service Area where the agricultural activity occurred.  
1051 

Reservation, Pueblo, or Service Area Name

 1052 

State

Number of Acres
4. How many total acres did this operation use for livestock or cropland within this Reservation, Pueblo, or Service Area in 2007? Exclude land used on a per-head or animal unit month (AUM) basis. . . . . 1053  
a. How many of these acres were harvested cropland? . . . . . 1054
5. In 2007, did this operation have any livestock within the borders of an American Indian Reservation, Pueblo, or Service Area? Include livestock on land used on a per-head or animal unit month (AUM) basis.  
1056  **Yes** - Continue    3  **No** - Go to SECTION 32 below  
a. On **December 31, 2007**, what percent of this operation's livestock was on this Reservation, Pueblo, or Service Area?  
1057 

<input type="checkbox"/> None	<input type="checkbox"/> 26 - 50 percent	<input type="checkbox"/> 76 - 99 percent
<input type="checkbox"/> 1 - 25 percent	<input type="checkbox"/> 51 - 75 percent	<input type="checkbox"/> 100 percent (all livestock)

**SECTION 32 PRACTICES**

1. At any time during 2007, did this operation -
- a. Have Internet access? . . . . . 1603    1  Yes    3  No
  - b. Have high speed Internet access? . . . . . 1604    1  Yes    3  No
  - c. Use more than 5,000 gallons of water in any one day for any purpose? . . . 1721    1  Yes    3  No
  - d. Receive irrigation water supplied by a U. S. Bureau of Reclamation project or facility? Include reclamation water delivered by a local district. . . . . 1722    1  Yes    3  No
  - e. Generate energy or electricity on the farm using wind or solar technology, methane digester, etc.? . . . . . 1723    1  Yes    3  No
  - f. Use conservation methods such as no-till or limited tilling, filtering runoff to remove chemicals, fencing animals from streams, etc.? . . . . . 1724    1  Yes    3  No
  - g. Practice rotational or management intensive grazing? . . . . . 1725    1  Yes    3  No
  - h. Pay on a per-head or animal unit month (AUM) basis for livestock to graze on any land (private, Federal, State, Indian Reservation, etc.)? . . . . . 1720    1  Yes    3  No
  - i. Produce and sell value added crops, livestock, or products such as beef jerky, fruit jams, jelly, preserves, floral arrangements, etc.? . . . . . 1726    1  Yes    3  No
  - j. Market products through a community supported agriculture (CSA) arrangement? . . . . . 1727    1  Yes    3  No
  - k. Raise or sell veal calves? . . . . . 1728    1  Yes    3  No
  - l. Raise or sell hair sheep or wool-hair crosses? . . . . . 1729    1  Yes    3  No
  - m. Have a barn that was built prior to 1960? . . . . . 1730    1  Yes    3  No

07200215 

**SECTION 33 TYPE OF ORGANIZATION**

1. Mark the **one** item which best describes this operation in 2007.

- 1671 1  Family or individual operation - Exclude partnerships and corporations.
- 2  Partnership operation - Include family partnerships. • Is this partnership registered under state law? 1567 1  Yes 3  No
- 3  Incorporated under state law - • Is this a family-held corporation? 1681 1  Yes 3  No  
 • Are there more than 10 stockholders? 1683 1  Yes 3  No
- 4  Other, such as estate or trust, prison farm, grazing association, American Indian Reservation, etc. - specify type →

**SECTION 34 OPERATOR CHARACTERISTICS**

1. In 2007, how many operators (individuals) were involved in the day-to-day decisions for this operation? Enter the number of operators and the number of women operators. Exclude hired workers unless they were a hired manager or family member. . . . .1575

Total Number of Operators	Women Operators

2. Answer the following questions for up to three primary operators of this operation as of **December 31, 2007**.

	Principal Operator or Senior Partner	Operator 2	Operator 3
a. Name →	<input type="text"/>	<input type="text"/>	<input type="text"/>
b. Sex of operator . . . . .	0926 1 <input type="checkbox"/> Male 2 <input type="checkbox"/> Female	1586 1 <input type="checkbox"/> Male 2 <input type="checkbox"/> Female	1597 1 <input type="checkbox"/> Male 2 <input type="checkbox"/> Female
c. At which occupation did the operator spend the majority (50 percent or more) of his/her worktime in 2007? . . . . .	0928 <b>Mark one answer only.</b> 1 <input type="checkbox"/> Farm or ranch work 2 <input type="checkbox"/> Other	1580 <b>Mark one answer only.</b> 1 <input type="checkbox"/> Farm or ranch work 2 <input type="checkbox"/> Other	1591 <b>Mark one answer only.</b> 1 <input type="checkbox"/> Farm or ranch work 2 <input type="checkbox"/> Other
d. Is this operator retired?..	0924 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No	1582 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No	1593 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No
e. How many days did the operator work off this operation in 2007? Include days in which the operator worked at least 4 hours per day in an off-farm job. Include work on someone else's farm for pay. . . . .	0929 <b>Mark one answer only.</b> 1 <input type="checkbox"/> None 2 <input type="checkbox"/> 1 - 49 days 3 <input type="checkbox"/> 50 - 99 days 4 <input type="checkbox"/> 100 - 199 days 5 <input type="checkbox"/> 200 days or more	1831 <b>Mark one answer only.</b> 1 <input type="checkbox"/> None 2 <input type="checkbox"/> 1 - 49 days 3 <input type="checkbox"/> 50 - 99 days 4 <input type="checkbox"/> 100 - 199 days 5 <input type="checkbox"/> 200 days or more	1931 <b>Mark one answer only.</b> 1 <input type="checkbox"/> None 2 <input type="checkbox"/> 1 - 49 days 3 <input type="checkbox"/> 50 - 99 days 4 <input type="checkbox"/> 100 - 199 days 5 <input type="checkbox"/> 200 days or more
f. Did the operator live on this operation at any time in 2007? . . . . .	0923 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No	1581 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No	1592 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No



	Principal Operator or Senior Partner	Operator 2	Operator 3
g. In what year did the operator begin to operate any part of this operation?	0930 <input type="text"/>	1584 <input type="text"/>	1595 <input type="text"/>
h. What was the operator's age on December 31, 2007? . . . . .	0925 <input type="text"/> years	1585 <input type="text"/> years	1596 <input type="text"/> years
i. Is the operator of Spanish, Hispanic, or Latino origin or background, such as Mexican, Cuban, or Puerto Rican, regardless of race?	0927 Spanish, Hispanic, or Latino origin 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No	1587 Spanish, Hispanic, or Latino origin 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No	1598 Spanish, Hispanic, or Latino origin 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No
j. What is the operator's race? . . . . .	<p><b>Mark one or more.</b></p> <p>1703 <input type="checkbox"/> American Indian or Alaska Native, specify tribe <input type="text"/></p> <p>1705 <input type="checkbox"/> Asian</p> <p>1702 <input type="checkbox"/> Black or African American</p> <p>1704 <input type="checkbox"/> Native Hawaiian or Other Pacific Islander</p> <p>1701 <input type="checkbox"/> White</p>	<p><b>Mark one or more.</b></p> <p>1803 <input type="checkbox"/> American Indian or Alaska Native, specify tribe <input type="text"/></p> <p>1805 <input type="checkbox"/> Asian</p> <p>1802 <input type="checkbox"/> Black or African American</p> <p>1804 <input type="checkbox"/> Native Hawaiian or Other Pacific Islander</p> <p>1801 <input type="checkbox"/> White</p>	<p><b>Mark one or more.</b></p> <p>1903 <input type="checkbox"/> American Indian or Alaska Native, specify tribe <input type="text"/></p> <p>1905 <input type="checkbox"/> Asian</p> <p>1902 <input type="checkbox"/> Black or African American</p> <p>1904 <input type="checkbox"/> Native Hawaiian or Other Pacific Islander</p> <p>1901 <input type="checkbox"/> White</p>
k. How many people lived in the operator's household in 2007? . . . .	Number of persons living in Principal Operator's household 1577 <input type="text"/> number	Number living in household of Operator 2. Enter "0" if this operator has been counted in the previous column. 1589 <input type="text"/> number	Number living in household of Operator 3. Enter "0" if this operator has been counted in the previous columns. 1600 <input type="text"/> number
l. Is this operator a hired manager for this operation? . . . . .	1576 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No	1588 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No	1599 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No
<b>HOUSEHOLD INCOME</b>			Number
3. In 2007, how many households shared in the net farm income of this operation? . . . . .			1608 <input type="text"/>
4. What was the total household income of the <b>principal</b> operator in 2007? Include net income from farming, wage or salary income from all sources, social security, and investment income.			
<sup>1678</sup> 1 <input type="checkbox"/> less than \$20,000    3 <input type="checkbox"/> \$30,000 to \$39,999    5 <input type="checkbox"/> \$50,000 or more 2 <input type="checkbox"/> \$20,000 to \$29,999    4 <input type="checkbox"/> \$40,000 to \$49,999			
5. In 2007, what percent of the principal operator's total household income came from this operation? . . . . .			Percent (%) <input type="text"/>
			1578

07200231 

**SECTION 35 CONCLUSION**

1. Is it possible the information on this form would be duplicated on a form with another name or address?

1080 1  **Yes** - Please provide the other name and address below 3  **No** - Go to Item 2

Name

1081

Address

1082

City

1083

State

1084

Zip

1085

2. Do you (the individual named on the label) make any day-to-day decisions for **another** farm or ranch? It is important that the Census of Agriculture accurately accounts for all of your farm or ranch operations.

1086 1  **Yes** - Continue 3  **No** - Go to Item 3

a. Did you receive a 2007 Census of Agriculture report form for this additional farm or ranch?

1087 1  **Yes** - Go to item 3 3  **No** - Enter the information of the additional farm or ranch below

Additional Farm or Ranch

1088

Area Code and Phone Number

1089  -  -

b. Did you include all data from this additional farm or ranch on THIS REPORT? Do not make changes to the data in this report, regardless of your answer.

1091 1  **Yes** 3  **No**

3. Please print the information below for the person completing this form.

Name

1092

Area Code and Phone Number

1093  -  -

Date (MM-DD-YYYY)

1094  -  -

**THANK YOU FOR YOUR COOPERATION.**

**Questions? Call us toll free at 1-888-424-7828.**

A wide variety of agricultural statistics is available from the National Agricultural Statistics Service (NASS). Check out the NASS reports, data products, and services on the Internet at [www.nass.usda.gov](http://www.nass.usda.gov)

According to Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB number. The time required to complete this information collection is estimated to average 50 minutes per response.



## INSTRUCTION SHEET UNITED STATES 2007 CENSUS OF AGRICULTURE

**Who Should Report** – A reply is needed from everyone who received a report form, including both persons who operated a farm, ranch or other agricultural operation in 2007 as well as those who were not involved in agriculture. Your report is due by February 4, 2008. More census information is on the Internet at [www.nass.usda.gov/Census\\_of\\_Agriculture/](http://www.nass.usda.gov/Census_of_Agriculture/)

If you farmed in 2007, complete the enclosed report form and return it in the preaddressed envelope.

If you were a landlord only and rented out all of your land, complete sections 1 and 35 of the enclosed report form and return it in the preaddressed envelope. Even if you were a landlord but still operated any land yourself, you should complete the entire report form for that land which you operated.

If you had no land and no agricultural operations, return the report form with a note indicating your status on the front of the form below the address label.

**Specialty Commodities** - Horses, bees, elk, emus, fish, nursery, etc., are an important part of the agriculture industry. Report for all items, regardless of the amount of production or sales you had in 2007.

**Land in Federal conservation programs in 2007** - If you had land in the Conservation Reserve Program (CRP), Wetlands Reserve Program (WRP), Farmable Wetlands Program (FWP), or Conservation Reserve Enhancement Program (CREP) and you made the decisions on the acres, include the conservation land on this report form in sections 1, 2, and 4.

**If you owned farm or ranch land in 2007 that was idle and NOT rented out, you should complete and return the report form.**

**Partial Year Operations** - If you stopped farming during 2007, complete the report form for the portion of the year that you did farm. Write "Stopped farming during 2007" and the date you stopped farming below the address area. Mail the completed report form in the return envelope.

**Involved In More Than One Operation** - If you made decisions for more than one operation, you should have received a report form for each operation. Provide information for each operation on a separate form. To obtain additional report forms, please call the toll-free help line at 1-888-424-7828.

**Received More Than One Report Form For the Same Operation** - If you received more than one report form for the same operation, complete only ONE form per operation. Write "Duplicate" below the address area of each extra form. Return all forms in the same return envelope with your completed form so that we can correct our records.

**Have a Partnership Operation** - Complete only ONE form for the entire partnership's agricultural operation and include ALL partners' shares on the one form. If you made decisions for more than one partnership operation, complete a report form for each separate operation. We have listed all the known partners below the address area to assist in defining the operation. Make any necessary corrections to these names. If you have questions, please call the toll-free help line, 1-888-424-7828.

**Entering Your Responses** - Use **BLUE** or **BLACK INK** only. Enter your replies in the unit requested, i.e., dollars, bushels, tons, etc. When reporting dollars, report in whole dollars only. Convert fractions to decimals. Please print clearly and keep numbers and letters within the white boxes. Mark all applicable Yes/No and None boxes with an "X".

### INSTRUCTIONS FOR SPECIFIC SECTIONS

#### **SECTION 1** – ACREAGE IN 2007

Your answers in this section will determine the land (**Acres in "THIS OPERATION"**) referred to throughout the report form. Include land associated with your agricultural operation in 2007, whether in production or not. Include all land that you owned or rented during 2007, even if only for part of the year. Exclude residential or commercial land. Report in whole acres.

**Item 1** - Report all land owned in 2007 whether held under deed, purchase contract or mortgage, homestead law, or as heir/heirless or trustee of an undivided estate. Include all land owned by you and/or your spouse, or by the partnership, corporation, or organization named on the front of the report form.

**Item 2** - Report all land rented or leased by you or your operation. Exclude land used under Government grazing permits or on a per-head or animal unit (AUM) basis. Bureau of Land Management (BLM) section 15 land leased by your operation with a specified acreage tract should be included here even though your fees to BLM are paid on an AUM basis.

**Item 3** - Include all land rented out for any purpose if it was part of the acreage reported in items 1 and 2. Your tenant(s) will receive a form to report production for the land they rent. Do not report land placed in conservation programs as acres rented to others.

**Item 4** - This is all land you operated at any time in 2007. Land use should be reported for these acres.

**Total acres equals zero (0)** - After completing section 1, if the acres in item 4 equal zero and you did not raise or own any livestock, aquaculture, or poultry in 2007, skip to and complete section 35. Write "All land rented out" in the space below section 1 if all your land was operated by a renter or sharecropper. Mail the report form in the return envelope.

#### **SECTION 2** - LAND

The sum (item 5) of the acres entered in items 1 - 4 should equal the total acres in section 1, item 4, which is "this operation" for this census report. Do not report any crops grown on land rented or leased to others or worked by others on shares during 2007.

**Land used for more than one purpose** - Do not report the same acreage in more than one of the listed categories. If part or all of your land was used for more than one listed purpose in 2007, report that land only in the first purpose listed. For example, if you planted and harvested a grain crop and grazed the crop residue in the fall, report the land in item 1a, cropland harvested. Do not report it again in item 2c, cropland used only for pasture or grazing.

**CRP/WRP and other conservation programs** - Report acres in items 1 through 3 that best describes these acres. For example, CRP land may be reported in cropland harvested, idle cropland, or woodland not pastured depending on its use.

#### **Item 1a -**

**Double cropping or interplanted crops** - If more than one crop was harvested from the same land in 2007, report that land only once as cropland harvested.

**Christmas trees to be cut and short rotation woody crops** - Report the acres for these types of crops that were cut in 2007 and will be cut in later years as cropland harvested.

**Skip row planted crops** - Report the acres that represent planted rows as cropland harvested, item 1a. Report the acres that represent the total non-planted or skipped rows as cropland idle in item 1d.

**Item 1c** - Include cropland left unseeded for the 2007 harvest and summer fallowed, cultivated by tillage, or treated with herbicides to control weeds and conserve moisture. Include cropland summer fallowed in 2007 even though it may have been planted to wheat, etc., for the 2008 harvest.

**SECTION 3 – IRRIGATION**

Include acres irrigated by all methods and from all water sources including those irrigated from lagoons through a sprinkler or flood system.

**SECTION 4 – CONSERVATION RESERVE PROGRAM AND CROP INSURANCE**

**Item 2** - Report all acres covered by any crop insurance policy in 2007. Include land in pasture insurance programs and acres covered by guaranteed revenue policies.

**SECTION 5 – FIELD CROPS**

**Acres harvested** - Enter the acres harvested in 2007. Round fractions to whole acres except for tobacco where tenths should be reported.

**Total quantity harvested** - If your unit of measure is different than the unit requested on the report form, convert your figure for the quantity harvested to the unit requested. If the harvest was incomplete by December 31, 2007, estimate the total quantity to be harvested.

**Acres irrigated** - Report the irrigated harvested acres only once, even if the crop was irrigated multiple times during the growing season.

**Double cropping** - If two or more crops were harvested from the same land (double cropping), report the total acres and production of each harvested crop.

**Interplanted crops** - If two crops were grown at the same time in alternating strips in the same field, report the acreage of the field used for each crop.

**Skip row planting** - If a crop was planted in an alternating pattern of planted and non-planted rows, such as two rows planted and two rows skipped, report the acreage occupied by the crop and report the skipped portion as cropland idle in section 2, item 1d.

Sweet corn harvested for seed is reported as crop code 0740 and the value of sales is reported in section 21, item 4.

**SECTION 6 – GRAIN STORAGE CAPACITY**

Report total capacity of all structures normally used, even if they were not used in 2007. Do not report any capacity or usage of off-farm public storage or capacity of structures leased to others.

**SECTION 7 – HAY AND FORAGE CROPS**

Include hay and forage from alfalfa, wild or native grasses, small grains, soybeans, and peanuts. Report production in tons. Any pasture or conservation land that had hay cut from it should be reported as cropland harvested in section 2, item 1a.

**SECTION 8 – WOODLAND CROPS AND MAPLE SYRUP**

**Cut Christmas trees** - Acres in production of cut Christmas trees include both those to be harvested in future years as well as those harvested in 2007. Trees cut should include only those trees cut in 2007.

**Short rotation woody crops** - A short rotation woody crop is a tree that is harvested in 10 years or less. These are trees for use by the paper or pulp industry or as engineered wood. Exclude trees cut for timber. Acres harvested in 2007 should be reported as having been both in production and harvested. Acres not harvested in 2007 should be reported in production only.

**Maple syrup** - Producers should report number of taps and gallons of syrup. If sap was sold, estimate the number of gallons of syrup it would have produced. Report the acres of tapped maple trees in section 2, item 3, woodland not pastured.

**SECTION 9 – NURSERY, GREENHOUSE, FLORICULTURE, SOD, MUSHROOMS, VEGETABLE SEEDS, AND PROPAGATIVE MATERIALS**

Report Christmas trees grown on this operation and sold live as nursery stock, code 0488. Value of sales should be reported only for those items grown on the operation, not items bought for immediate resale. Report all acres of Christmas trees in production for cut Christmas trees and the number cut in 2007 in section 8.

**SECTION 10 – VEGETABLES, POTATOES, AND MELONS**

For crops planted more than once during the year, report the total acres harvested during 2007. For example, if 1 acre was planted to lettuce, harvested, and an additional acre was planted and harvested, report 2 acres of lettuce under total acres harvested.

**SECTION 11 – FRUIT AND NUTS**

Report fruit and nut trees only if there was a combined total of 20 or more trees and vines whose production was either for home use or for sale. Exclude abandoned acres of orchards or vineyards which should be reported in section 2, item 1d. Bearing age acres are the acres of trees or vines that produced any fruit or nut crop in 2007 or previous years. If fruit and nut trees and vines were interplanted with other crops, report only the total acres for the orchard in section 11, and the total acres of each interplanted crop in their appropriate section(s).

**SECTION 12 – BERRIES**

Do not include abandoned acres or acres harvested for home use.

**SECTIONS 13, 15, AND 16 – CATTLE AND CALVES, POULTRY, AND HOGS AND PIGS**

Include all animals on this operation on December 31, 2007 owned by you, raised by you under contract, or kept by you for others. Include animals on unfenced lands, National Forest land, Indian Reservation Land, cooperative grazing association land, or rangeland administered by the Bureau of Land Management on a per-head, animal unit month (AUM), or lease basis. Animals in transit on December 31, 2007, should be reported by the person who had control of the animals on that day. Report beefalo as cattle in section 13. Report buffalo as bison in section 19.

**Contract and custom feeding operations** - Report numbers of animals or poultry on this operation on December 31, 2007. Report as sold, animals and poultry kept on a contract or custom basis and moved or sold from this operation in 2007. Report in section 20 on the appropriate line the quantity delivered of custom fed livestock or production contract livestock and poultry and report the dollar amount received from the contractor in section 20, item 3.

**Cattle, hogs, and poultry to exclude from the report form** - Exclude animals or poultry kept on land rented to others or kept under a share arrangement on land rented to others. Exclude animals quartered in feedlots that were not located on this operation. Do not report the sales of animals bought and then resold within 30 days. Such purchases and sales are considered dealer transactions.

**Number sold** - Report all animals and poultry sold or moved from this operation in 2007, without regard to ownership or who shared in the receipts. Include animals sold for a landlord or given to a landlord or others in trade or in payment for goods or services. Do not report number sold of any hogs and pigs, cattle and calves, or poultry owned by you that were kept and sold from a location that you did not operate.

**Animals moved from this operation** - For animals moved from this operation to another, such as for further feeding, report them as "sold". Cattle moved are not considered sold if they were moved to another operation for a short term, such as winter wheat or corn stubble grazing, or during the winter to public grazing land.

**Cattle in feedlots**

Do NOT include in cattle in feedlots:

- Cattle and calves sold or moved off the operation for further feeding
- Veal calves or any calves weighing less than 500 pounds
- Cull or dairy cows fed only the usual dairy ration before being sold

**SECTION 14 – SHEEP AND LAMBS OWNED**

**Item 2** - Report sheep, lambs, and ewes owned by you regardless of their location. Include ewes owned in both item 2 and item 2a. Report pounds of wool shorn in 2007 only.

**Contract and Custom Feeding Operations** - Do not report inventory of sheep and lambs that were not owned by you. They are to be reported on the owner's report form.

**SECTION 17 – AQUACULTURE**

Include all sizes for each type. On a separate line, specify the sale of fish eggs, fry, or fingerlings for each type. Convert units such as bushels, bags, or gallons to number or pounds.

**SECTION 18 – COLONIES OF BEES**

Report the number of bee colonies for honey or pollination owned regardless of location. Report the total colonies of honey bees or pollination bees sold during 2007. Report the pounds of honey collected in 2007 whether sold or not sold. Report the value of sales of honey, bee colonies, beeswax, pollen, package bees, and leaf cutter bees in section 21, item 16. Report the quantity of package bees produced in section 19, item 16.

**SECTION 19 – OTHER ANIMALS AND LIVESTOCK PRODUCTS**

**Item 2** - Report in item 2 the total number of horses on this operation regardless of ownership on December 31, 2007. In item 2a, report only those horses in item 2 that were owned and sold by this operation. Exclude horses owned by this operation but stabled elsewhere.

**Items 4, 5, and 6** - Report goats based on utilization regardless of breed.

**Items 12 and 13** - If mink pelts and rabbit pelts were sold in 2007, include in number sold. Retained pelts should be included in inventory. The value of pelt sales should be reported in section 21, item 16.

**Item 16** - Include bees wax, bee pollen, package bees and feathers.

**SECTION 20 – PRODUCTION CONTRACTS AND CUSTOM FEEDING**

A production contract is an agreement between a grower and contractor (integrator) that specifies that the grower will raise an agricultural commodity and that the contractor will provide certain inputs such as feed, fertilizer, etc. The grower receives a payment or fee from the contractor, generally after delivery, which is usually less than the full market price of the commodity. The contractor takes possession of the raised commodity at the end of the growing period.

Report amount of the specified commodity that you raised and delivered under a production contract in the unit requested in item 2. If you had contracts with more than one integrator or contractor for a single commodity, combine the production of all contracts and report the total units produced for that commodity in the proper category. If you had multiple contracts to produce different commodities, report the appropriate amount of each commodity produced under each contract in the proper categories. Report the total amount the contractor paid you for producing the commodity(s) in item 3. Exclude marketing contracts, futures contracts, forward contracts, or other contracts based strictly on price.

**SECTION 21 – VALUE OF SALES**

Report the value of all crops and livestock sold from this operation in 2007 on the appropriate line(s) of section 21. Report the sales in 2007 regardless of the year crops were harvested or raised. Include the value of your landlord's share of the commodities harvested. Also, report as sold commodities, such as cattle, that you owned and moved to someone else's operation for further feeding. Report gross value before expenses and taxes. Include payments received in 2007 from cooperatives or marketing organizations for crops produced on this operation regardless of the year in which the crops were harvested. Also, include as sales your estimate of the value of any crop or livestock removed from this operation in trade of services, such as baled hay for labor or other services. Report the total value you received for animals and poultry sold from this operation in 2007, without deducting production or marketing expenses (cost of feed, cost of livestock purchased, cost of hauling and selling, etc.).

**Do NOT include:**

- Proceeds from CCC loans or other government payments.
- The value of sales of any livestock and poultry owned by you that were kept and sold from a location you did not operate.
- Commodities grown under a production contract.

**Item 6** - Exclude crops bought for resale without additional growing, such as plugs and started plants or garden center items, such as pot liners, chemicals, and fertilizers.

**Item 17a** - If you rented land under a share arrangement, report your landlord's share of the crop and livestock sales included in item 17.

**Item 18** - Include only those commodities sold directly for human consumption, such as vegetables, fruit, eggs, milk, cattle, chickens, hogs, turkeys, etc. Report only commodities grown or raised on this operation. Exclude crops, livestock, poultry, or other products that you bought and resold within 30 days. Exclude craft items such as bird houses, woodwork, etc.

**SECTION 22 – ORGANIC AGRICULTURE**

A farm produces organic products if it operates according to the practices outlined in the National Organic Standards. Farms exempt from certification because they sell less than \$5,000 in organic products a year should also report in this section. Acres used for organic production include pastureland and acres where crops were harvested, as well as any acres not used in the census year because crops failed, land was in a cover rotation, or crops were not yet of bearing age. Total sales of organic products include all sales of the products, regardless of whether an organic premium was obtained.

**Item 7** - Acres being converted to organic production apply to all acres in the farm operation that are in the three year transition period before land can be certified as organic. Acres reported in item 7 should not be reported in item 3.

**SECTION 23 – COMMODITY CREDIT CORPORATION (CCC) LOANS**

Report amount received for commodities placed under CCC loan during 2007. Include amount received even if commodity was redeemed or forfeited prior to December 31, 2007. Exclude CCC loans to build crop storage facilities.

**SECTION 24 – FEDERAL AND STATE AGRICULTURAL PROGRAM PAYMENTS**

For conservation program cost shares, include the government's share of the amount paid. Exclude any payments from loans or programs which must be repaid.

**SECTION 25 – INCOME FROM FARM-RELATED SOURCES**

Report only those income producing activities for which you used part of the land, machinery, equipment, labor, or capital normally used on this operation and which you do not consider as entirely separate from your farming activities. Include insurance payments for crop or livestock losses in item 6. Report gross amounts received before taxes and expenses.

**Item 2** - Exclude rental income from nonfarm property.

**Item 3** - Include only those forest products cut from this operation, not items cut from other nonfarm timber acreage. Exclude income from a sawmill business. Report sales of Christmas trees or maple syrup or sap products in section 21.

**SECTION 26 – PRODUCTION EXPENSES**

Include farm production expenses paid by you or your landlord(s) for crops, livestock, or poultry produced on this operation in 2007 in items 1 through 15. Include expenses associated with the generation of farm-related income reported in Section 25. Include expenses incurred in 2007 even if they were not paid in 2007. Estimate if exact figures are not known.

**Contract growers or custom feeders** - Do not report as production expenses, the value of inputs provided by the contractor or livestock owner. Identify the items that were contractor provided in section 20, item 4.

**Item 2** - Include surfactants and oils and other products used to increase a chemicals effectiveness.

**Item 6** - Report the purchase cost of all grains, silage, hay, commercially mixed and premixed feeds, ingredients, concentrates, etc., fed to livestock or poultry on this operation. Contract livestock and poultry growers should not report the value of feed that was provided by a contractor. Do not report the value of feed raised and fed on this operation as an expense.

**Item 9** - Include the cost of repairs and upkeep of farm machinery, vehicles, buildings, fences, and other equipment used in the farm business. Include expenses for repairs to machinery and equipment used only for customwork if income from those machines is reported in section 25. Exclude repairs to vehicles not used in the farm business. Exclude expenditures for the construction of new buildings or the cost of additions to existing buildings.



**Item 10a** - Include labor expense for the farm business for gross salaries and wages, commissions, dismissal pay, vacation pay, and bonuses paid to hired workers, family members, hired managers, administrative and clerical employees, and salaried corporate officers. Include cost for benefits such as employer's social security contributions, unemployment compensation, workman's compensation insurance, employer paid life and medical insurance expense, pension plans, etc.

**Item 10b** - Include the labor costs of workers furnished on a contract basis by labor contractor, crew leader, or cooperative for harvesting vegetables or fruit, shearing sheep, or similar farm activities. Exclude costs for building or repair work done by a construction contractor. Report the cost of customwork or machine hire in item 11.

**Item 12a** - Exclude rent paid for operator dwelling or other nonfarm property. Exclude the value of shares of crops or livestock paid to landlords.

**Item 13** - Report all interest expenses paid in 2007 for the farm business. Include interest paid on CCC loans in item 13b. Exclude interest associated with activities not related to production of crops or livestock on this operation, such as land or buildings rented to others, packing sheds, or feed mills that provided services to others. Exclude interest on owner/operator dwelling where the amount is separated from the interest on the land and buildings on this operation.

**Item 14** - Include real estate property taxes you paid on the acres and buildings you owned and used in the farm business and property taxes on equipment or livestock. Exclude property taxes on land or buildings rented to someone else, property taxes paid on other property not associated with the farm business, income, social security, and excise taxes.

#### **SECTION 27** - FARM LABOR

Report the number of paid farm or ranch workers who performed agricultural labor on this operation in 2007. Include paid family members. Include workers such as hired bookkeepers, office workers, maintenance workers, etc., if their work was primarily associated with agricultural production on this operation. Include in item 1a any short term or temporary workers who may have worked only a few days. Exclude contract labor in items 1a and 1b.

#### **SECTION 28** - FERTILIZERS AND CHEMICALS APPLIED

**Fertilizer** - Report acres on this operation on which commercial fertilizer was applied during 2007 only once, even if multiple applications were made. Report fertilizer and manure expenditures in section 26, item 1.

**Chemicals** - Include acres on which custom application of chemicals was made. If multiple applications of chemicals for the same purpose (for example, herbicides) were made on the same acres, report acreage only once. If chemicals were applied for different purposes, report the acres for each purpose that the chemicals were used. Report agricultural chemical expenditures in section 26, item 2. Estimate the acreage for spot treatments.

#### **SECTION 29** - MARKET VALUE OF LAND, BUILDINGS, MACHINERY, AND EQUIPMENT

**Item 1** - Estimate the value of the land, houses, barns, and other buildings for each of the three listed categories if they were sold in the current market. The real estate tax assessment value should not be used unless that value represents a full market value assessment and the land, house, and buildings could reasonably be assumed to be sold at that price. Do not deduct real estate marketing charges from your estimate. Report the total value, not the value on a per-acre basis.

**Item 2** - The estimated market value refers to all machinery and equipment kept primarily on this operation and used for the farm business. Report the value in its present condition, not the replacement or depreciated value. Include mobile implements, hand tools, and office supplies. Permanently installed equipment or equipment which is an integral part of a building should be included as a part of the value of land and buildings and reported in section 29, item 1.

#### **SECTION 30** - MACHINERY AND EQUIPMENT

Report the total on this operation or normally on this operation and normally used on this operation in the first column. Do not report obsolete or abandoned equipment. In the second column, report only the number manufactured in the last five years.

#### **SECTION 31** - AGRICULTURAL ACTIVITY WITHIN THE BORDERS OF AMERICAN INDIAN RESERVATIONS, PUEBLOS, AND SERVICE AREAS

Complete this section if any of your cropland or livestock was on an American Indian Reservation, Pueblos, or service area in 2007. Include trust acres used, as well as deeded land or land leased from others that was on the Reservation.

#### **SECTION 32** - PRACTICES

**Item 1c** - Include water for any purpose - irrigation, cleaning, water for livestock, etc.

**Item 1g** - Rotational grazing is the practice of subdividing pasture into smaller sections and grazing different sections at different times.

**Item 1m** - Include any barn (used or not) on your operation that was built prior to 1960.

#### **SECTION 33** - TYPE OF ORGANIZATION

Use the following definitions to determine the type of organization for this operation:

**Family or individual operation** - Farm or business organization controlled and operated by a family or an individual (sole proprietor). Include family operations that are not incorporated and not operated under a partnership agreement. Report family corporations under "Incorporated under state law."

**Partnership operation** - Two or more persons who conduct an operation together and share work and profits. Co-ownership of land by husband and wife or joint filing of income tax forms by husband and wife does not constitute a partnership unless a specific agreement to share contributions, decision making, profits, and liabilities exists. Production under contract or under a share rental agreement does not constitute a partnership.

**Incorporated under state law** - A corporation is a legal entity or artificial person created under the laws of a State to carry on a business, including family corporations. Exclude cooperatives, even if they are incorporated.

**Other** - Estate or trust, prison farm, grazing association, American Indian Reservation, university farm, institution run by a government or religious entity, cooperatives (an incorporated or unincorporated enterprise or an association created and formed jointly by the members), etc.

#### **SECTION 34** - OPERATOR CHARACTERISTICS

This section collects information about the operator(s) of this operation. A farm may be a family operation and still have multiple operators. Complete one column for each operator, listing the principal operator or senior partner in the first column. The principal operator is the person in charge, such as a hired manager, business manager, or other person primarily responsible for the on-site, day-to-day operation of the farm or ranch business.

**Item 1** - Enter the number of people who made day-to-day decisions for this operation. Do not report as operators minor-aged children who only worked on the farm.

**Item 2** - Answer each question for up to three operators. If there were more than three, answer for three operators only.

**Item 2c** - The principal occupation of the operator(s) is the occupation at which an operator spent the majority of his/her worktime. If the operator spent the majority working for another agricultural operation for wages, it is considered hours devoted to other.

**Item 2g** - Report the first year the specified operator began to operate any part of this operation on a continuous basis. If the operator returned to a place previously operated, report the year operations were resumed.

**Item 3** - The number of households that share in the net farm income are those households involved with the day-to-day decisions and not those households that received funds because they are landlords, custom equipment operators, or provide other supplies that are listed in section 26, Production Expenses. Your answer should not exceed the number of operators listed in item 1.

#### **SECTION 35** - CONCLUSION

**Item 1** - If your operation might be identified under a different name than printed on the front of the form (for example, a farm name or another partner), please provide these names.

**Item 2a** - All farms and ranches should receive their own forms to complete. If you operated another farm or ranch, indicate whether you received a form for that operation.

## DATA CHANGES TO THE 2007 CENSUS OF AGRICULTURE REPORT FORM

### Front Page

**Redesign:** The label box was moved to the right per Post Office requirements. The logos were grouped and placed to one side along with the “office use only” boxes. The “NOTICE” statement was moved to the bottom to allow the name of the form – United States 2007 Census of Agriculture – to be more prominently displayed.

**Special situation listing:** This 2002 item was removed for 2007. The list only cited a few items and its impact for 2002 was uncertain. Several alternatives were developed – a more detailed listing, a specialty listing, full page screening, etc. – but they did not test well. Respondents had a tendency to not read the front page so the list was overlooked. Several of the respondents given the form with screening also ignored the page and went straight into answering the land questions. Others answered yes to the first item of interest and rather than skipping to the land section, continued through the screening, answering no to the last question and then going to the Conclusion (and screening themselves out) as instructed. The decision was made to remove the screening and lists to allow the respondents to begin answering questions as soon as possible.

**Instructions:** All instructions were grouped into bulleted items below the label. This gave the form a more organized look.

**Duplicate box:** The boxes for reporting duplicate forms were removed. Experience from previous censuses and the 2005 Content Test showed that a vast majority of respondents repeated their own Id in this box. NASS consulted with NPC. NPC agreed that they would still be able to capture duplication if the bulleted instruction was only included on the front page.

**Spanish assistance:** A line written in Spanish informing Spanish speaking respondents that a toll free number was available was added to the front page.

### Section 1: ACREAGE IN 2007 (Commonly referred to as Ownership)

**K46 (item 4, total acres)** Because there were problems conveying to the respondent that K46 referred to the acres for this operation that should be reported on the form, a statement was added for clarity and a large arrow was included that pointed to the K46 box.

**K53 (item 5, rented or leased acres)** – The entry box for K53 (rented acres owned) was indented to the left. In the 2002 census, respondents reported K46 again in this cell.

**Secondary counties:** At the request of the Agriculture Advisory Committee, a cell was added to the “other county” question so that respondents could break their acres into as many as five counties. In researching this request, NASS discovered that a large number of acres were left in the “other” counties and not split into separate reports by the field offices.

## Section 2: LAND

In the 2002 census, the land, irrigation, and CRP questions were in one section. In 2007, like the 1997 census, they were put into separate sections to better break the page.

Also, in the past, respondents had a problem making the land use cells add back to K46 in Section 1. The main cause was that the cropland pastured was often erroneously reported as both cropland and pastureland. For 2007 the categories were rearranged so that all cropland types were reported together followed by all pasture types.

**Text changes:** The opening statement above the items was changed to explain how to report land used for more than one purpose. A statement about excluding land rented to others in an attempt to keep landlords from erroneously completing the section was also included.

**Cropland harvested:** Berries, Christmas trees, and short rotation woody crops were added to the list of items to include in the cell to be more thorough.

**Woodland not pastured:** Woodlots and timber tracts were added to the include statement to be more thorough.

## Section 3: IRRIGATION

**Location:** This section was moved ahead of the CRP section. NASS felt it made more sense to collect acres irrigated right after the land use rather than collecting CRP acres and dollars then going back to irrigation.

**Item 2:** A reference to crops and berries irrigated was added to be more thorough.

**Item 3:** A reference to abandoned crops irrigated was added to be more thorough.

## Section 4: CONSERVATION RESERVE PROGRAM AND CROP INSURANCE

**Organics:** The 2002 question was removed and replaced by an Organic Section for 2007.

**CRP:** The CRP acres and dollars were collected in this section in an attempt to better collect both pieces. In 2002, the dollars were collected nearly 20 pages later and many either missed or forgot to enter the dollars.

A reference date of September 30, 2007 was also added for CRP. Respondents were not to report newly enrolled acreage for which they had not received any payment because the edit would automatically give them money for CRP acres.

**Farmable Wetlands Program (FWP) and Conservation Reserve Enhancement Program (CREP):** The question was expanded to include FWP and CREP. These were new programs added since 2002 but were still part of the CRP umbrella.

**Crop insurance:** The text in "...Federal or other crop..." was removed from the question as it sounded redundant.

## Section 5: FIELD CROPS

A spanner reading “DO NOT report crops grown on land rented TO OTHERS” was placed above the section. This was an attempt to keep landlords from reporting the crops their renters grow.

**Design:** In 2002 the field crops were segmented into a page of preprinted crops, a list of a few tenth acre crops on the next, interrupted by hay and woodland crops, before ending with a table of prelisted field crops and room for write-in crops from the list at the bottom of the page. NASS wanted all the field crops on one page in 2007. This was accomplished with a table with several of the top field crops for each region preprinted and only a few blank lines for those crops listed below the table. Queries were run on the 2002 data to ascertain the optimal number of blank lines for each region.

**K1011:** The Yes/No question was changed to exclude hay and forage because that section had its own section and Y/N question. The crops in the question were changed in each of the regional forms to better suit the crops grown in a particular region.

**Tenth acre crops:** For 2007 potatoes and sweet potatoes were moved out of the field crops section and into the vegetable section. This left tobacco as the only field crop to be reported to the tenth acre. For this reason it was preprinted in the table for any region having tobacco growers. It was also listed first in those regions. NASS was concerned this would cause respondents to report the crops that followed in tenth acres, but that did not materialize during the 2005 Content Test.

**Crops deleted:** Several crops with only a few respondents (less than 20) were removed from the crop listing and tables for 2007. If reported, they were summarized and published as “other field crops.” These crops were amaranth, foxtail millet seed, lotus root, mungbeans, redtop seed, salt hay, sweetclover seed, sweet rice, and jojoba not harvested.

**Dry beans:** Text varied for dry edible beans (K554) by region due to local jargon for beans.

**Region 1:** Dry edible beans - kidney, black, etc. - Exclude limas.

**Region 4:** Dry edible beans - pinto, navy, chickpeas, etc.

**Region 5:** Dry edible beans - Include garbanzo beans.

**Rest of US:** Dry edible beans - Exclude limas.

**Canola:** The text for canola was different for Region 3. Since the growing season was longer, the 2008 crop may have already been in the ground by the time the census was mailed and NASS wanted to specify that respondents should report for those acres harvested in 2007.

**Production:** The word “total” was added to the column header for production. Some respondents reported yield rather than total production in 2002.

## Section 6: GRAIN STORAGE CAPACITY

This section was placed between the Field Crops and Hay Section.

## Section 7: HAY AND FORAGE CROPS

For 2007 hay had its own section so a screener question was added.

The note for multiple cuttings was reworded and placed in a more logical location on the page.

**Total land for hay:** In 2002 the form asked acres for each type of hay and then asked the total land from which hay was cut. The way the total question was positioned many respondents erroneously totaled the columns above. For 2007 the total question was placed above the hay types and the total columns did not align with the hay type columns.

**Groupings:** For 2007 the hay was grouped into alfalfa hay and silage items followed by other hay and silage types. This made it more like the Quarterly Agricultural Survey (QAS) hay questions.

**Production:** The column header for production changed from “quantity harvested” to “total tons harvested” since respondents sometimes reported yield rather than total production in 2002.

## Section 8: WOODLAND CROPS AND MAPLE SYRUP

For 2007 the woodland crops were in their own section and so a screener question was added.

**Acres irrigated:** Columns were added for acres irrigated for cut Christmas trees and short rotation woody crops. This corrected an omission from the 2002 census.

## Section 9: NURSERY, GREENHOUSE, FLORICULTURE, SOD, MUSHROOMS, VEGETABLE SEEDS, AND PROPAGATIVE MATERIALS

The title and the screener question were expanded to better specify the items to be reported in this section. Item 2 - “...vegetable seeds...” was replaced by “propagative materials” to coincide with other changes in the section. The column header was also changed from “Whole acres” to “Acres in the Open” with a subheading of “Acres” and “Tenths.”

The column header “whole acres” used in 2002 was replaced with “Acres.” The term “whole” was not well understood and seemed redundant.

The column header where the respondent recorded their crop was changed from “crop name” to “crop type.” This was an attempt to get the respondent to enter “bedding plants” rather than “geraniums” or “pansies.”

**Value of sales:** In 2007 the form collected sales by commodity in this section. This was mainly the result of losing funding for a horticulture census after 2007. This change provided data for sales by category rather than one lump sum of nursery, greenhouse, and sod to provide to the industry and other data users. Such information was often requested following 2002.

**Categories:** New items (tobacco transplants, tomatoes, mushroom spawn...) and groupings (propagative materials) were added for 2007. This was an attempt to better stratify the population for on-going nursery and floriculture surveys conducted by NASS. The broad categories and lack of dollars by commodity in 2002 made it difficult to accurately sample for such surveys. Tomatoes were also added at the request of data users and NASS staff.

The word "SOLD" was only used on PROPAGATIVE MATERIALS because it assumed that the operator was going to sell these items. However, the propagative materials could be used on his operation to produce

finished plants or finished goods such as tomatoes, peppers, etc. Therefore, it was necessary to emphasize that these were sold and not used on this operation.

Also, to make the census and other NASS floriculture and greenhouse surveys more alike, “indoor” was added to foliage plants and “...palms, ornamental grasses...” was added to nursery stock.

**Others:** In 2002 there was one code for other nursery and greenhouse. With the creation of categories in the nursery section in 2007, three “others” were listed – other floriculture, other nursery, and other vegetables. However, only the other vegetables were published. Staff reviewed entries in the other two and assigned them an appropriate code.

## **Section 10: VEGETABLES, POTATOES, AND MELONS**

**Potatoes:** The title, screener question, and item 2 were changed to include potatoes because it was a new crop in the section. NASS was concerned that this move would confuse potato growers. However, potato farmers were specifically sampled in for the 2005 Content Test and did not see any problems (potatoes written in the field crops or the omission of potatoes from the vegetable section) with the data.

The statement “for sale” was removed from the screening question because it was redundant. Respondents were to exclude vegetables for home use.

**Item 2:** The text was changed from “Land from which...” to “Acres from which...” The column header was also changed from “Total Acres” to “Acres Harvested.”

**Harvest season:** As was done in 2002, Region 6 (California and Arizona) included a statement referring to different harvest seasons in the different States. A similar note was used for Florida in 2002, but was not for 2007 for several reasons.

**Bullet information:** A few bullets were added above the table to explain how to report multiple crops from the same acres and better define what was meant by “processing.”

**New crops:** Potatoes, sweet potatoes, and ginseng were moved from the field crops section to the vegetable section for 2007 because of a NAICS change. Horseradish was added and squash was separated into summer and winter squash.

**Fresh market:** A column for fresh market acres was added to the existing total and processing acre columns. In 2002 the total acres irrigated box was located just above the processing vegetable column in the table. This resulted in any many respondents erroneously reporting acres of a given crop irrigated as acres harvested for processing. This was a major problem in 2002.

**Crop changes:** Asparagus was changed to “asparagus, bearing age” to ensure that only bearing acreage was collected. Ginseng was moved to the vegetable section. The text for tomatoes was changed to read “tomatoes in the open” to distinguish it from the tomatoes grown in greenhouses. Pimientos and mixed vegetables were dropped as separate items and were included in other vegetables.

## **Section 11: FRUIT AND NUTS**

**Design:** In most regions, all fruit and nuts reported in 2002 fit in the table. Therefore, to reduce respondent burden and the amount of hand writing to interpret, all expected fruit and nuts were preprinted in the table and

the list at the bottom of the page was removed. Several blank rows were left for any other fruit or nuts the respondent would like to report. Regions 3 and 6 had the 2002 design with a few preprints and a crop listing.

A statement to exclude abandoned acres was added to the screener question.

**Item 2:** The word “total” was dropped from “Acres in bearing...” This made it read more like the other sections of the form.

**Item 3:** The text was slightly modified from 2002 to better fix the new design.

**Crop changes:** K-early citrus (only 5 reports) was removed as a separate crop and was summarized and published as other citrus if reported. Pluots and chestnuts were added as new crops and pecans were split into improved and native.

## **Section 12: BERRIES**

**Acres Grown:** The berry section was changed to collect total acres grown, acres harvested, and acres not harvested. This was a change from previous censuses when only the acres harvested was asked. This was done to circumvent the huge swing in berry acreage from census to census since some berries have a longer maturity rate and are not harvested each year. Depending on the year, harvested acreage in certain counties can change by thousands of acres.

**Item 1:** The screener text was changed as a result of the change to acres grown. Statements to exclude berries for personal or home use and to report berries grown under glass in Section 9 were added to the question.

**Item 2:** In addition to the change to acres grown, the word “total” was dropped from “Acres on which...” This made it read more like the other sections of the form.

**Item 3:** The statement was changed to reflect a change in the table layout as well as the addition of an instruction to report the acres only once for multiple pickings of the same crop.

## **Section 13: CATTLE AND CALVES**

**Bullets:** Several bulleted items were listed in the section to better instruct the respondents about cattle on AUM land or custom fed cattle.

**Item 2a:** In the past as well as in the 2005 Content Test, respondents erroneously listed their beef cows and total as the same. Many believed this was the result of respondents reporting anything that was not a dairy cow in as beef cows. In an effort to keep heifers, steers, etc. out of beef cows, an exclude statement was added.

**Item 2c:** The text for heifers was changed to “heifers that had not calved.”

**Item 4:** The words “or moved” were added to 4a and 4b. They were not in the statement above, but were added because there was a concern that respondents might not read item 4, only the 4a and 4b parts.

**Cattle in feedlots:** In 2002 respondents repeatedly and erroneously reported having cattle in feedlots. In an effort to combat this problem, text was added to better define what was meant by cattle in feedlots. The feedlot questions were also grouped.

## **Section 14: SHEEP AND LAMBS**

**Sheep and lambs section moved:** In 2002 sheep were collected in the other livestock section. However, sheep (and bees) were collected on an ownership basis, not presence on the operation like all other livestock, and the screener for the other livestock section may have caused some sheep owners to miss reporting their sheep. For 2007 sheep were placed in their own section with more references to ownership. Wool production was also collected here.

## **Section 15: POULTRY**

The header for the first column was changed from “inventory on this...” to “number on this...” so that is read more like the other sections.

**Chickens, layers:** This item was broken into three pieces for 2007 – table eggs, hatching layers for meat-types, and hatching layers for table eggs. Although we did not publish the items separately, the information was valuable to the edit. Different values were used for sales and production contracts depending on the type of layers reported.

**Turkeys:** Turkeys were broken into two pieces – for meat production and hens for breeding. Although we did not publish the items separately, the information was valuable to the edit. Different values were used for sales and production contracts depending on the types of layers reported.

**Item 11:** Examples of other poultry were added to the question to prompt response. Note - Although peacocks and guineas were considered other livestock according to NAICS, NASS continued to collect them as other poultry as in the past.

**Item 12:** The question was reworded to collect data.

## **Section 16: HOGS AND PIGS**

**Hog section moved:** In 2002 the hog section was located under the berry section. However, many hog operators checked “no” to berries and went to the next page rather than the next section (hogs, below) and either omitted their hogs or reported them in other livestock. For 2007 the hog section was located at the top of the page. NASS felt the error in 2002 was largely in part due to stacking a crop and a livestock section on the same page. The word “below” was added to the go-to instruction when a section was located below the previous one. The hog section was also moved to later in the livestock order allowing the cattle and poultry sections, which typically received more responses, to come first.

**Items 5 & 6:** In 2002 respondents were allowed to check more than one type of hog operation and type of producer. This resulted in problems for the edit and publication. In 2007 the respondent was limited to one choice for type of operation and producer. Those checking more than one were edited to one choice.

## **Section 17: AQUACULTURE**

**Aquaculture section moved:** For the 2007 census, Aquaculture was moved out of other livestock and placed into a separate section.

**Item 2:** The text above the table was expanded for 2007 to better explain what was to be reported in the section. Respondents were also instructed to report aquatic plants in the nursery section.



**Value of sales:** The value of sales for each commodity was added to the section. The data were used for editing purposes but were not published. The sales were used to determine whether the fish reported were food fish or fingerlings when expenses, production contracts, etc. were calculated.

## **Section 18: COLONIES OF BEES**

**Bees section moved:** In 2002 bees were collected in the other livestock section. However, bees (and sheep) were collected on an ownership basis, not presence on the operation like all other livestock, and the screener for the other livestock section may have caused some bee owners to miss reporting their bees. For 2007 the bees were placed in their own section with more references to ownership. Honey was also collected in this section.

## **Section 19: OTHER ANIMALS AND LIVESTOCK PRODUCTS**

**Design:** Removing sheep, bees, and aquaculture from this section made space for all livestock in the table and deleting the write-in area and other livestock listing. This reduced respondent burden and limited the number of hand written entries NPC had to interpret.

The header for the first column was changed from “inventory on...” to “number on ...”. This make it read like the other sections.

**Item 2 & 2a:** As in the past, NASS asked for the number of horses and ponies on the operation. In 2007 a subquestion was added to collect the number owned. This was an attempt to detect operations that were stables or race tracks only since those operations were not counted in the census. The number owned question was used for editing purposes and was not published.

**Item 7:** Alpaca was added as a new item for 2007. Many reported alpaca in 2002 as either other livestock or llama which caused problems for the edit. Since other livestock were only allowed a few dollars per head by the edit, most alpaca farms went out of scope the first time through the edit as \$5,000 worth of sales was bumped down to \$50 by the edit.

**Items 10 & 11:** “in captivity” was added to the text for deer and elk to discourage respondents from reporting wildlife roaming freely on their property.

**Item 16:** Examples of other livestock were added to the question to prompt response.

## **Section 20: PRODUCTION CONTRACTS AND CUSTOM FEEDING**

**Screening:** In 2002 the section had four screening questions before getting into the table. Many of the respondents ignored the cumbersome screening and erroneously reported their commodities again in this section. In an effort to keep non-contract operators out of the table, the screener was reduced to one question and large arrows were added to direct them to the table below or the next section on the next page depending on the answer to the screener. A definition for a production contract grower was also added to the section.

**Column header:** The column header was changed from “quantity delivered” to “total quantity moved from this operation in 2007.” Many contractors picked up the commodity from the contractee’s farm, so the commodities were not actually “delivered” by the contractee.

**Item 2e:** Text was added to custom fed cattle specifying that only those shipped directly to slaughter should be reported. This was an attempt to reduce the number of cattle erroneously collected for this item.

**Item 4:** The text "...or provided..." was added to the question to improve data collection for the many different operating situations. The "none" box indicating no expenses were paid by the contractor, was moved to the last position. This item was located first in 2002 and was often checked even though other inputs were also checked.

**Item 5:** The text was reworded to encourage respondents to enter the contractor's company name, when applicable, rather than their contact for the company. The contractor's phone number was also removed since it was rarely used in 2002.

## **Section 21: VALUE OF SALES**

The opening statement was changed to correct inefficiencies in the wording for 2002.

**Grains, oilseeds, and beans:** In 1997 sales for 6 individual grains and beans were collected separately. They were consolidated into one sales item in 2002 in an effort to reduce respondent burden. However, after the publication of the 2002 census, NASS received numerous calls from individuals and commodity groups wanting sales data by individual crops. In 2007 individual crop sales data were added back to the form. Therefore, we are again collecting individual crop sales. However, one difference between 2007 and 1997 was that rye was removed and rice was inserted since rye numbers had dropped dramatically over the last several years and the rice industry had grown in economic importance.

**Item 4:** Ginseng and vegetable transplants were added to the include statement to improve the instruction.

**Item 16:** Embryos were added in the include statement to prompt response.

**Item 17:** The landlord's share continued to be erroneously reported. Asking percentage was discussed but it was decided that would cause respondents to have to change their mindset in the midst of answering dollar questions. The words *landlord's share* were bolded. The entry box was indented to the left in an effort to keep the respondents from repeating total sales again.

**Item 18:** A header was added above the question to distinguish it from the sales reported on the previous page. The question text was also expanded to provide examples of items to include and exclude in the calculation. The phrase indicating the data cell was for sales directly to consumers was bolded.

## **Section 22: ORGANIC AGRICULTURE**

Due to the growing organic agriculture sector and the need for additional information, a new section was added to the 2007 form.

## **Section 23: COMMODITY CREDIT CORPORATION (CCC) LOANS**

This question was moved out of the government payment section and placed in its own section, similar to 1997.

**Item 2:** The commodity listing was changed to reflect changes in the latest Farm Bill. The question text was changed from crop to commodity to signify that other items, like cotton and honey, were part of the CCC program.

## **Section 24: FEDERAL AND STATE AGRICULTURAL PROGRAM PAYMENTS**

**Item 2:** Federal government payments were divided into three categories. This was a compromise to be more like the Agricultural Resources Management Survey (ARMS) without segmenting into the numerous categories that the survey used.

**State and local payment:** This question was previously collected as other income in farm-related income but was included here along with other government payments. However, it was summarized and published as a new and separate farm-related income item for 2007.

## **Section 25: INCOME FROM FARM-RELATED SOURCES**

**Item 2:** The text was reworded and several phrases bolded in attempt to get more accurate data.

**Item 4:** Although not explicitly stated, agri-tourism was previously included in recreational services. However, at the request of Jackie Folsom, Agriculture Advisory Committee President and Vermont Farm Bureau President, the question text was expanded to include agri-tourism. This was a growing part of the farming financial picture and statistics on this item were helpful to communities.

**Item 6:** Insurance payments were collected as part of other farm-related income in 2002 but were separated for 2007. As a part of the financial structure of the farm, interest in this item was growing. NASS debated asking for the value in Section 4 where acres under a crop insurance policy were collected. However, payments were to include more than crops on acres insured and there was concern that the dollars would be underreported if left in Section 4.

**Other income:** Since several of the previously included items were removed, this item was updated. New items such as tobacco quota buyout and farm-generated energy were added.

## **Section 26: PRODUCTION EXPENSES**

**Instruction:** The introductory statement was corrected so that respondents were instructed to include expenses connected with performing customwork for others.

**Design:** Although the wording did not change, livestock purchases were broken into separate questions rather than being subquestions, primarily as a means of saving space.

**Item 5:** Colonies of bees were added to the include statement.

**Item 8:** Repairs were moved before supplies in the text since the value of repairs was much larger than the expense for supplies. It was believed this minimized the chance the item was overlooked.

**Item 16:** Wording was changed but the context remained the same.

## **Section 27: FARM LABOR**

**Farm Labor section moved:** The section was moved just below expenses. It seemed more logical to ask for labor numbers after asking for labor expenses rather than after value of land and buildings.

**Design:** The questions remained the same but the wording changed slightly to incorporate the parenthesis used in 2002 into the question for 2007. The Y/N boxes for item 2 were also moved to the right under the cell boxes for item 1.

## **Section 28: FERTILIZERS AND CHEMICALS APPLIED**

**Item 1:** Herbicides was added to the list of items to include in the section.

**Headers:** In 2002 bolded spanners were used before each item. It was advised that these headers were distracting and if they were important, they should be incorporated into the questions. Following that advice, the wording was changed for items 2 and 4 so they read more smoothly but did not change the context.

**Item 4d:** The “s” was removed from smuts and rusts since these diseases are not usually plural.

## **Section 29: MARKET VALUE OF LAND, BUILDINGS, MACHINERY, AND EQUIPMENT**

**Moved.** This section was moved ahead of the machinery and equipment section in an effort to better collect the value of machinery, equipment, and implements (item 2).

**Item 2:** For 2007 the value of all machinery and equipment was moved out of the machinery and equipment section and placed here. In the past, respondents had a tendency to only report the value for those inventory items specifically asked for in the machinery and equipment section. However, the question was intended to collect the value for all machinery, tools, office supplies, etc., used on the operation. Therefore, many respondents were either underreporting the value or they were leaving it blank if they had none of the specified items. This resulted in large amounts of imputation for this cell since the edit assumed each farm had at least a few tools and office supplies. The question was also expanded to provide more examples of the types of items to include. Data from the 2005 Content Test showed better reporting of the item with larger values per farm compared to the 2002 average.

## **Section 30: MACHINERY AND EQUIPMENT**

**Item 1a:** Trucks were added back into the 2007 form. This item was present in 1997 but dropped from the 2002 census. However, many data users called after release of the 2002 data looking for the truck numbers.

## **Section 31: AGRICULTURAL ACTIVITY WITHIN THE BORDERS OF AMERICAN INDIAN RESERVATIONS, PUEBLOS, AND SERVICE AREAS**

**Expanded:** This section was expanded from two regions in 2002 to the entire country for the 2007 census. Changes to the questions were largely directed by those working with the American Indian Reservations. Also the questions were expanded to include pueblos and service areas.

**Item 1:** The wording was changed to “use any land.” The 2002 wording was too narrow in scope.

**Item 2:** Rather than collecting the acreage, the question was changed to find out what type of land arrangement – owned/deeded; trust; or other – the operator had with the reservation.

**Item 4:** The text was changed to include all land, not just trust or deeded land.

**Item 5:** The date reference was changed to anytime during the year rather than on December 31. Item 5b collected the percent of the herd on the reservation on December 31. With this change, NASS was able to publish the number of operators who used reservation land to graze cattle during the year and how many were still there on December 31.

## Section 32: PRACTICES

**New section:** This new section allowed NASS to develop a sample frame for follow-on surveys.

**Items 1a & 1b:** The computer and Internet questions from the Operator Characteristics section in 2002 were moved to the Practices section since they were Y/N responses. However, many USDA programs are now funding high speed Internet access and the Senior Executive Team (SET) recommended that the census gauge the number with high speed access. Therefore, the “use a computer” question was replaced with an “access to high speed” question.

**Item 1d:** This question was a request by the Bureau of Reclamation. Initially, they wanted to collect the information in the irrigation section, but the page was too full. There was also concern about asking a question that only pertained to 18 western States so early in the form.

**Item 1g:** This was requested by a few States as well as a group of New York and Pennsylvania cattle operators.

**Item 1h:** Farm Bureau, Cattleman’s Association, and others requested data for Animal Unit Month (AUM) acres. NASS originally tested a question in Section 1 collecting the acres used on an AUM basis. However, the results were questionable. Reinterviews of the 2005 Content Test verified that erroneous entries were received. Therefore it was decided to not complicate Section 1, which established the acres the report form was based on, and ask a Y/N question in this section. More testing of the AUM question is being done in other NASS surveys and follow-ups to census AUM respondents which could produce a more reliable question for 2012.

**Item 1k:** Although NASS received many requests for veal calf data, it was mainly one veal organization’s members. In addition, NASS was not comfortable including a veal question in the cattle section for several reasons. One is that there was no standard definition of the term *veal*. Second was the possibility that the animal rights organizations could possibly locate veal farms if published at the county level. Therefore, the data for this section were only being published at the State level.

**Item 1m:** This was the result of a request received by Senator Harkin, Chairman of the Senate Agriculture Committee, from the BARN AGAIN! Program, a partnership between the National Trust for Historic Preservation and *Successful Farming* magazine.

## Section 33: TYPE OF ORGANIZATION

**Design:** Although no words were changed, the layout was changed so that the bulleted subquestions were aligned to the right rather than below the previous question. At one time the question asking if the partnership was registered under law was removed. However, this went against an agreement made with the Bureau of Economic Analysis in 2000, so it was added back. The categories used in ARMS were also reviewed for possible changes, however, NASS decided against making a dramatic change to the historic data series.

## Section 34: OPERATOR CHARACTERISTICS

**Women operators:** In 2002 the box for women operators was located under the total operator box and far away from the question text. This may have been the cause of some of the misreporting (total = women, but only male operators listed in table below; total < women; etc.). For the 2005 Content Test, the women operator box was intended to bring it closer to the question and appearing more like a subquestion of item 1. However, this resulted in more confusion. The placement of the box lead some respondents to believe the table in item 2, where all the demographic data were collected, only applied to those entering a positive value for women. The missing data would have to be imputed for a large percentage of respondents.

**Principle occupation:** The percentage of operators reporting farming as their primary occupation grew dramatically in 2002 with half the States increasing by at least 10 percent. Although some of the change was attributable to aging farm operators who did not have jobs off the farm, much of the change was attributed to a change in the wording for 2002. For 2007 NASS reinstated the 1997 style and added more text for clarity.

**Typology:** NASS was asked to investigate whether the census could publish anything on typology, a socioeconomic classification for limited-resource farms as defined by the Economic Research Service (ERS). Although typology depends on income over a two year period, NASS determined that adding two questions (retired and household income level) would allow them to publish figures that would somewhat simulate the classification. The term “retired” was left up to the respondent to define and report if the respondent so decided. The income breaks were created to allow the edit to determine whether a respondent was above or below the median household income for his/her county, one of the requirements when defining typology. However, after the census content was finalized, ERS changed the method for classification slightly but the data were published under the earlier version.

**Indian Reservation:** The question asking if the operator(s) lived on an Indian reservation was dropped due to poor data quality. The question was misunderstood and was over-reported in some areas and underreported in others.

**Manager:** The manager question was expanded to all three operators, not just the primary operator, because the manager was not always listed as the primary operator. In some cases the owner listed himself/herself as the primary operator followed by his/her manager(s).

**Computers:** The computer and Internet questions were moved to the practices section since they were only Y/N responses.

## Section 35: CONCLUSION

**Intentions:** The question asking whether the respondent intended to produce, raise, or sell anything in the future was dropped from the 2007 census. It was asked in 2002 but was not used for editing, analysis, or publication so it was removed.

**Item 2 and 3:** The text was changed to better illustrate something other than the respondent’s name was requested, which was often reported in the past.

**Thanks:** In 2002 the entire back page was used for additional information – NASS website, who should report, toll free number, etc. However, there was not extra space to repeat these items for 2007. Instead, only the toll free number and the NASS website were included.

**OMB burden statement:** The OMB burden statement was revised on the bottom of the back to reflect new standards: “The time required to complete this information was estimated to average 50 minutes per response.”

## Appendix C: Volume of 2007 Census of Agriculture Mailout and Follow-up Mailings

**Table C-1. Initial Mailout Report Forms Mailed From NPC and Marked Report Forms Handled by Field Offices**

Report Form Type	Quantity
Total report forms	3,194,000
Report forms mailed from the National Processing Center:	
National (form 07-A0100)	514,000
Regionalized (forms 07-A0201 to 07-A0207)	2,443,000
Must cases (forms 07-A0201 to 07-A0207)	165,000
Sub-total	3,122,000
Marked respondent report forms handled by field offices (forms 07-A0201 to 07-A0207)	72,000

**Table C-2. Receipts and Corrected Undeliverable As Addressed (UAA) Report Form Packets**

UAAs	Mailout dates	Forms
UAAs received	NA	98,000
Total corrected UAAs mailed	<u>February 7 – April 1, 2008</u>	21,000





# Appendix D. Summary of U.S. Nonresponse and Coverage Adjustments

## Table A. Summary of U.S. Nonresponse and Coverage Adjustments: 2007

[For meaning of abbreviations and symbols, see introductory text]

Item	Total	Percent from nonresponse adjustment	Percent from coverage adjustment	Item	Total	Percent from nonresponse adjustment	Percent from coverage adjustment
Farms .....number	2,204,792	14.65	16.24	Tenure:			
Land in farms .....acres	922,095,840	10.32	3.33	Full owners .....farms	1,522,033	14.24	19.21
Farms by size:				.....acres	343,952,327	10.30	5.54
1 to 9 acres .....farms	232,849	13.35	31.34	Part owners .....farms	542,192	15.65	7.76
.....acres	1,080,019	13.09	31.96	.....acres	496,344,290	10.37	1.53
10 to 49 acres .....farms	620,283	13.43	24.94	Tenants .....farms	140,567	15.23	18.71
.....acres	15,918,542	13.53	23.41	.....acres	81,799,223	10.13	4.54
50 to 69 acres .....farms	153,862	13.99	18.51	Principal operator characteristics by-			
.....acres	8,930,361	13.99	18.43	Sex of operator:			
70 to 99 acres .....farms	192,043	14.55	15.85	Male .....farms	1,898,583	14.76	14.98
.....acres	15,783,304	14.57	15.76	.....acres	867,831,274	10.23	3.05
100 to 139 acres .....farms	175,146	15.32	13.35	Female .....farms	306,209	13.99	24.02
.....acres	20,313,722	15.34	13.23	.....acres	64,264,566	11.60	7.02
140 to 179 acres .....farms	139,479	15.87	11.47	Primary occupation:			
.....acres	21,954,090	15.87	11.45	Farming .....farms	993,881	14.81	12.04
180 to 219 acres .....farms	87,502	16.43	8.65	Other .....farms	1,210,911	14.52	19.68
.....acres	17,283,570	16.45	8.61	Spanish, Hispanic, or			
220 to 269 acres .....farms	90,313	16.77	7.45	Latino origin (see text) .....farms	55,570	13.56	39.00
.....acres	16,258,454	16.77	7.44	.....acres	17,054,007	10.09	15.78
260 to 499 acres .....farms	212,553	17.51	5.67	Race:			
.....acres	75,892,077	17.56	5.52	American Indian or			
500 to 999 acres .....farms	149,713	17.50	3.07	Alaska Native .....farms	34,706	13.86	30.33
.....acres	104,140,461	17.48	2.88	.....acres	49,680,678	2.47	1.63
1,000 to 1,999 acres .....farms	92,656	14.61	1.71	Asian .....farms	11,214	14.28	20.94
.....acres	127,595,277	14.46	1.61	.....acres	1,389,766	7.67	8.68
2,000 acres or more .....farms	80,393	9.16	1.44	Black or African American .....farms	30,599	18.35	29.11
.....acres	496,945,963	5.47	1.07	.....acres	3,182,313	18.08	19.54
Market value of agricultural products sold .....\$1,000	297,220,491	5.89	4.10	Native Hawaiian or Other Pacific Islander .....farms	1,356	16.15	23.01
Farms by value of sales:				.....acres	405,006	5.61	2.25
Less than \$1,000 .....farms	688,833	12.45	30.03	White .....farms	2,114,325	14.60	15.77
.....\$1,000	84,357	11.85	33.65	.....acres	863,819,828	10.74	3.36
\$1,000 to \$2,499 .....farms	211,494	14.48	19.69	More than one race reported .....farms	12,592	15.97	18.94
.....\$1,000	350,588	14.44	19.54	.....acres	3,618,249	12.36	2.75
\$2,500 to \$4,999 .....farms	200,302	15.67	13.67	Reporting primary occupation as farming by age group:			
.....\$1,000	718,027	15.63	13.52	Under 25 years .....farms	5,988	13.86	32.87
\$5,000 to \$9,999 .....farms	218,531	15.74	12.72	25 to 34 years .....farms	44,591	14.35	23.23
.....\$1,000	1,552,543	15.71	12.68	35 to 44 years .....farms	97,508	14.50	12.91
\$10,000 to \$19,999 .....farms	190,402	17.51	7.22	45 to 54 years .....farms	211,039	14.24	11.21
.....\$1,000	2,682,120	17.51	7.25	55 to 64 years .....farms	260,056	14.70	11.37
\$20,000 to \$24,999 .....farms	57,883	17.45	8.05	65 years and over .....farms	374,699	15.35	11.08
.....1,000	1,277,703	17.43	8.11	Reporting primary occupation as other than farming by age group:			
\$25,000 to \$39,999 .....farms	107,046	17.41	9.85	Under 25 years .....farms	5,890	11.95	41.95
.....\$1,000	3,367,681	17.39	9.97	25 to 34 years .....farms	62,144	13.67	32.66
\$40,000 to \$49,999 .....farms	47,686	17.25	11.99	35 to 44 years .....farms	171,310	15.01	20.99
.....\$1,000	2,112,835	17.24	12.03	45 to 54 years .....farms	354,362	14.66	19.55
\$50,000 to \$99,999 .....farms	125,456	18.52	6.70	55 to 64 years .....farms	336,250	14.57	18.23
.....\$1,000	8,961,255	18.43	7.11	65 years and over .....farms	280,955	14.23	17.44
\$100,000 to \$249,999 .....farms	147,500	18.38	4.51	All operators by age group <sup>1</sup> :			
.....\$1,000	24,212,940	18.06	5.65	Under 25 years .....farms	54,197	14.56	23.62
\$250,000 to \$499,999 .....farms	93,373	15.63	2.33	25 to 34 years .....farms	209,385	13.96	23.98
.....\$1,000	33,409,883	15.14	3.41	35 to 44 years .....farms	468,740	14.52	17.92
\$500,000 to \$999,999 .....farms	80,777	7.93	-2.49	45 to 54 years .....farms	877,500	14.36	16.59
.....\$1,000	42,690,783	7.36	-1.78	55 to 64 years .....farms	848,277	14.54	15.52
\$1,000,000 or more .....farms	65,509	1.37	7.25	65 to 74 years .....farms	533,436	14.82	14.08
.....\$1,000	175,799,795	0.70	4.84	75 years and over .....farms	289,999	14.98	13.08
Farms by type of organization:							
Family or individual .....farms	1,906,335	14.86	16.98				
.....acres	574,150,050	13.21	3.78				
Partnership .....farms	174,247	14.09	12.10				
.....acres	161,416,999	6.84	3.38				
Corporation:							
Family held .....farms	85,637	12.23	9.28				
.....acres	114,264,200	5.78	2.29				
Other than family held .....farms	10,237	11.79	12.15				
.....acres	11,055,610	4.37	2.17				
Other - cooperative, estate or trust, institutional, etc. ....farms	28,135	12.33	14.43				
.....acres	61,208,981	2.00	1.10				

<sup>1</sup> Data were collected for a maximum of three operators per farm.



---

## Appendix E. Abbreviations

---

ACES	Agricultural Coverage Evaluation Survey
ADC	Automated Data Capture
ADVFU	Advance Follow-up
AELOS	Agricultural Economics and Land Ownership Survey
AIS	Agricultural Identification Survey
AMS	Agricultural Marketing Service
APHIS	Animal and Plant Health Inspection Service
ARMS	Agricultural Resources Management Study
ASCII	American Standard Code for Information Exchange
ATAC	Automated Tracking and Control System
AUM	Animal Unit Month
BOC	Bureau of the Census
CATI	Computer-Assisted Telephone Interview
CBO	Community-Based Organization
CCC	Commodity Credit Corporation
CCT	Census Content Test
CD-ROM	Compact Disc-Read Only Memory
CES	Classification Error Survey
C-FARE	Council on Food, Agriculture, and Resource Economics
CML	Census Mail List
CNMI	Commonwealth of Northern Mariana Islands
CPB	Census Planning Branch
CREP	Conservation Reserve Enhancement Program
CRP	Conservation Reserve Program
CSV	Comma-Separated Values
CCT	Census Content Test
DOC	Department of Commerce
DUP	Duplicate
EDR	Electronic Data Reporting
EIN	Employer Identification Number
ELMO	Enhanced List Maintenance Operations
ERS	Economic Research Service
ES	Extension Service
FRIS	Farm and Ranch Irrigation Survey
FSA	Farm Service Agency
FWP	Farmable Wetlands Program
FY	Fiscal Year (October - September)
GPO	Government Printing Office
HUC	Hydrologic Unit Code

iCADE	Integrated Computer Assisted Data Entry
ID	Identification
I/S	In-Scope (Meets the census definition of a farm)
IT	Information Technology
ITC	Incoming Telephone Call System
JAS	June Agricultural Survey
LACS	Locatable Address Conversion System
LAN	Local Area Network
LSF	List Sampling Frame
LRC	Low Response County Follow-up
MIS	Management Information System
MISO	Marketing and Information Services Office
NAFB	National Association of Farm Broadcasting
NAICS	North American Industry Classification System
NAMA	National Agricultural Marketing Association
NASDA	National Association of State Departments of Agriculture
NASS	National Agricultural Statistics Service
NCOA	National Change of Address
NITC	National Information Technology Center (United States Department of Agriculture)
NML	Not-on-the-Mail List
NPC	National Processing Center (Bureau of the Census)
NR	Nonresponse
O&B	Osborn & Barr Communications
OCR	Optical Character Recognition
OMB	Office of Management and Budget
OMR	Optical Mark Recognition
O/S	Out-of-Scope (Does not meet census definition of a farm)
PDF	Portable Document Format
POID	Person Operator Identification
PRDA	Puerto Rico Department of Agriculture
PRL	Probabilistic Record Linkage
PSA	Public Service Announcement
PSU	Primary Sampling Unit
QA	Quality Assurance
QAS	Quarterly Agricultural Survey
QC	Quality Control
REE	Research, Education, and Economics
RMSE	Root Mean Squared Error
SET	Senior Executive Team
SSN	Social Security Number

StPOID	State Person Operator Identification
TOTAL	Tenure, Ownership, and Transition of Agricultural Land
TVP	Total Value of Product
UAA	Undeliverable As Addressed
UPR-ES	University of Puerto Rico - Extension Service
U.S.C.	United States Code
USDA	U.S. Department of Agriculture
USGS	United States Geological Survey
UTN	Universal Telecommunications Network
VNR	Video New Releases
WRA	Water Resource Area
WRP	Wetlands Reserve Program



---

## Appendix F. Sources

---

The following NASS source documents were utilized in 2007 Census of Agriculture History document:

1. 2007 Census of Agriculture, Volume 1, Geographic Area Series, Parts 51 (United States); 52 (Puerto Rico); 53 (Guam); 54 (U.S. Virgin Islands); and 56 (Commonwealth of Northern Mariana Islands) dated February 2, 2009
2. 2007 Census of Agriculture, Volume 2, Subject Series, American Indian Reservations (AC-07-S-5) dated June 19, 2009; Watersheds (AC-07-S-6) dated May 29, 2009; and Specialty Crops (AC-07-S-9) dated November 30, 2009
3. 2007 Classification Error Survey for the United States Census of Agriculture, Research and Development Division, Number RDD-09-03, September 2009
4. Census Mail List Trimming Using SAS Data Mining, Research and Development Division, Number RDD-09-02, April 2009
5. 2005 Content Test Final Report, November 2006
6. 2002 Census of Agriculture, Volume 2, Subject Series, History (AC-02-S-5) dated January 2007
7. 2007 NASS Organization Chart