

Arizona State and County Data

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2002 CENSUS OF AGRICULTURE

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Introduction

OVERVIEW

The 2002 Census of Agriculture was taken to obtain agricultural statistics for each county or county equivalent, state, and the Nation. The organization, content, and format of this publication are similar to previous Volume 1, Geographic Area Series publications. Program and policy decisions created several changes to the data published for 2002. These changes affected data comparability for some items. A new section, Data Changes and Comparability, on page X provides detail about the more noteworthy changes.

HISTORY

For 156 years (1840 - 1996), the U.S. Department of Commerce, Bureau of the Census was responsible for collecting census of agriculture data. The 1997 Appropriations Act contained a provision that transferred the responsibility for the census of agriculture from the Bureau of the Census to the U.S. Department of Agriculture (USDA), National Agricultural Statistics Service (NASS). The 2002 Census of Agriculture is the 26th Federal census of agriculture and the second conducted by NASS.

The first agriculture census was taken in 1840 as part of the sixth decennial census of population. The agriculture census continued to be taken as part of the decennial census through 1950. A separate mid-decade census of agriculture was conducted in 1925, 1935, and 1945. From 1954 to 1974, the census was taken for the years ending in 4 and 9. In 1976, Congress authorized the census of agriculture to be taken for 1978 and 1982 to adjust the data reference year so that it coincided with other economic censuses. This adjustment in timing established the agriculture census on a 5-year cycle collecting data for years ending in 2 and 7.

USES OF 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 state and county or county equivalent in the U.S.

Agriculture census data are routinely used by farm organizations, businesses, state departments of agriculture, elected representatives and legislative bodies at all levels of government, public and private sector analysts, and colleges and universities. Agriculture census data are used to:

- Evaluate, change, promote, and formulate farm and rural policies and programs that help agricultural producers;
- Study historical trends, assess current conditions, and plan for the future;
- Formulate market strategies, provide more efficient production and distribution systems, and locate facilities for agricultural communities;
- Make energy projections and forecast needs for agricultural producers and their communities;
- Develop new and improved methods to increase agricultural production and profitability;
- Allocate local and national funds for farm programs, e.g. extension service projects, agricultural research, soil conservation programs, and land-grant colleges and universities;
- Plan for operations during drought and emergency outbreaks of diseases or infestations of pests.

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.

AUTHORITY

The 2002 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, and the Commonwealth of Northern Mariana Islands.

FARM DEFINITION

The census definition of a farm is 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 current definition was first used for the 1974 Census of Agriculture and has been used in each subsequent agriculture census. This definition is consistent with the definition used for current USDA surveys.

REFERENCE PERIOD

Reference periods for the 2002 Census of Agriculture were similar to those used in the 1997 Census of Agriculture. Reference periods used were:

- Crop production is measured for the calendar year, except for a few crops such as avocados, citrus, and olives for which the production year overlaps the calendar year. See Appendix A, General Explanation for details.
- Livestock, poultry, and machinery and equipment inventories, market value of land and buildings, and grain storage capacity are 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 and Wetlands Reserve Program participation, direct sales income, chemical and fertilizer use, farm-related income, and hired farm labor data are measured for the calendar year.

TABLES AND APPENDICES

Chapter 1. Table 1 shows state-level historical data through the 1974 census and tables 2 through 54 show detailed state-level data usually accompanied by historical data from the 1997 census. Tables 55 through 61 show detailed state-level data cross-tabulated by several categories for the 2002 census only.

Chapter 2. County-level data are presented in 51 tables in 2 different table formats - county and county summary. Most tables include 1997 historical data. County tables include general data for all counties within the state. The county names are listed in alphabetical order in the column headings. County summary tables provide comprehensive data for all counties reporting a data item. This is a change from the reporting practices of past censuses when data for counties with a limited number of farms reporting an item were combined and reported as "all other counties."

Appendix A. Provides information about data collection and data processing activities. It also includes definitions of specific terms and phrases used in this publication, including items in the publication tables that carry the note "see text."

Appendix B. Describes supplemental activities conducted to improve coverage of American Indian and Alaska Native farm operators. Table A shows the total number of American Indian or Alaska Native farm operators both on and off reservations by county. Table B compares selected farm characteristics for farms operated by American Indian and Alaska Native farm operators and all farms. Table C provides selected operator characteristics of American Indian and Alaska Native farm operators.

Appendix C. Discusses the statistical methodology used in conducting and evaluating the census. Table A summarizes nonresponse and coverage adjustment for selected items for the state. Table B provides reliability estimates of state totals for selected items. Table C summarizes nonresponse and coverage adjustment for selected items at the county level.

Appendix D. Provides facsimiles of the report forms and instruction sheets used to collect data.

RESPONDENT CONFIDENTIALITY

In keeping with the provisions of Title 7 of the United States Code, no data are published that would disclose information about the operations of an individual farm or ranch. All tabulated data are subjected to an extensive disclosure review prior to publication. Any tabulated item that identifies data reported by a respondent or allows a respondent's data to be accurately estimated or derived, was suppressed and coded with a 'D'. However, the number of farms reporting an item is not considered confidential information and is provided even though other information is withheld.

SPECIAL EFFORTS DIRECTED AT MINORITIES

NASS implemented several activities to improve coverage of minority farm operators. These activities included, but were not limited to:

- Obtaining mail lists from organizations likely to contain names and addresses of minority farm operators; and
- Conducting pre-census promotion activities that targeted women, American Indian and Alaska Native, Black and African American, and Spanish, Hispanic, or Latino origin farm operators.

SPECIAL STUDIES AND CUSTOM TABULATIONS

Special studies such as the 2003 Farm and Ranch Irrigation Survey and 2005 Census of Aquaculture are part of the census program and provide supplemental information to the 2002 Census of Agriculture in the respective subject area. Results are published in print and on the internet.

Custom-designed tabulations may be developed when data are not published elsewhere. These tabulations are developed to individual user specifications on a cost-reimbursable basis and shared with the public. The census Volume 1 on CD-ROM is an alternative data source that should be investigated before requesting a custom tabulation.

All special studies and custom tabulations are subject to a thorough disclosure review prior to release to prevent the disclosure of any individual respondent data. Requests for custom tabulations can be submitted via the internet from the NASS home page, by mail, or by e-mail to:

Associate Administrator
National Agricultural Statistics Service
1400 Independence Avenue, S.W.
Washington, D.C. 20250
or
HQ AA@nass.usda.gov

ABBREVIATIONS AND SYMBOLS

The following abbreviations and symbols are used throughout the tables:

- Represents zero.
- (D) Withheld to avoid disclosing data for individual farms.
- (H) Standard error or relative standard error of estimate is greater than or equal to 99.95 percent.
- (IC) Independent city
- (L) Standard error or relative standard error of estimate is less than .05 percent.
- (NA) Not available or not published. Some historic data are not published because they are not comparable, electronic files are unavailable, or re-summarizing could compromise respondent confidentiality.
- (X) Not applicable
- (Z) Less than half of the unit shown
- cwt Hundredweight
- sq ft Square feet

Data Changes and Comparability

Several changes were made to the 2002 census program. Report form content and wording were improved, several publication tables were redesigned, and tabulated data were adjusted for coverage. In some instances, comparability with previous censuses was effected.

REPORT FORM CHANGES

Report form changes involved eliminating items that were no longer necessary or duplicated data collected on surveys, and adding new items that were included to cover emerging agricultural products and practices. Several production-related items were deleted, including production of fruits, nuts, and berries; number of bearing and nonbearing age trees or vines; litters of hogs farrowed; number of hogs sold for slaughter; number of sheep and lambs shorn; and pounds of wool shorn. Deleted sales items were gross value of sales for cattle fattened on grain or concentrates, feeder pigs sold, and value of individual nursery items and individual grain and bean commodities. The farm-related injuries and deaths section was also eliminated.

New economic data were collected to provide a more complete picture of farm income and expenses. Questions relating to net cash income of the operator and the operation, and landlord share of income and expenses were added. Information about production contracts, grain storage, and organic farming were also collected.

For the first time, information was collected for up to three operators on each farm. For those operators who would self-identify as being of multiple races (i.e., selected more than one race code on the report form), a “more than one race” category was added to the

publication to better represent those individuals. Questions relating to computer use and Internet access on the farm were included. Principal operators were asked to report whether they worked as the hired manager on the operation, the number of households receiving income, and percent of income from farming.

Other changes involved splitting items from the 1997 census into multiple parts to provide more detailed data, and in some cases items from the 1997 census were combined which helped reduce respondent burden. Several questions were reworded to improve respondent comprehension.

PUBLICATION TABLE CHANGES

In previous censuses, States and counties with a minimal number of operations reporting an item were collapsed and published in the “all other states” and “all other counties” categories. For 2002, States and counties with at least one operation reported were published. This change provides more detailed information at the state/county level.

COMPARABILITY

The 2002 Census of Agriculture introduced new methodology to account for all farms in the United States. Incompleteness in the census mail list was measured by matching list names against all qualifying operations found through canvassing sample land areas throughout the Nation. All published 2002 census items (except in Hawaii and Alaska) were reweighted for undercoverage. To provide comparable data, comparable 1997 data published in 2002 were also reweighted for undercoverage. An explanation of the methodology is included in Appendix C.