

CHAPTER 10.

Agriculture Census Publication Program

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INTRODUCTION

General Information

This program's goal was to make data available to users as quickly as possible after collection, while maintaining the high standards of statistical quality, reliability, and comparability. The general plan for the 1982 publication program directed that the data be published in one or more forms—printed reports, computer tapes, microfiche, and microcomputer diskettes. Individual preliminary county and State reports would be issued, while the detailed final county- and State-level tabulations would be included in Volume 1, *Geographic Area Series* reports—one for each State, Puerto Rico, two outlying areas, and a United States summary. The preliminary and final reports would present data for all operations qualifying as farms under the census definition (that is, with a sales value in the census year of \$1,000 or more) as well as data only for farms with sales of \$10,000 or more.

Use of Video-Composition Systems

The bulk of the published material in any census of agriculture consists of statistical tables. To facilitate efficient production of publication-quality tables, the Bureau made extensive use of video-composition systems in the 1982 census publication program. The computer output-to-microfilm video composition (COMp80) system was used to develop reproduction copy, in conjunction with the table image processor system (TIPS) originally developed for use in the 1977 Economic Censuses publication program.

TIPS was designed by the Bureau's Systems Software Division (SSD) and Publications Services Division (PSD) for use in producing large volumes of statistical tables in census reports. The system actually was a computer program that controlled the COMp80 or the Government Printing Office's Video COMp systems. An updated version, TIPS II, was developed for the 1982 censuses. The TIPS II system could use the table-layout instructions, stub, and data file for a given report to compose a single "instance" of a table, and produce either a cathode ray tube (CRT) screen display or rough proof copy of the table for review. The system automatically applied any correction made to the data file to the tables and provided corrected input files

for table composition. Once the tables were reviewed and approved, the tape files were sent to the GPO, which used them to produce photographic negatives of the publication pages. These then were returned to the Census Bureau and used to make dylux copies of each page for final review before being sent for publication.

All published reports were produced by photo-offset in the standard 8 1/2" x 11" page size.

Quantity Of 1982 Statistics Published

The quantity of data published for the 1982 Census of Agriculture was reduced through elimination of the major-results reports for counties and the reformatting of the county data tables in the volume 1 reports, resulting in a substantial reduction in the total number of pages in the printed reports. The number of pages of text and tables in the preliminary reports for 1982 was slightly higher than for 1978, over 12,400 pages in all, compared with approximately 12,300 in the earlier census; however, the 54-part Volume 1, *Geographic Area Series, State and County Data* set included final State and county (or equivalent) data for the 50 States and each outlying area, as well as a United States summary, and contained approximately 19,300 pages of text and tabular data, compared with some 28,800 pages in the 1978 volume 1 reports. These savings were realized primarily by the elimination of the separate multipage county reports used in previous volume 1 publications. For 1982, combined subject-matter tables were designed showing the specific data item in the stub, with the counties listed in the header. While the number of pages in the 1982 volume 1 reports was reduced by 33 percent, reformatting the county tables meant that the *volume of data published* was virtually the same as for the 1978 census. Volume 2, *Subject Series*, for 1982 comprised four reports—the *Graphic Summary*, with 188 pages of maps illustrating national agriculture statistics; the *Coverage Evaluation*, 32 pages; the *Ranking of States and Counties*, with 112 pages of tables showing comparative rankings of States and counties for selected subjects; and this *History*.

PUBLICATION PROCESS

Production Control and Reporting System

The Agriculture Division developed the tables and text for the census data volumes, and the Publications Services Division (PSD) had primary responsibility for preparing these materials for publication. PSD used a centralized control and reporting system to monitor the flow of work from receipt of the specifications for a report to the return of the volumes from the printers. A control record was prepared for each step of the planning, editing, design and graphics work, printing, and printing review activities to ensure an orderly flow of work through production, and to keep editors and others informed of the status of each project. These control records also permitted any component of a publication to be located prior to printing, so that corrections, if any, could be made. Periodic progress reports on

the publication work for each report series were made to sponsoring units so they knew the status of their publications.

Publication Steps

The major steps in the 1982 Census of Agriculture publication process are outlined below.

1. Steps required for implementing the publication program:

Prepare timetables for the steps listed below and estimate completion dates, adjusted as required.

Plan series format (e.g., cover design, typeface for titles, headings, text, and table format) and select means of reproducing text and tables.

Select appropriate maps and plan basic design.

Prepare and submit a form CD-27, Publication Clearance Request.

2. Steps required for processing:

A. Tables:

Prepare manuscript of tables showing boxheads and stubs.

Submit table manuscript to Economic Census Staff (ECS) for review and approval.

Edit and plan table outlines, marking specifications for typing or automatic data processing.

For TIPS II processing:

Code tables for computer run.

Prepare base table images (BTI's) from planned layouts.

Produce and expand BTI's.

Review and correct BTI's.

Merge boxhead and stub image with data to produce final page.

Prepare film negatives of table pages with all heads, stubs, data, rules, and page numbers.

Mask with tape the frame identification numbers of each negative.

Prepare and distribute dylux¹ copies for review.

Consolidate all revisions or corrections onto a master proof.

Review and correct film images.

For typewritten processing:

Prepare table outlines showing proposed stubs and boxheads.

Edit and plan horizontal and vertical spacing for each page.

Prepare and procure preprints for repetitive materials (boxheads and stubs for multipage tables of 10 or more pages).

Provide data to be typed.

Type and proofread stubs and data fields.

Review and correct tables.

Add folios and rule tables.

B. Text and introductory materials:

Plan and write manuscript.

Send to ECS for review and approval.

¹A "dylux" copy is a readable photocopy made from a negative. The copy is made on special yellow paper and, while readable, is not of photo-offset print quality. Dylux copies frequently are used for review and correction of printed materials.

Edit and mark manuscript (using Bureau style, policy, and grammar) for composition.

Review and correct galleys.

Prepare page dummies.

Review and correct page dummies.

Prepare camera copy (mechanicals).

Preprint repetitive copy.

C. Maps:

Select appropriate maps, produce camera copy.²

Prepare computer files required for production of multicolor and dot maps.³

Produce positive copy—including text, fonts, and so forth, on maps— using COMp80 unit.

Produce negatives and color keys from positive copy.

Review and verify accuracy.

3. Completed report:

Assemble component parts.

Send to ECS for review and approval.

Prepare printing requisition, form CD-10.

Carry out final editorial review of camera copy.

Mark camera copy with printing specifications.

Procure printing.

Printing

The printed reports for the 1982 Census of Agriculture were produced using photo-offset print. The negatives required for this process were made from pages of tables generated by the GPO's video-composition systems. After composition, the camera copy was reviewed for conformity with Census Bureau standards for printed material. All of the actual printing was procured through the GPO, which subcontracted both the preliminary and final reports to private printers.

When printed materials were received from the printers, they were inspected by PSD and Agriculture Division personnel to ensure that the reports were complete and met the Census Bureau's print-quality standards. Packages of preliminary reports were randomly checked to make certain all of the individual county reports were included. Packages of volume 1 reports for each State were opened and four copies were randomly selected for inspection by publication specialists in PSD; two copies from each box of reports also were randomly chosen and inspected by Agriculture Division personnel. No problems were discovered in the preliminary reports, but the volume 1 reports for Utah and Louisiana had to be reprinted.

Grouping and Binding Reports

The 1982 Census of Agriculture print publication program consisted of the preliminary reports; the Volume 1, *Geographic Area Series* final reports; and the Volume 2, *Subject Series* reports. The Bureau issued 4-page preliminary reports for over 3,000 counties with 10 or more farms in 1982, for each State (but not for Puerto Rico or the outlying areas), and for the United States.

²Only a single State map, showing county outlines, was included in the Volume 1, *Geographic Area Series*, reports, but the Volume 2, *Graphic Summary*, contained many national maps.

³The automated statistical mapping system developed by the Census Bureau generated a computer tape of commands that directed the plotter (the COMp80 unit was capable of plotting a map in a matter of minutes) to draw maps on 310mm paper or film at publication size.

The reports were grouped and released by State beginning in August 1983; with the last report—the United States — published in April 1984. The Volume 1, *Geographic Area Series*, contained final data for States and counties, or their equivalents, and were bound in one paperbound book per State. Separate books were prepared for Puerto Rico, Guam, the Virgin Islands, and the United States.

The Volume 2, *Subject Series* reports were bound in four books by subject.

Pricing and Distributing Reports

The Superintendent of Documents at GPO was responsible for sales and distribution of selected Government publications. The sponsoring agency for each publication—in this case the Bureau of the Census—paid all production costs and for printing copies for its own use. Prices for individual publications sold through GPO were based on a schedule established by that agency, but the only costs passed on to other buyers of the reports were for the actual printing, postage, and handling of the reports purchased.

The Superintendent of Documents also was responsible for distribution of Census Bureau publications to some 1,500 Government and Census depository libraries. About 150 of the former, usually those at very large educational institutions, received all or nearly all, Bureau publications, while the remaining libraries indicated which reports they wished to receive. All were sent the annual *Statistical Abstract of the United States*, containing summary data from the most recent censuses.

The Census Bureau distributed copies of its publications to its own 12 regional offices; to Department of Commerce district offices in 47 cities throughout the Nation; and to approximately 250 State data centers (SDC's) and their 1,050 affiliates located in the 50 States, the District of Columbia, Puerto Rico, and the Virgin Islands. (The SDC's were sent all of the Census Bureau's publications for their States or areas, while the affiliates indicated which reports they wished to receive.)

The availability of census reports was publicized through the Superintendent of Documents, the Department of Commerce and its field offices, and other organizations. The Bureau issued press releases about new publications, as well as distributed order forms, publication schedules, a monthly product announcement, and an annual catalog of publications. Most of these materials included brief descriptions of the reports and actual or estimated publication dates.

The Bureau of the Census maintained a supply of its various publications for its own use at its Jeffersonville, IN, facility, but the primary responsibility for storage and sales of census reports was in the hands of the Superintendent of Documents.

DATA PUBLICATIONS

Printed Reports⁴

Preliminary reports—Prior to publication of the final census data reports, the Bureau prepared and published a 4-page preliminary report for each county, parish (in Louisiana), independent city, or combined election district (in Alaska) with 10 or more farms; for each State; and for the United States. The reports presented selected data items, including all farms (i.e., agricultural operations with sales during the census year of \$1,000 or more),

⁴Each report had a series number. The preliminary reports were numbered AC82-A-00(P) to -56(P) (for the States) and AC82-01-001(P) to -56-045(P) (for counties). The volume 1 reports were numbered AC82-A-1 to -54. The volume 2 reports were numbered AC82-SS-1 to -4.

land in farms, land use, irrigation, market value of agricultural products sold, type of organization, operator characteristics, principal crops and livestock, and selected items for farms with sales of \$10,000 or more. The preliminary reports were published between August 1983 and May 1984.

Volume 1, Geographic Area Series, State and County Data—The volume 1 reports contained the final data reports for geographic areas for the census and consisted of individual reports for the 50 States, Puerto Rico, Guam, the Virgin Islands, and a United States summary. Each report consisted of a standard introductory text and two chapters of statistical tables—one of detailed data for the State (or area), the second of detailed county-level data.

Chapter 1 (State data) consisted of 50 statistical tables; tables 1 through 43 showed detailed State-level data and covered all of the items collected in the census, while tables 44 through 50 covered selected 1982 summary State data cross-tabulated by various farm classifications, such as size of farm, tenure, type of organization, operator characteristics, and standard industrial classification (SIC) code identification. Data were presented by county or county equivalent in chapter 2. Tables 1 through 16 showed selected data for all counties classified by SIC classification or size of farm, as well as information on operator characteristics and tenure, agricultural chemicals used, machinery and equipment, hired farm labor and payroll, Commodity Credit Corporation (CCC) loans, agricultural services and direct sales, livestock and poultry inventories and sales, and so on. In tables 17 through 36, data were provided for counties where three or more operations reported the particular item. Data for these items (e.g., various animal specialties, nursery and greenhouse products, farms operated by persons of selected racial groups or of Spanish origin) for counties with fewer than three farms reporting were combined into an "all other counties" category for the State. The first volume 1 report (Delaware) was published in February 1984, and the last (United States) was published in October 1984.

Volume 2, Subject Series—Volume 2 consisted of four special reports:

Graphic Summary presented a profile of agriculture in the United States in a series of national maps, many printed in color.

Coverage Evaluation provided national- and regional-level estimates on the completeness of the census in terms both of the number of all farms missed and the characteristics of farms missed.

Ranking of States and Counties showed data and ranking of importance (i.e., volume of production or value of sales) for selected items for 1982. The report also contained, for most tables, comparative data and ranking from the 1978 census.

History

These reports were published between February 1985 and July 1987.

Other Publishing Media

Preliminary data files on microcomputer diskette—Microcomputer diskettes are 5.25-inch-diameter flexible vinyl disks (generally referred to as "floppy disks" to distinguish them from the rigid disks used in mainframe and some personal computers [PC's]) magnetically imprinted with machine-readable data. They were designed to be used with PC's, which had

reduced, although still considerable, capability compared with the mainframe machines, but were much less expensive and required far less sophistication on the part of users (given appropriate "software"—or programming diskettes).

The Census Bureau began making some of its data available on diskettes at about the same time as the first 1982 agriculture census data appeared, and issued 104 diskettes containing the preliminary reports for each State and for each county with 10 or more farms. The Bureau's diskettes were double sided, double density, and formatted with 320,000 bytes per side to be compatible with the Microsoft-Disk Operating System (MS-DOS), and the IBM Personal Computer-Disk Operating System (PC-DOS). The data could be accessed using any one of several commercial spread sheet, word processing, or data base software packages, or the BASIC programming language. The Bureau developed two versions of a BASIC program on diskette to display data by item: the DOS 1.1 version for use with disk drives, and the DOS 2.1 version for hard-disk storage systems.

Microfiche—A microfiche is a 4" x 6" sheet of photographic film containing up to 98 frames (or pages) of text, tables, or other printed matter, reduced 24 times from their original size. Thus the entire 964-page volume 1 report for Texas could be contained on 10 microfiche, and the whole volume 1 data set, stored on microfiche, could be carried in a shoe box.

All the data from the final 1982 Census of Agriculture volumes were published on microfiche and were available for sale through the Superintendent of Documents approximately 1 month after publication of the printed reports.

Computer tapes—The Bureau of the Census began making computer tapes of agriculture census data available to users in 1965, when tapes of the preliminary county reports from the 1964 census were produced and sold. For the 1969 and 1974 censuses, county-level data tapes were prepared from the final county tabulations, while 1978 census users' requests prompted the Bureau to release tapes of the preliminary county data—to release data in machine-readable format as quickly as possible—and later, to produce tapes from the final data. (The latter tapes were produced and sold by the Agriculture Division, as a special tabulation.)

For the 1982 Census of Agriculture, the Bureau issued three tape files, one each for the preliminary and final county data files, and a third for the final State data and cross-tabulations. The preliminary data tapes contained all of the information in the preliminary county reports, while the final county data tapes held the data from the 36 county tables in chapter 2 of the Volume 1, *Geographic Area Series* reports. The former were made available to users in May 1984 on two standard-sized, 1,600 bpi (bits per inch) reels of tape, or on one 6,250 bpi reel, while the final county data were released in October 1984 on five 1,600 or two 6,250 bpi reels.

The final State data and cross-tabulation tapes were produced and sold by the Agriculture Division. The tape file included all the data in the 50 State tables in chapter 1 of the volume 1 reports. The complete file could be contained on 17 reels at 1,600 bpi, or 5 reels at 6,250 bpi.

The specifications for the computer tape reels for the 1982 data were:

Tape width	1/2 inch
Reel size	10 1/2 inch, 2,400 feet maximum length

Logical record size:	
Preliminary county file	4 3,800-character segments
Final county file	5 9,600-character segments
Final State file	101 9,600-character segments
Field size	Fixed, 12 characters
Recording density	1,600 or 6,250 bpi on 9-channel tape
Language	Optional, either American Scientific Code for Information Interchange (ASCII) or Extended Binary Coded Decimal Interchange Code (EBCDIC)
Block spacing	.60 inch

The price for the data tapes covered the cost of producing, documenting, handling, and postage. Users could purchase the complete files, or tapes for a particular State or combination of States. (The price for tape reels with data for more than one State was slightly higher than for a reel with a single State's data.)

COMPARABILITY OF DATA

One of the major objectives of a census of agriculture publication program is to maintain adequate comparability of the agriculture data series from census to census. A variety of factors may affect the actual comparability of data from these censuses, including changes in (1) the definitions of data concepts being measured, (2) the price structure of the economy, (3) the procedures used for data collection, and (4) the methodology used for estimating and imputing data.

The same farm definition was used for the 1974, 1978, and 1982 censuses, and the data published for all three were directly comparable in that respect. Different definitions were used for earlier enumerations, and 1982 data were directly comparable to the 1969 and earlier censuses only for farms with sales of \$1,000 or more. The comparability of the value of the sales figures was, however, affected by changes in the value of the dollar and in the price levels of various commodities.

The primary data-collection procedure was changed from personal to mail enumeration with the 1969 Census of Agriculture. The 1978 Census of Agriculture improved coverage, especially of small farms, by supplementing the mail enumeration with a State-level area-sample survey. Budget restrictions prevented the Census Bureau from using an area sample in 1982. This difference in methodology for data collection and estimation had more influence on the comparability of data from the 1982 and 1978 censuses than any other factor.

In 1978, the area sample was used to estimate the number and characteristics of farms not on the census mail list at the State level. The 1978 county-level tabulations were based only on data from farms on the census mail list, since the area sample (6,400 area segments) was not large enough to provide reliable county-level estimates. The 1978 national, regional, and State tabulations included data from farms on the mail list supplemented by estimates derived from the area sample. Since an area sample was not used in 1982, the 1982 publications provided 1978 historical estimates for the mail list only.