

CHAPTER 6. Dissemination of Census Results

Introduction

Basic Decisions

The publication program for the 1974 Census of Agriculture, like those of all the censuses, was intended to make the data available as soon as possible after collection, and at the same time to maintain the Bureau's standards of quality and comparability of statistics. To achieve these goals, the following basic decisions were made:

1. The data were to be available in one or more of the following forms: Printed publications, computer tapes, and microfiche.
2. Preliminary county reports would be issued. (In 1969, the Bureau replaced the preliminary county reports with a relatively complete final report for each county. Summary tables showing totals for each county of a State for selected items were included in volume I, together with a complete set of the county reports and the State tables. The volume I reports contained more detailed breakdowns and cross-classifications of the data for the State or outlying area than were issued for the counties.) A U.S. summary, using the same table format as the State summary tables, was to be included in each State final report; otherwise coverage in volume I was to be the same in 1974 as it was in 1969.
3. The preliminary reports would include data for all agricultural operations qualifying as farms under the definition used for the 1959 through 1969 agriculture censuses. The final reports would present data for all agricultural operations meeting the new farm definition adopted in January 1977 (i.e., agricultural operations with \$1,000 or more in total value of agricultural products sold), with detailed data available for farms that had sales of \$2,500 or more.
4. The output of the Bureau's computerized high-speed printer would be used as reproduction copy for the county preliminary reports, while tables for the final reports would be photocomposed on the Linotron equipment at the Government Printing Office (GPO) from computer tapes prepared by the Bureau.
5. All published reports were to be produced by photo-offset in the standard 8½" x 11" page size.

Comparability of the Data

A new farm definition was adopted for the publication of the final reports of the 1974 Census of Agriculture. (See ch. 1 for a discussion of the change in the definition.) As a result of this change, the preliminary and final data for the "all farm" classification differed more than usually is attributable to corrections, additions, and deletions. Consequently, the "all farms" data for 1974 and prior censuses are directly comparable only for farms that had, or normally would have had, a total value of sales of \$2,500 or more. However, even this limited comparability is affected by the differences in the methodologies used to collect the data; the 1974 and 1969 censuses were conducted as mailout/mailback operations, while earlier censuses were door-to-door canvasses. The difference in the timing of the censuses (particularly in the 1974 enumeration, which, because of the supplemental data-collection effort, lasted well into 1976) also has an effect on comparability. Although the reporting period and inventory items reported were the same as in the 1969 census, the lapse of time between the end of the reference year and the actual collection of data from individual farmers meant that memories or records were sometimes inaccurate.

While changes in rates of farm expenditures and the prices of agricultural products sold have an effect on the comparability of the data for any two agricultural censuses, the changes in the 1969 and 1974 censuses are particularly important because of (1) the relatively high rate of inflation experienced between 1969 and 1974 and (2) the wide fluctuations in prices received by farmers for their agricultural products during the same period.

Quantity of 1974 Statistics Published

The quantity of statistics published for the 1974 census was somewhat less, in terms of total number of pages, than for the 1969 enumeration, in part because of the return to four-page preliminary county reports in place of the eight-page reports issued in the previous census. Although the total number of pages published in the 1974 State reports was reduced, the quantity of data published was approximately the same as for 1969, since the use of Linotron equipment permitted as much as 20 percent more data per page.

There are approximately 12,250 pages of tables and text in the individual preliminary county reports; approximately 32,000 pages in the 54-part **Volume I, State and County Data**, which includes county reports for each State and outlying area;

and about 1,500 pages in the **Volume II, Statistics by Subject**. These figures compare to nearly 24,500 pages in the county reports, 18,000 in **Volume I, Area Reports**, and approximately 1,500 in **Volume II, U.S. Summary**, for the 1969 census.

The 1969 **Volume III, Agricultural Services**, contained 55 pages of tables and text, while the 1974 report had 111 pages.

The Publication Process

Production Control and Reporting System

A centralized production control and reporting system was developed during the fall of 1975 to permit the Publication Services Division (PSD) to monitor the flow of publication work for major activities from receipt of specifications to the return of the printed reports from the printer. The control records covered all aspects of the planning, editorial, design and graphics, printing, and printing review activities, so that there would be an orderly flow of the thousands of pieces of publication elements through the various production operations. These detailed records also permitted components of proposed publications to be located at any given time prior to printing so that corrections or alterations could be made. A biweekly narrative report of the program was started in the fall of 1975 to describe the progress or delays on all of the publication series currently in development and production, and to point out specific problems and materials needed from the various offices involved.

Correction of Errors

The correction of census figures goes on without any time limitation. The Bureau of the Census maintains one set of bound volumes in which corrections are entered as they are found throughout the years. Corrections are made any time an error is discovered within the census period and also when correcting data for comparability in succeeding censuses. For example, corrected 1969 data appeared in the 1974 reports where they were given for comparison.

Publication Steps

The major steps in the 1974 Census of Agriculture publication process are outlined below.

1. Steps required at beginning of each report series:
 - a. General
 - Submit form CD-27, Publications Clearance Request, for approval.
 - Plan series format, e.g., cover design, typeface for titles, headings, and text, and table format.
 - b. Tables
 - Prepare manuscript of tables showing boxheads and stubs.
 - Edit and plan table outlines, marking specifications for typing or automatic data processing.

For Linotron processing—

- Prepare base table images from planned outlines.
- Review and correct base table images.
- Merge boxhead and stub image with the data to produce final page.

For non-Linotron processing—

- Prepare printer's copy, using typewritten or high-speed printer output. Preprint standard or repetitive copy, such as the titles, headnotes, boxheads, stubs, and folios.

c. Text and front matter

- Plan and write manuscript.
- Edit manuscript for Bureau policy, grammar, and style.
- Prepare galleys from manuscript.
- Review and correct galleys.
- Prepare page dummies.
- Review and correct page dummies.
- Prepare camera copy (mechanicals).
- Review and correct mechanicals.
- Preprint repetitive copy.

d. Maps and charts

- Select appropriate maps and charts and produce camera copy on computer or by hand.

2. Steps required for each individual report:

a. Tables

For typewriter copy

- Prepare table outlines showing proposed stubs and boxheads.
- Post historical data.
- Edit and plan horizontal and vertical spacing for each page.
- Prepare and procure preprints for repetitive materials (e.g., headings and boxheads for multipage tables).
- Provide data to be typed.
- Type and proofread stubs and data fields.
- Correct and review.
- Rule tables.

For phototypeset (Linotron) copy—

- Edit and plan table outlines, marking specifications for processing.
- Code tables for computer run.
- Produce and expand base table images.
- Mix expanded table images and field data.
- Prepare Linotron film negatives of table pages with all heads, stubs, data, rules, and page numbers present.
- Mask with tape the frame identification numbers of each Linotron negative.
- Prepare and distribute paper copies (office copying machine paper reproduced from treated paper) or film negatives for review.
- Consolidate all revisions or corrections onto a master proof.
- Correct and review film negatives.

- b. Maps and charts
 - Establish basic designs.
 - Preprint chart worksheets and base art.
 - Provide data to cartographers for map production.
 - Prepare specifications to produce charts on the Hewlett-Packard plotter.
 - Produce camera copy of maps and charts.
 - Review and verify accuracy.
 - c. Completed report
 - Assemble component parts.
 - Prepare printing requisition, form CD-10.
 - Conduct final editorial review of camera copy.
 - Mark camera copy printing specifications.
 - Procure printing.
3. Steps required for implementing a publication program:
- Prepare production timetables implied in the above steps and estimate completion dates, adjusting as required.
 - Establish priorities, expedite production, coordinate programs, and report progress.
 - Periodically review progress and problems.
 - Monitor detailed expenditures to anticipate surpluses or deficits.

Use of High-Speed Printer Output and Linotron

High-Speed Printer Output. For the 1964 and 1969 censuses, the separate county reports and most of the tables in the volume I reports were machine products; the Bureau's computer was programmed so that its output of tabulations fell into columns on the copy from the high-speed printer (HSP), which was then used as the camera copy for the reports. Most of the tables in the general report, volume II, and the other publications were typewritten for offset reproduction. For the tables prepared on the HSP, three copies of the data were produced simultaneously by using paper—the original white copy was ultimately used as camera copy; the second copy, yellow, was used to indicate corrections, changes, and other instructions for preparing the white copy for offset reproduction; the third copy, pink, was used for review and disclosure analysis. For some tables, film positive overlays containing repetitive information such as page headings, boxheads, table titles, and stubs were placed over the white camera copy of each page to be photographed. Use of film positives provided the same economy as preprints, since one film positive could be used as an overlay for all pages of any multipage table. For the remaining tables, preprinted stubs and boxheads were stripped onto the camera copy.

In the interests of cost effectiveness and publication of the data on the most timely basis possible, a plan was adopted to correct errors in the initial HSP output by hand. (The computer data file would be subject to further edits and corrections before the final reports were produced and the errors in the file identified at this stage would be corrected in those edits.) The decision to use the HSP for the county preliminary reports also enabled the Bureau to include graphics in those reports, for while Linotron offers a variety of character types, it is unable to reproduce graphics and its use would have required a separate

negative containing the appropriate chart for each county. (The graphic to be used was a pie chart showing land use in each county.) With the HSP, the Bureau was able to use its plotter to produce the charts on separate preprints, which could then be stripped onto the HSP copy.

The HSP method was economical and fast, but had a number of limitations. For example, it produced characters of uniform lateral spacing (10 characters to an inch); thus, space requirements for a given amount of data were greater than with variable-spaced characters. The HSP alphabet was also restricted to capital letters, with no variations of bold or italic faces; superscripts were not available and had to be added by hand.

Because of these considerations, the Bureau decided to use the Linotron system at the Government Printing Office (GPO) to produce most of the tables in volume I. HSP copy was used for the preliminary county reports, for part of the reports for the outlying areas, and for parts of volumes II, III, and IV. The remaining tables were typewritten.

Linotron. The Bureau first used the Linotron phototypesetting system to produce camera-ready copy for publication of statistical data from the 1970 Census of Population and Housing. Essentially, the system consists of a control unit and a cathode ray tube (CRT) X-Y plotter with a built-in character generator. Output is determined by a magnetic tape, prepared by computer, that contains the data to be printed and specifications for type sizes and styles, table rules, and pagination. The tape is fed into the control unit, which reads the input and instructs the character generator regarding the selection of characters, their size, and their position on the page. The characters are projected onto the CRT, which converts the optical images into electronic ones. These images are then exposed to a sheet of photographic film or photosensitive paper. For the agriculture census data, the output of the Linotron system was photographic film of completed pages, including all rules, headings, stubs, and data. This film was then processed to produce the negatives for production printing.

The control tapes for Linotron operation were prepared in the Bureau. Two computer programs were written, the first for the headings and stubs, and the second for the data. The two programs were later merged and sent to the GPO for use in the Linotron system.

Linotron offered several advantages over the HSP: It produced characters of variable lateral spacing, which permitted the inclusion of more data per page; it made available specialized characters, such as bold and italic faces; and it permitted the specification of one set of boxheads and stubs for all the tables, which, once written into the computer program, could be used as often as necessary. The latter point was a great improvement over the continual overlaying of headings and stubs required by the HSP; the output of the Linotron system was completed made-up negatives, ready for printing, while the output of the HSP was only one of several steps necessary in the production of pages for camera copy.

Grouping and Binding of Reports

All four-page preliminary county reports were issued separately

for the 1974 Census of Agriculture. Unlike the eight-page final county reports issued for the 1969 census, these preliminary reports were not included in the final volume I State and county reports. A new, six-page set of tables was prepared from final data for each county for inclusion in the State and county data reports. Chapter 1 of volume I contains State summary data for each of the 50 States. Chapters 2, 3, and 4 contain data at the county level. The outlying area reports show summary data and data for election districts (Guam), islands (Virgin Islands), and municipios (Puerto Rico). All published data were bound into one book per State or outlying area except Georgia, Kentucky, Missouri, and Texas. For Kentucky and Missouri, chapters 1, 2, and 3 were bound into Book 1 and chapter 4 was bound into Book 2. For Georgia and Texas, chapters 1, 2, and 3 were bound into Book 1 and chapter 4 was divided into two books (Book 2 and Book 3) for each State.

All the 1974 census reports available for sale are paperbound.

Printing, Pricing, and Distribution

Photo-offset, first used for the 1940 decennial census publications, was used for the major portions of the succeeding censuses of agriculture and for all 1974 Census of Agriculture publications.

The 1974 census publications conformed to the printing, pricing, and distribution policies for all Bureau publications, and these conformed to Government-wide policies. It is the general policy of the Federal Government that all printing of its publications is either done by, or procured through, the U.S. Government Printing Office (GPO).

Printing of the final 1974 census reports was subcontracted by GPO to private printers: The four-page preliminary reports were printed under a multiple-award contract that involved several printers.

The Superintendent of Documents handled sales and distribution. All U.S. Government publications have a subsidized price: The sponsoring agency pays all costs for preparation of a publication and the printing of copies for its own use, so that the only costs passed on to the purchasers are for the printing of extra copies, handling, and postage. This permits the Bureau, like other Federal agencies, to make information available to the public at a nominal charge. Prices of individual publications are based on a schedule maintained by the GPO; prices of Bureau publications not printed by the GPO are equivalent.

The Bureau also has the responsibility for making some free distribution of all reports for certain uses, including consultation and reference in libraries. The Bureau maintains lists of people entitled, for various reasons, to receive publications free of charge. The Superintendent of Documents sends specified Bureau publications to nearly 1,200 depository libraries for Government publications; this places copies in the major reference libraries of the country. In addition, census publications are placed in about 100 other libraries located in cities having large populations and, usually, a large educational institution. The depository libraries in both programs indicate which classes of publications they wish to receive. All of them receive the annual **Statistical Abstract of the United States**, which includes

summary figures from the most recent censuses. Most of the libraries also carry the U.S. summary reports of the major censuses (for the 1974 Census of Agriculture, these data would be in **Volume II, Statistics by Subject**) and the reports pertaining to their particular State. About 150 depositories receive all, or nearly all, of the publications of the Bureau of the Census.

The Bureau works with the Superintendent of Documents, the Department of Commerce and its field offices, and other organizations to publicize the availability of census reports. It also publishes and widely distributes press releases, order forms, and a quarterly catalog of publications. Statements on the publication programs of the 1974 Census of Agriculture were prepared and distributed periodically during the census period. They included brief descriptions of each series of reports and the anticipated publication dates.

The storage and distribution of sale copies were handled by the Superintendent of Documents. A supply of the reports was also maintained in the Census Bureau's Jeffersonville, Ind., facility for Bureau uses, as well as for filling requests for free copies.

Volumes I through IV of the printed reports for the 1974 Census of Agriculture were reproduced on microfiche.¹

1974 Agriculture Census Printed Reports

Preliminary reports. A four-page preliminary county report was published separately for each county, parish (Louisiana), independent city, and combined election district (Alaska) in the United States with 10 farms or more. The first preliminary county report was issued in April 1976, for Stratford County, N.H., while the last preliminary report was released in December of that year for Mitchell County, Tex. A four-page summary of the county data was also issued for each State, the four regions, and the United States. In addition to the text and two computer-plotted charts, each report presented for all farms and for farms with sales of \$2,500 and over, data on the number of farms, land in farms by use and land-use practices, operator characteristics, machinery and equipment, livestock and poultry, crops harvested, income and expenses, value of sales, type of organization, and the effect of the change in the farm definition on selected items.

Volume I, State and County Data. A separate report was published for each of the 50 States, Puerto Rico, Guam, and the Virgin Islands. The State reports for the 1974 census were published in 59 separate books rather than the 98 required for the equivalent 1969 reports.

Chapter I of each State report contains detailed data at the State level classified by size of farm, tenure and age of the farm

¹ Microfiche is one of the most economical methods of storing and retrieving data. It is similar to microfilm except that it is reproduced on a 4" x 6" film sheet capable of containing a heading describing the contents and up to 98 standard size pages of printed data. Each page is photographically reduced 24 times to approximately thumbnail size. Microfiche data are available through the Data User Services Division, U.S. Bureau of the Census, Washington, D.C. (Census volumes are reproduced on microfiche approximately 12 months after the printed reports are issued.)

operator, type of organization, value of products sold, and major kinds of farm operations. Chapter II contains county summary data for major items.

Since county data were also collected and tabulated for selected crops of local importance in only a certain number of counties within a State, as well as for certain specialized livestock operations, a miscellaneous report was produced for each State showing data for other items of agricultural inventory and production. These data make up chapter III of the State report, and contain a count of farms by type of farm for each county, and data for locally significant and/or miscellaneous agricultural products that could not be included in the standard report. For each State the data for each product cover only those counties reporting the product.

Chapter IV of each State report consists of a six-page section of data for each county with 10 farms or more. Data are shown for all farms and for farms with sales of \$2,500 or more, the number of farms by size, value of farm products sold and value of sales by kinds of products; farm operators by tenure, race, age, residence, and days of off-farm work; land in farms and land-use practices; market value of products sold; income; production expenses; livestock and poultry inventory and sales; and crops planted and harvested. Additional data on farms with sales of \$2,500 or more are presented in five tables dealing with the use of commercial fertilizers and agricultural chemicals; irrigation, artificial drainage, and artificial ponds; farm credit; and payroll and employment.

Each State and/or county report contains 1974 data and, where available, comparable 1969 data.

The volume I State reports for the 50 States were sent to the printer beginning in March 1977 with the one for Maryland and ending with Virginia in July 1977. The reports for the outlying areas were published in March through August 1977. (See app. E for complete list.)

Volume II, Statistics by Subject. Volume II presents statistics by subject for the United States as a whole, and for regions, divisions, and States in nine separate paperbound chapters. Data are shown for all farms and for farms with sales of \$2,500 or more. The subject-matter chapters are as follows:

- Part 1 **General Information: Procedures for Collection, Processing, and Classification**
- Part 2 **Farms: Number, Acreage, Value of Land and Buildings, Land Use, Size of Farm, Farm Debt**
- Part 3 **Tenure, Type of Organization, Contracts, Operator Characteristics, Principal Occupation**
- Part 4 **Farm Expenditures, Labor, Equipment and Facilities, Chemicals**
- Part 5 **Livestock, Poultry, Livestock and Poultry Products, Fish**
- Part 6 **Crops, Nursery and Greenhouse Products**
- Part 7 **Value of Products, Value of Sales Group, Other Income**

Part 8 **Standard Industrial Classification of Farms**

Part 9 **Irrigation and Drainage on Farms**

Volume III, Agricultural Services. Volume III contains data by State and county for the United States about establishments whose primary activities are providing agricultural services. Two-page preliminary reports were published for each State in April and May 1976 containing data on number of establishments, gross receipts, and employers. The final report was published in September 1976, and included data at the county, State, and U.S. levels for all establishments. Selected data were published for the appropriate 4-digit standard industrial classification (SIC) codes, and by size and type or organization. The data published included dollar volume of businesses, payroll, supplemental labor costs, gross receipts by type of service performed, gross receipts from products provided as part of services performed, capital expenditures, changes in gross value of depreciable assets, and expenditures for electricity, gasoline, petroleum, and other fuels.

Volume IV, Special Reports. Special reports published as part of the 1974 Census of Agriculture were as follows:

- Part 1 **Graphic Summary** contains maps and charts relating to the agriculture census data.
- Part 2 **Ranking Counties and States** shows the top ranking counties and States in descending order of importance for various agricultural characteristics and products. Data are included for both 1974 and 1969 censuses of agriculture.
- Part 3 **Coverage Evaluation** describes the coverage check and processing sample evaluation.
- Part 4 is this **Procedural History**, including selected basic data-collection forms.
- Part 5 **Corporations in Agricultural Production** contains data on the number and basic characteristics of corporations involved in agricultural production.
- Part 6 **Partnerships in Agricultural Production** presents characteristics of farm units operated as business partnerships.
- Part 7 **Agricultural Production and Marketing Contracts** provides data on agricultural operations conducted under contracts.

Parts 6 and 7 were prepared in cooperation with the Economic Research Service, USDA.

Computer Tapes

Computer tapes containing data published in the county reports were first made available by the Bureau of the Census for the

1964 Census of Agriculture. The tapes for 1964 contained the same data found in the printed preliminary reports; for 1969, the data published in the eight-page county reports; and for 1974, the data published in the six-page county reports. For both 1969 and 1974, the county miscellaneous data tables were made available in separate files. These tapes enabled users to retabulate the data for specific geographic areas, to make cross-tabulations of particular interests, and to mix census data with data from other sources. The tapes were compiled and released on a flow basis as each State's tabulations were completed.

The arrangements made for producing computer tapes of the 1974 data were similar to those made for 1969. The data on computer tape were organized into two files, A and B. File A contains data for all farms and for farms having gross sales of \$2,500 or more for every county in the United States with 10 farms or more. With the exception of the reel containing data from Texas, each reel carries data for at least two States, ordered by geographic State code within each geographic division. Within each State, the county data are ordered by county in alphabetic order. File B contains data for local and/or miscellaneous crops and livestock that could not be included economically in file A. The data are broken down by product. Counties not reporting any given product in significant quantities are included in an "all other" category whenever disclosure rules permit.

The specifications for the tape reels for the 1974 data are as follows:

Tape width:	½ inch
Reel size:	10½ inch, 2,400 feet maximum length
Logical record size:	Seven 1,980-character record segments. For file A, a logical record contains a single year/size class for a county or State. For file B, a logical record contains information about livestock or crop types for a county or State.
Field size:	Variable

Recording density:	800 bits per inch (BPI) on 7-channel tape; 800 or 1,600 BPI on 9-channel tape.
Language:	Binary coded decimal (BCD) on 7-channel tape; extended binary coded decimal interchange code (EBCDIC) on 9-channel tape.
Block spacing:	0.75-inch interblock on 7-channel tape; 0.60-inch on 9-channel tape.

The price of each reel of tape covers only the cost of producing, documenting, and handling the tape, and postage to mail it. Complete sets of file A and file B are available in both 800-BPI and 1,600-BPI tapes: file A is contained on 12 800-BPI tapes or 6 1,600-BPI tapes; file B is contained on 3 800-BPI or 2 1,600-BPI tapes.

Users' Conferences

As had been done following the 1969 enumeration, the Bureau of the Census conducted a series of conferences for data users for the 1974 Census of Agriculture. Twenty-seven such conferences were held between December 1975 and January 1978.

The purpose of these meetings was to enable data users to meet with Bureau staff members to discuss the census publications and data tapes, their contents, and the uses that could be made of the data. Each conference was scheduled only after a local group interested in agricultural statistics agreed to sponsor or underwrite the expenses of a representative from the Bureau and to handle all arrangements for the meeting, including facilities, registration, etc. Each conference was held at a location convenient to the data users within the State where the conference was held, as well as one easily accessible to persons wishing to attend from other States.

The conferences were attended primarily by representatives of farm and agricultural organizations, agribusiness firms, academic institutions, consumer groups, the agricultural news media, State and local governments, the transportation industry, and other interested groups.