

CHAPTER 7. Supplementary Surveys

Introduction

The need to keep response burden as low as possible precludes the collection in the census of a great deal of the information desired by data users. The inclusion of additional questions to collect these data would make the census questionnaire too long and probably would lead to lower response rates. However, the information is invariably useful, and often essential (though not necessarily needed at the county level) to the formulation of Government policy, and efforts are made to gather the data in as painless a manner as possible. The method often adopted by the Bureau for the collection of additional data involves the use of surveys and special censuses targeted to the specific parts of the agricultural system that are of particular interest. As part of the 1969 enumeration, for example, the censuses of irrigation, drainage, and horticulture were carried out, but there were also sample surveys to collect data on farm finances and farm enterprises.

Since then, there has been growing interest by data users in the degree of penetration by agribusiness firms of the production sector of the agriculture economy, in the types of business organization used by farmers, and in the business and contract activities of farmers. Accordingly, the Bureau instituted for 1974 (1) an enumeration of farm corporations, feedlots, and business and related activities, (2) surveys of eight commodities produced under contract, and (3) a survey of partnerships.

Legal Authority

Authorization for the conduct of surveys to supplement the data collected in the agricultural census is given in section 193 of Title 13, United States Code. The section states that: "In advance of, in conjunction with, or after the taking of each census provided for by this chapter, the Secretary [of Commerce] may make surveys and collect such preliminary and supplemental statistics related to the main topic of the census as are necessary to the initiation, taking, or completion thereof."

The use of sampling is authorized in section 195, title 13, which states that, except for the determination of population for purposes of apportionment of representatives in Congress, the Secretary of Commerce may "authorize the use of the statistical method known as 'sampling' in carrying out the provisions of this title."

Data collected in supplemental surveys and/or enumerations are protected by the confidentiality provisions of section 9, title 13. (See ch.1.)

The Survey of Corporate Operations, Feedlot Operations, and Business and Related Activities

Preliminary Operations

The initial data-collection effort for corporate operations, feedlot operations, and business and related activities was a part of the prec canvass for the 1974 Census of Agriculture. (For details of the prec canvass, see ch. 2.)

The mailing list for the prec canvass was drawn primarily from the address registers of the 1969 Census of Agriculture, the 1972 economic censuses, and supplementary lists supplied by the Economic Research Service (ERS) of the U.S. Department of Agriculture, and included approximately 57,000 agricultural or agricultural service operations. The prec canvass was intended primarily to aid in identifying and enumerating multiunit operations, but data on types of business organizations, feedlot operations, and business activities were also collected. Corporations that were identified in the census as having agricultural operations, but that had not been included in the prec canvass, were sent supplementary survey report forms requesting the same type of data collected in the prec canvass operation. Thus, the survey was an attempt to (1) collect corporation data from all corporations reporting agricultural production in the census, and (2) obtain more detailed information about those corporations' feedlot operations and nonfarm business activities.

Report Forms

Corporate agricultural operations identified in the census as potential subjects for the supplementary survey were sent one or more of three separate report forms that might be applicable to their situation. Report form 74-A29, Supplementary Survey of Corporate Operations, was mailed to each corporation. If there were indications in the census returns that a given corporation had feedlot operations and/or nonfarm business activities, form 74-A30, Feedlot Operations, and/or form 74-A31, Related and Other Business Activities, were included in the same mailing. Each form included a letter on the front page explaining the need for the data requested, the reason the addressee had received the report form after he had already supplied census information, the legal requirement for response, and a request that the completed form be returned within 10 days. The three forms are reproduced in appendix F.

Form 74-A29, Supplementary Survey of Corporate Operations. This was an 8" x 21" sheet folded to 8" x 10½", with printing in

black ink on white stock. The data-collection part of the form was divided into three sections: Section 1 requested data on the characteristics of the corporation's organization, management, and shareholders; approximate volume of business receipts; percentage of receipts from each of several classifications of business activities; and the year the corporation began participating in agricultural production. Section 2 requested information on the corporation's affiliation with any other company and asked for any employer identification number the addressee may have used. Section 3 asked for the name and telephone number of the person preparing the report, and for any remarks.

Form 74-A30, Supplementary Survey of Feedlot Operations.

This was a single 8" x 10" sheet of light blue stock with printing in black ink. Two sections comprised the data-collection portion of the form: Section 1 asked if feedlot operations had taken place, and if so, the one-time capacity of the feedlot, number of cattle marketed from the lot in 1974, percentage of cattle marketed that were custom-fed for others; how many participants, investors, individuals, or groups of individuals had cattle custom-fed at the addressee's feedlot; whether the addressee had any other livestock feeder operations and, if so, the types of livestock fed and the one-time capacity of these feedlots. Section 2 requested the name and telephone number of the preparer of the report, and any remarks.

Form 74-A31, Supplementary Survey of Related and Other Business Activities. Form A31 was a 10½" x 16" sheet of buff stock, folded to 8" x 10½", and printed with black ink. There were two data-collection sections, the second of which (Section 2, Person Preparing this Report) served the usual identification function. Section 1, Agriculture Related and Other Business Activities During 1974, had an introductory item asking if the addressee had received \$50,000 or more in estimated gross receipts from business activities other than agricultural production in 1974. The body of the section was divided into three parts: Part A requested information about the production or supply of any farm inputs to the addressee's own operations, and on the processing of any of the addressee's farm products; part B asked for data on production, purchasing, and forward-bookings contracts (to provide farm supplies); part C asked the addressee to identify any other business activities related or unrelated to agriculture, and to check one of five categories (from less than \$50,000 to \$1,000,000 or more) for estimated gross receipts for each business activity.

Mailout and Followup

Assembly of the mailing list. The compilation of a mailing list for the survey of corporations, feedlots, and business and related activities was begun after the seventh, and last, followup of the census. The names and addresses of operations identified as falling into any of the categories subject to the survey were drawn from the census processing cycle and each was given a name or source code number indicating the form or forms to be sent. Reports entering the census processing operation from the telephone followup and the supplementary enumeration

were also checked for possible inclusion in the survey. Addresses continued to be added to the mailing list as late as July 1976.

Mailing the questionnaires. Address labels were prepared and affixed to the report forms prior to mailout, and the forms, together with return envelopes, were inserted into the mailing envelopes. The initial mailout of questionnaires was made on November 5, 1975. Mailings of individual forms continued over an extended period of time as late responses and/or lately identified operations were added to the survey's universes. The number of each type of form mailed (excluding followup mailings) was as follows:

Form	Initial mailout	Final
Total	11,643	17,435
A29	10,604	¹ 15,052
A30	18	305
A31	1,021	2,078

¹ Of this total, 12,716 A29's were mailed as the only report form required for an operation; 2,031 A29's were mailed in packages with A31 forms, 258 with A30 forms, and 47 with all three report forms.

Followup. Three followup mailings and a telephone followup operation were done as part of these surveys. Beginning in mid-November 1975, followup mailings of report forms (stamped "Second Request," "Third Request," or "Fourth Request," as appropriate) were made to nonrespondents.

Approximately 1,300 of the larger nonrespondent operations (those with estimated sales of \$40,000 or more) included in the survey were referred to the telephone unit at the Bureau's Pittsburg, Kans., facility. Clerks obtained telephone numbers for these operations and attempted to complete the questionnaires by telephone interview.

Response to the survey questionnaires was generally very good. The highest degree of response was obtained from operations receiving the A29 form only; 12,531 of 12,716 questionnaires were returned, a response rate of 98.5 percent. Understandably, rates were lowest for the combinations of several questionnaires; only 36 of the 47 operations receiving all three questionnaires returned them, yielding a response rate of 76.6 percent. However, respondent cooperation was, in general, very good, and an overall response rate for all the questionnaires of over 95 percent was attained.

Processing the Report Forms

Clerical processing. Processing for the survey was similar to that done for the prec canvass. (See p. 15.) Report forms received at the Bureau's Jeffersonville, Ind., facility were sorted and batched into work units of about 100 forms of one type. (In those cases where respondents received more than one type of form, the packages were kept together as single data-reporting units and batched separately for processing.) The census file numbers for each case were keyed onto magnetic tape for transmission to Suitland, where they were used to

update the receipts indicated on the address files prior to each followup mailing. Correspondence attached to report forms was referred to the correspondence unit, which made any replies that were necessary or referred particular problem cases to technical analysts.

Once check-in was completed, the work units were forwarded to the clerical edit staff, which screened each report form for completeness and consistency. Corrections were made as necessary and, if no further work was required, the report forms were assigned geographic area codes, reviewed for control file changes, batched into work units once more, and sent to the data-keying unit. Reports that required special handling, such as those from establishments in which a unit change had taken place (which would necessitate a change in an operation's identification number) were referred to supervisors or analysts for further disposition. In some cases, respondents indicated their operations had been erroneously reported as corporations in the census. These cases were dropped from the survey and the correct organization code was entered in the census record. Once the problems of each case were resolved, the report form was recycled through the processing system and sent to the data-keying unit. The data from the report forms were keyed onto magnetic tape and transmitted via telephone datalink to Suitland.

Computer processing. In Suitland, corporate data from the survey report form were combined with data from the corresponding census report form. Consistency checks and edits were made by computer to determine whether the data entries and totals were reasonable. In general, data items were not imputed, but if closely related data from the corporate survey and/or census reports clearly indicated what an entry should be, the imputation was made. For example, if the value of total corporate receipts was not reported, but the report form showed that 50 percent of the respondent's sales came from farming and a value was given for those sales, total corporate receipts were imputed as twice the value of farm sales. When important data items were missing, respondents were contacted by telephone to obtain the necessary information.

Tabulations. This supplementary survey was actually the lesser of the data-collection efforts directed at corporations with agricultural production operations. The prec canvass to the 1974 Census of Agriculture involved a greater number of respondents and furnished about 53 percent of the final data file for tabulation. The data from the two operations were merged in mid-1977 and tabulations were run. The survey was primarily concerned with corporations as firms or business organizations, rather than as individual farm establishments. Only 7 of the 37 tables produced from the corporate survey data showed characteristics of corporate farm operations at the level of the individual farm. One of these tables showed data for the United States, for geographic regions, and for States. The remaining tabulations from the survey treated the data on the basis of the business firm. Inasmuch as one firm might operate a single farm or several dozen farms in as many different States, tabulated data at the firm level were available only on a national basis.

Publication Program

The data from this survey were published in the **1974 Census of Agriculture, Volume IV, Special Reports, Part 5, Corporations in Agricultural Production.**

The Survey of Farm or Ranch Partnership Operations

Preliminary Operations

Report form content test. In early 1977, an experimental version of the partnership survey report form 74-A33X, Survey of Farm or Ranch Partnership Operations, was prepared for mailing to a randomly selected sample of partnership operations identified in the 1974 Census of Agriculture, but not chosen for the partnership survey itself. The report form included all of the items for which data were to be requested in the survey and was intended to test the respondents' ability to understand the questions asked and supply the data requested.

A33X report forms were mailed to approximately 300 selected operations in February 1977. There were no followup mailings and by April a response rate of about 70 percent had been achieved. Analysis of the returned questionnaires indicated respondents had no particular difficulty providing the information desired. Accordingly, while minor format and content modifications were made, no significant alterations in the report form were considered necessary.

Compilation of the mailing list. The sample for the survey was chosen, on a random basis, from operations identified as partnerships in the census. To provide a sample of sufficient size to supply valid data for each State, the sampling rate was varied from State to State; for example, in Texas the sampling rate was 1 in 30, while in the New England States 1 in 3 partnerships were selected, and in Delaware every operation known to have been a partnership at the time of the census was included.

Report Form 74-A33, Survey of Farm or Ranch Partnership Operations

Form 74-A33 was a four-page 8" x 14" folder with printing in black ink on white stock, and contained 13 sections. Section 1 asked whether the respondent operated a farm or ranch as a partnership in 1976. If not, the respondent was to skip to section 12, which asked whether the partnership had been in operation in 1975 and, if so, why it had been dissolved. (A number of report forms were returned with an indication in section 1 that the partnership had been dissolved, but with no additional data in section 12. Respondents who had done this were sent form letter 74-A38(L), which included the items in section 12 of the report form, and were asked to supply this additional information.) Section 13 asked for the identity of the person filling out the report and provided space for remarks.

Sections 2 through 8 requested data on the characteristics of the partnership and of the partners, such as whether the

partnership existed before becoming involved in agriculture, type of partnership arrangement, whether the partnership was limited, expected changes in the organization of the partnership, the number of partners and households associated, and characteristics of the partners (age, whether head of a household, percentage of working time devoted to the partnership, whether agriculture was the principal source of income, etc.). Section 9 requested data on the partnership's assets, operating expenses, and percentages of labor and management provided by the partners and hired from outside the partnership. Section 10 concerned agriculture- and nonagriculture-related business activities by the partnership as a whole or by individual partners, while section 11 asked whether the partnership had filed a partnership information return (IRS form 1065) for Federal income tax purposes.

Mailout and Followup

Mailing the report forms. Two sets of address labels were prepared, one to be affixed to the report form for mailing, the other to be sent to the control office for the processing operation. Each package contained a 74-A33 report form and a cover letter (form 74-A35(L)) explaining the need for the data, that this operation was a survey of selected respondents only so as to reduce overall response burden, and that title 13 of the United States Code provided that all the data supplied would be kept confidential.

On April 15, an initial mailing of approximately 12,000 packages was sent to selected partnership operations.

Followup mailings. By the end of the first week in May, responses had been received from about 48 percent of the sample. The first of three mail followups was made on May 11, when approximately 6,200 form 74-A36(L) letters were mailed to nonrespondents. The letter requested that the original report form be completed and returned to the Bureau of the Census as soon as possible, and reiterated the fact that strict confidentiality of the data would be maintained. A second mail followup was carried out on June 1, when 4,200 form 74-A37(L) letters were sent to nonrespondents. The final mail followup occurred on June 24, when 3,200 form 74-A39(L) letters were sent out. The A37(L) and A39(L) letters restated the request for prompt response made in the A36(L).

Telephone followup. An overall mail response rate of about 81 percent was achieved by the end of July, and the Bureau decided to try to obtain additional responses by telephone. In August, therefore, 1,362 nonresponse cases (about half the total nonrespondent universe within each State) were randomly selected for telephone followup. Telephone calls were made from the Bureau's Jeffersonville, Ind., office in August. About 1,200 nonrespondents were contacted and the clerks completed forms for those operations.

With the inclusion of the cases enumerated by telephone, a final response rate of about 91 percent was obtained.

Processing the Report Forms

Clerical processing. Processing for the survey of farm partnerships was carried out from April 1977 to March 1978. The procedures used were generally similar to those employed in the processing phase of the survey of farm production by contract. Report forms were batched for check-in and census file numbers for each case were keyed to magnetic tape for updating the address file before each mail followup. Correspondence received was referred to the correspondence unit which made any necessary replies. First-time PMR's were also referred to the correspondence unit, which remailed them. Second-time PMR's also went to the correspondence unit, which pulled the appropriate A1 census report form record to check the address used prior to remailing. Third-time PMR's were referred to the telephone unit, which drew a 50-percent random sample from the PMR file and attempted to contact addressees by telephone.

Once completed reports had been checked in, they were edited to assure uniform and accurate presentation of the data, and then sent for data keying and transmission to Suitland via the telephone datalink system.

Computer edit and tabulation. At Suitland, computer consistency checks and edits were made to the data to determine if the entries and sums were reasonable. Items failing the computer edit were displayed for inspection and correction by analysts. In cases where data items were missing that other information indicated should be present, the computer program imputed probable values and included them in the final tabulations. Once the computer edit was completed, the data were tabulated. Data estimates were provided for States, geographic regions, and the Nation as a whole. The necessarily limited size of the sample meant that county estimates were not possible.

Publication Program

The data from the survey of farm partnerships were published in the **1974 Census of Agriculture, Volume IV, Special Reports, Part 6, Partnerships in Agricultural Production.**

The Survey of Farm or Ranch Contracts or Binding Agreements

Preliminary Operations

Subject selection. The survey of contracts and binding agreements was initiated at the request, and with the cooperation, of the Economic Research Service (ERS) of the Department of Agriculture. ERS was to designate the types of contracts for which data were to be requested and initially submitted a list of about a dozen commodities generally produced under contract. Considerations of time and cost precluded a meaningful survey of all of these commodities; therefore, the Bureau requested that ERS reduce the list to seven or eight subjects.

Accordingly, the following eight subjects were chosen for the survey: Feeder and/or stocker cattle, fattened cattle, feeder pigs, slaughter hogs, broilers, chicken eggs, tomatoes, and potatoes.

Sample selection. The survey samples were selected by type of contract and geographic area from the 1974 census records. Prior to selection, listings of all contract operations within designated geographic areas were classified by type of contract. If a single operator was involved in several production contracts, a priority listing of contract types was used to select the type of report form the operator would receive. (The listing, in order of priority, was as follows: Processing tomatoes, potatoes, feeder pigs, slaughter hogs, fattened cattle, feeder and/or stocker cattle, chicken eggs, and broilers.) Once the contract universe had been created and classified by type, sampling from each classification was done, using "starts" and selection intervals that varied from contract type to contract type and from region to region. For example, in the processing tomatoes survey sample for the North Central States, selection began with the second case on the list, and continued with every fourth case thereafter. For the same survey in the Pacific States, however, selection began with the fourth case, and continued with every fourth one thereafter. The most frequent sample selection involved potato contracts in the Pacific States, where the "start" was at 2.8 (i.e., the third case on the list), and the interval was .3 (so that two out of three cases on the lists were ultimately selected). The least frequent sample selection was of broiler contracts in the South, where selection began with the 14th case and involved every 11th case thereafter. Sampling rates were determined by the necessity of obtaining valid data on contract operations by type at the national and regional levels.

Report Forms

Eight report forms (forms 74-A70 through 74-A77) were developed, which were essentially identical in format and content, with variations made only to adapt to the collection of specific data items. The kinds of data requested on contracts and binding agreements by each of the forms, however, were identical. The form numbers and the specific commodities under contract covered by each were as follows:

Form number	Commodity
A70	Feeder and/or stocker cattle
A71	Fattened cattle
A72	Feeder pigs
A73	Slaughter hogs
A74	Broilers
A75	Chicken eggs
A76	Tomatoes
A77	Potatoes

Each of the report forms was a four-page, 8" x 14" folder (folded to 8" x 3½" for mailing) with printing in black ink on white stock. The front page of the form was a letter from the Director of the Bureau of the Census explaining the need for the data requested and that the information supplied would be

subject to all of the confidentiality protection of other census data, and requesting prompt response. Section I of the form asked whether the respondent had any contracts or binding agreements to produce designated commodities in 1977; if not, the respondent was directed to skip to section X, which inquired about the reasons for the termination of the respondent's contracts and/or binding agreements. Section XI asked for the name and telephone number of the person completing the report.

The remaining sections of the form, sections II through IX, were concerned with data collection. Information was requested on the timing of the contract agreement (when the contract was agreed upon, when prices were determined, etc.), the terms of the contract (quantity, planting dates, types of crops or livestock involved, rate of delivery, etc.), who was to furnish certain production items (fertilizer, feed, labor, and so on), payment determination, the origin of the contract, provisions of the contract covering variations in the amount and/or quality of the commodity being produced, other contract characteristics (whether the contract was in writing, duration of the agreement, whether the agreement was with a cooperative, whether a negotiating organization was involved, and so on), the type of business organization used by the farm, and farm income. A facsimile of a contract survey report form is reproduced in appendix F.

Content Pretest

It was decided that a pretest of the contract survey report forms should be made to determine whether respondents would be able to supply the requested information. The pretest program for the 1978 Census of Agriculture was already underway in one county in each of nine States and it was decided to use the resources in place for this pretest. Accordingly, operations reporting production contracts in the 1974 census were identified in each county (two counties had no contract operations) and a sample of 66 cases was selected, plus 18 cases in Indiana (which was not among the pretest States) added to the sample at the request of the ERS. The sample consisted of at least two operations in each category of the survey. The aggregated statistical data from the responses were made available to ERS when the pretest was completed.

The report forms were mailed, together with a request that respondents hold the completed forms until a Bureau interviewer picked them up in the latter half of August 1977. The Bureau's field staff began visiting farms in late August, and by early September the contract survey pretest was considered to have been completed. Response was good and it was decided that no significant alterations in the report forms were required.

Mailout and Followup

Mailing the report forms and mail followup. The mail portion of the contract survey consisted of an initial mailout and two mail followups. The procedures for each of the mailings were essentially the same. In each case, two sets of adhesive address

labels were prepared, one set to be affixed to the report forms, the other to be sent to the processing control office. The mailing packages for the initial mailout and the first followup consisted of the appropriate report form, a mailout envelope (with the address label showing through the open window), and a return envelope. For the first followup, the report form was stamped "Second Request." The mailing packages for the second followup were the same as for previous mailings except that form letter 74-A78(L), requesting prompt response and restating that the data supplied would be protected by the confidentiality provisions of title 13, was included. The original and followup mailings, by type of report form, were as follows:

Form	Mailout (Sept. 26, 1977)	1st followup (Nov. 3, 1977)	2nd followup (Nov. 17, 1977)
Total	5,730	4,730	3,630
A70	380	280	280
A71	200	125	90
A72	350	275	190
A73	400	300	220
A74	1,800	1,600	1,200
A75	1,250	1,000	770
A76	600	500	330
A77	750	650	550

Telephone followup. Response to the contract survey was still below acceptable minimums at the end of November. Consequently, samples of nonrespondent cases from each survey were referred to a telephone followup operation. Non-respondents in each category were chosen on a random basis and in sufficient number that completion of their report forms would bring the total response rate in each category to 80 percent. The telephone unit in Jeffersonville, Ind., began making calls in early December. If the telephone interviewers could not find a telephone number for a nonrespondent, the address was deleted from the telephone followup list and a replacement was selected from the nonrespondent list for that category. (This was done, however, only for the first case in each series; if no telephone number could be found for the replacement case, no further selection was made.) The telephone followup continued into January 1978, by which time 624 additional responses had been added to the contract survey totals.

Processing the Report Forms

Receipt and check-in. Completed report forms were sorted by form number as they were received. Work units or batches, each of about 100 forms of a single type, were assembled as the report forms arrived and a form A402 (Check-In Keying Work Unit Cover Sheet) was attached. As each batch was completed, it was sent to the check-in keying unit where the census file number from each report was keyed to a magnetic computer tape that would be used to update the address file after the closeout of each phase of the mailing operation.

All correspondence, with or without report forms attached, and PMR's were referred to the correspondence unit for whatever action was necessary. First-time PMR's were checked to make certain the address labels were legible and complete. The mailout envelopes were then stamped "R-1" and the cases

were remailed. Second-time PMR's (identified by the "R-1" stamp on the envelope) were designated as out-of-scope cases upon receipt.

Screening and technical review. As the check-in keying of each batch was completed, the batch was referred to the clerical screening unit. Clerks checked each report form, editing the responses so that there would be a uniform presentation of data for the data keyers. Changes, made as required, included deletion of percent signs, rounding of decimals and fractions to the nearest whole numbers, changing numeric names to (numeric) digits, and so on. Reports presenting problems were referred to the technical review unit, which determined whether any additional followup action (either by correspondence or by telephone) should be taken. Once any problems associated with a particular report were resolved, the report was returned to the screening staff and recycled through the processing operation.

Report forms that passed the clerical screening again were collected, on a flow basis, into batches of about 100 reports of the same type each. A form A405 (Data Keying Work Unit Cover Sheet), showing the number and type of forms in each batch, was attached and the batches were placed in bins for forwarding to the data-keying staff. When the material was sent for keying, a form A403 (Transmittal Record), showing the number of batches and types of forms in the bin, was placed in each bin.

Data keying. As batches of report forms were brought to the data-keying unit, they were keyed to magnetic tape for transmission via telephone datalink to Suitland. (For details of standard data-keying methods and a description of the transmission system, see ch. 4.)

Computer edit and tabulation. When the data were received in Suitland, there were computer consistency checks to determine if all required entries had been made, if the relationships between entries were reasonable, and if the sums of the component parts were in agreement with the totals. Items failing the computer edit were displayed for inspection and correction by analysts. For items absent from a respondent's record that, according to other available information, should have been present, the computer program imputed values for those items.

Once the consistency check and edit were completed and all necessary corrections and/or imputations had been made, the data were tabulated. The size of the sample used for the survey necessarily precluded reliable tabulations by State or county. However, data estimates were provided on a regional and national basis.

Publication Program

The data for the eight commodities produced under contract surveyed by the Bureau were published in the reports of the **1974 Census of Agriculture as Volume IV, Special Reports, Part 7, Agricultural Production and Marketing Contracts.**