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Special Reports

Part 4

Procedural History

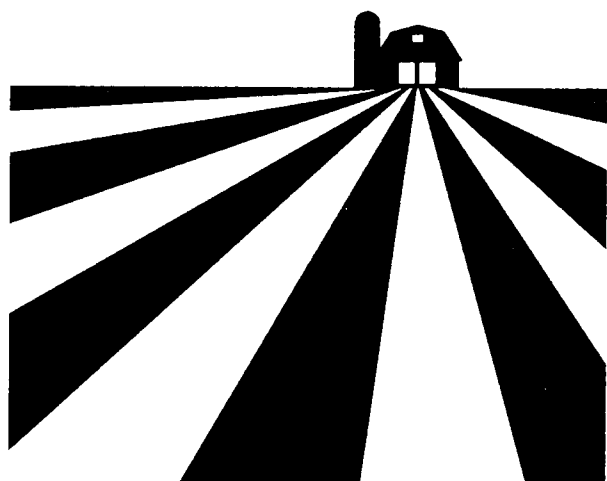
AC78-SR-4

1978 CENSUS OF AGRICULTURE

U.S. Department of Commerce
BUREAU OF THE CENSUS

1978 CENSUS OF AGRICULTURE

Volume 5
Special Reports



Part 4
Procedural History

AC78-SR-4

Issued September 1983



U.S. Department of Commerce

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Chapter 1.

Introduction

GENERAL INFORMATION

The 1978 Census of Agriculture was the 21st such enumeration in United States history. Agricultural censuses are normally carried out at 5-year intervals, but the intercensal period following the 1974 census was shortened to 4 years, and will again be 4 years after the 1978 enumeration, so that the reference years for the 22nd agricultural census and the other 1982 economic censuses will coincide.

The basic unit for which data are collected in the agriculture census is the individual farm (or, in the case of the census of agricultural services and various specialized data collection operations, the individual operating unit). Farm operators are asked to provide information on land in farms and land use, agricultural production and sales, inventories and sales of livestock and poultry, use of fertilizers and chemicals, ownership of machinery and equipment, selected operating expenses, business organization of the farm, and so on.

USES OF AGRICULTURE CENSUS DATA

Data from the census of agriculture are valuable not only to farm operators, but also to the entire agribusiness sector of our economy. Census data, as well as current sample estimates derived from or based on census benchmark data, are widely used for planning purposes by manufacturers servicing agricultural operations, and by businesses involved in the transportation, processing, or distribution of agricultural products to the consumer. While some of the same kinds of information are collected by other Federal agencies in periodic or occasional sample surveys, data from the census are the only statistics on agriculture that are comparable, county by county and State by State, on a nationwide basis, and classifying farms by size, tenure, type of organization, market value of farm products sold, and type of farm enterprise.

The census data are used by administrators and legislative bodies at all levels of government in developing farm and rural programs and in analyzing the results of such programs. The census provides a county-level data base for decisionmaking by public and private organizations; comprises a body of benchmark figures used in adjusting the various statistical series maintained by the U.S. Department of Agriculture; and establishes a framework for research projects conducted by universities, government agencies, farm organizations, agricultural

management organizations, and others. The data permit analysis of changes in many facets of agriculture (changing technology, increased mechanization, capital structure, etc.) as well as within the agricultural economy as a whole. Thus the accuracy and completeness of each agriculture census is important, both to the individual farmer who provides the information needed, and to a wide variety of other data users who must rely on these statistics for a clear view of an essential part of the American economy.

In the past, few farm operators have knowingly made direct use of the agriculture census data—their benefits have accrued from the publication of these statistics by intermediate sources, and from the use of the information by private entrepreneurs and government planners. In an effort to increase awareness of the value of census data, an item was included on the 1978 Census of Agriculture report form inviting respondents to ask for the major census results for their county. Those requesting one were sent a two-page summary of these statistics as soon as the preliminary results for their county were available. The summary enabled each operator to compare his or her individual agricultural activities with county totals and averages.

LEGAL AUTHORITY

The census of agriculture is taken under the provisions of title 13, U.S. Code, Census, which governs the operations of the Bureau, an agency of the U.S. Department of Commerce. Chapter 1 (Administration) of that title is concerned with administrative operations and sets forth procedures regarding the collection and treatment of data, the qualifications and duties of employees and supervisors, authorization of appropriations, etc. Most particularly, regarding the actual conduct of censuses, section 5 provides that "The Secretary [of Commerce] shall prepare schedules, and shall determine the inquiries, and the number, form, and subdivisions thereof, for the statistics, surveys, and censuses provided for in this title." Section 9(a) protects the confidentiality of the data by prohibiting (1) use of the information for any except the statistical purposes for which it is supplied, (2) publication of any data that could identify any particular individual or establishment, and (3) access to census reports by anyone except sworn Commerce Department officials and employees.

Chapter 5 (Censuses), section 142, of title 13 directs the Secretary of Commerce to conduct a census of agriculture

"... in 1979, in 1983, and in every fifth year beginning after 1983..." to take a census of irrigation and drainage in conjunction with the census of agriculture"... in 1979, in 1988, and every tenth year beginning after 1988..." and that the data collected in each census shall relate to the immediately preceding year. Section 191 of this chapter requires the inclusion in these censuses of each State, the District of Columbia, the Virgin Islands, Guam, the Commonwealth of the Northern Mariana Islands, and the Commonwealth of Puerto Rico, "... and, as may be determined by the Secretary with the concurrence of the Secretary of State, such other possessions and areas over which the United States exercises jurisdiction, control, or sovereignty." This latter section also prescribes the manner in which censuses may be taken of territories or areas outside the 50 States. The enumerations in Puerto Rico are conducted in accordance with special agreements made before each census with the Government of the Commonwealth. In the other outlying areas, the census data may be collected by the Governor or highest ranking Federal official, in accordance with plans approved by the Secretary of Commerce. Section 195 authorizes the Bureau to cover census topics by sampling, where appropriate.

Sections 221 and 224 of Chapter 7 (Offenses and Penalties) require respondents to supply the information requested (on penalty of a fine of \$100 for individuals or \$500 for companies, businesses, religious bodies, and other organizations), while section 214 of the same chapter prescribes the penalties (a fine of not more than \$5,000, or imprisonment for up to 5 years, or both) incurred by any employee or staff member who publishes or communicates census information, the disclosure of which is prohibited, to any but sworn Commerce employees or officers.

LEGISLATION AFFECTING 1978 CENSUS OF AGRICULTURE

The conduct of a census of agriculture for the year 1978 instead of 1979 was the result of special legislation. The great technological changes in American agricultural production, distribution, and processing and marketing practices since the end of World War II have shifted much of the process of agricultural activity between the producer and the consumer from the farm to off-farm establishments. Thus, any attempt to obtain a picture of the agricultural sector of the economy must include data from both farm and nonfarm sources. It was recognized that a more accurate "snapshot" of the Nation's economy could be provided if the economic censuses and the agriculture census data were for the same reference period (census year). Accordingly, in 1972, the Bureau suggested that the 1974 Census of Agriculture be postponed, and that the next enumeration be conducted for 1977, in conjunction with the economic censuses for that year. This proposal generated considerable opposition among agricultural data users and, after about 15 months' delay in planning, the plan to postpone the census was scrapped.

The idea of obtaining data for all the agriculture and economic censuses for the same reference period was still considered a legitimate goal, and in June 1975, a bill, H.R. 7824, was introduced in Congress to alter title 13 by having

section 142, paragraph (a) read "The Secretary shall in 1979, in 1983, and every fifth year beginning after 1983, take a census of agriculture [covering the preceding calendar year]." This wording meant that (1) the next two intercensal periods would be only 4 years long, before the 5-year cycle was resumed; (2) the agriculture census for 1982, and any following, could be taken in conjunction with the economic censuses; and (3) there would be no break in the cycle of available agriculture census data sets, as would have been the case if a census had been postponed or cancelled. After hearings in September 1975, H.R. 7824 was approved and signed into law in March 1976 as Public Law 94-229.

In October 1976, a somewhat more extensive modification of title 13 was undertaken when H.R. 11337 was signed and became Public Law 94-521, sometimes known as the Mid-Decade Census Law since its major provisions concerned the establishment of mid-decade censuses of population and housing. Besides directing the taking of these new censuses, the act made a number of other alterations to various sections of the title, two of which had direct effects on the census of agriculture: Section 191, paragraph (b) was changed to specifically include the Commonwealth of the Northern Mariana Islands (as distinct from the Trust Territory of the Pacific Islands); while sections 221, 224, 225, and 241 were reworded to remove the threat of jail penalties for persons refusing to answer census inquiries. (The proviso of fines for nonresponse was retained, as well as the punishment for false information and wrongful disclosure.)

A number of bills considered by Congress during the intercensal period preceding the 1978 enumeration did not become law but had substantial effect on the Bureau's plans and actions, in that they demonstrated the degree of public interest in certain areas of census operations. This was perhaps most apparent in the area of the reduction of respondent burden, where a number of bills, notably H.R. 14830 (submitted July 1976) and H.R. 7012 (May 1977), called for substantial reductions in respondent burden in the agricultural enumeration (50 and 40 percent, respectively, although no base against which these reductions were to be measured was identified). The Bureau opposed both proposals on the grounds that the reduction of respondent burden by some arbitrary figure would undermine the validity and utility of the data, but the bills served to reinforce the Bureau's own determination to reduce respondent burden to the greatest degree possible. In a like manner, H.R. 7411, intended to amend title 13 to provide for the collection and publication of data on foreign ownership of property (including farmland) in the United States, did not become law, but congressional interest in these data encouraged the Bureau to include an item on both its sample and nonsample report forms asking if any land operated by the respondent was held under foreign ownership at any time during the census year.

SCOPE AND REFERENCE DATES

General Information

The 1978 Census of Agriculture program can be divided into two parts: the census of agriculture proper, which has come to

mean the enumeration of farms; and the various enumerations or surveys of specific parts of the agricultural economy, such as the census of agricultural services or the survey of farm finance. The agriculture census program, as a whole, included the following censuses and surveys:

1978 Census of Agriculture	1979 Farm Finance Survey
1978 Census of Agricultural Services	1979 Farm and Ranch Irrigation Survey
1978 Census of Irrigation	
1978 Census of Drainage	1979 Farm Energy Survey
1979 Census of Horticultural Specialties	

Scope of 1978 Censuses

The census of agriculture traditionally is taken on an operating-unit basis, the operating unit generally being the farm. The 1978 census involved the enumeration of all farms active in agricultural production during the census year in the 50 States, Puerto Rico, Guam, and the Virgin Islands. Censuses of agriculture in American Samoa and the Commonwealth of the Northern Mariana Islands were carried out as adjuncts to the 1980 Census of Population and Housing, but the agricultural data collected were published as part of the 1978 Census of Agriculture publication program. Data were collected on—

Acreage	Foreign ownership of farmland in 1978
Crops	
Fruit and nut production	Use of fertilizers, pesticides, and other chemicals
Vegetables	
Nursery and greenhouse products	Selected production expenditures
Value of sales	
Land use	Expenditures for energy
Irrigation	Machinery and equipment
Type of organization	Market value of land and buildings
Livestock and poultry	
Animal specialties	
Characteristics and occupation of operator	

The census of agricultural services is taken to provide statistics on the rapidly growing investment in capital and labor input to agricultural production that is shifting from the farm to off-farm entrepreneurs. For individuals and establishments engaged in agricultural services as defined by the 1972 *Standard Industrial Classification (SIC) Manual*, the 1978 census collected data on—

Gross receipts	Changes in value of depreciable assets
Payroll and number of employees	
Supplemental labor costs	Expenditures for energy
Capital expenditures	

The decennial census of irrigation collects data primarily from organizations supplying water to farms and ranches, although a limited amount of irrigation information is obtained from farm operators on the agriculture census form. The 1978 Census of Irrigation used two data collection forms (for single-basin and multi-basin organizations) and collected data on—

Type of organization	New capital investment, and indebtedness
Source of water	
Water users and acres served	Cost of operation and maintenance
Irrigation facilities (diversion dams, wells, canals, etc.)	Irrigation revenue
Irrigation water storage reservoirs	Diversion and delivery points
Measurement of water	

In 1978, a limited amount of data were collected from drainage districts in the 1977 Census of Governments, and these were substituted for drainage project data as previously collected. The 1978 Census of Drainage proper compiled data on—

Number of drainage districts	Full-time and part-time employees
Revenues received and expenditures	
Long-term indebtedness	

The recent diminution of new drainage projects has resulted in a decline in the need for drainage project statistics, and during the review and rejustification of subject matter that accompanied the development of plans for the 1978 census, the Bureau was unable to find any substantial interest in agricultural drainage project statistics by data users except on the part of the Soil Conservation Service (SCS), U.S. Department of Agriculture. Because of their participation in the planning and engineering of drainage works both public and private, the county and State SCS offices had sufficient drainage records and other information to meet the limited data needs.

For the 1978 Census of Drainage, it was decided to utilize SCS drainage records as the principal source of statistics in developing county and State estimates on the acreage of agricultural land benefited by artificial drainage.

The 1979 horticulture census was taken in cooperation with the U.S. Department of Agriculture in those States where USDA conducted its annual floriculture survey. The USDA collected data for all the establishments on its own mailing list and, after aggregating the floriculture data, released the individual report forms to the Bureau's Agriculture Division. Data for establishments on the Census list but not on the USDA list were collected by the Bureau under the mandatory provisions of title 13, United States Code, and thus were not shared with USDA. In the 1979 Census of Horticultural Specialties data were collected on—

Greenhouse products	Equipment
Nursery products	Irrigation
Mushrooms	Sales and purchases
Sod	Expenses
Land used	Labor
Structures	

Scope of 1978 Program Sample Surveys

Follow-on sample surveys to obtain more detailed information than is feasible to collect from all farm operators in the census have been conducted since before the turn of the century. For the 1978 census, surveys of farm finance, on-farm irrigation, and energy use on farms were part of the program. The 1979 Farm Finance Survey collected data on—

Land ownership	Income and expenses from farm-related sources
Value of land and buildings	Taxes
Rent information	Assets
Purchases, expenditures, and credit used	Off-farm income and off-farm work
Debts as of December 31, 1979	Landlord characteristics
Value of farm products sold	
Production contracts	

The 1979 Farm and Ranch Irrigation Survey was taken to supply up-to-date statistical measures relating to irrigation water

use on the Nation's farms and ranches. Data were collected on—

Land in farms	Selected irrigation facilities
Land use	Capital expenditures, maintenance and repair costs
Irrigated and nonirrigated crop yields	Energy use for irrigation
Method of irrigation	Irrigation used for secondary purposes
Quantity of water used	

The 1979 Farm Energy Survey was taken in response to the demand for specific energy information, basic to energy planning, such as for possible priority allocation, stimulation of the development and use of alternate energy sources, seasonal needs, etc. The 1979 Farm Energy Survey collected data on—

Acres operated, by ownership	Inventory, size, and use of wheel tractors, motor trucks, combines, automobiles, and other self-propelled equipment
Livestock and crops and value of sales	Irrigation pumps
Energy expenditures and usage	Electric motors over 1 horsepower
Inventories and capacity of on-farm storage	Crop drying or curing facilities
Type of delivery service	Nonresidential farm buildings heated or cooled
Customwork by others	
Customwork for others	

Reference Dates

The reference dates for the 1978 Census of Agriculture (i.e., the period(s) for which data were requested) varied, depending upon the area involved and the information requested. For the 50 States, inventory data were obtained as of December 31, 1978, and all other data (except for a few crops, such as citrus, for which data were collected for the production year) were requested for calendar year 1978. In Puerto Rico, inventory data were collected as of July 1, 1978, while production information was requested for the 12-month period from July 1, 1977 to June 30, 1978. In the outlying areas, production data for Guam were collected for the calendar year 1977 and inventory data as of the date of enumeration (April 15-May 31, 1978); while in the Virgin Islands, production data were requested for the 12 months preceding the enumeration and inventory items as of the date of enumeration (June 28-July 31, 1978). In American Samoa and the Northern Mariana Islands, the census was carried out in 1980, concurrently with the population and housing census, and all data were requested for calendar year 1979.

DEFINITION OF A FARM

A definition of a farm for census purposes was first established for the 1850 enumeration. The definition has been altered a number of times since, but the essential features of every one used have been that (1) the land involved be operated under the day-to-day control of one person or management (partnership, corporation, etc.), and (2) that the land be used for or connected with agricultural operations. Thus, the enumeration and farm count have been on an operating-unit rather than on a land-ownership basis. Further, the tracts of land operated as a single farm did not have to be contiguous.

The key, of course, has been whether or not the land was involved in agricultural operations, which naturally requires a definition (again, for census purposes) of what constitutes

“agricultural operations.” Briefly, these include the production of livestock, poultry, and animal specialties and their products, and the production of crops, including fruits, greenhouse, and nursery products. Farms may vary in size from hobby operations barely meeting the minimum definition criteria to diversified businesses including thousands of acres of cropland, extensive orchards, livestock range operations, feedlots, and dairy and poultry operations.

The farm definition used in the censuses of 1850 and 1860 had no acreage requirement, but set a lower limit of \$100 in value of agricultural products. Since that time, acreage and dollar value of production limits have been added to the definition, changed, or removed. In the censuses of 1900-1920 no minimum acreages or values of production were set, provided the operation involved the continuous services of at least one person. Usually, however, the census has required that a farm have a minimum acreage (though the acres need not all be under cultivation) varying from 3 to 10, and a minimum total value of production sold (TVP), varying from \$100 to \$500.

The definition used for the 1959 through 1969 censuses counted as a farm any place that (1) contained 10 acres or more and had, or would normally have, sales of \$50, or (2) had less than 10 acres, but had, or would normally have, sales of \$250 or more. If values of sales were not reported or were obviously incorrect, average prices were applied to crops, livestock, and livestock products in order to estimate sales.

The longer a definition goes unchanged, the more necessary data users perceive a change in the minimum criteria for including an agricultural operation in the census total to be. During the planning of both the 1969 and 1974 censuses, the Bureau became aware of increasing sentiment among data users that some change in the farm definition was necessary. Although the census law (title 13, United States Code) leaves the definition of a farm for census purposes to the discretion of the Secretary of Commerce, it was the Bureau's position that, as a neutral data-collection agency (i.e., without responsibility for the administration of any agricultural program), it should follow the lead of the data-user community, but that in the event of a change in definition, data would be collected and published to show the effect of the change. Thus, data collection and processing plans for the 1974 census were made in terms of the existing (1959) definition. Tabulation programs, however, were constructed to permit tabulation by either the 1959 definition or a new one.

On August 12, 1975, the Departments of Agriculture and Commerce, with the concurrence of the Office of Management and Budget, announced a change in the official definition of a “farm.” The traditional operating-unit concept was retained, but the minimum value of sales was increased and the acreage criteria were eliminated. The official census definition of a farm became “all land on which agricultural operations were conducted at any time during the census year under the day-to-day control of an individual management and from which \$1,000 or more of agricultural products were sold, or normally would have been sold, during the census year.” The Department of Commerce announcement stated that the 1974 census publications would show some data for both the old and the new definitions.

Considerable opposition to the use of the new definition was expressed by some members of Congress, and Public Law 94-229 (signed March 15, 1976) included a provision (section 2) requiring that any data published from the 1974 Census of Agriculture prior to July 1, 1976, be in accordance with the 1959-1969 definition. The Departments of Agriculture and Commerce and many other interested parties considered the original decision to change the farm definition justified in view of the significant rise in price levels and other changes in the structure of agricultural operations. However, since the publication of the county preliminary reports, issued during the period April through December 1976, began while section 2 of Public Law 94-229 was in effect, it was decided that the entire series of county preliminary reports should be tabulated and published under the 1959 definition.

The enacted prohibition expired without renewal, and in December 1976, the Secretary of Commerce directed the use of the "new" farm definition for the remaining 1974 census publications and in future censuses. Thus, all reports except the preliminary reports were published on the basis of the "new" definition. The farm definition for the 1978 Census of Agriculture encompasses any agricultural operation having \$1,000 or more in actual, or potential, sales of agricultural products in 1978.

ORGANIZATION OF BUREAU OF THE CENSUS

During most of the 1978 Census of Agriculture, the Bureau of the Census was organized under a Director, a Deputy Director, and five Associate Directors responsible for demographic fields, economic fields, administration and field operations, statistical standards and methodology, and electronic data processing. (Administration and field operations were placed under separate Associate Directors in July 1979, raising the number of Associate Directors to six.) Five Assistant Directors had oversight of demographic censuses, economic and agriculture censuses, administration, field operations, and electronic data-processing (EDP) operations.

Aside from the Director's staff, the Bureau consisted of several kinds of functional divisions: (1) subject matter (agriculture, population, business, etc.), (2) data collection and processing, (3) statistical services (including mapping and geographic presentation of data), and (4) administrative services

(personnel, finance, etc.). In addition, the Public Information Office was responsible for publicizing the Bureau's censuses and surveys; the Data User Services Division had the principal task of servicing data users' needs and included the Census History Staff, which prepared this procedural history (subject to the review and approval of the Chief, Agriculture Division).

The 1978 Census of Agriculture was conducted by the Agriculture Division under the general supervision of the Associate Director for Economic Fields and the Assistant Director for Economic and Agriculture Censuses. Other divisions and offices participated in the census operation or in the processing and publication phase of the program, most notably the Field Division (which operated the Bureau's regional offices and trained and supervised the field interview staffs), the Data Preparation Division (which handled mailing, much of the telephone followup operation, and receipt, check-in, and clerical processing of the census report forms), and the various divisions concerned with data processing and publication services. A list of the key personnel and divisions that took part in the 1978 Census of Agriculture is presented in appendix B.

EXPENDITURES

The planning and conduct of the 1978 Census of Agriculture extended over a period of several years. The initial planning was begun in 1976, before work on the 1974 enumeration was completed, and the first funds specifically earmarked for the 1978 census operation were for fiscal year (FY) 1976. Extensive preparation of the mailing list, expansion of the census program to include censuses of irrigation and horticultural specialties, an enumerative area sample in each of the contiguous 48 States to improve coverage in the census, the addition of several follow-on sample surveys, and inflation all contributed to increase the total cost of the 1978 census as compared to previous censuses. Total expenditures for the 1978 Census of Agriculture were \$50,497,000. Expenditures for each fiscal year were as follows:

Fiscal year	Expenditures
Total	\$50,497,000
1976	84,000
1977	2,563,000
1978	11,601,000
1979	21,480,000
1980	9,118,000
1981	5,651,000

Planning and Preliminary Operations

PRELIMINARY PLANNING

Initial Considerations

The Bureau of the Census is one of the principal statistical agencies of the Federal Government and, as such, has the responsibility for providing data for Congress, other agencies of the Federal Government, various State agencies, and the general public. These data are used in setting Government policy, in academic research, and in business; they must be both timely and reliable, and must be collected and tabulated as economically as possible while imposing minimum burden on respondents. The planning of any census necessarily involves balancing respondent burden and data needs, timeliness of publication and detail of tabulation, data availability and cost, and so on, and the task is further complicated by the Bureau's concern, and legal obligation, to maintain respondents' privacy and the confidentiality of data relating to them. In the census of agriculture the Bureau asks farmers and operators of certain agriculture-oriented businesses for information they would not normally provide to anyone, with the possible exception of the Internal Revenue Service in tax matters. In order to collect complete and reliable data, respondents must be assured that their responses will be held in the strictest confidence, and that the Bureau's published tabulations will contain no information that could be used to identify a specific operation or operator.

Advance Planning

The 1974 census suffered in some instances from the necessarily *ad hoc* nature of its planning because of uncertainty and suspension of work while a proposal to delay the enumeration until 1978 (so it could be concurrent with the economic censuses) was debated and ultimately rejected. (See page 2.) The resultant lack of time for some phases of the planning and testing program was keenly felt, and revealed itself in the quality of some of the results. While the intercensal period following the 1974 operation was shortened from 5 years to 4, the problems encountered in the 1974 census were alleviated with respect to the 1978 operation. This was largely because the advance knowledge of the shortened period enabled the Bureau to compensate for it in its planning development, and there was no lost motion as a result of having to close down and then restart planning and preparatory activities. There

would be a similar "short" interval between the 1978 and 1982 censuses, so that the agriculture and economic censuses could be carried out simultaneously for 1982.

The Bureau established a 1978 Census Planning Staff in early 1976, while many of the Agriculture Division personnel were still heavily involved in completing the 1974 census, to begin planning and testing for the 1978 program. Two major points received special emphasis in this stage of the program: (1) lowering respondent burden by reducing the content of the report forms and increasing the use of sampling for certain data, and (2) increasing coverage by improving the mailing list and establishing a program to obtain data for places not normally included in mail lists which would be missed by a mailout/mailback census.

Planning also had to consider the fact that the 1978 agricultural census would include censuses of irrigation, drainage, and horticultural specialties, as well as the usual enumerations of agricultural production and agricultural services, plus a series of three follow-on surveys in 1979.

Reduction of respondent burden was of crucial importance because of the considerable volume of complaints and the respondent resistance encountered in the 1974 census. Every effort was made to reduce the number of items on the report forms and to design the forms so as to impose the minimum response burden, while still collecting the required data. It was determined that selected county-level data could be collected from a sample of about 20 percent of farm operators. For data required only at the State or national level, smaller samples would suffice, and a series of follow-on surveys, using samples of agricultural operations selected from the 1978 census in-scope respondent lists, were designed to obtain these data.

With regard to coverage improvement, studies of the 1974 census indicated that 10.7 percent of all farms were not enumerated in the census. Farms missed in the census were usually small and accounted for less than 3 percent of the total value of agricultural products sold and for less than 6 percent of the land in farms. However, for farm programs and legislative use, the total farm count is very important, and the coverage, in terms of number of farms, had to be improved. Therefore, significant changes were made to the data collection procedures, including an attempt to compile a complete mail list and the use of a direct-enumeration area sample to supplement the mail list. A Farm and Ranch Identification Survey was conducted the year before the census to determine the status of addresses on

selected lists and to identify successor operators and new tenants. The area sample survey provided U.S., regional, and State-level estimates of the number and statistical characteristics of farms not on the mail list (i.e., those "missed" in the compilation effort through their absence from any source list). These two surveys are described on pages 20-25 and 38-41.

DETERMINATION OF CONTENT

The overall responsibility for determining the questions to be included on the census report forms is vested in the Secretary of Commerce, who normally delegates this authority to the Director of the Bureau of the Census. The actual content and design work was done by the Bureau's Agriculture Division, with the assistance of the Forms Design Branch of the Administrative Services Division, and with the advice and counsel of the Bureau's advisory committee on agricultural statistics, other government agencies, and other interested persons and organizations.

In setting the content of the report forms for any census, the Bureau must decide, within the authority granted by Congress, whether items meet high-priority needs, and whether each inquiry can be answered with reasonable accuracy by respondents. Further, there are limits to both the number and kind of questions that the Bureau can readily expect farmers to answer. While response is required by statute, the Bureau does not usually employ the coercive powers of the law to try to obtain it. This would be unproductive and would have unfortunate consequences in terms of the public's perceptions of the Bureau of the Census. For all of these reasons, the Bureau makes every effort to restrict to the absolute minimum necessary the number, complexity, and sensitivity of the questions asked on the census report form.

Selection of the inquiries for 1978 began with consideration of the report forms used in the 1974 enumeration. The Bureau's objective was to eliminate all items that were not of the highest priority for the 1978 enumeration. Accordingly, many items included in the 1974 forms were omitted or simplified for the 1978 census. Several new questions were added, principally to the sample version of the report form and the general design of both the sample and nonsample forms was refined as a result of the content protests of July 1977 and January 1978. (See pages 9-13.)

CONSULTATION ON 1978 CENSUS PROGRAM

General Information

The Bureau of the Census is a statistical agency, and a normal part of its program for the planning of each of its various censuses and surveys is consultation with data users as to the kind and level of detail of data that are necessary. Regular contact with data users is maintained through a number of census advisory committees, each composed of representative individuals or organizations from a particular sector of the data-user community. The Census Advisory Committee on Agricultural Statistics is the principal focus of interest for those

involved with the agricultural economy, and was an integral part of the planning process of the 1978 census. Various other user groups, from both inside and outside the Federal Government, were also consulted in determining the content for 1978.

The cooperation of data suppliers is imperative if accurate and timely statistics are to be produced from any census or survey, hence the second part of the Bureau's consultation program involved a series of meetings with farmers to obtain opinions and advice on the design of the census report forms and the data-collection methodologies to be used.

These efforts to consult with, and obtain the cooperation of, both data users and data suppliers, are described briefly below.

Census Advisory Committee on Agriculture Statistics

This Committee was chartered as a permanent advisory body to the Bureau of the Census in 1962; prior to that an agricultural advisory committee had been organized before each agriculture census and disbanded as soon as the data were published. During the 1978 census period (from mid-1976 to the end of 1981) the Committee met in December 1976; in May and October of 1977, 1978, and 1979; in April and October of 1980; and in October 1981. The Committee heard the Bureau's plans for the collection, processing, and publication of the census data, and offered its advice regarding priorities of data items to be requested, data-collection methodologies, the ability of farm operators and others to provide the data requested, and the tabulations to be made and published. The Committee was composed of representatives of the following organizations:

- Agricultural Publishers Association
- American Agricultural Economics Association
- American Farm Bureau Federation
- American Farm Bureau Women's Committee
- American Feed Manufacturers Association
- American Meat Institute
- Conference of Consumer Organizations
- Farm and Industrial Equipment Institute
- Federal Statistics Users' Conference
- Irrigation Association (from 1978)
- National Agricultural Chemicals Association
- National Agri-Marketing Association
- National Association of State Departments of Agriculture
- National Association of State Universities and Land-Grant Colleges
- National Council of Farmer Cooperatives
- National Farmers Organization
- National Farmers Union
- National Food Processors Association (until 1978, the National Cannery Association)
- National Grange
- Rural Sociological Society
- U.S. Department of Agriculture
 - Economics, Statistics, and Cooperatives Service (ESCS)

For a list of the individuals who served on this Committee during the census period see appendix C. The meetings of the

Committee were open to the public and representatives of Statistics Canada, the U.S. Office of Management and Budget, U.S. Department of Agriculture (USDA), the Bureau of Economic Analysis, and other private and government agencies, often attended as observers. Attendees from other agencies and members of the public were given an opportunity to comment on the Bureau's plans and programs during periods reserved at each meeting for public questions and discussion.

Interagency Consultation

The Federal Government is the single largest user of the statistical data produced from the agricultural census. The primary mechanism used by the Bureau for governmentwide consultation with data users during the planning phase of the 1978 census was the Interagency Committee for Planning the 1978 Census of Agriculture, which included representatives from the following agencies:

- U.S. Department of Agriculture
 - Statistical Reporting Service (later part of ESCS)
- U.S. Department of Commerce
 - Bureau of Economic Analysis
- Commodity Futures Trading Commission
- U.S. Department of Defense
 - Civil Defense Preparedness Agency
- Environmental Protection Agency
- Federal Energy Administration
- Federal Reserve System
- General Services Administration
 - Federal Supply Service
- U.S. Department of Housing and Urban Development
 - Division of Housing and Community Analysis
- U.S. Department of Interior
 - Bureau of Indian Affairs
 - Office of Territorial Affairs
 - Water Resources Planning Coordinator
 - Office of Environment and Planning Coordination
 - Bureau of Reclamation
- U.S. Department of Labor
 - Bureau of Labor Statistics
 - Occupational Safety and Health Administration
- Office of Management and Budget
- Small Business Administration
- U.S. Department of Transportation
 - Transportation Information Policy Division
- U.S. Department of the Treasury
 - Internal Revenue Service
 - Office of International Affairs

This Committee had only one formal meeting, in December 1976, after which its business was conducted largely through meetings among individual members and correspondence. The Bureau asked agencies represented on the Committee to submit their data requests not later than January 24 and February 24, 1977 for county-level and State-level items, respectively. The requests, and the agencies' justifications for them, were used in

the development of the 1978 report forms and the tabulation and publication programs.

The USDA is the largest user of census of agriculture data within the Government, and since its programs require continuous close contact with all parts of the agricultural economy, the Department was able to provide a great deal of help to the Bureau in the preparation of the census mailing list (by supplying source lists), publicizing the enumeration, assisting respondents in completing the report forms, and so on. In 1976, the USDA created its own in-house committee to coordinate its recommendations for census content and its requests for tables in the census publications, computer data tapes, and special tabulations. The following agencies within the Department were represented on this committee:

- Agricultural Marketing Service
- Agricultural Research Service
- Agricultural Stabilization and Conservation Service
- Animal and Plant Health Inspection Service
- Cooperative State Research Service
- Economic Research Service (later part of ESCS)
- Extension Service
- Farmer Cooperative Service
- Farmers Home Administration
- Federal Crop Insurance Corporation
- Food and Nutrition Service
- Foreign Agricultural Service
- Forest Service
- National Agricultural Library
- Packers and Stockyards Administration
- Rural Development Service
- Rural Electrification Administration
- Soil Conservation Service
- Statistical Clearance Officer

Ad Hoc Conference on Report Form Content

As part of its effort to improve response rates and reduce respondent burden in the 1978 census, the Bureau held a conference with data users and farmer representatives in September 1976 to consider the content of the 1978 report forms. Some 42 associations, companies, and other groups were invited to send representatives to a meeting at the Bureau's Suitland headquarters to discuss data needs and make recommendations on report form content and format and on enumeration techniques to be used. Participating organizations were as follows:

- Agway Incorporated
- American Association of Nurserymen
- American Cyanamid Company
- American Farm Bureau Federation
- American Meat Institute
- Atchison, Topeka, and Santa Fe Railroad
- Conference of Consumer Organizations
- Data Resources, Inc.
- Farm Progress Publications

International Harvester Company
 Michigan State University
 Department of Agriculture
 National Association of State Departments of
 Agriculture
 National Canners Association (later the National
 Food Processors Association)
 National Council of Farm Cooperatives
 National Farmers Organization
 National Grange
 Northrup, King and Company
 Ohio Grain, Feed and Fertilizer Association, Inc.
 Oregon State University
 Department of Agricultural Economics
 Ralston Purina Company
 Rocky Mountain Farmers Union
 Sheep Industry Development Program
 U.S. Department of Agriculture
 Economic Research Service and Statistical
 Reporting Service (later combined in ESCS)
 University of Central Arkansas
 Department of Sociology
 University of Florida
 Department of Food and Resource Economics
 Upjohn Company
 Wisconsin Farmers Union

The principal areas of discussion at the conference were (1) the proposed use of a screening form (in the Farm and Ranch Identification Survey) prior to the census mailing, (2) the possible uses of sampling in the census itself, and (3) data needs, particularly at the county level. At the end of the conference the general conclusions researched by the participants were that (1) there was neither strong support for, nor strong opposition to, the proposed screening operation; (2) the report form to be used to collect the 100-percent data items for county-level data should request an absolute minimum of information, and should expressly exclude expenditure and energy items and other data that could be obtained on a sample basis; and (3) any additional data desired for State and/or national statistics should be collected in a sample of the census universe or in follow-on surveys.

Meetings With Farmers

One of the principal problems with the 1974 enumeration was the reluctance of some farmers to respond to the census. Evaluation of the census revealed that this resistance was due to a number of factors, including the length and complexity of the report forms, a general suspicion on the part of farmers that the data collected would be "used against them" by regulatory agencies or agribusiness firms, and an overall distrust of Government.

While development of a shorter, simplified report form could do much to reduce respondent burden and improve the farmers' ability to supply the data requested, the distrust expressed of the census and the Government presented a more difficult

problem. In an attempt to correct, or at least lessen the severity, of this situation, the Bureau instituted a series of public meetings throughout the country between members of its staff (usually the Associate Director for Economic Fields and representatives of the Agriculture Division) and groups of farmers. More than 40 such meetings were held between July 1976 and December 1978, generally with the sponsorship of the local Member of Congress or Senator, or an agricultural organization. These local meetings gave Bureau personnel an opportunity to talk with farmers about the need for census data and the protection given to the individual records collected in any census operation. More importantly, perhaps, these meetings gave farmers a chance to meet some of the Bureau's staff and to voice their comments and complaints regarding the Government in general and the census in particular. It was felt that the personal contact between the Bureau and farmers, while it could not and did not completely solve the problem of deliberate nonresponse, did a great deal to improve relations.

JULY 1977 CONTENT TEST

Preparation

Background information—Preparation for the 1978 Census of Agriculture included the design and testing of a new version of the data-collection form A1. A two-phase test program was planned, with the first phase, involving the evaluation of five variations of the basic A1 design, to be carried out in mid-1977. This test was intended to determine:

1. If there would be significant differences in the response rates among five different report form formats.
2. Whether the type of mailout envelope used would influence response rates.
3. The quality of data reported for new items not included in earlier censuses, and to measure the respondent burden created by these items.
4. Overall response rates compared to the 1974 census.
5. Reasons for nonresponse, and to obtain suggestions from respondents for improving the report form design.

Sample design—The general plan called for test versions of the report form to be mailed to a sample of farms drawn from the 1974 census list of in-scope cases with sales of less than \$500,000. Some 5,800 addresses were selected by a random sampling of the 1974 national lists, stratified by 1974 standard industrial classification (SIC) code (type of farm), and total value of sales. A further sample of 2,900 addresses was selected, in ZIP-code clusters, for the following counties: Allegan, Mich., Canyon, Idaho, Chautauqua, N.Y., Doña Ana, N. Mex., Fresno, Calif., Sampson, N.C., Smith, Miss., Winnebago, Ill., and Worth, Ga. The "national" sample was to be used for evaluating rates and quality of response. For addresses in the cluster sample, members of the Bureau's staff visited and interviewed about 1,100 respondents and nonrespondents about the content and design of the report forms.

Report forms—The July operation tested five versions of the basic report form A1. These varied in size, color of paper, and arrangement of instructions, as follows:

Form	Characteristics
77-A1(A)-T2	12" x 8" 8-page booklet printed on white stock with black ink and shading; instructions on a separate sheet.
77-A1(B)-T2	13" x 20" sheet, folded to a 13" x 10" 4-page folder, printed on buff stock with black ink and shading, with instructions in a separate folder.
77-A1(C)-T2	13" x 21" sheet, folded to a 13" x 10½" 4-page folder, printed on yellow stock with black ink and shading; instructions on a separate sheet.
77-A1(D)-T2	14" x 24" sheet, folded to a 14" x 8" 6-page folder, printed on salmon colored stock with black ink and shading; instructions on a separate sheet.
77-A1(E)-T2	17" x 20" sheet, folded to a 17" x 10" 4-page folder, printed on blue stock with black ink and shading, and with instructions on the last page.

While the format and specific wording used for the basic items differed somewhat among the versions of the form, all requested inventory and production items, acreage and location, income from agricultural services, characteristics (including race and Spanish origin) and principal occupation of the operator, and so on. In addition, a number of data items were tested by inclusion in only one of the five test forms. The test sections in each version were as follows:

Form version	Test section/data
77-A1(A)-T2	Section 19, total expenditures for energy and petroleum products for the farm business; and section 20, grain storage facilities.
77-A1(B)-T2	Section 18, machinery and equipment in use, and estimated total value of all machinery and equipment.
77-A1(C)-T2	Section 19, use of commercial fertilizers and/or lime; section 20, value of direct sales to consumers; and section 21, estimated total value of land and buildings.
77-A1(D)-T2	Section 18, use of insecticides, other herbicides, fungicides, other pesticides, lime, and other chemicals; section 19, contracts and forward price agreements made, and which products were involved.
77-A1(E)-T2	Section 18, selected production expenses for all agricultural operations.

Two different types of skip instructions also were tested. Forms A and C contained one set before the crops sections, providing instructions for completing the remainder of the form based on whether or not any crops were grown. If crops were not grown, instructions were provided for livestock. Forms

B and D had separate instructions ahead of the crops and livestock sections of the form. Form E did not contain skip instructions.

The possible effect of mailout envelope size on response was also to be checked in the test, and four separate mailing envelopes were used for the mailing packages. Two white 4½" x 10½" envelopes (forms BC-354 and BC-441) and two large-format (9" x 12") manila envelopes (forms BC-491 and BC-2016) were used. No special messages or logos appeared on these envelopes beyond the normal Bureau address and postal frank.

Mailout and Response

Mailout and followup—The mailing packages were prepared and the address labels applied at the Jeffersonville, Ind., facility. The initial mailout carried first-class postage and took place on July 25. The contents of the various packages, and the number of each test report form mailed, are given in table 1.

By mid-August a response rate of 27.5 percent, including some 200 postmaster returns (PMR's—packages returned by the postal service as undeliverable), had been achieved and a followup mailing was done. On August 19, form 77-L2-T2 followup letters requesting prompt response were mailed to approximately 6,300 nonrespondent addresses and PMR packages were remailed. Three weeks after the followup letters were mailed, an overall response rate of 48.2 percent had been achieved. This was a somewhat better rate of response than had been attained 6 weeks into the 1974 census, but since the test sample was drawn from the 1974 in-scope list, a significantly higher rate of response had been anticipated. The 48.2-percent response rate prompted the Bureau to plan the first mail followup of the census proper for 3 weeks after the initial mailing, rather than 4, in the hope of stimulating a higher, and earlier, response to the census. The response rates achieved for each of the report form test versions showed that there was no significant difference in the respondents' preferences among the five versions. (See table 2.)

Field interviews—During the week of August 22, subject-matter staff from the Suitland office visited 1,100 of the 1,900 addresses in the cluster sample and interviewed respondents and nonrespondents for their comments and opinions about the report forms. Both respondents and nonrespondents were generally very cooperative with the interviewers.

Processing and Analysis

Processing—Upon receipt in Jeffersonville, Ind., the test forms were batched into work units of approximately 100 each, by type of form. Automatic equipment "read" the bar codes on the mailing labels and checked in respondent addresses. Report forms were then sent for editing. The clerical edit was concerned primarily with ensuring that the data on the forms were keyable, and was not intended to analyze questionable entries or alter the data on the forms any more than was absolutely necessary. Accordingly, the clerks made no effort to change

Table 1. Contents of Initial Mail-Out Packages

Report form	Instruction sheet	Cover letter	Outgoing envelope	Return envelope	Number mailed
Total					8,701
77-A1(A)-T2	77-A10-T2	77-(L1)-T2	White BC-354 or manila BC-491	BC-354 or BC-213	1,746
77-A1(B)-T2	77-A11-T2	77-(L1)-T2	White BC-354 or manila BC-2016	BC-354 or BC-76	1,720
77-A1(C)-T2	77-A12-T2	77-(L1)-T2	White BC-354 or manila BC-2016	BC-354 or BC-76	1,746
77-A1(D)-T2	77-A13-T2	77-(L1)-T2	White BC-441 or manila BC-491	BC-1266 or BC-213	1,745
77-A1(E)-T2	77-A14-T2	77-(L1)-T2	White BC-441 or manila BC-2016	BC-354 or BC-76	1,744

Table 2. July Content Test Response After 6 Weeks

Form	Total mailed	Receipts	Percent response
Total	8,701	4,196	48.2
77-A1(A)-T2. . .	1,746	841	48.2
77-A1(B)-T2. . .	1,720	815	47.4
77-A1(C)-T2. . .	1,746	840	48.1
77-A1(D)-T2. . .	1,745	851	48.8
77-A1(E)-T2. . .	1,744	849	48.7

apparently erroneous data, although such mistakes as multiple entries for an item were corrected by adding the entries together and entering the single sum. Upon completion of the clerical edit, the forms were sent to the data-entry unit, where each response was keyed to magnetic tape.

After data entry, the data tape and the report forms from the cluster sample were sent to Suitland. The cluster-sample forms were analyzed, i.e., comments read, etc., while the data tape was used in the preparation of analytical tabulations.

Analysis and results—There was no significant difference in the response rates achieved for the various test versions of the report form, as already noted, or among the various kinds of mailout envelopes used. With respect to the general characteristics of the report forms, it was found that skip patterns were more frequently used correctly on the "B", "C", and "E" versions. Field interviews also revealed that about half of the respondents were able to complete their forms in 30 minutes or

less, while the overall average time was approximately 37 minutes. Nonrespondents who were interviewed showed no great resistance to completing the report forms; their principal reasons for nonresponse were that they were too busy with farm work to complete the forms, or that they had set the forms aside and had forgotten them. This suggested that while the response rate for the test (approximately 50 percent with one followup) was not as high as anticipated, a publicity program and the normal followup operations would encourage a much higher rate of response.

Analysis of the quality of response achieved for specific items indicated that some instructions on the forms and/or instruction sheets needed to be clarified. This was particularly evident in responses received for the items on "Acreage and Location in 1976," and "Location of Agricultural Operations." Respondents also experienced some confusion in reporting item codes for various crops, particularly on the "B" and "D" versions, in which the codes were listed in the instructions rather than on the report form. The irrigation item also proved troublesome, with almost half of the respondents in California and New Mexico (States with extensive irrigation) incorrectly reporting irrigated-land use.

Among the sample items tested in the various versions the item on total value of land and buildings (section 21 of the "C" version) caused confusion to respondents as to whether assessed or current market value was being requested. Section 20 of version "C", asking the value of direct sales to consumers, also posed problems; operators suggested that clarification of the term "consumer" was necessary.

Comments from respondents—Aside from comments directed at problems found with specific items, respondents were generally gratified at the brevity of the test form as compared to

the 1974 form. While there were the inevitable comments that the forms did not enable an operator to accurately report a particular type of agricultural operation or business arrangement, the overall attitude seemed to be that all of the versions tested were great improvements over the 1974 census report form.

JANUARY 1978 CONTENT TEST

Background Information

The second phase of the report-form testing program involved mailing variations of the proposed final versions of the forms to a nationwide sample of farm operators. The adoption of a sample methodology for collecting some of the agricultural census data reflected the Bureau's concern for reducing respondent burden. While the first content test had been concerned with overall design and the reportability of specific items, the second test was to check that no problems were created by the changes made to the final sample and nonsample report forms.

Two report forms had been used in the 1974 census—the A1 “long” form for farms with annual sales of \$2,500 or more, and the A2 “short” form for farms with sales under \$2,500. There was considerable variation in the data items requested on each form, although both included inquiries on basic acreage, inventory, and production data, and the A1 was over twice as long as the A2. For the 1978 census, the Bureau planned to use two forms as well. The 78-A1(N) ((N) for “nonsample”) would request data that could not be obtained on a sample basis if county-level tabulations were to be produced, and would be mailed to approximately 75 percent of the addresses on the census list. The second form, the 78-A1(S) ((S) for “sample”), included an extra page of items, also required for county-level tabulations. These items, however, could be asked on a sample basis. The A1(S) would be mailed to the remaining 25 percent of the addresses on the census mail list. The principal objectives of the January 1978 test were to—

1. Verify the final wording and format of the 1978 census report forms
2. Test the use of the “AGRICENSUS USA” logo and a printed message on the outgoing envelope
3. Determine if respondents would like to receive a file copy of their report form
4. Determine if respondents would like to receive a preliminary census report for their county.

Report Forms

Two versions of the nonsample questionnaire, forms 77-A1(N1)-T3 and 77-A1(N2)-T3, were used in the January test. These versions were identical in content: each requested data on acreage; major field crops; dry hay, grass silage, haylage, or green chop; fruit and nut trees and vines; vegetables; nursery and greenhouse products; berries; gross value of crops sold; land use; land irrigated; inventory and sales of cattle and calves; hogs and pigs, sheep or lambs, and other poultry, livestock, and animals; income from custom work and other services; whether any crops or other products were sold directly to

individuals for human consumption; type of organization; characteristics of the operator; and whether any land enumerated was foreign-owned. Each of the forms was a 4-page 10½" x 14" folder, printed in black and red ink on yellow stock; the only difference in the forms was that the “N1” version was a left-hand fold, while the “N2” was a right-hand fold.

The sample versions tested, the forms 77A1(S1)-T3 and 77A1(S2)-T3, were also identical in content, including all of the items from the nonsample forms. In addition there were sections requesting data on the use of commercial fertilizer or lime; use of chemicals (herbicides, pesticides, etc.); machinery and equipment; grain storage facilities; expenditures for energy; selected production expenses and estimated market value of land and buildings. Once again the forms were printed in black and red ink on yellow stock with 10½" x 14" pages. The “S1” was a 6-page folder with pages 4 and 5 on a single-column half (i.e., 5½" x 14") page; the “S2” was a 5-page stapled booklet with three separate sheets (the reverse of page 5 was left blank).

Sample Selection

A nationwide random sample of approximately 5,300 addresses was selected for the test from the 1974 census in-scope list. This sample then was broken into four equal subsamples, with one of the four test versions of the sample/nonsample forms to be mailed to the addresses in each subsample.

Mailout and Processing

Adhesive address labels were prepared and shipped, together with report forms and other mailout materials, to Jeffersonville for the assembly of the mailing packages. Each package contained the appropriate report form, an information sheet giving instructions for completion, a cover letter (form 77-A1(L)-T3) explaining the reason for the test, and a form BC-2344 return envelope. Three different outgoing envelopes were used; a plain white form BC-477 window envelope; a BC-477 overprinted with the census logo and the message, “U.S. CENSUS BUREAU REPORT—Please complete and return within 20 days,” and one overprinted with the logo and “THIS IS YOUR CENSUS OF AGRICULTURE REPORT FORM—Please complete and return within 20 days.”

Mailout was completed by January 30. No followup mailings were undertaken.

After 4 weeks a response rate of 44.9 percent had been attained, comparing favorably with the July Content Test and the 1974 census. The report forms were returned to Jeffersonville, where they were batched into work units of approximately 100 each, by type of form, as they arrived. Clerical and computer processing for the report forms was essentially the same as was done for the July 1977 test; there was a minimal clerical edit prior to data entry, and the Bureau produced analytical tables showing responses to each item by type of form.

Results

After 7 weeks, and without any follow-up work, 2,645 completed forms had been received, indicating an overall

response rate of 49.9 percent. Analysis of the test results showed that farmers had little preference between the two versions each of the nonsample and sample report forms, so the Bureau decided to use the A1(N1) and A1(S1) versions for the census proper. Response rates for the nonsample forms were 3.9 percent higher than those achieved for the sample forms. Results from the test indicated the use of the census logo and the printed message on the outgoing envelope had resulted in a 3-percent higher response rate than was achieved with the plain envelope, but that there were no significant differences in the results obtained between the two messages tested on the envelopes.

In general, respondents had little difficulty completing the report forms, although a few items still presented problems. One of these problem areas was section 21, which asked for data on foreign ownership of farm land. A number of inconsistent responses were received, as well as report forms on which no answer had been given, and it was decided that a lead-in question—"Was any of the land in this place held under FOREIGN OWNERSHIP or control in 1978?"—should be added. Changes

were also made to section 22 on the sample report form, "Commercial Fertilizer," and the wording of the items was changed to asked for (1) "Acres of cropland (excluding cropland pastured) which were fertilized in 1978," (2) "acres of pastureland and rangeland fertilized in 1978," and (3) "LIME—tons of lime and acres on which applied (Do not include land plaster or gypsum or lime for sanitation)." When the Bureau was informed that the Agricultural Stabilization and Conservation Service (ASCS) would be conducting a county-level survey of storage facilities in the principal grain-producing States, it was decided to delete section 25 of the sample items ("Grain Storage Facilities") to reduce unnecessary respondent burden.

With respect to the item asking respondents if they wished to receive a file copy of the census form, approximately 52 percent indicated that they would. Almost 65 percent of all respondents indicated that they would like to receive a report of census results for their county. It therefore was decided to include a file copy of the report form in each census mailing package and provide respondents with a report for their county on request after the data were tabulated.

Preparatory Operations

INTRODUCTION

After completing the pretests and initial planning operations, the Bureau began final preparations for the enumeration. This work can be broken into three main activities: (1) the compilation and unduplication of the census mailing list, (2) publicizing the census, and (3) printing and addressing the report forms for the initial mailout.

The construction of the mail list for the 1978 census included not only the acquisition, compilation, and unduplication of lists of addresses from many sources, but also a major screening operation—the Farm and Ranch Identification Survey—designed to reduce the number of out-of-scope addresses on the mailing list. Concurrent with the mail list work, the Bureau was carrying out an extensive public information campaign to inform the farmers and ranchers it would be enumerating of the need for the census data, how and when it would be collected, and why response was important. During the last 12 months prior to the initial mailout, the Bureau completed final versions of the report forms and private contractors printed the forms and other materials and, in some cases, assembled the mailing packages. Later, when the final mailing list was complete, other contractors prepared the mailing address labels (under supervision of Bureau personnel to insure confidentiality of census-related information). In total, approximately 4.2 million packages for the initial census mailout were labeled and readied for posting.

These operations are explained in greater detail below.

ADDRESS LIST COMPILATION

Introduction

General information—The 1978 enumeration was the third agriculture census to be carried out primarily by mail. In any data-collection effort using such a technique, it is essential that the address list used is as accurate and complete as possible. It must not only cover all, or nearly all, of the agricultural operations from which data are needed, but contain as few duplicates as possible, since repeated requests for information increase respondent burden.

Using administrative records from various sources, a preliminary address list was compiled and unduplicated by computer at the Bureau's headquarters in Suitland, Md., between

mid-March and mid-May 1978. Addresses on the resulting list identified with only one specified source or a combination of specified sources were selected for a Farm and Ranch Identification Survey, in order that their farm/nonfarm status could be confirmed one way or the other and the address list updated accordingly. (For details of this operation see p 20.) The results of this survey, and additions from administrative records that were not available until the late summer and early fall, were incorporated into the address list in a second compilation and record linkage process carried out between September and December 1978.

General procedures—The principal operations involved in the assembly and linkage of the census address lists were as follows:

1. Receipt of records from individual sources, assignment of unique identification numbers, and standardization of record format for computer processing.
2. Matching of employer identification numbers (EIN's) for records having them, and deletion of duplicates. Matching of social security numbers (SSN's) for records having them, and clerical review and deletion of duplicates.
3. Geographic coding (geocoding) for retained records. (Records checked for State and county codes, and accurate ZIP codes. Missing codes added to records.)
4. For all geocoded records, a match of names and addresses within each ZIP code, and clerical review and deletion of duplicate records.
5. Assignment of unique census file numbers (CFN's), final size codes, and source combination codes for each record.

These procedures are described in greater detail below.

Sources

Names and addresses for the preliminary (spring) address list were obtained from a number of sources, most of which were updated versions of those used to assemble the 1974 list, and were contained on about 200 computer tapes:

Source	Approximate number of addresses
Total	10,700,000
1974 Census of Agriculture in-scope file	2,000,000
Internal Revenue Service 1040F and 1040C file (1976) ¹	2,800,000

Source	Approximate number of addresses
Agricultural Stabilization and Conservation Service (ASCS) file (containing records for persons or organizations associated with the farm crop programs administered by ASCS at the county level)	4,900,000
Internal Revenue Service business master file (1120, 1120S, 1065, 941, and 943) (1976) ¹	600,000
1974 Census of Agriculture nonrespondents . .	400,000

¹ IRS records used were for forms:

- 1040F, Schedule of Farm Income and Expenses attached to form 1040, Individual Income Tax Return.
- 1040C, Profit (or Loss) from Business or Profession (coded SIC 01, 02, and 07 (Agriculture)), attachment to form 1040.
- 1065, Partnership Return of Income
- 1120/1120S, Corporation and Small Business Corporation Income Tax Return
- 941/943, Employer's Annual Tax Return for Employees (941 (coded SIC 01, 02, and 07 (Agriculture)) for nonagricultural workers, 943 for agricultural workers)

After unduplication of the preliminary list, the Bureau selected approximately 4 million addresses for the Farm and Ranch Identification Survey. (For details of the unduplication (or linkage) procedures and the survey, see below.) The results of this survey, added to those addresses that were not included in the survey and supplemented by lists from sources that became available to the Bureau only in the summer or early fall of 1978, were used to compile the address list for final unduplication. The address universe at this time was as follows:

Source	Approximate number of addresses
Total	12,550,000
Address file after spring record linkage.	6,000,000
ASCS adds	100,000
Internal Revenue Service 1040F and 1040C file (1977)	2,600,000
Internal Revenue Service business master file (1020, 1020S, 1065, 941 and 943) (1977) . .	600,000
Tenants and successors from the Farm and Ranch Identification Survey	1,000,000
Multiunits and special lists	100,000
Statistical Reporting Service (SRS) ¹	2,150,000

¹ The SRS list was a compilation of addresses of persons or organizations that had some dealings with the U.S. Department of Agriculture's SRS. The portion available for use by the Bureau covered 27 States (SRS will ultimately compile and unduplicate a list for all 50 States), the list for only 7 of which had been subjected to any duplication checks. The Bureau therefore assumed a comparatively high degree of duplication in the list from this source.

The procedures used in formatting and unduplicating the mail list after both the spring and fall compilations were virtually identical and are described below.

Format and Standardization

The purpose of the format and standardization program was to turn the individual records making up the address list into

uniformly organized data records that could be linked by the Bureau's computer programs. Each computerized record was assigned a unique identification number (the source file number (SFN)), names and addresses were modified (including the supplying of standard State abbreviations), and each record was organized in a uniform layout. The principal phases of the format and standardization process were as follows:

1. **Edit.** Commas, periods, and special symbols (@ and #) were removed, spaces were inserted between alphabetic and numeric characters (e.g., 123Main#201 became 123 Main 201), and standard State abbreviations were added.
2. **Name control.** The name control was used as part of the record linkage procedures and usually consisted of the first four characters of the surname. To create the name control, the computer read the primary name field of each record from *right to left* until a nonnumeric word of three or more characters was found. This word was matched against a dictionary of words to be ignored (Bros., Inc., Dairy, etc.), and if it did not appear on this "skip" list, the first three or four characters (if it had more than three) were used to set the name control and were inserted into the name control field of the record. (Name controls were not the same as the name recode, which is discussed on p. 17.)
3. **Insert surname locator.** The surname locator was an indicator identifying the field position of the first letter of the last name within the record. (This was used in the name and address linkage to identify name parts for recoding.) If no name control existed for a record, the surname locator was set at zero.
4. **Extract numerics from address field.** Box numbers, rural route numbers, and street address numbers were identified in the address field and placed in separate record locations for use in name and address linkage.
5. **Assign possible partnership-corporation (PPC) flags.** Possible partnership-corporation records were identified and flagged. (It was important to do this since some members of partnerships might also have separate individual operations, in which case the name and social security number (SSN) unduplication would find a match and would delete a record that might, or might not, represent another farm.
6. **Assign large flags.** "Large" flags were assigned to allow a manual review of possible duplicate cases that might represent large operations. (The definition of what constituted a "large" case varied from source to source: IRS 1040F, 1040C, 1065, and 1120/1120S designated operations with sales of \$200,000 or more as "large" cases, while IRS 941/943 lists required \$40,000 or more in cash wages; census in-scope lists generally included minimum sales (\$200,000) or minimum acreage (2,000 to 10,000 acres, depending on which area of the country was involved).)

The format and standardization program assigned size codes (derived from those sources that included such information in the original records), inserted an address priority code (see the sections on linkage below), and identified agricultural services records and places them in another file for separate processing. Records with ZIP codes for areas outside the 50 States and the

District of Columbia were deleted from the file. (Puerto Rico, Guam, and the Virgin Islands were included in the 1978 census, but were enumerated by field interview; the other outlying areas, such as American Samoa and the Commonwealth of the Northern Mariana Islands, were enumerated for agricultural data as part of the 1980 Census of Population and Housing.) Finally, the following files were established:

1. Agricultural services record (to be processed separately).
2. Records with ZIP codes outside the 50 States and the District of Columbia (to be deleted).
3. Trace sample (see p. 19.).
4. Records with no employer identification number (EIN) or social security number (SSN).
5. Records with EIN's or SSN's.
6. "Short" records¹ with EIN's, with or without SSN's.
7. "Short" records with SSN's only.
8. "Short" post office name records for cases lacking EIN's or SSN's.
9. Tally file (by size and geographic codes).
10. Microfilm record of all serialized records.

EIN Unduplication

All records containing an EIN went into an EIN linkage process. The records were sorted by EIN, by PPC flag, name control, and address priority code. The priorities for the name and address and EIN (the same set of priority assignments applied to SSN's) for the spring and fall unduplication operations were as follows:

Name and Address Priority

Spring unduplication	Fall unduplication
Priority:	Priority:
1. Multiunits	1. Multiunits and abnormals
2. IRS 1040F and 1040C	2. Farm and Ranch Identification Survey respondent list, in-scope and out-of-scope
3. IRS 1065	3. IRS 1040F and 1040C (1977)
4. IRS 1120 and 1120S	4. Business Master File (1978)
5. IRS 941 and 942	5. Nonscreening records* from spring survey (IRS 1040F and 1040C, Business Master File, 1974 census)
6. Special lists	6. Farm and Ranch Identification Survey nonrespond-
7. 1974 Census of Agriculture in-scope list, respondents	
8. 1974 Census of Agriculture nonrespondents	
9. ASCS list	

¹"Short" records were the formatted complete records minus the names and addresses. Use of these shortened records saved computer time (and hence, money) in the sorting and linkage operations. After EIN and SSN linkage, the "short" records were matched to the complete records using the source file number (SFN).

Spring unduplication

Priority—Con.

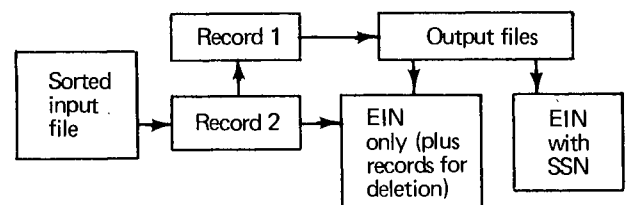
Fall unduplication

Priority—Con.

- ents (from IRS 1040F and 1040C, Business Master File, and 1974 Census of Agriculture records)
7. Special lists
 8. SRS lists
 9. Nonscreening records* (sources other than in item 5)
 10. Farm and Ranch Identification Survey nonrespondents (sources other than in item 6)
 11. Farm and Ranch Identification Survey postmaster returns (PMR's)

*"Nonscreening" means records *not* mailed to in the Farm and Ranch Identification Survey.

After sorting, the records were read from the input file into two temporary storage areas (1 and 2) for matching, as diagrammed below.



When it was determined that two records were duplicates (EIN's and name controls matched and neither a PPC) the record stored in "Record 2" (i.e., the record with lower priority assigned to its data sources) was deleted, its codes were transferred to "Record 1" and the next record was read from the input file into "Record 2" for a new comparison. Possible duplicates (EIN's matched but name controls did not, or one or both records were PPC's) were assigned a *pair number* that would tie them together so they could be displayed for clerical review. "Record 1" was then read into the appropriate output file, "Record 2" was then moved into the vacated "Record 1" position, and the next record was read from the input file, to "Record 2," to "Record 1," then to the appropriate output file.

SSN Unduplication

The "EIN with SSN" output file from the EIN unduplication was merged with the "SSN only" file and this combined file became the input for the SSN unduplication procedure. The file was sorted by SSN, PPC flag, name control, and address priority code, and was submitted to a linking program that was in most respects the same as was used for the EIN unduplication procedure. The only significant changes in the procedures

concerned the use of "dummy records" and a modification in the assignment of pair numbers for possible duplicate records.

"Dummy records" were established for IRS 1040 records that contained two SSN's. (These SSN's were usually those of husbands and wives.) The dummy record contained the same information as the "master" record, except the SSN's were reversed. After unduplication was completed, the dummy records were matched back to their masters, any codes picked up during unduplication were transferred to the master, and the dummy records were dropped.

Pair number assignment differed from the procedure used in EIN linkage in that there could be a situation in which two records were possible SSN duplicates, and both records had already been assigned different pair numbers in EIN linkage. In such a case, the original numbers were retained and a *collision* pair number was inserted into both records to identify the possible SSN duplication. This combined the records of two different possible duplicate sets, which could be reviewed as a single set.

Name and Address Unduplication

General—The third phase of the unduplication of the source lists, in both the spring and fall operations, matched names and addresses. All of the records not deleted from the list in the EIN/SSN phases of the operation passed through the name and address linkage, which, essentially, used a modified Soundex² system similar to the one employed in processing the 1974 list, to sequence and match names and addresses. Modifications were made to the 1974 system to improve its performance with regard to (1) identification of name parts, (2) linkage using first and middle initials, and (3) use of numeric address characters. The general sequence of the name and address unduplication procedure in both the spring and fall operations was as follows: (1) geocoding, (2) name recode, and (3) sort, linkage, and identification of duplicates.

Geocoding—Before any linkage of the files by name and address was possible, the files had to be geographically coded. The principal tool of the geocoding program was a geographic reference file containing a complete list of ZIP codes for the 50 States, with correct and variant post office names and county and State codes for each ZIP code. Once the address files (approximately 6.5 million records for the spring operation and 9.7 million for the fall) were merged and sorted by ZIP code, the geocoding process did the following:

1. Verified ZIP codes, post office names, county and State codes. The ZIP code for each record was compared to the post office name given in the record, then against the geographic reference file. If the post office name was correct, but the ZIP code did not match the one in the reference file, a corrected ZIP code was inserted. The same procedure was applied to the other items verified: the item in disagreement with the other geographic information in each record was corrected by the program.
2. Assigned missing ZIP codes or post office names by com-

paring available information to the geographic reference file.

3. Standardized specified post office names within ZIP codes.
4. Assigned census State and county codes, county abbreviations, and telephone area codes to each record, after verification.

Once the geographic items for each record in the file was verified, the file was ready to be sorted and sequenced (i.e., placed in numeric order) by ZIP code, then sorted by name control. In processing the returns from the Farm and Ranch Identification Survey, the Bureau had discovered a number of duplicate records with differing ZIP codes. The problem generally occurred in urbanized areas, and this led to the creation of a system of ZIP groups in the fall unduplication. In most instances, each ZIP group contained all of the individual records with a single ZIP code, but for certain urban areas served by multiple ZIP codes, the ZIP group included all the records for the area and was identified as a group by the lowest ZIP code serving the area. It was hoped that grouping these records would make discovery of duplicates with varying local ZIP codes more certain.

Name and address recode—Prior to recoding the names and address on each record, it was necessary to identify the parts of the name in the first and second name fields of the records. As an aid in this procedure, a dictionary of common words to be skipped (i.e., words such as "Farm," "Inc.," "Bros.," etc.) was compiled and used as a reference by the computer program. In the recode, each character string (i.e., each single letter, or group of letters, within a specific data field in the computer record) in the name fields was processed and "skip words" were deleted. The character strings then were classified as either a surname, single letter, nickname or "other," or as a conjunction, and were given a number code, as follows:

Character string type	Code
Nickname	1
Single letter	2
Surname	3
Conjunction	4
All others	1

The resulting codes, in the same order as encountered from left to right as the record was read, became the pattern number. Each word or letter was then identified, according to the pattern number, as a first name, middle initial, or last name. There were 103 possible patterns used for name-part identification. Only 0.7 percent of the input records were rejected by the program because of unacceptable pattern arrangements.

Some examples of acceptable and unacceptable patterns are as follows:

Name string	Pattern	Status
John A Doe	123	Acceptable
Mrs Mary Smith	13 ("Mrs." on skip list)	Acceptable
Ben Hill Turpentine Co.	13 ("Turpentine" and "Co." on skip list)	Acceptable
A B C Farms Inc.	222 ("Farms" and "Inc." on skip list)	Unacceptable
Cattle Feeders Inc.	None (all words skipped)	Unacceptable

²The Soundex system is an index of personal census records, for selected censuses, based on the sound of the surname rather than the spelling. In a Soundex file, records for "Smith," "Smythe," etc., would be indexed together to facilitate checking variant spellings of a name.

Once the name parts were identified, the records were processed through the name recode to produce four-character alphabetic codes for each name. The recording retained the initial letter of each name, the second of all double consonants, and deleted all vowels (including Y). The program then left-justified the name, and deleted any characters that extended beyond the four-character data cell available for the name. For example, the name DILLINGER would be recoded by deleting the second L and all the vowels reducing the name to D_L_NG_R. Moving and truncating resulted in the deletion of the R and the coding of Dillinger as DLNG. Nicknames (Bill, Dick, Becky, etc.) had the proper names (William, Richard, Rebecca) recorded instead so that the versions of a name used in the different source lists were standardized. (Shortened versions of names, such as Ed, Geo., and Wm., were recoded as proper names (Edward, George, William) as well.)

When multiple name patterns were encountered, additional output records (dummy records) were created. Multiple names were identified as following conjunctions (words matching a conjunction dictionary list) such as "&," "and," "or," etc. Dummy records were created for wife names (if other than source IRS 1040F and 1040C), names in the second name field, and partnership names. If the character following the middle names was a conjunction, and the name pattern was (for example) "John Jones & Frank Small" (Pattern No. 22-11413), then three names were recoded: John Jones Small, John Jones, and Frank Small. If the character following the middle name was a conjunction, and the new pattern was "Jones Kelly & Smith (pattern No. 21-1143)," then three names were recoded: Jones, Kelly, and Smith. This was an attempt to identify partnerships that could change name order in different source file records.

Sort, linkage, and unduplication—After recoding the master and dummy records, the next step was to sort them so as to facilitate the comparison of adjoining records. Prior to this sort, each record was assigned a ZIP serial number (ZSN) consisting of the record's ZIP code plus a five-digit serial number within the ZIP code (e.g., 55555-00001). Dummy records carried the ZSN of their master records. Once the ZSN's had been assigned, the file was sorted, each ZIP group being sorted successively by last name recode, first initial, PPC flag, dummy record flag, box number, route number, first name recode, and source priority code. The linkage program then compared records with the same ZIP code, recoded last name, and first initial. Records that had only a last name with no first initial or name were compared to all records with that last name in the ZIP group containing the record.

This comparison, or match, operation produced the following files:

1. Duplicates. Records that matched both name and address information.
2. Possible duplicates. Records that matched on first or last name but did not match address information, and records that had matching last names and addresses but had only first initials.

3. Nonduplicates. Records that did not match on last name recode, or that had matching last name recodes but differing first names or initials.

Duplicate records were deleted by the computer after the data from the record with lowest address priority has been transferred to the record with the higher priority. When possible duplicates were identified, a pair number was assigned and no data were transferred. All possible duplicate records were sorted by pair number and displayed for clerical review. Clerks compared the linked pairs of records, determined whether there was in fact a match, and, if so, which record(s) to delete from the file. Nonduplicate records were retained in the file. The records processed in the name and address phase of the spring and fall unduplications were as follows:

Process step	Spring unduplication, No. of records	Fall unduplication, No. of records
Input to name and address unduplication	6,433,193	9,680,872
Unable to process	44,419	¹ 429,245
Deleted by computer	216,863	1,619,052
Clerical review from name and address phase	979,077	2,119,004
Clerical deletes	277,347	649,336
Out-of-scope, PMR, and ASCS deletes	NA	2,325,829
Final file	² 5,921,600	² 4,240,733

¹These records required special processing and were part of the supplemental mailings made in February 1979.

²The counts are not balanced because SRS lists available to the Bureau only for fall unduplication were more extensive than were available for the spring operation.

Controls

General information—During both the spring and fall unduplication processes, a system of checks and controls was imposed on the address file as it moved through the various phases of the operations. These included the establishment of records of changes in the file, such as the source-file microfilm and the control counts, as well as samples of addresses from the file used to test the procedures. The specific measures taken are described below.

ZIP-code sample for testing—Prior to the actual production runs for the unduplication phase of the address list compilation a sample of the records in the input file was selected to test each phase of the computer programs and procedures. Chosen on the basis of the first three digits of their ZIP code, all the records for each source file for specified areas within various States became part of the sample. Once these test samples had been processed and any problems the tests revealed had been corrected, final tests were carried out using parts of the "live" production file. All test runs were subjected to detailed reviews, and corrections to the program specifications and/or procedures were made as needed.

Source-file microfilm and audit trail—The source-file microfilm and the audit trail were general reference tools. The former was

a microfilm listing of all records received as part of the address list compilation for both the spring and fall operations, some 18 million in all, and was sorted and arranged by source file number. After all the relevant data on each record had been received from the various sources, the resultant files were merged, sorted, and microfilmed.

The audit trail was a microfilmed record of each case dropped (sorted by source file number) and of the case to which the deleted record had been matched.

Trace sample—The trace sample was selected by flagging every 1,000th record during the formatting and standardization phase of the fall compilation operation. As the records were selected, they were displayed and reviewed by the research staff at each processing step. Thereafter, the sample was used as a quality-control tool for following the progress of the records as they went through the various phases of the processing cycle. The display and review of the records proved especially useful as it enabled reviewers to discover various processing errors. For example, the formatting program had been assigning incorrect ZIP codes to records. The early detection of this problem permitted its correction before it had progressed so far as to require extensive reprocessing.

The trace sample was also available for other research projects concerned with the processing of the address file.

Control counts—During each production run of the address list processing, the computer generated control counts of records in the file and of all deletions for each phase of the unduplication. These provided numerical checkpoints at each phase of the processing.

Census File Numbers

As part of the final preparations of the address lists used in the spring Farm and Ranch Identification Survey and the census mailing itself, a unique identification number, the census file number (CFN), was assigned to each address. The CFN was composed of 11 digits (counting the check digit) arranged in two groups. The first five digits were the State and county codes for the operation to be enumerated, while the second six digits consisted of a five-digit serial number identifying each operation within each county, and a check digit. The serial numbers for each State-code area were assigned beginning with 00001 and continuing in sequence (00001, 00002, 00003, etc.). It was felt that the five-digit system, permitting specific identification for up to 99,999 farms, provided more than adequate space for any additions to the list for a given county made after the census was underway. The check digit provided a mathematical check for quality control during the data keying of the returns. (See ch. 4, p. 46, for details.)

Must and Certainty Cases

Following the fall record linkage, the final mailing list was subjected to a computer procedure that selected "must" and "certainty" cases. Using lists of multiunits and size codes from the 1974 census farm list, and other size indicators on the mail

file, the computer program identified as "must" cases those operations the Bureau believed (1) were so large that some data must be obtained in all cases, rather than imputed in cases of nonresponse to the mailout, (2) an explanation of *why* the addressee was not engaged in agricultural operations was needed, or (3) a special analyst's review of the census return had to be made.

Records for the following operations were selected:

1. **Multiunits.** Multiunits were companies or organizations that had substantial agricultural or agriculture-related operations at more than one location. In general, two or more report forms were required for each such organization since each establishment was considered a separate operation.³
2. **Abnormal farms.** Abnormal farms were farms operated by institutions, such as State agricultural research establishments, Indian reservations, etc.
3. **Other records.** The TVP's required for inclusion as either a "must" or the generally smaller (in TVP) "certainty" group varied among the States. The minimum criterion for assignment as a "must" case in California and Iowa was an expected TVP of \$500,000 or more; in the New England States, Alaska, and Hawaii, the minimum was \$100,000; while for the remaining States the minimum TVP was \$200,000.

The "certainty" stratum contained all addresses on the small list that were expected to meet specified size criteria in terms of indicated acreage and/or total value of annual sales. These criteria differed from State to State, depending on local conditions. The minimum indicated acreage ranged from 1,000 to 5,000 acres, while the minimum sales (based on historic or mail-list source data) varied from \$40,000 to \$200,000. Further, all addresses in counties that had fewer than 100 farms enumerated in the 1974 census were included.

Mail List Sampling

In order to reduce overall respondent burden, all the records in the mailing file were split into two groups, a "sample file" of approximately 1 million addresses, and a "nonsample file" containing the remaining 3.2 million addresses. The addresses in the sample file would be mailed the sample form 78-A1(S), the "long" form, while the nonsample addresses were to receive

³ Separate mail files were maintained for each master (company or organization) and each associated establishment. Multiunits identified before the initial census mailing had multiunit identification numbers assigned in the alpha/plant field of the mailing label that indicated whether the report form was for the master or an associated establishment. The numeric "alpha" code identifying the company was six digits in the alpha field of each of the various establishment's records. The "plant" code was a 4-digit establishment identifier. The master record for a multiunit would have the company identifier in the alpha field, with four zeros in the plant field, while each associated establishment had an identifying number in the plant field as well as the company identifier in the alpha field. Each report form for a master or an associated establishment was assigned a unique serial number, the associated establishments being assigned numbers in immediate sequence following the master.

the form 78-A1(N). (See app. G for facsimiles.) Aside from the shading used on the two forms (green on the A1(S), yellow on the A1(N)), the A1(S) differed from the A1(N) in that it included a number of additional data items. All "must" and "certainty" cases were part of the sample file.

The sampling of the "noncertainty" cases was done on a county-by-county basis, the sampling rate determined by the expected number of farms in the county involved. In counties with 100 to 199 farms counted in the 1974 census, one out of every two addresses on the mailing list was selected for the sample, while counties with 200 farms or more in 1974 were sampled at a rate of one in every five addresses. Taken together, the certainty stratum (including the must cases) and the sampling of the noncertainty strata yielded an initial sample that included about 26 percent of all the addresses on the Bureau's census mailing list. This was considered a sufficiently large sample to provide reliable county-level estimates for the sample data items included on the A1(S).

FARM AND RANCH IDENTIFICATION SURVEY

Introduction

The name and address file for the 1978 Census of Agriculture was compiled using lists from a variety of sources. In most instances, the addresses on the lists represented individuals or places that had some association with agricultural production that qualified them for inclusion in the program or activity of the agency compiling the list. Naturally, none of these source lists was, by itself, a complete list of agricultural operations in the United States, but by combining them and deleting duplicate addresses, the Bureau tried to compile as nearly complete a list as possible.

Since the purpose of the various agencies in assembling these individual source lists vary from monitoring and assisting production of a specific commodity to collecting taxes, the type of name and address included on any individual list varies as well. The Bureau of the Census uses a specific definition of a farm for its own data-collection and publication program, hence many of the addresses on the source lists supplied by other agencies did not meet that definition, and some method of deleting from the file those addresses that did not represent agricultural operations was necessary.

The Farm and Ranch Identification Survey enabled the Bureau to improve the coverage (completeness) of the 1978 census while, at the same time, keeping the size of the census mailing at an acceptable level. To improve coverage, additional lists were included in the original mail file. For example, for the 1974 census, only selected records from the ASCS list were used to develop the census mailing list. In 1978, the 4.9 million addresses in the ASCS file were added to the census file. These additions to the mail file naturally included a significant proportion of cases whose status as farms was uncertain and the Bureau decided to carry out a mail survey to identify those cases that did not represent agricultural operations. Addresses

identified as out-of-scope could then be deleted from the final list.

In addition, the survey could be used to identify successors to persons who had discontinued farm operations, as well as tenant operators who were not on the list. It would also furnish updated size information for farm operators.

Spring Farm and Ranch Identification Survey Test

Background information—The Farm and Ranch Identification Survey was scheduled for the spring and early summer of 1978, several months prior to the finalizing of the census address list. From the beginning it was realized that, to be effective and at the same time realize significant economies with respect to reducing the census mailings, the survey would need to attain a high rate of response with minimum followup. Furthermore, necessary processing would have to be kept to a minimum. The basic requirement for the survey questionnaire, then, was that it request the minimum information necessary to decide whether or not the name and address represented an agricultural operation.

Work on the design of the identification survey report form began late in 1976, with an initial survey form-content test scheduled for the spring of 1977.

The test report forms—Two versions of the identification survey form were produced in January 1977. Form 77-A4(A)-T1, "1977 Farm and Ranch Identification Survey," was considered the basic survey form design and was an 8" x 10½" single sheet of blue stock with black printing and shading.

The form was divided into six data-inquiry items, a remarks section (part of item 6) and a request for the name, address, and telephone number of the person preparing the form. Data were requested on (1) acreage owned, and acres rented or leased to or from others; (2) names and addresses of tenants and acres rented to each; (3) agricultural items expected to be produced in 1977; (4) estimated value of products sold in 1976, and expected sales for 1977 (check-off boxes of approximate values of sales were included); (5) county and State in which the largest value of products were produced in 1977; and (6) an explanation if there were no agricultural operations in 1977.

Form 77-A4(B)-T1, "1977 Farm and Ranch Identification Survey," was a shortened and simplified variant of the A4(A), printed in black ink on a 5¼" x 8" blue card. Item 1 asked only how many acres were owned and how many were rented or leased from others, while item 4 asked the respondent to write in the estimated values of sales for 1976 and expected sales for 1977. Item 6 requested the respondent to report the expected use of the land, if it was not to be used for agriculture in 1977. There was no space for remarks.

The test sample—A stratified sample of 7,783 records was selected for the test from the 1974 Census of Agriculture address file and split into two samples, a national sample with 5,808 records and a cluster sample of 1,975 records. The national sample was drawn from 1974 files of in-scope and out-of-scope respondents and specified nonrespondents. The sample was stratified by type and size of farm, excluding farms with

1974 total value of production of \$500,000 or more. For cash-grain and livestock and dairy farms, a 1-in-500 sample was selected, while all other farms were sampled at a 1-in-250 rate. The cluster sample was drawn from the 1974 in-scope, out-of-scope, and nonrespondent records for the following counties:

Winnebago, Ill.	Canyon, Idaho
Allegan, Mich.	Fresno, Calif.
Chautauqua, N.Y.	Doña Ana, N. Mex.
Sampson, N.C.	Smith, Miss.
Worth, Ga.	

The random selection from the cluster sample resulted in a file of approximately 200 addresses for each county. The clustering was designed to facilitate carrying out personal interviews with adequate coverage at minimum expense, but ultimately no personal interviews were done and the cluster sample addresses were treated as part of the general mailing.

Mailout and followup—Initial mailout of the test forms was done from Jeffersonville, Ind. on March 25, 1977. The national and cluster samples were evenly divided for the mailing, 3,892 addresses being sent form 77-A4(A)-T1, and 3,891 being sent form 74-A4(B)-T1. The mailing package for each address contained a transmittal letter that explained the reason for the survey and requested prompt response, as well as a return envelope.

A followup mailing was made on April 22, when 1,778 A4(A) forms and 1,699 A4(B) cards were sent to nonrespondents; 140 postmaster returns (PMR's) were also mailed. This mailing was the only data-collection effort made after the initial mailout. Final receipts were closed out on May 17.

Response and processing—Response to the test was generally very good, particularly with only one followup mailing. A total of 2,918 A4(A) forms and PMR's were received, representing 75 percent of the original mailout. Response to the shorter A4(B) card was even better, 3,075, or 79 percent.

The forms were received at the Bureau's Jeffersonville facility, where they were checked in and responses to individual items were tallied to determine whether respondents would be able (or willing) to provide the information requested. The tallies and studies indicated that respondents would be able to furnish the sort of information desired. Overall response to the A4(A) form, while not as high as that for the A4(B), had been very good, and there had been no difficulty in obtaining the somewhat more detailed information it requested. Inasmuch as this greater detail permitted easier and more thorough identification of agricultural operations, the Bureau adopted the A4(A) form's general design for a further test in the fall of 1977.

The Fall Mail List Update Test

Background information—The Mail List Update Test was a much smaller operation than the spring test and was intended primarily to recheck response to the items on the A4 report form. The report form, 77-A4-T2, "1977 Mail List Update," was a modified version of the 77-A4(A)-T1. The format of item

1 was changed and item 2 provided space for names and addresses of persons from whom land was rented, while item 3 requested the same information for tenants. Item 5 of the T2 form was the equivalent of item 4 on the T1, and asked only for an estimate of the value of agricultural products expected to be sold in 1977. Item 5 (county and State location) from the T1 was dropped, while item 6 was added, asking if "this place operated under any name other than the one shown in the address label." The wording of the respondent identification item was changed from "Name and address of person preparing this report" to "Person to contact regarding this report." The A4-T2 was an 8x10½-inch sheet of buff stock, with printing and shading in black ink on both sides.

Mailout and response—The mail list for the fall test was constructed using the 1974 census in-scope and out-of-scope respondent lists. A random sample of 2,541 addresses was selected, and address labels were prepared. On October 18, 1977, packages containing the report form, a cover letter explaining the reason for the test, and the return envelope, were mailed to the sample addresses. There was no followup.

Response to the fall test was comparable to that of the spring test. After 28 days, a response rate of 57.1 percent (including PMR's) had been achieved, about 3 percentage points ahead of that attained after a comparable time in the spring test.

Processing and analysis—Report forms were checked in manually in Jeffersonville and sent to Suitland for tallying of responses to individual items, evaluation of test results, and comparison with earlier test results.

The analysis of completed A4-T2 forms indicated that, as a general rule, the format employed was adequate for the collection of sufficient information to correctly classify a respondent with respect to his or her status as an agricultural producer. However, a number of specific changes in the report form were recommended. These were—

1. Revise the form to dissuade landlords from reporting products grown or sales made by tenants or sharecroppers.
2. Advise respondents apparently having all agricultural land rented out to explain the use of any remaining land.
3. Change the wording of the A4-T2 item 7 to make it clear to respondents that they needed to indicate the reason why they were *not* engaging in agricultural activity in the subject year.
4. Change the certification "Person to contact regarding this report" back to "Person preparing this report."
5. Restore the "Remarks" section.
6. Change the title of the form back to "Farm and Ranch Identification Survey."

The Farm and Ranch Identification Survey report form—The final version of the form 78-A4, "1978 Farm and Ranch Identification Survey," was a modification of the A4-T2 form used in the fall mail list update test. The format was generally simplified and the A4-T2 item 2 (concerned with the names and addresses of persons from whom land was rented) was deleted. There were minor changes in the wording of some items to con-

form with the recommendations made after the analysis of responses to the mail list update test, but the original A4-T2 format was considered generally satisfactory.

Development of Farm and Ranch Identification Survey Mail File

A preliminary mail address file for the 1978 Census of Agriculture was compiled in the spring of 1978. This initial effort drew on most of the sources that would be used for the final file, including the Agricultural Stabilization and Conservation Service (ASCS) list, 1976 Internal Revenue Service (IRS) form 1040F and 1040C files, the Business Master File (BMF) of addresses reporting agricultural employees, and lists of agricultural partnerships and corporations, as well as the in-scope and nonrespondent lists from the 1974 Census of Agriculture. After completion of the clerical and computer unduplication program (see the section on "Address List Compilation," pp. 14-20, for details of the compilation and unduplication procedures), the resulting file contained 5,921,600 names and addresses.

The primary purpose of the identification survey was to eliminate from the census mailing those addresses that did not represent agricultural production. Addresses on the preliminary list that were found on only one source list, or on two or more lists that in the 1974 census had comparatively high proportions of addresses not meeting the Bureau's farm definition, were to be selected for the survey. Accordingly, a computer selection of the address file was made, and addresses with source codes from the selected sources were assembled as the survey list. The sources, and the numbers of addresses drawn from each were as follows:

Source	Number of addresses selected
Total	4,080,737
ASCS only	2,215,963
IRS form 1040 only	553,584
1974 nonresponse only; 1974 nonresponse/ ASCS combined	122,285
1974 in-scope only; 1974 in-scope/ASCS	417,463
IRS form 1040/ASCS	508,714
BMF only	131,998
IRS form 1040/1974 nonresponse/ASCS combined	130,730

After selection of the addresses for the survey was completed in April and May 1978, computer tapes were prepared for use in the production of address labels and preparations for the mailout of the report forms from Jeffersonville was begun.

Mailout and Followup

Preparation and initial mailout—The mail file for the identification survey, over 4 million records, was split into four groups to facilitate handling and processing. Allocation of records to each group was determined on the basis of the source list (or combinations of source lists) from which a given record was

drawn and the State in which the address was located. Records were grouped by source list as follows:

Groups 1-3	Group 4
ASCS only	IRS 1040 file/ASCS combined
IRS 1040 file only	1974 nonrespondent/IRS 1040 file/
BMF only	ASCS combined
1974 in-scope only	
1974 nonrespondent only	
1974 in-scope/ASCS combined	
1974 nonrespondent/ASCS combined	

While group 4 contained addresses from all the States except Hawaii, groups 1-3 included records for States as listed below:

- Group 1: Alabama, Arizona, Arkansas, Connecticut, Delaware, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Mississippi, Nevada, New Hampshire, New Mexico, Rhode Island, Tennessee, Utah, Vermont, Virginia, West Virginia
- Group 2: Alaska, California, Colorado, Florida, Georgia, Hawaii, Idaho, New Jersey, North Carolina, Pennsylvania, Oklahoma, Oregon, South Carolina, Texas, Washington, Wyoming
- Group 3: Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Montana, Nebraska, New York, North Dakota, Ohio, South Dakota, Wisconsin

The Bureau prepared computer tapes containing the address list, by group, for the label contractor to use to produce bar-coded address labels in ZIP-code sequence. Bureau employees supervised the use of these tapes to ensure compliance with the confidentiality provisions of the census law.

The mailing packages were assembled, labeled, and mailed from Jeffersonville on a flow basis, as the labels were produced and delivered. Each package consisted of a 78-A4 report form with a bar-coded address label attached, a form 78-A4(L1) transmittal letter explaining the purpose of the survey and requesting prompt response, and a form BC-1266 return envelope overprinted "AG-SS." These materials were inserted in a form 78-A5 outgoing window envelope, and the bar-coded address label was applied through the window. All of the packages were sent by first-class mail, by groups, as follows:

Group	Begun	Completed	Number mailed
Total.	5/03/78	5/31/78	4,080,737
Group 1.	5/03/78	5/11/78	954,901
Group 2.	5/11/78	5/18/78	1,178,643
Group 3.	5/18/78	5/24/78	1,310,470
Group 4.	5/28/78	5/31/78	636,723

Followup mailings—No telephone followup of the identification survey nonrespondents was conducted, but there were four followup mailings. The first of these was begun a week after the last of the initial mailing was completed, and all were done on a flow basis, beginning with group 1 addresses, and working through to those of group 4. The mailing packages for the

followups were identical to those of the initial mailing except for the transmittal letter (form 78-A4(L2) letters were used in the first followup), which was different for each followup. Mailing label codes showed the status of each case as nonrespondent or PMR (postmaster return).

The cutoff for the first followup was approximately 4 weeks after the last of the initial mailing for each group. A new computer tape of nonrespondent names and addresses for each group was prepared and used to produce address labels. All mailing packages were assembled, labeled, and mailed from Jeffersonville.

The second followup began approximately 3 weeks after the first followup mailing for each group. Once again, packages were identical to earlier mailings, except that the A4(L3) transmittal letter was used; all preparation and mailing took place at Jeffersonville. Mailing was carried out as for the previous operations, but those for groups 1 and 2 were combined.

The third followup differed from its predecessors in that a sample of nonrespondent addresses was drawn to test the use of a toll-free telephone information number. Approximately 4,000 addresses were randomly selected from each of the three remaining groups. While the nonsample addresses received the A4(L4) letter requesting response, the 12,000 sample cases received the A4(L5), which included the toll-free number and urged respondents with questions to call for information. No more than a handful of such calls were received.

The fourth, and last, followup mailing closely resembled the third. The mailing packages sent were identical to those sent earlier, except that the transmittal letters sent to each group, while not differing in content, were dated differently for each. The final mailing for the fourth followup occurred on August 26, 1978. The mailings for each group, for each followup, and for the survey as a whole were as follows:

Group	Begun	Completed	Total mailed
Initial mailout			
Total.	5/03/78	5/31/78	4,080,737
1st followup			
Total.	6/07/78	6/26/78	2,172,799
Group 1.	6/07/78	6/09/78	529,514
Group 2.	6/10/78	6/13/78	618,591
Group 3.	6/17/78	6/20/78	634,994
Group 4.	6/23/78	6/26/78	389,700
2nd followup			
Total.	7/03/78	7/17/78	1,367,171
Group 1.	7/03/78	7/06/78	715,877
Group 2.			
Group 3.	7/12/78	7/13/78	380,914
Group 4.	7/14/78	7/17/78	270,380
3rd followup			
Total.	7/22/78	8/05/78	1,068,875
Group 1.	7/22/78	7/24/78	563,612
Group 2.			
Group 3.	8/01/78	8/01/78	291,660
Group 4.	8/05/78	8/05/78	213,603

Group	Begun	Completed	Total mailed
4th followup			
Total.	8/11/78	8/26/78	865,123
Group 1.	8/11/78	8/12/78	450,345
Group 2.			
Group 3.	8/18/78	8/19/78	232,790
Group 4.	8/26/78	8/26/78	181,988

Postmaster returns (PMR's)—New mailout packages to replace postmaster returns (PMR's) were prestuffed at Jeffersonville. The packages were identical to the initial mailing packages except that the outgoing envelopes were overprinted with "M2." PMR's with an ASCS-only source code were not re-mailed, while those with a name or address correction, or an indication that the addressee was deceased, were referred to the correspondence unit for remailing. Address labels bearing a check-in status code of 21 (for first-time PMR's without a name or address change, or deceased) were prepared for the remaining cases, 73,509 in all, and were attached through the windows of the outgoing envelopes. This first group of PMR's was mailed on June 26. (PMR totals are not included in the total followup mailings listed above.)

A second group of first-time PMR's was treated in much the same fashion in the second followup, except the 78-A4(L3) letter was substituted for the A4(L1) used for the earlier group. Report form packages were mailed to 22,743 addresses still listed as first-time PMR's on July 22.

The last mailing to addresses listed as first-time PMR's was made on August 14, when 16,333 packages were mailed. The contents of the packages for the final mailing to first-time PMR cases was identical to those used in the third followup mailing. Second-time PMR's were referred to the correspondence unit. (Selected second-time PMR's were remailed on a flow basis by the correspondence unit.)

Processing

Receipt, batch and check-in—The report forms for the identification survey were returned to Jeffersonville for processing. Upon receipt, the unopened mailing return packages were sorted into (1) PMR's, (2) all receipts in BC-1266 return envelopes, (3) replies to census-originated correspondence (overprinted "AGCOR-SS"), and (4) other mail. The packages, except those for PMR's, were then opened and, within each of the initial sort groups, were sorted again in three mail categories: (1) receipts with barcoded census file numbers (CFN's), (2) those with CFN's but no barcodes, and (3) receipts without CFN's.

Receipts without CFN's were sent to the CFN research unit, while barcoded receipts were sent to batch for barcode check-in; those without barcodes were batched and routed for check-in keying. Receipts (including correspondence) without barcodes

were batched into work units, usually of approximately 250 CFN's each, and form A402, "Check-In Work Unit Cover Sheet," was attached. The A402 carried the date, the number of CFN's in the work unit, and a check-in code for the work unit; the first digits of the codes were as follows:

- 2 PMR
- 3 Respondent-originated correspondence
- 4 Form received

The work units then were sent to check-in keying where the CFN and check-in code assigned to each form were recorded on a key-to-disk system, with an output on computer tape. The resultant file was transmitted to the Suitland computer facility via telephone datalink for computer matching to the address file.

Report forms with barcoded CFN's were batched into work units of 500 or 1,000 each. A form A402 cover sheet was attached to each work unit, with the same information as was included for the nonbarcoded receipts, and the work units were sent for barcode scanning. The barcode scanner employed a laser device to "read" the barcoded CFN's printed on the address labels and transfer the numbers to computer tape. The use of the barcodes and scanner greatly accelerated check-in of the report forms.

Clerical review—The primary purpose of the survey was to remove addresses with no agricultural operations from the census list, hence a review of the responses received was ultimately necessary. The clerical staff at Jeffersonville reviewed the data on in-scope forms and assigned "in-scope" or "out-of-scope" designations, or problem-referral codes: When the check-in report forms were received by the clerical unit, each was reviewed by a clerk, who scanned the entire form, including the remarks section. If the data from the report form indicated the address had agricultural operations, "I/S" was written in red ink in the upper right-hand corner of the face of the form. The reviewer checked to see if the form named a tenant or a successor (persons with no agricultural operations were asked to report successors); if the former, a "T" was written in the top margin of the form, while an "S" was written there if the response named a successor. Reviewers wrote "O/S" in the upper right-hand corner of receipts with no agricultural operations reported, while forms that represented problems of definition or identification (refusals; land, but no agricultural activity, reported; suspected agricultural services; inconsistent entries, etc.) were coded "R" (referral), that code being written in red ink just to the right of the address label on the face of the form.

As the individual forms in each work unit were reviewed and coded, they were placed in code groups for further processing. When the work unit was completed, the groups of forms were sent on for the next processing step. These groups were as described in right-hand column.

Technical review and microfilm search—The technical review unit was responsible for resolving problem cases referred to it by the clerical review unit, as well as processing "2+" reports (i.e., two or more reports received in the same envelope) and refer-

Code group	Destination
"R"	To technical review
Report forms with "S," or "S" and "T" ("I/S")	Sorted by State for microfilm search
"T" only	Division sort, then microfilm search or to keying of data and tenant names
"I/S"	Batch for data keying
"O/S" (no tenants or successors)	Central files

rals from the microfilm search unit. Reports received were reviewed in more detail than in the clerical unit and the responses were interpreted to determine a report form's status. Forms were coded "in scope" if the respondent reported any agricultural production, or that sale of agricultural products was expected in 1978. If review of the responses on a form indicated that the address represented an abnormal farm (i.e., one operated by an institution, Indian reservation, etc.) or an agricultural services operation, the form involved was referred to subject-area specialists in Suitland. Following technical review, the coded I/S report forms were returned to the processing cycle.

Report forms reporting sales of \$100,000 or more, and those with selected types of names reported in item 5, were checked against the microfilm address lists to identify duplicate records. All successor names and addresses, and selected tenant names and addresses, were checked against the microfilm lists to determine if the tenant or successor was present on the mail file (because of the large number of cases involved, all tenant names were not researched). All tenant and successor cases that were researched on microfilm but were not located, along with the remaining tenant and successor cases, were keyed during data entry. These tenants and successors comprised a new source file, and were included in the census mailing list in the fall unduplication.

Data keying and computer processing—Report forms were batched into work units of 200-300 for keying of data and tenant and successor names and addresses, using the electronic key-to-disk-to-tape system at Jeffersonville. Once on disk, the data were automatically transferred to computer tape and were transmitted by data link to the main computer facility in Suitland where data tapes for use in the compilation and unduplication of the final census mailing list were prepared.

Results

Response to the survey—The 80.5-percent response rate achieved in the Farm and Ranch Identification Survey was considered very good overall, although it varied somewhat, depending on the list source for any given address. An 86.7-percent response rate was achieved for addresses from the 1974 census in-scope and the 1974 in-scope/ASCS combined lists, while only 41.1 percent of the forms mailed to addresses from the combined 1974 nonresponse/1040/ASCS list elicited a response. The rates attained for the various source lists are shown as follows.

Source	Mailed	Receipts	PMR's	Percent	
				Receipts (less PMR's)	PMR's (of total mailed)
Total	4,080,737	2,980,540	378,639	80.5	9.3
ASCS only	2,215,963	1,581,957	281,520	81.8	12.7
IRS 1040 only	553,584	460,298	14,501	85.4	2.6
1974 nonresponse only/1974 nonresponse-ASCS combined	122,285	46,466	18,240	44.7	14.9
BMF only	131,998	92,601	16,732	80.3	12.7
1974 in-scope only, 1974 in-scope-ASCS combined	417,463	328,300	38,785	86.7	9.3
IRS 1040-ASCS combined	508,714	417,931	7,138	83.3	1.4
1974 nonresponse IRS 1040-ASCS combined	130,730	52,987	1,723	41.0	1.3

Results—Of the 3 million report forms received, approximately 1.9 million were classified as out of scope and were deleted from the final 1978 census mailing list. Out-of-scope addresses included landlords not carrying on any agricultural activities, duplicate addresses, ex-owners, "no connection with agriculture," etc. Corrections to names and addresses, acreage, and size codes from the 1 million I/S report forms received were used to update the census mailing file.

Following the fall name and address unduplication, the out-of-scope records from the Farm and Ranch Identification Survey were dropped from the census mailing list, along with all postmaster returns and ASCS-only nonresponse cases.

PUBLICITY

General Information

Public information programs are particularly important to mail censuses; since respondents must willingly cooperate with the enumeration if data are to be collected quickly and efficiently. When plans were being drawn up for the publicity campaign for the 1978 Census of Agriculture, it was decided that respondents would be more likely to cooperate with the data-collection effort if they had some idea of how the information gathered would be used; hence the campaign was designed not only to encourage farmers to complete and return their report forms, but also to inform them of the intended uses of the data.

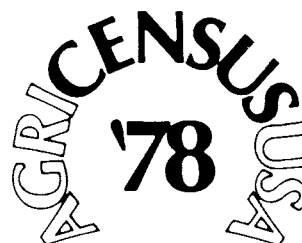
While many of the techniques and procedures used for the 1974 census were repeated for 1978, a number of changes were made in the light of lessons learned. Most significant, perhaps, was a de-emphasis of the use of television. The extraordinary expense of preparing television "spots," as well as the fact that farmers are generally more dependent on the radio than on television for news and information, led the Bureau to drop the idea of a series of 10-, 30-, and 60-second television "spots" such as those used in the 1974 program. While public service announcements were prepared for television release during the census, the precensus phase emphasized the radio advertising campaign and printed materials.

The total public information campaign was a multimedia effort, involving radio, newspapers, television, farm publica-

tions, and the distribution of informational materials to schools, businesses, individuals, and organizations throughout the country. The initial news release for the census in January 1978 reminded farmers to keep accurate records through the census year. The information program continued through the enumeration period, "peaking" in mid-1979, near the end of the regular data-collection effort.

Theme and Symbol

Evaluation of the 1974 enumeration suggested that the theme message used for the publicity campaign—"Fill it out, mail it in—NOW!"—had not been particularly well received by recipients. It was decided that the information effort for the 1978 census should have a less direct theme and symbol, one that reminded the public of the census but did not seem to be demanding action. Accordingly, a simple census logo, the number 78 with "AGRICENSUSUSA" in a three-quarter circle around it, was designed for use on all agriculture census materials.



Radio

Radio is the primary news source for most farmers and the Bureau made extensive use of it throughout the census period. In March 1978, the radio awareness effort began with the distribution to 32 farm broadcasting networks of a salute to American farmers by the Director of the Bureau, with a request that it be broadcast as part of the observances of Agriculture Day on March 20. In addition to periodic news releases on the progress of the census, a series of 10-, 30-, and 60-second public service announcements were taped by the president of the National Association of Farm Broadcasters (NAFB) and about 250 copies were made available for distribution at the

NAFB convention in November 1978. In addition, a set of 1½- to 2½-minute interviews with 10 agricultural experts were recorded and transferred to a 12-inch long-playing disc. Copies of this disc were mailed to 1,229 radio stations that had large farm audiences, while another 150 were made available for distribution at the NAFB convention.

Printed Materials

Newspapers, magazines, and informational material for distribution are all important parts of any census publicity effort. For 1978, this part of the campaign, in addition to posters, brochures, and the like, included distribution of articles and information to newspapers, proclamations, standardized speeches and statements, drop-in advertisements, and a series of stories tailored to each State for use by local publications. Some of these efforts are described in greater detail below.

Posters—Some 152,000 census of agriculture posters (printed in green, yellow, brown, and red ink) were printed. About 17,700 of these were delivered to the USDA for distribution to its agencies, while 10 copies were sent to each of some 9,000 vocational-agriculture teachers throughout the country for their classes. Additional copies were sent to various private agriculture-oriented organizations and associations.

Brochures and standardized speeches and statements—A pamphlet, "The 1978 Census of Agriculture and You," was prepared for general use and was included with all the information kits, census guides, and so on, mailed by the Bureau. Copies were distributed by Bureau personnel staffing booths at conventions, and also were sent to vocational-agriculture departments, county agents, USDA local offices, and the like. The agricultural statistics brochure in the Bureau's *Factfinder for the Nation* series was also distributed.

A suggested text for a 6- to 7-minute speech in support of the census was prepared and was made available to interested organizations for use at their conventions or local meetings. Distribution of copies of this text was as follows:

Organization or agency	Approximate total
ASCS (for information kits)	3,500
Ruritan National (for local chapters in 35 States)	1,350
Jaycees State chairmen of Outstanding Young Farmer Program (10 each)	420
Kiwanis district governors (10 each)	320
Directors' meeting of the Agriculture Council of America	100
Lions district governors in Maryland, Virginia, and Delaware	100

The Kiwanis, Lions, Jaycees (Junior Chamber of Commerce), and Ruritan also published articles in their members' monthly magazines announcing the availability of free copies of the speech.

Newspapers and magazines—The Bureau sent 551 agriculture census information kits directly to farm-oriented publications, farm writers, and to the farm editors of daily newspapers throughout the Nation. Newspaper farm editors were placed on the Bureau's distribution list and were sent all news releases

related to the agricultural census, as well as a series of drop-in ads of various sizes (examples on following page).

A series of stories, one for each State, was developed to outline the changes in local agriculture over the last 25 years, as measured by the data collected in the census of agriculture. Copies of the appropriate stories were mailed to 1,262 identified farm media outlets across the country. In addition, as was done for 1974, some 500 farm magazine editors were contacted about using census-oriented photographs, shot to their specifications, for use on the covers of their issues appearing during the data-collection phase of the enumeration. About 130 asked for these photographs, while a further 20 requested census report forms and envelopes for use as props in shooting their own pictures.

Farm Census Guide

The *Farm Census Guide* (form 78-A20) was a reference manual prepared for use by county agents, vocational-agriculture teachers, and others who assisted farmers and other respondents to complete their report forms. The 55-page booklets contained step-by-step instructions for completing each section of the standard report forms. These guides, together with cover letters and/or additional materials as listed below, were delivered in bulk, or were mailed directly from the Bureau's Jeffersonville, Ind., facility. The principal distributions were as follows:

Organization or agency	Number of copies	Content of mailing package
Agricultural Stabilization and Conservation Service	21,000	A20 guide, 78A20 or 78A20(L1) cover letter
Soil Conservation Service	5,000	A20 guide, 78A20 or 78A20(L1) cover letter
Cooperative Extension Service	4,625	A20 guide, 1978 Census of Agriculture brochure, 78A20 or 78A20(L1) cover letter
Farmers Home Administration	1,900	A20 guide, 1978 Census of Agriculture brochure, 78A20 or 78A20(L1) cover letter
Statistical Research Service	120	A20 guide, poster, 1978 Census of Agriculture brochure, 78A1(S) report form, <i>Factfinder</i> on Agricultural Statistics CFF No. 3 (Rev.), 78A20 or 78A20(L1) cover letter
Farm Credit Administration	3,800	A20 guide, poster, 78A20 or 78A20(L1) cover letter
High school, college, and university vocational agricultural departments	16,500	A20 guide, 78A1(S) report form, <i>Factfinder</i> on Agricultural Statistics CFF No. 3 (Rev.), 78A17 Lesson Plan, 78A17(L1) cover letter
Agricultural bankers	3,300	A20 guide, 78A20(L2) cover letter

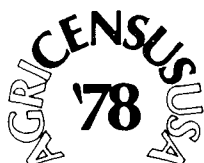
Agribusiness and Agricultural Organizations

Second only to the Federal and State Governments as users of census data is agriculture-related industry, hence the Bureau

Typical Drop-in Magazine Ads

It's Agriculture Census Time!

That's right, and a good Agriculture census will help all farmers. The Census Bureau will be contacting all farmers and ranchers by mail in January 1979 to measure the changes that have taken place since 1974. Only the census provides data on a comparable basis for counties in all States.



U.S. DEPARTMENT
OF COMMERCE
Bureau of the Census

Sound Decisions...



By the farming community—farmers, suppliers, banks—often depend upon data found only in the Census of Agriculture. Check your January mail for the streamlined 1978 report form.

U.S. DEPARTMENT
OF COMMERCE
Bureau of the Census



Missing Farm Facts Are Costly

Agriculture is a key business to America.

The decisions that are made need to be based on the best information possible. The purpose of the Census of Agriculture is to supply these facts.

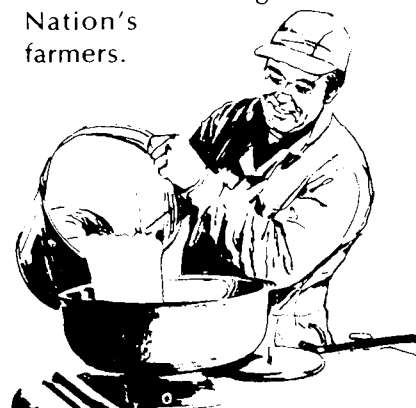
The 1978 Census of Agriculture will provide benchmark data useful to farmers and the farming community. It takes both farm and ranch operators and the Census Bureau to do the job right! Facts about individual farms and ranches are kept confidential. Only summary statistics are published.

U.S. DEPARTMENT
OF COMMERCE
Bureau of the Census

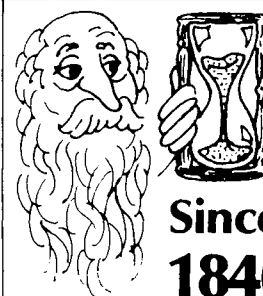


1978 AGRICULTURE CENSUS

Busy farmers will find the new agriculture census report much shorter and easier than the 1974 report form. Data for '78 are collected by mail early in '79. Since 1840, we've been serving the Nation's farmers.



U.S. DEPARTMENT
OF COMMERCE
Bureau of the Census



Since 1840... The Agriculture Census

The report form for the 21st Census of Agriculture will be mailed to the Nation's farmers in January 1979. Data are needed from all agricultural producers for this new chapter in the 140-year history of American agriculture.

U.S. DEPARTMENT
OF COMMERCE
Bureau of the Census



of the Census asked the assistance of those involved in agribusiness to help publicize the census. The informational materials sent to the news media, county agents, vocational-agriculture teachers, and others interested in the enumeration were also made available to representatives of agribusiness, either directly by the Bureau or through the USDA or other agencies. Agribusiness assistance included the insertion of census-related articles and ads in their media or publications and the distribution of census posters and brochures through their sales outlets and sales organization, as well as "word-of-mouth" encouragement.

Additional assistance in informing the public of the importance of the census was requested from many associations and organizations representing the broadest possible cross-section of the agriculture-oriented population and economy. Special slide programs were prepared and shown at 4H and Future Farms of America conventions, and members of these organizations, as well as representatives of colleges and universities, the Farm Credit Bank, Federal Land Grant Association, and the Production Credit Association, received copies of the census posters and other informational materials to distribute.

The associations and organizations that were represented on the Census Advisory Committee on Agriculture Statistics cooperated with the publicity program to the fullest extent possible, including publicizing the census through their own publicity resources and making representatives available for recorded and/or filmed interviews or statements supporting the enumeration. (See p. 7 for a list of member organizations.)

In addition, the following private organizations cooperated with the Bureau in the publicity campaign in various ways:

- American Agricultural Editors' Association
- American Association of Agricultural College Editors
- Agricultural Publishers' Association
- National Association of Farm Broadcasters (NAFB)
- National County Agents Association
- National Rural Electric Cooperative Association

The Federal Government is the largest single user of census data, and various Government agencies were called upon to help in publicizing the census. The largest user within the Federal Government, the Department of Agriculture, assisted the information campaign primarily through the following agencies:

- Agricultural Stabilization and Conservation Service
- Economics, Statistics, and Cooperatives Service
- Farmers Home Administration
- Forest Service
- Rural Electrification Administration
- Science and Education Administration
- Soil Conservation Service

PRINTING AND ADDRESSING REPORT FORMS

General Information

For the 1974 census, the majority of the report forms mailed to farm operators were self-mailing packages, with the recip-

ient's name and address printed on the cover, which served as the mailout wrapper. Separate mailing labels were used in the assembly of traditional mailout packages for special cases, such as for Alaska and Hawaii, for agricultural services establishments, and for the followup mailings. This was a major change in procedures compared to the 1969 census, and while it worked well enough, it was felt by Agriculture Division's census planning group that the new report forms designed for the 1978 enumeration would elicit a better rate of response if there was a reversion to the use of separate items in the package. In part, this was because the 1978 report forms were considerably shorter than the 1974 versions, and the change in the general format of the forms made the use of a booklet/mailling cover system less efficient. An additional consideration was the resemblance of the self-mailing forms to State and Federal tax forms; using the older system would avoid respondent confusion as well as the natural resistance of many people to most things reminiscent of tax collection forms.

Private contractors printed all of the census materials, assembled the mailing packages (except for those for special cases and Hawaii) according to Bureau specifications, and forwarded the packages and special materials to Jeffersonville. The Bureau staff at Jeffersonville added any special materials required to the mailing packages, and applied the address labels to the packages prior to the mailout.

Address Labels

The address labels for the initial and all followup mailings were printed by a private contractor using a computerized jet-imaging system. This process employed streams of computer-controlled ink droplets, directed onto a continuously moving length of paper, or in this case, a strip of labels. Alignment of the image was extremely precise, which was especially important for the 1978 labels because of the use of barcodes above the address on each label. The speed of the imaging could be controlled up to approximately 40,000 lines of characters per minute. The labels were printed, four addresses across, on pinned label stock for use in the Bureau's labeling machines.

Magnetic computer tapes containing the census address lists were prepared by the Bureau and were used by the contractor to produce the labels. By the end of May 1979, 208 tapes had been prepared and provided to the contractor for printing the labels for the initial and the followup mailings. The first delivery of approximately 1 million mailing labels for the initial mailout was made in late November 1978, with the remaining 3.5 million or so being delivered on a flow basis, in batches of about 250,000, over the following several weeks. After each followup mailing closeout date, which was always on a Tuesday, the Bureau updated the nonrespondent address file tapes within 24 hours, and sent them by courier to the contractor. New sets of address labels for nonrespondents were printed and ready for application by the Friday following the closeout.

Security of Census Address Files

The confidentiality requirements of the census law extend to protecting the Bureau's mailing address lists. This required that the computer tapes used in the production of the address

labels, and the labels themselves, be protected from any disclosure of individual addresses. To implement the confidentiality requirements, the label contractor's entire printing staff were deputized as temporary census agents, and thus made subject to the confidentiality provisions of title 13. The contractor also provided special facilities for the secure storage of the Bureau's address tapes, and one or more Bureau representatives were always present while the contractor was using the tapes to observe safeguards maintained during production of the address labels, storage of the tapes and labels prior to sending the latter to Jeffersonville, destruction of waste, etc. Bureau personnel were also responsible for unpacking the address tapes on their arrival at the contractor's plant, inspecting the tapes to verify their condition, and supervising the return of the tapes to the Bureau for erasure.

Printing, Assembling, and Addressing the Mailing Packages

Quantities—Three separate contractors printed and assembled the mailing packages for the 1978 Census of Agriculture. The approximate quantities of mailing packages for individual

agricultural operations specified in the contracts were as follows:

Form No.	Quantity ordered
Total.	4,433,000
74-A1(N).	3,300,000
74-A1(S) (yellow)	990,000
74-A1(S) (green)	135,000
74-A1(H).	8,000

Note: The A1(S) (green) was used for "must" cases; the A1(H) was a blue-green variant of the A1(S), used for Hawaii; the A1(S) (yellow) was used for all "certainty" cases, as well as for all non-certainty sample cases.

Quality control—The printing contractors were also responsible for assembling the mailout packages and shipping them to the Bureau's Jeffersonville facility. The specific contents of the packages to be mailed to individual agricultural operations were as given in table 3.

Table 3. Principal Contracts for Report Forms for Initial Data Collection Operations

Form No.	Description	Total quantity received	Delivery period	Contractor	Cost
78-A1(N) ¹	Agricultural production report form (non-sample), 4 pages, 20½" x 14" folded to 10¼" x 4 2/3", white writing sub. 100, printed in black ink on two sides with 90-percent coverage of 20-percent toned process blue.	6,100,000	Aug. 1978-Apr. 1979	Government Printing Office (GPO)	\$564,000
78-A1(S) ¹	Agricultural production report form (sample), 6 pages, 26" x 14" folded to 10¼" x 4 2/3", white writing sub. 100, printed in black ink on two sides with 90-percent coverage of 50-percent toned PMS yellow.	2,165,000	Aug. 1978-Apr. 1979	GPO	262,000
78-A1(H)	Agricultural production report form (Hawaii), 6 pages, 26" x 14" folded to 10¼" x 4 2/3", white writing sub. 100, with printing in black ink on two sides.	16,000	Oct. 1978-Apr. 1979	GPO	3,000
78-A1(S)	Agricultural production report form (for "must" and "certainty" cases), 6 pages, 26" x 14" folded to 10¼" x 4 2/3", white writing sub. 100, printed in black ink on two sides with 90-percent coverage of 50-percent toned green.	335,000	Aug. 1978-Apr. 1979	GPO	67,000
78-A1(PR) (SP)	Agricultural production report form (Puerto Rico), 4 pages, 21" x 16" folded to 10½" x 16"; salmon sub. 40, with printing in black ink on two sides (English version); white offset sub. 100, with printing in PMS reflex blue ink.	5,000 (English) 30,000 (Spanish)	April 1978	GPO	1,712.00

**Table 3. Principal Contracts for Report Forms for Initial
Data Collection Operations—Continued**

Form No.	Description	Total quantity received	Delivery period	Contractor	Cost
78-A1(VI)	Agricultural production report form (Virgin Islands), 2 pages, 20½" x 16", white offset sub. 100, printing in black ink on two sides.	1,200	June 1978	Dept. of	168.00
78-A1(G)	Agricultural production report form (Guam), 4 pages, 16" x 14" folded to 8" x 14", white offset sub. 100, printing in black ink on two sides.	4,000	March 1978	Commerce	478.00
78-A40A ¹	Agricultural services report form (soil preparation and crop services), 4 pages, 20½" x 14" folded to 10¼" x 14" white offset sub. 100, printed in black ink on two sides with 90-percent coverage in blue shading.	60,000 (original) 37,000 (file)	October 1978	GPO	5,947.00
78-A40B ¹	Agricultural services report form (veterinary and animal services), specifications same as above except 90-percent coverage in PMS red shading.	180,000 (original) 110,000 (file)	September 1978	GPO	13,815.00
78-A40B	Reprint	50,000	March 1979	GPO	2,193.00
78-A4C ¹	Agricultural services report form (landscape and horticultural services), specifications same as above except 90-percent coverage in salmon shading.	293,000 (original) 180,000 (file)	September 1978	GPO	35,595.00
78-A40D ¹	Agricultural services report form (combined form), specifications same as above except 90-percent coverage in purple shading	67,000 (original) 35,000 (file)	October 1978	GPO	6,591.00
78-A40D	Reprint	100,000	Jan.-Feb. 1979	GPO	5,513.00
78-A60	Census of Irrigation data collection form (single-basin organizations), 4 pages, 21" x 17" folded to 10½" x 8½", white offset sub. 100, printed in black ink on two sides with 90-percent coverage in 20-percent toned process blue.	20,000 (original) 17,000 (file)	November 1978	GPO	2,969.00
78-A60A	Same as 78-A60 except shaded in 70-percent tone PMS 102 yellow.	2,000 (original) 2,000 (file)	November 1978	Commerce	562.00
78-A61	Census of Irrigation data collection form (multi-basin organizations), 4 pages, 21" x 17" folded to 10½" x 8½", white offset sub. 100, printed in black ink on two sides with 90-percent coverage of 20-percent toned PMS 361 green.	1,500 (original) 1,000 (file)	October 1978	Commerce	456.00

¹ Contracts were for sets of materials for mailing packages including originals, file copies, instruction sheet, and transmittal letter. Form descriptions apply to "originals"; the file copies were similar but were usually shaded in gray.

Upon receipt in Jeffersonville, the mailing packages were submitted to a quality control check. Fifteen mailing packages were randomly selected from the first carton of each type of packages (each carton contained 275-325 packages), and from every fifth carton thereafter of each shipment, and were

inspected using a balance scale. If a package was out of balance, it was opened and the contents were inspected. In addition to the balance scale, every 100th sample package was opened and the contents were inspected to verify the order of insertion. Any package that was incomplete, or in which the contents

had been inserted in the wrong order, or in which the label area did not show through the open window of the mailout envelope, was considered defective and the entire carton from which it has been drawn was temporarily rejected. All of the packages in each rejected carton were inspected until 100 consecutive error-free packages were found, at which time it was returned to the preparation cycle.

Hawaii and Alaska—The mailing packages for Hawaii were assembled at Jeffersonville, rather than by a private contractor, but were essentially identical in content to the 78-A1(S) sample packages except that the report form 78-A1(H) and 78-A1(H)I information sheet were substituted for the standard sample forms. The packages for Alaska were also assembled at Jeffersonville, and were standard sample packages except that they, like the Hawaiian packages, were mailed with first-class postage.

Multiunits and Abnormals—While the assembly of single-unit mailing packages was fairly simple, multiunits and abnormal operations required special handling. For multiunits, Bureau headquarters provided the Jeffersonville staff with (a) two pressure-sensitive master address labels—one for the outgoing envelope or carton, and one for a folder in which all the materials for each case could be assembled; and (b) a set of three-bank multiunit master and plant labels—two copies for Jeffersonville, one for the Agriculture Division file, and one for the Agriculture Services Branch file. Plant labels, in alpha plant-number sequence, were also included (Cheshire labels for regular agriculture report forms and pressure-sensitive labels for agricultural services and Hawaiian forms). Two copies of a control sheet, one for the main file at Suitland and one for insertion in the appropriate folder, were generated by computer for each company.

Private contractors prestuffed the mailing envelopes for regular agriculture operations, which the Jeffersonville staff then assembled into multiunit packages. Address labels were

applied to individual plant packages (in which a revised version of the A2 brochure was substituted for the regular A2, and the A8 return envelope replaced the A7) and the packages were inserted in the appropriate company folders.

When all the materials for one company had been collected in its folder, the contents of the folder, except for the control sheet, were placed in an outgoing envelope or carton, which was labeled and left unsealed for quality-control inspection.

The packages for "abnormal" farms (i.e., institutional farms, grazing associations, experimental stations, etc.) were assembled at Jeffersonville. The packages contents were similar to those for "must" cases, except that the A24 instruction sheet was used in addition to the A1(I).

Labeling—Upon receipt in Jeffersonville the address labels were sorted by the type of form to which they were to be applied (A1(N), A1(S) "yellow" (excluding Alaska), and A1(S) "green"), then sorted by ZIP code within form type and split as follows:

1. Five-digit ZIP code with 150 or more cases
2. Multi-ZIP coded cities with 10 or more cases
3. Three-digit ZIP codes with 10 or more cases
4. All other cases

The labels for multiunits, abnormals, and other cases requiring special handling were applied manually, using pressure-sensitive labels. However, the vast majority of the census packages—over 4 million in all—were labeled by machine. Each single-unit package was addressed by applying the appropriate label mechanically onto the A1(S) or A1(N) form through the window of the mailout envelope. Four labeling machines at Jeffersonville performed this function at the rate of 10,000 addresses per hour each. The initial mailout operations took place between late December 1978 and mid-January 1979. For details of the mailout phase of the census, see chapter 4.

Table 4. Package Contents

Type of package	Outgoing envelope	Report form	File copy	Information sheet	Return envelope	Brochure	Cover letter
Nonsample	78-A7 (B) (3rd class)	78-A1 (N) "blue"	78-A1 (N) "brown"	78-A1 (I)	78-A8	78-A2	78-A1 (L1)
Sample -Must	78-7 (A) (1st class) or 78-A7 (B) (3rd class)	78-A1 (S) "green"	78-A1 (S) "brown"	78-A1 (I)	78-A8	78-A2	78-A1 (L1)
-Other	78-A7 (A) (1st class) or 78-A7 (B) (3rd class)	78-A1 (S) "yellow"	78-A1 (S) "brown"	78-A1 (I)	78-A8	78-A2	78-A1 (L1)
Hawaii	78-A7 (A) (1st class)	78-A1 (H) "blue-green"	78-A1 (H) "brown"	78-A1(H)I	78-A8	78-A8	78-A1 (L1)

Note: Contents are inserted in the order listed except for the A1 (S) "yellow" sample packages, in which the information sheet and return envelope were in reverse order. First-class postage was used for "abnormal" farms, Alaska, Hawaii, and multiunits.

Data Collection and Processing

INTRODUCTION

Once the planning and preparations for a census have been completed, there remains the enumeration itself, and the processing and publication of the data acquired. The data-collection phase of the 1978 Census of Agriculture involved extensive mail and telephone activities from January through November 1979. In addition, door-to-door canvass techniques were used in a sample survey of agricultural operations taken during the last 3 months of 1978.

The data-collection forms were processed and the data prepared for tabulation on a flow basis as the materials were returned to the Bureau by respondents. The processing involved (1) a clerical phase, in which the individual report forms were sorted, reviewed, edited, and the data prepared for computer processing, and (2) a computer phase, during which the Bureau's computers were used to perform certain edits of the data, impute for selected nonrespondent addresses and/or items, and tabulate the results.

DATA COLLECTION

General Information

Most of the data-collection operations associated with the 1978 Census of Agriculture were carried out by the Bureau's Jeffersonville office, with the close supervision and cooperation of the Agriculture Division. The data-collection effort comprised an initial mailout of report forms in December 1978, a subsequent mailing of reminder letters at the end of January 1979, and six followup mailings to nonrespondent addresses that began about 2 months after the initial mailout date, and were carried out at about 1-month intervals thereafter. The second, fourth, and sixth followup mailings involved sending complete sets of report forms and additional materials to nonrespondents, while the remaining three mailings were of letters requesting response, pointing out the uses of the census data, and reminding addressees of the legal requirement for response to the census.

A telephone followup operation was also used, beginning in April 1979. Selected large nonresponse cases ("must" and some "certainty" cases) were turned over to a telephone staff for enumeration, (See p. 36 for details.)

An area sample survey, designed to supplement the data collected by the mail operation, was also part of the census.

Some 6,400 area segments were selected for the survey and were canvassed by the Bureau's field staff in the last 3 months of 1978. The enumerators completed an A1(A) (similar to the A1(S)) report form for each person having any agricultural operations. Respondents to the sample survey were not required to complete a mail census form, and were given identifying stickers to use on the report forms if they received materials from the initial or any followup mailing. The names and addresses of area-sample respondents were matched to the census mailing list. Those not found on the list were tabulated separately and were used to make estimates, at the State level, of the number and characteristics of farms not on the mailing list. These estimates were included in the published State totals. (The area sample survey is described in more detail below.)

Initial and Supplemental Mailouts

General information—The initial mailout for the 1978 Census of Agriculture embraced first-time mailings to any address designated to receive an A1(N) or A1(S) report form and involved over 4.2 million addresses. (The primary mailing operation for the census also included agricultural services cases, which are discussed in chapter 6.) There were also a series of supplemental mailings to cases added to the census file after the "final" address list had been compiled and mailings were underway. The components of the initial and the supplemental initial mailings were as follows:

1. The principal mailing to the addresses on the "final" census mailing address list, involving 4,240,733 report forms, released to the Postal Service in the last 2 weeks of December 1978.
2. A supplemental mailing of 132,486 report forms in early February 1979 to addresses withdrawn as problem cases from the regular address list during the final unduplication of the list. (Problem cases were identified as those without a standard name and address or ZIP code.)
3. An additional 56,414 cases mailed from February to August 1979, on a flow basis. These cases were drawn from—
 - a. Special lists, especially for broilers and worms, received too late to be included on the address list.
 - b. Tenant/successor adds: i.e., successors and large tenants reported on the 1978 report forms which were not included in the census address list.

- c. Responses to the 78A25 "Were You Counted?" form printed in rural newspapers and farm periodicals as part of the census publicity campaign.
- d. A supplement to the Hawaii mailing file, consisting of cases believed to be associated with agriculture but not included in previous mailings.

The bulk of the mailing operations were handled by Jeffersonville, although report forms for abnormal farms were sent directly from the Suitland headquarters. The mailouts were done on a flow basis with first-class postage for Alaska, Hawaii, abnormal farms, and multiunits. The remaining packages were sent by third-class bulk rate. The supplemental mailings in February 1979 were sent by third-class postage, and other miscellaneous first-time mailouts were sent first-class.

The basic characteristics of the initial December mailout for the agricultural census were as shown below.

Supplemental mailings—The supplemental list mailing packages sent to the additional special list cases were similar to the sample and nonsample packages used in the initial and February mailings, except the A7(A) first-class postage outgoing envelope was used and the A52(F) informational flyer was inserted in all packages.

Tenant/successor add cases' packages were identical to those for sample cases except that the labels carried a special list code identification number (98).

The contents of the packages for the Hawaii supplemental mailing varied considerably from that of the initial Hawaii mail-out, and consisted of a BC-1266 return envelope and the report form 78-A48(S). The A48(S) form was a composite 4-page form containing a cover letter (p. 1), a short questionnaire (pp. 2-3), and excerpts from title 13, United States Code, covering authority for the conduct of the census of agriculture and the legal requirements for response.

Followup Mailings

General—The agricultural census mail file (excluding multiunits) was divided into four segments to distribute the followup and mail-receipt workloads, as follows:

Group

- 1 Sample forms, Alaska, Hawaii
- 2 Nonsample forms for geographic divisions 5 through 9 (the Southern and Western States)
- 3 Nonsample forms for geographic divisions 1 through 4 (New England, the Middle Atlantic, and all the North Central States)
- 4 Agriculture supplement (the February supplement plus special-list supplement).

All six of the followup mailings were carried out on a flow basis with groups 1-3 mailed during each of three consecutive

1978 CENSUS OF AGRICULTURE INITIAL MAILOUT

Type	Form color	Quantity ¹		Form code	Other	Mail	Comments
		Initial	February supplement				
Agriculture single units (except services)		4,232,731	132,486				
Non-sample form 78-A1 (N)	Blue	3,140,189	98,227	1N		3rd	
Sample form 78-A1 (S)							
Must (excluding Abnormals)	Green	124,908	3,871	1S1	"Must" flag present (***)	3rd	
Alaska	Yellow	1,294	60	1S2	First two digits of CFN = 94	1st	First two digits of CFN = State code
Other than Alaska	Yellow	957,740	30,111	1S2, 1S3		3rd	
Hawaii form 78-A1(H)	Blue-green	6,331	217	1H	First two digits CFN = 95	1st	First two digits of CFN = State code
Abnormal farms 78-A1(S)	"Must" green	2,269		1S1	Mail size = 14	1st	Mailed in Suitland
Multiunits		5,523 (pkgs.)				1st	
Sample forms 78-A1(S)	"Must" green	7,855		1S1	Alpha plant number and mail size = 15		
Hawaii form 78-A1(H)	Blue-green	147		1H	Alpha plant number and mail size = 15		First two digits of CFN = 95 = State code

¹ Excludes tenant/successor adds, special lists supplement, and other forms mailed March-August 1979.

weeks and group 4 a few weeks later. The closeout for each followup was usually on a Tuesday, with mailing beginning on the following Friday or Saturday. For followups that included a report form (2nd, 4th, and 6th), barcoded address labels were used, while nonbarcoded labels were used for followups involving only letters.

Reminder letter mailout—The requested response date for the 1978 Census of Agriculture was February 15, 1979. A letter was sent to all single-unit cases (excluding abnormal farms) in the initial mailouts that were still nonrespondent by the third week in January, reminding them of the upcoming due date. January 23 was the date chosen as the cutoff point for selecting non-response cases from the census mail file, and computer tapes listing cases still outstanding on that date were prepared for use by the label contractor to produce a set of address labels for the reminder mailing.

The mailing packages for the reminder letter mailout consisted only of the 78-A1(L2) or 78-A1(L2A) letters (the L2A was sent to nonrespondents in division 8 (the Mountain States and California)) and the outgoing envelopes; these were mechanically assembled at Jeffersonville. Mailout, on a flow basis as packages were labeled, was finished about 2 weeks after the January 23 closeout date. Closeout dates, contents of the packages, and the number of packages sent out in the "reminder" mailing were as follows:

Group	Closeout date	Form	Letter	Quantity mailed
Total . . .				3,126,717
1-3	1/23/79	78-A1 (L2) 78-A1(L2A)	78-A21 78-A21	2,762,772 276,391
4	3/20/79	78-A1 (L3)	78-A21	87,554

First followup—The first of the regular followup mailings began in late February and continued into the second week of April. Once again, the packages consisted only of letters requesting prompt response, although more specialized letters were used for nonrespondent multiunits. The characteristics of the principal followup mailing to single-unit nonrespondents were as follows:

Group	Closeout date	Letter	Outgoing envelope	Quantity mailed
Total . . .				1,842,218
1	2/20/79	78-A1 (L3) 78-A1(L4)S	78-A21	498,264
2	2/27/79			716,987
3	3/6/79			536,501
4	4/10/79			90,466

The multiunit followup mailings were carried out on a flow basis during the first week of March. A total of 2,789 company packages were mailed, 2,518 to nonrespondent multiunits, and

271 to multiunits from which only a partial response had been received. The 78-A21 outgoing envelope was used for multi-unit mailings as well as for single units. Two special letters were employed—the 78-A80-L1 for companies with only a single plant and the 78-A81-L1 for those with more than one plant—in the initial mailing.

A total of 671 78-A1(L3) followup letters were mailed in mid-March from the Suitland headquarters to nonrespondent abnormal farms.

Second followup—The second mail followup was the first of three that involved remailing report forms to nonrespondent cases. As was the case for the initial mailout, a private contractor printed and assembled the mailing packages for single-unit operations. The content of the individual single-unit packages was similar to that used in the initial mailout, except that new followup letters (78-A1-L4 for groups 1-3, and 78-A1-L5(S) for the group-4 addresses) were substituted for the A1(L) transmittal letters used earlier, and file copies of the report forms were included in packages for group-4 addresses only.

The quality control of the mailing packages was similar to that for the initial mailout (see chapter 3). Packages for Alaska and Hawaii, abnormal farms, multiunits, and for addresses in group 4 were mailed using first-class postage; all other packages were sent third class. As before, closeout and mailings for the followup were spread over several weeks. Immediately after each closeout date, nonrespondent addresses were selected from the mail file and a new "delinquent case" file was produced and used to print address labels. The mailout generally began within 3 days of the closeout date and continued, on a flow basis, as long as necessary. The basic characteristics of the second followup mailing, by groups, were as follows:

Group	Closeout date	Report form	Quantity mailed
Total			1,563,837
1	3/13/79	78-A1(S) 78-A1(H)	424,809
2	3/20/79	78-A1(N)	603,403
3	3/27/79	78-A1(N)	469,689
4	5/1/79	78-A1(N), 78-A1(S), and 78-A1(H)	65,936

Packages for approximately 1,900 totally or partially non-respondent multiunit companies were mailed in the first week of April. The contents of the packages were similar to those sent in the initial mailing, except that form letters 78-A80-L2 or 78-A81-L2 were substituted for the original transmittal letters. The second followup to nonrespondent abnormal farms was carried out from Suitland in the middle of April, when 585 packages, each containing a report form (78-A1(S) "Must" (green)) and a 78-A1(L4) letter, were mailed.

Third followup—The third followup was, again, only a letter to nonrespondents. The nonrespondent address list and the mailing

labels were produced in the standard way, and mailout was completed, usually, about a week after each closeout date. Details of the mailout, by group, are given below:

Group	Closeout date	Letter	Quantity mailed
Total			1,341,741
1	4/3/79	78-A1-L5	359,473
2	4/10/79		512,924
3	4/17/79		412,957
4	5/22/79	78-A1-L6(S)	56,387

The third followup mailing to multiunits, in the first week of May, involved the use of only a single form letter, the 78-A80-L3, sent to approximately 1,600 totally or partially non-respondent companies.

The third followup also included the establishment of a file for the telephone followup. After the closeout date for group 3 (4/17/79), approximately 43,000 addresses for large non-respondent single-unit operations were extracted from the mail file and turned over to a telephone followup staff in Jeffersonville for enumeration. These addresses were not deleted from the mail followups until some response was obtained, so that if an operation had not been enumerated by telephone, or had not returned a completed report form by mail in time for the fourth followup cutoff date, it was included in the followup mailing. (For details of the telephone followup operation, see p. 36.)

Special April followup—By the beginning of April, the overall response rate to the census had reached 66 percent. This was considered very good, on the whole, but a significant number of individual counties had much lower rates, some as much as 10 points below the national average. In order to obtain an acceptable response rate for all counties, it was decided to mount a supplementary followup effort to nonrespondents in the 300 counties across the Nation with the lowest response rates as of the middle of April. A special followup letter was prepared, the 78-A1-L8, which used simpler language than the other transmittal letters and offered assistance in completing the census report forms. The mailing packages were assembled and labeled in Jeffersonville, and were mailed by first-class postage to 217,723 addresses during the last week of April.

Fourth followup—The fourth followup was the second that included the report forms and instructional materials. Once again, a private contractor printed all the materials and assembled the mailing packages. The packages were delivered to Jeffersonville, where they were subjected to the usual quality control procedures before being labeled for mailing. The contents of the packages were similar to the second followup, except for the use of new transmittal letters (78-A1-L6 for addresses in groups 1-3, and 78-A1-L7(S) for group 4). The mailout was as follows:

Group	Closeout date	Letter	Outgoing envelope	Quantity mailed
Total				1,053,611
1	4/24/79	78-A1(S) 78-A1(H)	78-A1(L6)	274,455
2	5/1/79	78-A1(N)		411,509
3	5/8/79	78-A1(N)	78-A1-L7(S)	324,902
4	6/19/79	78-A1(S) 78-A1(N) 78-A1(H)		42,745

Fifth followup—The fifth followup consisted of the form 78-A1-L7 letter, sent by first-class postage to approximately 855,000 nonrespondent addresses. All mailing packages were assembled and mailed from Jeffersonville. The particulars of the mailing were as follows:

Group	Closeout date	Letter	Quantity mailed
Total			854,370
1	5/22/79	78-A1-L7	222,012
2	5/29/79		338,160
3	6/5/79		257,794
4	7/10/79		36,404

The mailouts to each group were carried out in the week immediately following the closeout dates.

Sixth followup—The sixth followup included the complete package—report form, information sheet, return envelope, the 78-A2 census brochure (urging response and explaining and need for census data), and the 78-A1-L10 transmittal letter. The contractor printed all of the materials, prestuffed the mailing packages, and delivered them to Jeffersonville, where the packages were subjected to the standard quality-control procedures. The mailout was carried out on a flow basis, as follows:

Group	Closeout date	Form	Letter	Quantity mailed
Total				673,033
1	6/19/79	A1(S) A1(H)	78-A1-L10	166,836
2	6/26/79	78-A1(N)		270,192
3	7/3/79	78-A1(N)		205,931
4	8/2/79	78-A1(S), 78-A1(H) 78-A1(N)		30,074

All mailout packages were sent by first-class postage.

Tenant/successor followup mailing—The initial mailout to tenant/successor cases identified during the census processing began in February 1979. Mailings of complete packages to these cases were carried out on a flow basis by the Jeffersonville correspondence unit. Closeout for response to the initial mailings was set for June 4, at which time a list of nonrespondent cases was generated by computer and was used to produce a set of address labels. The followup package for tenant/successor nonrespondents consisted of the 78-A21 outgoing first-class envelope and the 78-A1-L6(S) followup letter. The mailing packages were prepared at Jeffersonville and were mailed to 6,922 nonrespondent addresses during the week following June 6. There was no additional followup for tenant/successor cases, although mailouts of initial census mailing packages to newly identified tenants and successors (there were only a handful of such cases) continued until the first week of August.

Hawaiian followup—The Hawaiian supplemental mailout to some 1,565 addresses not included in previous census mailings was carried out in the week of July 30. At this time, a seventh followup was made to regular Hawaiian nonrespondent cases not included in group 4. The mailing packages were the same as were used for the supplemental mailout, and were sent to the 678 nonrespondent cases in the Hawaiian file.

TELEPHONE FOLLOWUP

General Information

A telephone followup unit was established at the Bureau's Jeffersonville office to supplement the mail data-collection effort. The unit had three major functions: (1) to provide assistance to respondents calling in with questions about the census report form; (2) to verify inconsistent data reported on the forms, and to obtain missing data to resolve problem referral cases; and (3) to secure completed report forms from selected nonresponse cases. The specific cases referred to the unit included data referrals from the technical review staff, area-sample survey referrals and no-one-at-home (NOH) cases, nonrespondents in counties with low response rates, and selected nonrespondent large and multiunit operations. The unit also obtained additional information from nonmatched area-sample survey cases that might aid in matching them to the census mail list, and followed up delinquent agricultural services cases.

Telephone Followup Staff

The Bureau's Jeffersonville office included a staff and facilities to carry on various telephone operations. The telephone unit for the 1978 Census of Agriculture was established in December 1978, initially to handle incoming calls, and was expanded to carry out the telephone followup operation that was to begin in April 1979. Forty wide-area telecommunications system (WATS) lines were reserved specifically for interviews, while non-WATS lines were used for telephone-numbers research. Subject-matter specialists from the Agriculture Division and representatives of the American Telephone & Telegraph Company conducted interviewer training periodically during the period of February through April 1979.

Initially, the telephone staff consisted of only 10 supervisors, assigned in December 1978. Clerks began joining the staff in early January to handle incoming calls, and more were added as preparations for the telephone followup itself progressed. By April, the telephone staff for the agriculture census numbered 120 persons, split about equally into two shifts. The maximum staff strength of 130 was reached 3 months later (in July), but the number decreased rapidly each month thereafter, with only 11 members left by December 1979, by which time the telephone followup operation was essentially complete.

At first, the staff was divided into two shifts, each with two working units—a telephone control unit and an interview staff. However, this arrangement was soon changed to one in which a control unit was operational only during the day shift. Interviewers sometimes did telephone-numbers research on a rotational basis during each shift, but the night shift performed most of this function.

Telephone Operations

Work assignments—Two basic types of work assignments were made to the telephone unit for outgoing calls—problem referrals and nonresponse cases. Problem cases were referred to the telephone staff from the technical review and correspondence processing units beginning in early January 1979, while nonresponse cases were selected in April 1979 from the census mailing list and were, at first, limited to large farming operations. The "large" designation generally included operations believed to have had \$100,000 or more in total sales for 1978 and/or had 1,000 or 5,000 acres or more of land (depending on which State was involved). In late May, the sales requirement was lowered to \$40,000 in New England and \$80,000 in other States, and this increased the workload of the telephone followup significantly. In September, a further increment to the workload was made when a number of nonrespondent addresses with expected sales below \$80,000 in some 60 counties with response rates of less than 75 percent were turned over to the telephone unit for followup.

Subject-matter specialists from the Agriculture Division and the Jeffersonville staff were available to provide guidance and handle special problems. Members of the professional staff at Jeffersonville or from the Bureau's Suitland office supervised the telephone operation, and checked interviewers' work to verify that the data obtained were consistent and reasonable.

The control unit—Incoming cases for telephone contact were routed through the telephone control unit, which sorted the cases by State and then by group interview type (GIT), as follows:

GIT	Characteristics
1	Nonresponse; \$500,000 or more in expected sales
2	Nonresponse; \$100,000-\$499,000 in expected sales
3	Nonresponse; less than \$100,000 in expected sales, if acres exceeded 1,000
4	Nonresponse; "non-large" cases assigned by Agriculture Division

GIT	Characteristics—Con.
5	Jeffersonville "large" referral cases
6	Jeffersonville "non-large" referral cases
7	Congressional and refusal cases

All cases in GIT 1 (about 8,000 in all) were pulled from the telephone unit file and were sent to Suitland for followup by the Agriculture Division staff. The remaining cases were batched into work units of approximately 50 report forms each. (GIT 7 cases were given special handling in conformance with Agriculture Division staff instructions.) A form A82 Master Telephone Record Control Label was attached to each case or report form showing the GIT. An A410 Work Unit Control Form was then attached to each work unit and the work unit number was assigned. The work unit control number for each CFN in the unit then was posted to a master control log that included the CFN, name and address, and telephone number (if available) for each nonresponse case. This log recorded the status of each case from the time it was placed into a work unit until it left the telephone unit or was designated as "satisfied" by mail receipt or by the check-in status listing generated weekly by computer.

The telephone interviewer unit—The telephone interviewer unit performed two functions: (1) obtaining telephone numbers for nonresponse cases, and (2) carrying out telephone interviews to enumerate those cases. The interviewer unit used 40 WATS lines (with 60 telephone instruments) on a 2-shift-a-day schedule. Work units were distributed to the interview staff by WATS band (the WATS system was divided into colored "bands" designating the geographic region of the country covered by that "band") and State to ensure the most efficient use of the system. The staff was divided into four subunits, each using 15 instruments with access to the WATS lines and the Federal Telecommunications System (FTS). Initially, work units were referred to the interviewer unit for telephone numbers research, and the members of the staff checked local directories or information operators to try to obtain a telephone number. If a number was found, it was entered in the appropriate spaces on the A82 label; if none could be found, the fact was noted on the label before the work unit was returned to the control unit for assignment to individual interviewers.

Once telephone numbers research was completed, the work unit was assigned to the interviewer staff. The procedures for disposition of the various kinds of cases identified during the telephone nonrespondents followup operations were as follows:

1. Mail receipt. All cases indicated as received by mail on the weekly "alert" check-in status listing were pulled from the telephone unit file and such action was noted in the master control log.
2. In scope, completed report form. The form was completed using data obtained by telephone interview and was forwarded to the control unit, which annotated its control log accordingly and sent the form to batch for check-in.
3. Out of scope. Out-of-scope cases were noted on the control log and were referred to the coverage unit after check in.

4. Agricultural services cases. Agricultural services cases were referred to the agricultural services technical review unit.
5. Respondent claimed to have filed (Claims Filed). The interviewer attempted to obtain a CFN and the name and address on the report form supposedly completed by the respondent, and the case was referred to the microfilm mail list research team assigned to the telephone unit to verify the claim. If the claim could not be verified, the case was returned, with appropriate evidence of research, for telephone enumeration.
6. Respondent requested blank report form (Remail). If the respondent refused to give information over the telephone, but indicated the need for another form to fill out, the correct name and address were obtained and the case was referred to the correspondence unit for mailing.
7. Respondent promised to file (Will File). The date of the call and the nature of the conversation were entered on the control label and the case was placed in the suspense file in the control unit. If, after 2 weeks, the "alert" check-in status listing indicated the case was still unsatisfied, it was recycled through the telephone interviewing operation.
8. Respondent refused to give any information. The date of the refusal, the name of the person contacted, and the initials of the interviewer involved were noted on the control label. A second attempt, by a different interviewer, was made at a later date. If the subject still refused to provide the information, the details of the second call were noted on the control label and the case was checked against the microfilm mailout and current-status lists to determine if it had been otherwise resolved. If not, an analyst reviewed the case for possible special mail followup as a two-time telephone refusal. The annotated report form then was placed into the control unit's suspense file for completion by secondary sources as noted below.
9. No answer when called. After the fourth try (two attempts on each shift) the telephone number was researched again to verify that it was the correct number for the case. If it was, the control label was annotated with "N/A final try, Number Verified" and the case was placed in the work unit suspense file.
10. No listing. Cases for which no telephone numbers could be found were held in the control unit's suspense file.

Problem referral cases resolved by telephone were returned to the originating unit. Resolution often was delayed because respondents were not at home and had to be called back one or more times. Referral cases that were not resolved after several attempts at different times and days were returned to the originating unit for analyst's review.

As nonresponse cases were completed, they were sent to the check-in unit, and thereafter followed the normal processing program. Cases that had not, for whatever reason, been completed, but were known to be in scope, were usually edited by an analyst using information obtained from one or more secondary sources of data. The most important source of such data was the Agriculture Stabilization and Conservation Service (ASCS) of the USDA, which has offices in every State as well as some 2,700 county and consolidated county offices. Several

other offices of the USDA, notably the Soil Conservation Service (SCS), the Extension Service (ES), and the Farmers Home Administration (FmHA) were also major sources of data for nonrespondent farms. None of these offices or agencies of USDA has any legal obligation to provide the requested information, but since the census data are of extreme importance in formulation of USDA estimates and Government-wide agricultural policies, full cooperation was extended to the Bureau.

Results

Between January and the end of November 1979, a total of 172,217 delinquent and problem cases were referred to the telephone unit. Of this number, 29,532 were ultimately resolved by mail, 103,503 farm operators were interviewed and their report forms completed by telephone, and 32,558 more cases were completed by telephone contact with secondary sources of information. In addition, 11,447 incoming calls from respondents seeking assistance were handled (most of these occurred during the period January through May 1970).

CITRUS GROWERS

Background Information

Reports for selected citrus caretakers in Arizona, Florida, and Texas were obtained for the 1978 census by direct field enumeration. This special procedure has been used in recent censuses because of the difficulty in identifying and enumerating absentee grove owners who frequently do not have the information available that is needed to adequately complete the report form. Owners often employ "caretakers" for their groves (a citrus caretaker is an organization or individual caring for, supervising, or managing citrus groves for the owners). These caretakers are the most reliable sources of census information. Individual caretakers' operations may vary considerably: some are responsible for the entire management and care of the groves, while others perform only selected grove work; few do the harvesting.

The 1964 Census of Agriculture was the first to include a special field operation to collect data from citrus caretakers in Florida in order to improve coverage of the groves. A report form was completed for each caretaker, who was also asked to provide a list of grove owners' names and addresses and the number of acres owned by each. The names and addresses of grove owners were matched to the file of completed census report forms to eliminate possible duplication.

For the 1969 census, direct enumeration of the citrus caretakers was continued, despite the change to a mailout/mailback procedure for the general enumeration. In the 1974 census, the direct enumeration technique was extended to citrus operations in Texas, as well as in Florida. Caretakers were enumerated in May 1974 in Texas and in August and September 1974 in Florida, since these were the periods when workload in the groves was lightest and information from the bloom of 1973 would be available.

1978 Enumeration

The field enumeration of citrus caretakers for 1978 was further expanded to cover not only Florida and Texas, but

Arizona as well. Staff personnel from the Bureau's Suitland headquarters carried out the enumeration in Texas in June 1978, and in Florida and Arizona in September and October 1978. For the 1969 and 1974 censuses, only the A1 agricultural questionnaire had been completed for each caretaker, but for 1978, both the 78-A1 (for citrus operations only) and the appropriate version, or versions, of the 78-A40 agricultural services report form were completed by interviewers wherever required. In order to prevent duplication of coverage, each caretaker was given a "caretaker number" and was asked to contact his or her grove owners and inform them that they should mark "citrus reported by caretaker # " on any report forms they might receive, but to be sure to supply the requested data for any other agricultural operations they might have. In order to eliminate possible duplication, the list of owners' names and addresses supplied by each caretaker was matched to the "status report list" of the regular census. Where duplicate reports were identified, the owners' citrus data were deleted from the file.

In all, 135 caretakers were enumerated in the three States covered by the special citrus enumeration effort, accounting for about 8,400 grove owners, three-quarters of whom (about 6,600) owned groves in Florida.

1978 CENSUS OF AGRICULTURE AREA SAMPLE

Background

Prior to 1969, agricultural censuses were conducted primarily through a field canvass of rural areas. In 1969, the Bureau adopted the "mailout/mailback" methodology, which, in effect, asked agricultural operators to enumerate themselves. Before each mail census, the Bureau constructed an address list of persons or businesses associated with agriculture, using as sources the administrative records of the Internal Revenue Service (IRS), the U.S. Department of Agriculture (USDA), and other Government agencies and agriculture-related associations and organizations. The source lists were combined, identifiable duplicate addresses were deleted, and the remaining names and addresses became the mailing list for the census and were sent report forms to be completed and returned.

The Bureau has routinely conducted coverage evaluations of the census of agriculture since 1945. These have indicated that neither the field enumeration nor the mail census technique has been able to attain complete coverage of agricultural operations. The percentage estimates of undercoverage in agriculture censuses over the past 25 years are as follows:

Item	1954	1959	1964	1969	1974
Number of farms . .	8.1	8.4	11.3	15.0	¹ 10.7
Land in farms	5.4	6.0	6.1	9.1	7.4
Value of products. .	(NA)	(NA)	2.9	² 3.3	² 2.9

NA Not available.

¹ The farm definition was changed in 1974. The estimated net undercoverage of number of farms by the 1959-1969 definition was 14.3 percent.

² Estimated value of products for missed farms only.

A primary goal in the planning for every census has been to improve coverage. When it became apparent that coverage in the 1974 census was little better than obtained for 1969, the Bureau proposed to supplement the 1978 mailing list with a direct-enumeration area-sample survey, large enough to produce reliable estimates for States, for farms not on the mailing list.

Results from the 1970 Census of Population and Housing indicated that approximately 75 percent of all households were in urban areas (primarily places with 2,500 or more population) but only 7 percent of persons classified as farmers and farm managers lived in these areas. Thus, a sample of rural areas would exclude most households while including 93 percent of farmers and farm managers. This idea was further substantiated by the 1974 Census of Agriculture, which indicated that about 80 percent of all farmers lived on the farm operated and another 9 percent lived off the farm operated but in a rural area. It was decided, therefore, to select the area sample only from rural areas, and to use a supplement to the 1978 Annual Housing Survey to provide an estimate of farm operators living in urban areas.

Sample Selection

Sample design and sampling unit—The design used for the 1978 sample survey was a stratified one-stage area-segment sample. The sample unit was a defined geographic area of land, the area segment, which could vary in geographic size and in the total number of housing units and/or farms it contained, depending on the stratum to which it was assigned. Within each stratum, the area segments were so drawn as to have approximately equal numbers of farms. A farm operator and the associated farm (or farms) would be uniquely identified within a single area segment.

Stratification and sample selection—The sampling frame for the area-sample survey in each State was the list of all enumeration districts (ED's) and block groups (equivalent of ED's in city areas where data were tabulated by block) from the 1970 Census of Population and Housing. This list contained ED identification and geographic and administrative codes from the 1970 census, together with data on population, housing units, number of farmers and farm managers, and number of farm laborers and foremen as reported in the 1970 census. These data were used to estimate the number of farms (the larger of the counts of farmers and farm managers or rural farm housing units) and to calculate farm density (the ratio of farms to housing units) in each ED. ED's then were assigned to one of six strata, based on the estimated farm density. The number of farms and housing units assigned to any area segment was also a function of farm density in the ED. The six strata are defined below:

Stratum	Estimated farm density	Segment size	
		Desired No. of farms	Maximum No. of housing units
1	.10 and above	12	120
2	.05 to .10	10	200
3	.02 to .05	5	250
4	.01 to .02	2	200
5	.005 to .01	1	200
6	Less than .005	0	150

Based on these data, a number of segments were assigned to each ED. Once stratified, and prior to sample selection, the ED's were sorted by 1978 Census of Agriculture county code and by 1970 census tract and ED. This sort gave a sequence of ED's in approximate geographic order. In theory, the sample selection was a one-stage process, but in practice, two steps were used. Desired sample size for each stratum in the State and the total number of segments in the stratum universe determined the sampling interval, which varied among States and strata.

The geographic sorting of ED's and the systematic sampling from the cumulative number of segments insured that the sample drawn for each State in each stratum was distributed fairly uniformly throughout the State.

Once the segments were selected, the actual geographic areas were identified using enumerator maps from the 1970 decennial census that showed the 1970 location of housing units. This information was used to divide each ED into the previously designated number of segments, each containing approximately equal numbers of housing units, and with recognizable physical or political boundaries (i.e., a road, river, city limit, etc.). The segments in each ED then were numbered consecutively in a serpentine fashion, beginning in the north-east corner of each ED. After this, the segments carrying the numbers previously selected for the sample were identified and enlarged maps of each segment selected were prepared for use by the enumerators.

Data Collection

Field procedures test—The Bureau expected the area-sample survey to involve 6,393 area segments encompassing an estimated 450,000 households, of which 60,000 to 70,000 were expected to include agricultural operations. While preparations for the main sample enumeration continued, a test of proposed field enumeration procedures was carried out in the spring of 1978. Twenty area segments in Colorado, Iowa, South Carolina, and Texas were selected for the test and were canvassed by personnel from the Bureau's regional offices in the first week of April. No serious problems in the procedures were noted.

Enumeration staff and training—The area-sample survey itself was supervised by the regional offices (RO's), but the canvassing of the 6,393 area segments across the country required a fairly large enumeration staff—one considerably larger than the Bureau's regular interviewer staff. While supervisors were drawn from the RO's, most enumerators were recruited specifically for this survey. Two training sessions for the approximately 230 crew leaders, a 1-day session for quality control prelist training, followed later by a 4½-day session, were carried out by the RO staffs in mid-September. The crew leaders, in their turn, trained some 2,000 enumerators during the first week of October.

Enumeration materials and procedures—Each enumerator was issued a kit that included a form 78-A10 *Enumerator's Reference Manual*, a map of the segments he or she was to canvass (each map showed all known housing units), a map of the county in which the segments were located, a form 78-A3

Record Book, and a supply of form 78-A1(A) area sample questionnaires. (The form 78-A1(A) was virtually identical in content to the 78A1(S), except that additional identification data were requested on page 1.)

Enumerators were to systematically canvass their segments, visiting every housing unit in each segment, making corrections to their segment map when necessary, and asking the head of each household, or some other responsible member of the household (if the head of the household was unavailable), a set of screening questions from the A3 *Record Book* to determine whether any agricultural operations were being carried on by any member of the household. An entry was made for each household visited, with the name and address of each head of household as well as the name and address of anyone else there who had any agricultural operations. If any agricultural operations were being carried on, the enumerator noted that in the A3 *Record Book*, and completed a form 78A1(A) questionnaire for each operation. Each operator for whom a report form was completed was given a form 78-A15 "I Have Been Counted" sticker, with instructions to apply the sticker to any census report form received as part of the regular census mailout and to return the unfilled report to the Bureau. The sticker identified area-sample cases and enabled the names and addresses of respondents to be matched to the census mail file, so that respondents to the area-sample survey were not required to complete the mailed census form.

The enumeration—The canvassing of the area segments began on October 6 and continued into December. When all segments had been completed, 600,000 households and nearly 100,000 agricultural operations had been canvassed.

Quality control coverage check—The area-sample enumeration included a quality control program aimed primarily at insuring complete coverage. Crew leaders for the enumeration staff prelisted 15 dwelling units from the first area segment in each enumerator's assignment. These 15 units were selected by picking three starting points at random throughout the segment, then listing the five consecutive housing units following each starting point. After each enumerator completed his or her first area-segment listing, the listing book was compared to these advance listings to check the enumerator's canvass.

In all, 1,682 area segments were checked in this fashion. Based on the match of prelisted and canvassed addresses, the overall "miss" rate was estimated to be 3.8 percent. Budget constraints made it impossible to revisit any of the poorly canvassed area segments, so, in effect, the purpose of the check was primarily to let enumerators know their work was being checked and enable crew leaders to identify problems that the enumerators were having in the field.

Processing

General—The processing of the report forms for the 1978 Census of Agriculture Area Sample Survey included the following operations:

1. Receipt, check-in, and filing of enumeration materials
2. Matching of area-sample report forms to the census mailing list
3. Followup and imputation for nonresponse
4. Clerical review, geocoding, and keying
5. Tabulation and publication

The initial review of the report forms from each segment was carried out in the field by supervisory personnel. The forms then were forwarded to the Bureau's Jeffersonville facility for processing. While much of this, particularly the keying, computer editing, and tabulation, was similar to that carried out for the census, some phases were significantly different. Those points at which the processing of the area-sample materials varied markedly from the regular processing cycle are discussed below.

Receipt and check-in—All the enumeration materials for each area segment—A3 record books, segment maps, completed report forms—were submitted for receipt and check-in of individual segment packages. The clerical staff at Jeffersonville opened the packages as they arrived, checked the contents against the enclosed transmittal forms, and entered the date of receipt for each segment's materials on a listing of the segments in the sample. The segment materials then were cycled through a review procedure. This included the assignment of an area-sample CFN for each report form and the computation of a check digit for each CFN. Information from the A3 record book, which clarified any part of the A1(A) report forms for an operation, was transcribed, and page 1 of the A1(A) report form, containing all of the necessary identification information, was screened to insure completeness. Incomplete A1(A)'s were referred to the technical review unit, while complete report forms were sent to the microfilm search unit.

Matching—Since one of the major objectives of the area sample operation was to estimate the number and characteristics of farms not on the mail list, each completed report form was matched to the mail list and classified as "matched" or "not matched." Respondents whose report forms were matched to the mail list were deleted from the followup mail file (processing of the area sample began too late to prevent inclusion of such cases in the initial mailout). The report forms for cases matched to the mail list then were inserted into the regular mail-list processing operation and treated as regular respondents. To ensure that all possible cases were matched, a second attempt was made to match the unmatched cases. In addition, telephone calls were made to all of the larger farms to obtain additional information that might help in the matching process. As a result of these additional checks, most of the larger farms were found to be on the mail file and thus classified as matched cases.

Clerical review, geocoding, and keying—After matching to the census mail list, each report form was assigned tabulation codes for the appropriate State and county. Non-match cases were assigned to the proper State and were given a code number for a "pseudo county" for tabulation purposes to provide State-level estimates. Since the nonmatched cases in each State were used to estimate data only at the State level, the "pseudo

1. Receipt, check-in, and filing of enumeration materials

county" totals would provide estimates of the number and characteristics of farms in each State that had not been represented on the census mailing list.

After geocoding, all of the report forms were clerically reviewed, and were keyed to magnetic computer tape for computer processing and tabulation.

Computer processing, tabulation, and publication—The computer records for individual operations enumerated in the area sample were subjected to essentially the same computer editing and tabulation procedures as were used for mail respondent operations. The most significant difference in procedures was the separate tabulation for "non-match" farms. These estimates and the mail-list county estimates were combined to give the State-level estimates.

For preliminary State publications, data were shown for the area sample alone and combined with estimates from the mailing list for State totals. In final State tables, totals included the area-sample data. County summary tables for each State included each actual county, plus data for the "pseudo" county enumerated in the area sample listed as "Farms not on mail list."

PRECOMPUTER PROCESSING

General Information

The precomputer processing phase of the census program had four primary objectives: (1) check-in of respondent report forms, (2) coverage check for acreage, (3) resolution of any problems with the completed forms and of correspondence from respondents, and (4) creation of data tapes (data entry) for computer processing and tabulation.

Respondents mailed their report forms to the Bureau's Jeffersonville office, where the precomputer processing of the census materials was done. Except for barcode check-in, automated sorting of the forms, and limited electronic processing done during data keying, all computer processing operations were carried out at Suitland.

The precomputer processing staff's work included the receipt and check-in of the report forms, resolution of correspondence, routing of report forms and other mail to the appropriate processing unit, screening of the report forms, resolution of problem referrals, "2+" (two or more forms received) processing, telephone followup, data keying, and, after computer editing, review of the computer changes and corrections. In all, approximately 3.98 million individual cases were processed by the Jeffersonville operation, 2.26 million of which represented in-scope farms.

Receipt and Check-in

Batch for check-in—Correspondence, report forms, and postmaster returns (PMR's) were separated upon initial receipt and batched according to the most suitable type of check-in, i.e., barcode or keying.

Receipts with barcodes were sorted by type of form and receipt (i.e., whether completed forms or PMR's), and batched

into work units (WU's) of 200 report forms of one type (A1(S), A1(N), A40, etc.), or 200 PMR's, each. As each WU was assembled, a check-in status code was assigned using an A402 Check-In Work Unit Cover Sheet. These codes were as follows:

2X	Postmaster return
30	Respondent-originated correspondence
40	Form received
50	Out of scope
51	Out of scope—Requests a copy of farmer's report
7	Clerical remail
8	Computer remail
9	Out-of-scope recycle

This coding system was designed so that a higher number superseded a lower one. Many cases, especially those involving PMR's and correspondence, were checked in more than once. These cases were considered incomplete, even if something had been received from the respondent, until a completed report form was received or the case was determined to be out of scope. Two types of barcode-reading equipment were used, a laser reader and a hand-held ruby wand pen. Bulkier packages and report forms that had been removed from their mailing envelopes because of obscured labels were checked in using one of eight wands, which could accommodate packages of varying dimensions; standard mail receipts were read by the mechanical laser reader, which required envelopes of uniform size. In either case, the work unit information was keyed for the batch and the barcoded CFN's were read and stored on tape for updating on the master address file. This file was used to follow up nonrespondents at selected intervals.

Once reassembled after barcode check-in, placed in their plastic bags, and with the cover sheets attached, the individual work units were routed to the next step in the processing program. The disposition of the WU's by type, was as follows:

Type of receipt	Disposition after barcode check-in
A1(S), A1(N) and A1(H) with and without correspondence	State sort
1st time PMR's without address corrections	Central files
1st time PMR's with address corrections, and 2nd time PMR refusals	Correspondence reading
2nd and 3rd time "must" PMR's	Coverage unit
2nd and 3rd time PMR's	Correspondence typing
PMR's with area-sample sticker	Area Sample Survey clerical unit
Respondent-originated correspondence	Correspondence reading

Check-in keying—Completed report forms and PMR's that, for whatever reason, could not be checked in using the barcode readers were sorted for clerical handling into two groups, those with CFN's present, and those lacking CFN's. Materials with no CFN's were routed to the CFN researching unit, while those with CFN's were sent to the check-in keying unit. The latter were batched into work units using the same coding system

employed for barcode check-in. The CFN for each report form, piece of correspondence, and/or PMR, as well as any address changes noted, were recorded on the Bureau's data entry (key-to-disk) system, with output to computer tape. The data keying was subjected to verification and quality control procedures, and the resultant records were transmitted to Suitland via telephone datalink for updating the census master address file. Report forms rejected during keying because of faulty CFN's were removed from the work units, corrected, and recycled through keying.

After check-in keying, work units were routed to the appropriate processing unit.

State sort—After check-in, work units containing census reports were sorted by State, according to the geographic location of the operation. Sorting was done both manually and mechanically, but the majority of reports were sorted mechanically using a machine similar to the electronic check-in reader. This device contained 24 "sort" pockets and could be electronically controlled to use any pocket or group of pockets to hold selected items identified by the laser barcode reader. Sorting down to the State level required two passes: one pass sorted on geographic division code and the second by State code within division.

Reports that could not be sorted mechanically (i.e., reports without bar codes or on which the bar code could not be read) were sorted manually using the same digits described for mechanical sorting. Using a series of nine boxes, the manual sort was according to the first digit of the CFN—the division code. After the initial division sort, reports were removed from the bases and sorted on the second digit, one division at a time.

After sorting, most reports were routed to the screening or technical review unit, where they were placed in movable storage bins, by State, and held until scheduled for further processing. Reports from Alaska and Hawaii, however, were sent through final control and forwarded to Agriculture Division in Suitland for special handling.

Census File Number Research

The census file number (CFN) was the principal numeric identifier for each report form or case received and/or processed by the agricultural census operation, hence it was imperative that each case received have a CFN. Whenever a report form or piece of correspondence was received that either did not have a CFN or the CFN present was incomplete or wholly or partially obliterated, the case was referred for resolution to a special CFN research unit in Jeffersonville. This unit used 16mm microfilm reading and printing equipment and two microfilm files: (1) a complete census universe ZIP/name control file, and (2) a State/name control file for each State in which the name control (i.e., the first four characters of individual surnames (or in the case of partnership or other arrangements, the first surname), company name, association name, etc.) was used to sort and list alphabetically the complete name and address for each case originally mailed.

The ZIP/name control file was used if a ZIP code was present in the address of a referred case, otherwise the State/name con-

trol file was used. Since there were a number of names (such as Smith, Johnson, Green, etc.) that had the same name control, each such entry was reviewed and the complete addresses displayed for a comparison match to the record being researched. To be considered a match, the name on the correspondence or report had to be identical (i.e., contain the same first name, middle initial(s) (if any), and last name) to the microfilm equivalent, and the city, State, and other address elements had to be identical or very similar to that shown on the microfilm.

If a CFN was found for a case, it was transcribed to the appropriate space on the form or to the upper right-hand corner of the correspondence. A copy of the CFN entry was made from the microfilm and attached to the correspondence or report form, and the materials were referred to batching for check-in. If no CFN was located, the document was annotated "CFN NOT FOUND." If it could not be determined whether a case had been matched to the census files (e.g., because of incomplete address or name on the correspondence or report form), copies of possible CFN entries were made and the case was referred to the research unit supervisor for disposition. Area-sample materials then were referred to the area-sample processing unit, while all other materials were sent to the correspondence reading unit.

A total of 28,150 pieces of correspondence and 15,485 report forms were processed by this unit. Of these, CFN's were found for 22,064 pieces of correspondence and 11,597 report forms.

Clerical Screening and Review

General Information—The clerical screening and review unit was established in order to identify reporting errors on the 78-A1(N) and 78-A1(S) report forms that affected "keyability" and to make the necessary corrections. The unit also extracted from the regular processing cycle those forms that required special review and handling. Materials were received by the screening unit primarily from the State-sort unit. All forms with attached correspondence were screened immediately upon receipt, regardless of any State priorities that were in effect at the moment, so that congressional cases could be quickly identified and work could begin without delay on cases requiring additional respondent contact.

If the remarks or responses on any report form indicated a need for a form letter (e.g., a report form had been returned to the Bureau completely blank, or the respondent requested confirmation that his or her report form had been received), the screening clerk indicated the appropriate form letter to be used and forwarded the case to the correspondence typing subunit or, in the case of special problems, to a correspondence analyst.

Report forms without correspondence attached were clerically screened on a flow basis in State-priority order. Screening involved deleting fractions or converting them to decimal numbers, lining through extraneous material, verifying key-code assignment, and ensuring the readability of the entries to be keyed.

Screening and correction—Condition-action tables provided instructions to screening clerks for the review of the report forms. The general intent of the review was to make certain that—

1. Report forms with no agricultural operations were identified.
2. If any remarks were present that required action by the Bureau, the action was specified.
3. Remarks containing data were transcribed to appropriate data cells or were referred to technical analysts.
4. The address label contained no unprocessed changes.
5. The State code on the address label was consistent with the rest of the work unit.
6. The geographic coding on the address label was consistent with the reported State and county geographic locations.
7. Key codes were entered and/or corrected for the crop/livestock names.
8. Report forms with entries indicating total acreage was zero were referred to technical review to ascertain whether the addressee was a landlord only and, hence, out of scope.
9. All cases enumerated in the area sample were referred to the area-sample processing unit.
10. Data entries outside prescribed locations on the report form were transcribed to the proper ones.
11. Entries obscured or illegible were either deleted (if in "Quantity Harvested" or if a total for a section with detail entries) or were referred to technical analysts.
12. Alpha (i.e., "spelled out") data entries were converted to numeric entries (e.g., "five" was converted to "5," etc.).

Verification and quality control—Each work unit submitted to the screening unit had to pass the verification process. Errors detected during verification were corrected and tallied, and supervisors and clerks kept informed of the number and types of errors detected. The report forms so subjected were reviewed to make certain required referrals, data entries or transcriptions, and necessary changes in geographic area codes (GAC's) were properly made.

The verification process actually began during the training of the screening clerks. During their qualification period, the screening of the first 200 report forms by each clerk was verified on a 100-percent basis. If 4 percent or fewer of these forms contained critical screening errors, the clerk was considered qualified and subsequent work was verified on a sample basis.¹ Records of errors and corrections required were kept on each screening clerk and periodically discussed between supervisor and clerk. When an individual clerk's error rate exceeded 4 percent, additional work was verified. If a 100-percent verification of a run of 400 report forms screened by a clerk revealed an

unacceptable error rate, the clerk was retrained. If, after retraining, the clerk's work still did not meet acceptable standards of error, he or she was removed.

After qualification, each clerk's work was sampled for verification at a 10-percent rate. In addition, every report form on which a geographic code change had been marked on the label had the change verified as well. Each work unit was accepted or rejected based on the number of errors found in the sample. Accepted work units were released for further processing while rejected ones had to be completely corrected. To remain on sample verification, each clerk had to have at least 8 "accept" decisions in each sequence of 10 decisions.

Correspondence

All census-related correspondence was handled by a correspondence unit established at Jeffersonville. The unit was itself divided into three subunits, dealing with (1) reading correspondence and responding to routine cases; (2) typing of address labels, letters, envelopes, etc., and handling referrals from other units; and (3) filing and followup of post-edit correspondence (PEC—i.e., replies from respondents to Bureau-originated correspondence requesting more information, etc.).

The correspondence reading subunit sorted incoming materials into those cases in which (1) the respondent claimed he or she had filed, but made no reference to a CFN; (2) the respondent requested a report form; and (3) all others. The first two groups of materials were referred to the batch unit for check-in keying in order to generate labels for mailing; all the other cases were cycled through the reading subunit, where the correspondence was read and the appropriate action decided upon.

The appropriate action generally consisted of preparing and mailing the applicable form letters and/or report forms. The function was usually performed by the typing subunit. The filing and PEC followup subunit was primarily responsible for handling replies and followup to PEC, and file maintenance.

The work of the correspondence unit was subjected to verification and quality-control measures before any materials were filed or released. The verification program in the reading unit began with an initial training period for each correspondence clerk, during which the first 100 pieces of correspondence processed were checked for errors on a 100-percent basis. Once the initial training period was completed, each clerk's work was verified on a sample basis. When an error was detected during the sample verification phase, 100-percent verification was begun once again and continued until 50 successive pieces of correspondence were found error-free, before returning to sample verification.

Verification of the typing subunit's work was designed to insure an error rate of no more than 3 percent. All of the correspondence processed by each clerk during the first 5 working days on the job was verified at a 100-percent rate. If the error rate for all the work involved was 3 percent or less, the clerk was considered qualified for sample verification. (If the error rate exceeded 3 percent, the clerk was kept on 100-percent verification for another 5 working days. If the error rate still exceeded 3 percent, the clerk was removed from the typing

¹"Critical" errors were generally those involving failure to refer a form when it was necessary or to accurately transcribe data or complete necessary screening steps. "Noncritical" errors usually involved unnecessary actions, incorrect designation of reason for referral, etc. Noncritical errors were tallied and brought to the attention of the clerks, as their continued repetition could increase operational costs.

operation. If the rate was 3 percent or under, he or she was moved to sample verification.) Clerks qualifying for sample verification had each day's work verified at a 1-in-12 rate, beginning at a random start. If the error rate for any day's work exceeded 3 percent, the work lot was rejected and *all* the correspondence in that day's work lot were verified and errors corrected. If any clerk had more than one lot rejected in a week, the clerk was returned to 100-percent verification for requalification. If the error rate at the end of the 1-week requalification period exceeded 3 percent, the clerk was removed from the typing operation.

Some correspondence was referred to Bureau headquarters for handling. This included all congressional and potential congressional correspondence (i.e., any item that indicated the respondent was sending a copy of the letter to a Member of Congress), complex problems involving multiunits, and unusual or difficult situations that could not be resolved using routine form letters.

During later processing phases, the correspondence unit prepared letters to be sent to obtain additional information needed to edit or complete the report forms. These letters were also subject to quality control procedures. The principal form letters used by the unit in its day-to-day work are listed below:

Form No. 78-	Purpose
A101(L) } A102(L) } A103(L) }	Reply to request for extension of time for completing report form
A104(L)	Grant time extension
A105(L)	Request completed replacement report from correspondent who claims to have filed, but whose form cannot be found
A106(L)	Request additional information (report form enclosed with items indicated)
A107(L)	Respond to request for legal authority for census; excerpts of title 13 on back page
A108(L)	After review of correspondence, advise that report form is not necessary
A109(L) } A122(L) }	Recommend sources of assistance in completing report form
A110(L)	Inform respondent the Bureau is unable to excuse him or her from completing report form and explain need for census
A111(L)	Notify that correct report form is enclosed and request for prompt response
A112(L)	Determine whether respondent had agricultural operations in 1978
A114(L)	After review of correspondence and report form, advise that additional information not necessary
A115(L)	Reply to refusal cases, justifying collection of census data and assuring confidentiality

Form No. 78-	Purpose
A116(L)	Return report form for completion—form blank or nearly blank
A117(L)	Respond to request for payment for completing report form (no payment authorized under census law)
A118(L)	Indicate request for published data will be filled
A119(L)	Return noncensus materials included with report form
A120(L)	Advise additional materials sent to respondent, as requested
A121(L)	Acknowledge receipt of report form
A123(L)	Request census file number for response concerning respondent's report form
A124(L)	Request census file number
A125(L)	Explain need for census
A126(L)	Brief description of sources used in compilation of the census mailing list.
A127(L)	Furnish additional report form when original not received
A128(L)	Original addressee deceased, request executor provide information
A129(L)	Acknowledge receipt of report form
A130(L)	Original addressee deceased, request respondent provide additional information
A135(L)	Post-edit correspondence for deceased operator/addressee cases. Successor's information needed.
A136(L)	Reply to respondent who no longer had agricultural operations

Postmaster returns (PMR's)—The correspondence unit was also responsible for handling PMR's and Postal Service notifications of address corrections. Materials were referred from check-in to the correspondence unit on a flow basis, presorted as follows: (1) A1 first-time PMR's with address changes or "deceased" indicated²; (2) A40 first-time PMR's with address change or "deceased" indicated²; (3) follow-up letter PMR's with address changes or "deceased" indicated; (4) A1 second-time refusal PMR's (non-must); (5) A1 second- and third-time PMR's (non-"must")³; and (6) Postal Service notifications of address corrections.

The typing subunit prepared new mailing labels for remail to all cases where address changes or "deceased" were indicated,

²All first-time PMR's without address changes or "deceased" indicated were sent to central files after check-in. Mailing labels for these cases were generated by computer as a result of the check-in actions assigned, and affixed to prestuffed packages for remail. All second and third-time A40 PMR's were referred to the agricultural services processing unit after check-in.

³Second- and third-time "must" level PMR's were referred to the coverage processing unit after check-in.

and to other cases designated for remailing by an analyst. Complete packages were assembled, containing the appropriate report form, information sheet, return envelope, brochure, and transmittal letter for all cases to be remailed. New labels were affixed and the packages were mailed on a flow basis. The typing subunit prepared all materials that had name and/or address corrections, and referred them to data keying in order to update the mail file.

All second- and third-time PMR's were sorted to identify cases with name/address changes, large cases (i.e., those with 1974 farm sales of \$40,000 or more, or 1974 acreages of 500 or more), and special-list cases. Cases requiring name or address corrections were processed and remailed as described above. Large and special list cases were sent to the final control unit for referral to Suitland, as were second-time refusal PMR's. The remaining PMR's were sent to central files.

The volume of first-time PMR's processed in the 1978 census was similar to that experienced in 1974, that is, about 355,000. However, there were 220,000 second-time returns, a considerable increase over the rate experienced for 1974. This reflected the inclusion for 1978 of several large lists that contained many out-of-date addresses.

Technical Review

General procedures—The technical review unit consisted of a staff of technical analysts and clerks, who reviewed cases referred to their unit and made corrections or transcriptions as necessary to facilitate data-keying of the census report forms. In addition, cases rejected by the computer edit program were pulled from the computer processing cycle and the data items "flagged" by the computer were reviewed and corrected as necessary.

Most of the workload for the technical review unit came from the clerical screening referrals. The technical review staff edited each report form, resolved any problems if possible, and routed on to the analysts those forms that contained problems it could not resolve.

Computer-edit rejection review—The technical review unit also received records rejected by the computer format and edit programs because either the entire report or certain data items within were unacceptable and received disposition lists and/or batch edit listings that noted the reason(s) for failure. These reasons included the following:

- The census file number check digit failed.
- The county code was outside the acceptable range for its State.
- The form code (1H, 1N, 1S1, 1S2, or 1S3) differed from others in the batch.
- An invalid State code was detected.
- A nonnumeric character (such as an asterisk or a slash) was detected in the address label code.
- An invalid area sample characteristics code was detected.
- A data item was identified, but no data responses were included.
- Nonnumeric data were entered in a data field.

In addition to these specific reasons for rejection, 10 or more item-rejection messages for a given report form would result in the rejection of the form. The particular reasons for rejecting an individual item included—

- Miskeying of legitimate data, or extraneous data-keying error.
- Invalid key code for the State in which the operation was located.
- Data outside acceptable ranges.
- Wrong date listed.
- Write-in entry out of its section.

After reports were corrected, they were recycled through data keying.

Edit rejects—Detailed comparisons of crop, livestock, sales, etc., entries were made to determine if the values were consistent. Also, checks were made to determine if respondent entries were within the limits established by subject-matter specialists for each data item.

Rejected reports were referred to the review unit from the document-control area. Clerks matched the census file numbers on the batch edit listings to the report forms, reviewed the latter and took the necessary corrective action. The corrected batch edit sheets were routed to the batch unit for data keying and were re-edited by the computer correction program. If the number of changes to a case was above prescribed limits, the report was rekeyed.

Correspondence referral—When a problem case referred for technical review required followup correspondence, usually because a critical item or section was not reported, the clerk involved was to indicate on a form A404 that an A106(L) letter was necessary, staple the A404 to the report form, and refer it to the correspondence typing subunit. The correspondence unit normally held the report form for one month after the necessary documents had been mailed to the respondent concerned, and then sent the report form and the response, if any, back to the technical review unit. Clerks in the review unit then transcribed the data from the correspondence response to the report form, and returned the latter to the processing cycle. In critical cases, when a response was not received, telephone calls were made to resolve the problem.

Coverage unit—The coverage unit consisted of a staff of technical analysts and statistical clerks, who reviewed the "must" cases, multiunits, and abnormal farms cases, and prepared these reports for data keying. The workload for the unit came primarily from the check-in unit in the form of pre-identified "must" and multiunit reports. A portion of the workload also came from the screening unit where large acreage and/or high value cases were identified. All reports entering the coverage unit were screened and made keyable. Forms showing 10,000 acres or more on a place, and/or showing \$1 million or more in sales of agricultural products, were identified and referred to the Agriculture Division in Suitland for review. Multiunits were screened and the coverage unit prepared any followup mailings required.

Data Keying

The **data-keying system**—Data keying for the 1978 Census of Agriculture was done using an electronic key-to-disk-to-tape system to prepare the census data for computer processing. The data-keying unit at Jeffersonville employed 8 to 10 “keying systems,” each consisting of 16 to 20 individual keying stations. Each station was made up of a keyboard and a cathode-ray tube (CRT) viewing screen that enabled the operator and supervisors to monitor and edit the keyed data. Each of the keying systems was linked to a computer disk drive serving one to four computer disks. Each of these disks had a capacity of approximately 2.5 million characters. Programs and control instructions occupied about 20 percent of the total capacity of each disk, while the remainder was available for data from the census report forms. Since each report form required (on the average) about 250 characters, a disk, if used to its maximum capacity, might hold data for as many as 8,000 returns. In practice, the capacity of each disk assigned to a keying system was divided among the individual stations comprising that system, and a portion of each disk’s capacity was needed to insure there was no overlap of entries from the different stations.

The verification process enabled rekeyed data to be recalled for visual comparison to those already on the disk and, in cases of conflicts between data items, the appropriate report form would be consulted. When necessary, the original keying was corrected. Inasmuch as the verification procedures required that *every* difference in keying be checked, the need for quality control of the verification process was eliminated.

After verification and correction, the data were moved automatically from the disk to a magnetic pooler tape containing data for only one State, and then were transmitted to the Suitland computer facilities by telephone datalink. As soon as the data were “read” at Suitland, the Jeffersonville pooler tape was erased and reused. To safeguard against the loss of data through accident or technical breakdown, the contents of each disk were transcribed to “systems-save” magnetic tapes every 2 hours during the keying operation. These “save” tapes were held for approximately a week, or until the data they contained were accounted for as having been correctly read at Suitland.

Data-keying operations—After screening and technical review, the report forms were batched by State into work units of 100 forms. Separate batches were maintained for A1(N), A1(S), and “must” cases. A form A405 Data Keying Work Unit Cover Sheet was attached and the work unit was sent on to the data-keying unit where clerks, following detailed instructions, keyed the entries on the work-unit cover sheet and each report form in the unit. For each report, data were keyed from the address label and from each item to which there had been a response.

As the codes and responses were keyed, certain checks were performed electronically in a series of data-entry edits that were changed according to the type of form being keyed. The purpose of these “input edits” was to (1) insure that check digits and entries in State, item, and sub-item fields were valid; (2) insure that all identification, item code, and data-field entries (except the form code from the label) were numeric; (3) perform sequence and valid-code checks by section for each report

form; (4) insure data were keyed by item code; and (5) compare consecutive item codes for duplicates.

Rejected records were referred to agriculture subject-matter analysts for review. (The balance of the editing of the records was done during computer processing.)

After data keying and verification, the report forms were placed in a holding area until data were satisfactorily processed through the computer. Once that was accomplished, the processed forms were moved to central files for boxing and storage.

Verification—As with the other major clerical operations in the census processing program, data-keying was subjected to a process of verification to insure that keying was complete and accurate. In the verification phase of the operation, attention was centered upon the key operators, each of whose work was reviewed for errors. An error was defined as (1) a keystroke error in keying an item code or data entry, (2) an omission, or (3) duplication of an item code or datum. The verification process was carried out in three stages, during which the key operators progressed through three periods—training, qualification, and process control. During the training period, each operator’s work was verified on a 100-percent basis. Each operator was to become familiar with the key structures of the census report forms and was to key at least three complete work units. Operators with a cumulative error rate for these three work units of 3.5 percent or less advanced to the qualification period stage, while those failing to do so were retrained.

During the qualification period, key operators’ work was verified on a 10-percent basis; the specific records verified were selected at random from each work unit. To move on to process-control verification, an operator had to have a sequence of four successive “accept” decisions within a maximum of eight decisions. Operators failing to achieve this were allowed a second chance to qualify for process-control verification, but a second failure to do so meant the operator would not be retained.

Successful completion of the qualification stage meant operators were moved into process-control verification. During this stage a 4-percent sample of report forms (excluding “green must” forms—see below) was randomly selected and verified from each work unit keyed. Operators had to have a minimum of 7 “accept” decisions in each sequence of 10, or else had to requalify for process control.

At every verification point, errors detected were corrected before the data were transmitted to Suitland. “Must” cases (form 78-A1(S) “green”) were assigned only to keyers qualified for process control and were verified and corrected 100 percent. To maintain their standing, these “must” case keyers had to maintain an error rate of 2.5 percent or less. The verification plan was designed to allow an estimated outgoing error rate of no more than 2.5 percent for all records keyed. These goals were slightly improved upon in practice.

COMPUTER PROCESSING

General Information

The use of computers to process census data has increased progressively from census to census, since the first automatic

processing equipment was introduced in 1890. While a considerable amount of manual sorting, reviewing, and checking was done for the 1978 census, the greater part of the actual assembly, editing, and tabulation of the data was by computer at the Bureau's Suitland headquarters. The computer processing phase of the agricultural census started as soon as report forms began to arrive in Jeffersonville and were processed through the clerical screening and keying operations. The first farm records were processed by the computers in February 1979, and the operation continued until the final tabulations were completed in July 1981. Data were processed on a flow basis as records were received, although there were occasional interruptions in the access to the computer facilities because of water damage to the computers during a mishap in August 1979. Nevertheless, approximately 3.2 million individual agricultural census records were edited; some 2.26 million of these met the Bureau's definition of a farm and were incorporated into the agricultural census file.

The computer processing operation can be divided into three major phases: (1) formatting, (2) edit and failed-edit correction, and (3) tabulation of the data. These phases are described below.

Formatting

The first step in the computer processing was the formatting of the data into binary records that could be manipulated electronically. A computer record was established for each census report form; each consisting of a section of variable-length data segments and one fixed-length segment. The fixed-length section contained the report form's identifying information, such as State and county codes; serial number; farm definition, farm criteria, and SIC codes; and all the other data necessary to create a complete, consistent, and individually identifiable data record. The variable-length segments of each record contained a computer "word," or record segment, for each item reported, imputed, or changed in the record. Each data item was identified by the item key code associated with it on the report form. (For example, item 67 on the A1 form represented the acres of corn-for-grain harvested.) Data items for which nothing was reported or imputed contained no information and were omitted from the detail data record.

The following major operations were performed during the computer format run:

1. Data for crop production were converted into standard units of measure for those crops showing more than one such unit on the report form.
2. "Landlord only" and other types of out-of-scope records identified during the format run were separated from the general data file.
3. Invalid codes were identified and classified by type, and appropriate action was taken, as follows:
 - a. **Invalid State, county, and form codes:** These records were printed out and dropped from the format run. The sample and nonsample report forms involved were corrected and then rekeyed.

- b. **Rejected item codes.** These were codes that were either not assigned anywhere on that particular report form or were valid crop item codes that were invalid for a specific State (e.g., codes for sugarcane in Maine). For listing-identification purposes, the offending item code, the item code immediately preceding it, and the two item codes immediately following, together with all the associated data, were printed out. Valid item codes that appeared out of sequence, including duplications, were handled in the same way. All invalid or otherwise offending codes and their data were omitted from the formatted record and were printed out for review. Corrections then were made and were carried to the formatted record in a correction match program.

- c. **Maximum acceptable rejects exceeded.** The number of errors in any given record was limited. Once the total number of errors exceeded 9, the record in question was pulled from the formatting cycle, displayed in its entirety, and reviewed. Corrections were made, as necessary, to the appropriate report form or forms, which were then returned to the data-keying subunit and recycled through the processing operation.

Computer Editing and Failed-Edit Correction

Computer editing—Computer editing is the mechanized process of validating, cross-checking, and refining reported data. The computer processing programs for the 1978 census included an editing program that tested key ratios within the data for reasonableness and consistency. The ratios were tested by matching them to tolerance limits based on experience in previous censuses and surveys, after which the computer corrected errors by rounding the individual data items, substituting the sum of the detail items for a reported total, or imputing on the basis of one of several ratios that included the challenged component.

The computer programs written to perform these tasks were necessarily long and complex. The individual tests and checks comprised several thousand steps in total, although generally only a relatively small fraction of these were involved in the editing of the data from any one report form.

Computer edit specifications were transmitted from the subject-matter specialists to the computer programmers by means of a decision logic table (DLT), i.e., a tabular display of all the elements of an edit problem, from conception to solution, with flowcharts and texts attached when additional information was needed. About 3,000 pages of DLT's and related materials were needed for the computer edit of the standard agriculture census report forms, including several rounds of revisions carried out to improve precision and consistency in the edit. (An effort on a somewhat smaller scale was necessary to edit the various A40 forms, which were processed separately.)

The actual computer editing was done by State. Batches for editing, each consisting of formatted records sorted by State, county, and CFN, were assembled by setting cutoff dates; records received during a specified period (2 weeks early in the

census, but as much as 8 weeks later) became part of a single batch, which was then edited. The last batch was assembled and processed after the analysts' review of "must" cases.

The computer edit of the standard report forms—

1. Supplied missing entries.
2. Reconciled acres reported for individual crops with acres reported as total cropland.
3. Imputed production for crops when the reported production was outside acceptable limits.
4. Edited to assure consistency between and within the different sections of the report forms.
5. Calculated and checked values for products sold, using average prices in each State for each production item, and substituted these values for reported values if the latter were outside acceptable limits.

The computer edit also determined whether each record met the criteria for a farm or was out of scope, and coded (classified) the farm records according to acreage, tenure, value of agricultural products sold, and type of organization. Records that did not meet the minimum criteria for a farm were deleted from the data file and were transferred to an out-of-scope file. A list of these out-of-scope addresses was sent to Jeffersonville, where the clerical staff reviewed the related report forms to insure that they had been accurately keyed and correctly classified.

The minimum criterion for meeting the Bureau's definition of a farm was annual sales of agricultural products of \$1,000 or more. The computer edit identified and retained, as farm records, data for those places that did not have, but normally would have, a total value of annual sales of agricultural products of \$1,000 or more. Places not meeting the \$1,000 definition were tested against a set of criteria designed to identify potential farms and farms that would normally meet the sales minimum but which did not because of extenuating circumstances, such as drought or crop failure. A set of 46 criteria codes was established for these farms, each code indicating the broad type of product (cash grains, vegetables, livestock, pastureland, etc.) involved, with a minimum quantity or acreage specified.

In addition to determining whether records were in scope, the computer edit program also converted nonsample records to sample records if they met the certainty criteria. Certainty criteria varied by State, with sales of from \$40,000 to \$200,000 or a minimum indicated acreage of from 1,000 to 5,000 acres. Institutional operations and other special cases were also included in the certainty group even if they did not meet the minimum criteria, as were all farm addresses in counties with fewer than 100 farms in 1974. When data from a nonsample record met the certainty criteria for the sample, the additional detailed information was obtained by correspondence or was imputed on the basis of responses from farms of similar size in the same geographic area. Any such conversions based on reported sales or acreage were coded as "certainty" cases. Occasionally, a sample record was converted to a nonsample record. This usually was done if the farm in question had

originally been sent both a sample and a nonsample form, and the sample name and address were retained with the nonsample data. A record of the changes made for these individual farm records was printed out periodically during the computer batch edit phase of the operation and was sent to Jeffersonville for review.

Failed-edit correction—Once the computer edit was completed, the high-speed printer was used to produce a failed-edit listing that included a printout for each report form that had one or more items flagged by the edit program. This listing displayed the items from each form that (1) had failed the edit, (2) had not failed the edit but had been changed by the edit, and/or (3) had a referral flag. The printout for a given farm record occasionally ran to two or more pages, but no page contained items for more than one farm record.

The failed-edit listings were sent to Jeffersonville where they were separated, sorted by State, placed in portfolios in lots of 500 consecutively numbered records, and matched to the report form file. The listing sheets and the corresponding report forms then were reviewed clerically. A set of procedures was provided for referral of records to agricultural analysts when this was necessary. Disposition codes were assigned to the individual records, indicating the general action to be taken for each, as follows:

Code	Action
1	Make corrections—re-edit record
2	Make corrections—bypass specified sections of the edit
3	Make corrections—bypass the edit except coding (edit section 51), SIC coding (54), and summing (75)
4	No corrections—change failed-edit flag to passed edit
5	Delete record from file
6	Change RD (referral disposition) code to 3—make corrections and re-edit record
7	Convert record from sample to nonsample, make corrections and re-edit record

An item-locator code was assigned to each location within every farm data record where an edit failure occurred. These codes were used when corrections were inserted into the farm data file, and a file of corrections or changes, called the change index, was compiled. Every time an item was changed during processing, this was noted in the index; ultimately, the item, the value of the item before the alteration, and the value as changed were listed on a microfilmed "universe of changes" file. (This "universe" was used as a review tool during the analytical review of the tables.)

If no corrections were required, a disposition code of 4 was assigned. In cases that required numerous corrections, the form was corrected, rekeyed, and then recycled through the computer processing operation. For most cases, corrections were marked on the failed-edit listing sheets and the sheets were batched for keying (data to be keyed were underlined). The corrections were keyed to tape, verified 100 percent, and trans-

mitted by datalink to Suitland for a computer match to the data file. The corrected files were re-edited to insure that the corrections had been made properly and to determine whether further corrections were necessary.

Final data merge—After the computer edit and the failed-edit corrections were completed, the corrected files for each State were merged into a single data file in sequential order by State, county, and identification number. The file was then unduplicated by matching CFN's and all duplicate records were displayed for review. Unless circumstances dictated otherwise (e.g., the duplicate CFN's, through some error, represented entirely different operations), the first of the duplicate records displayed was retained while the rest were deleted. The merge program also tallied farms by size, total value of products sold, and type. These tallies were used to help impute data for nonrespondents. (Imputation is discussed below.) In addition, the merge program identified other problem records and displayed them for further review and possible correction before tabulation.

Imputation for nonresponse—Data for nonrespondents were imputed after the data files were corrected, merged, and unduplicated. Data for a respondent within the same size group and county were duplicated to represent each nonrespondent. All this meant was that the data for the farm selected for duplication was counted twice, to approximate the contribution to the county totals that would have been made by the nonrespondent operation.

Approximately 12 percent of all names and addresses on the mailing list did not respond to the census. Adjustments to compensate for this were made to the data at the county level, using a three-step procedure. First, a stratified sample of nonrespondents designed to provide State estimates was selected and each sample nonrespondent was mailed a short report form. Those not responding to the mailed form were contacted by telephone to determine if they operated a farm. The sample nonrespondents were classified on the basis of this survey as either "farm" or "nonfarm," and results of this classification procedure were used to estimate the number of nonrespondent census farms in each State. (About 60 percent of the nonrespondent sample units were classified as nonfarm.) A synthetic estimator was developed to estimate the number of nonrespondents by size strata for each county of a State. Finally, a sample of respondents was selected to represent the missing nonrespondent farm operators in the census on the basis of their expected total value of sales as recorded on the census mail list. Farms with expected values of sales of up to \$40,000 were candidates for duplication in the census data file, since most nonrespondent farms were in this range of value of sales. Any farm with an expected value of sales in excess of \$40,000 was a certainty case and was subject to a 100-percent followup. In the rare instance where a response from an operation of this latter size could not be obtained from the operator, administrative records were used to estimate totals rather than impute the data using the usual techniques.

Stratification and sample weighting—The use of sampling from the mail list introduced into the census data several elements

that could cause substantial variation and a potential bias. First among these was the fact that half of the addresses on the mail list from which the sample was selected did not represent farms and were not identifiable as such at the time the sample was selected. Hence, both farm and nonfarm addresses were included in the sample. Data actually tabulated came from only part of the sample—those names and addresses that represented farms. Second, stratification by size of operation of the addresses in the sample was based on information from several sources of variable quality. Further, the response rate for addresses in the sample may have been different than for nonsample addresses.

In order to improve the precision of the estimates from the sample, post-stratification was used to produce adjusted estimates. Basically, this consisted of classifying all farms into relatively homogeneous strata and weighting sample farms within each stratum by the ratio of total farms to sample farms.

Farms meeting certainty size criteria during sample selection, and those identified during processing as meeting similar criteria, were assigned to a certainty stratum. All other farms were assigned to 64 strata. Farms with sales of less than \$2,500 were classified into eight size-of-farm groups (less than 10 acres, 10 to 49 acres, 50 to 69 acres, 70 to 99 acres, 100 to 199 acres, 200 to 259 acres, 260 to 499 acres, and 500 acres or more) within each of two value-of-sales groups (less than \$1,500 and \$1,500 to \$2,499) and within each of two type-of-farm groups (crop or general farms and livestock or poultry farms). Farms with sales of \$2,500 or more were classified into four size-of-farm groups (less than 50 acres, 50 to 99 acres, 100 to 259 acres, and 260 acres or more) within each of the four value-of-sales groups (\$2,500 to \$4,999, \$5,000 to \$9,999, \$10,000 to \$19,999, and \$20,000 or more) and within each of two type-of-farm groups (crop or general farms and livestock or poultry farms).

Each stratum was examined and collapsed into another stratum if (1) the stratum contained less than 20 sample farms; or (2) the calculated weight for the stratum was greater than 10 in counties sampled at a rate of 1 in 5 or greater than 4 in counties sampled at a rate of 1 in 2.

The post-stratification provided weights to be assigned to farms in each of the final collapsed strata such that the total of the weights for sample farms in the stratum would be equal to the total number of farms in the stratum.

Estimates were prepared for items in sections 22 through 27 of the report form by multiplying the data for each item for each farm in the sample by the weight assigned to the farm. The weight for a certainty farm was 1.

Tabulating and Reviewing Data

General information—After the records had been edited, corrected, and merged, the data were ready for tabulation. The individual records were tabulated by computer into detailed data matrices, each containing over 12,000 different items that were designed to provide the basic data input for most of the data tables drawn from the 1978 Census of Agriculture. Analytical tabulations were prepared, using these matrices, in a

detailed format by county, to aid in locating problems in the preliminary data. After the tabulations were reviewed and the farm records had been corrected, a special tabulation run was made of corrected records both before and after correction. The data from the uncorrected records were subtracted from those for the corrected records, and the resultant net totals were merged into the data matrices. The corrected matrices were used as the data source for the preliminary reports, the major results reports, and for the review copies of the tables for volume 1. State-level cross-tabulations were not run until the final volume 1 corrections were completed; a separate computer pass of the data records was required for these cross-tabulations.

Analytical tabulations—All of the items reported on individual report forms were tabulated for each county and State, for all farms, and for farms with sales of \$2,500 or more. Comparable historical data drawn from the 1974 census final reports were included in the tables for use in reviewing the accuracy and completeness of the 1978 data. The analytical tables served as the basic documents for review by Agriculture Division staff. A substantial amount of related check data, most of it from USDA estimates, was also used in the review. Detailed criticisms of questionable data were prepared and were transmitted, together with suggested remedial action, to the Jeffersonville staff.

Prior to these transmissions, representatives from USDA's Economic Statistics Service's (ESS) State offices also reviewed the analytical tables and criticism sheets prepared by Agriculture Division staff. The ESS reviewers indicated which criticisms they considered unnecessary, offered additional or alternative solutions to identified problems, and added comments and/or criticisms on problems or potential problems not identified by the Agriculture Division review.

Criticisms arising from the review of these materials were acted upon by the Jeffersonville staff; the actions taken included—

1. Review criticisms and suggested actions made by the Agriculture Division staff and by ESS State representatives.
2. Verify the validity of data questioned in the criticisms submitted, or make necessary corrections to the data.
3. Obtain reports from farm operators for places that had not been included in the tabulations.
4. Correct data-keying, reporting, and processing errors.
5. Identify and eliminate duplicate records not previously detected by matching CFN's.
6. Assign correct State and county code numbers for large operations to ensure that these operations were tabulated in the proper State and county.

County data corrections—When the review of the analytical tables was completed, corrections were made to individual farm records in the same way as they had been after the initial com-

puter edit. These corrections were reviewed by the Agriculture Division staff for accuracy and to ensure that the data criticisms were satisfied. The preliminary reports then were tabulated and reviewed. If any additional corrections were necessary, the data were changed by computer, or hand corrections were made to the tabulation printouts. The data file was corrected as often as necessary to ensure its accuracy.

Tabulations for counties, States, divisions, regions, and the United States—County and State tables were drawn from the matrices and State cross-tabulations were prepared directly from the data file. Data for divisions, regions, and the United States were obtained by summing data from the State matrices. The historical data for the 1978 tables were taken from the 1974 computer matrices.

Final disclosure analysis—The Bureau of the Census is prohibited by law from publishing data that could be used to identify individual respondents to any of its censuses or surveys. To insure that confidentiality is maintained, all data tables are completely reviewed (disclosure analysis) before they are released for publication. While part of the analysis of the 1978 data was done by computer, the computer programs were incapable of completing the entire analysis and much of it had to be done by statisticians. Essentially, this involved the identification and suppression of figures that (1) would result in direct disclosures, or (2) could be used to reveal information about individual operations by derivation (e.g., adding or subtracting a published subtotal from a published total would expose individual data).

At the county level, for a county with fewer than 10 farms, no data were released at all because of the possibility of disclosure of individual information.

The established guidelines usually set a lower limit on the number of farms that must report data for an item before those data would be released for publication. If more than the minimum required number of farms reported an item, the data could be published, unless comparison of different tables could result in disclosing that one or two farms had a very large percentage of the total. Exceptions in the application of these rules were made, but generally only for the very large specialty operations—e.g., poultry, feedlots, greenhouses, etc.—any of which might easily be identified as a specific farm, but whose absence from the counts would grossly distort the data. Publication of the number of farms reporting an item was not in itself considered a disclosure; only related information about the item was suppressed.

Several of the tables contained the same information arranged according to a different classification, so that when it was necessary to suppress a figure in one table, it would also be necessary to check other tables and suppress it in them as well. Similarly, when it was found necessary to suppress an item in one of the county tables, all of the tables for the county had to be reviewed and the item in question had to be suppressed in all of them.

Chapter 5.

1978 Census of Agricultural Services

GENERAL INFORMATION

Background

Until the late 1960's, when the 1969 Census of Agriculture was planned, it had been generally assumed that except for such obvious things as grain combining (in some States) and the services of a veterinary, farmers provided most of their own special services—fertilizing, cultivating, harvesting, bookkeeping, and so on. While the Bureau of the Census has been conducting an annual survey of cotton ginning since the 19th century (and continues to do so), little was done to collect data on the growth of businesses concerned specifically with providing services to farm operators. However, following World War II, agricultural services became an increasingly specialized and separate industry, closely involved with, and important to, agricultural production. The changes in agriculturally oriented technology and science and the rapid growth of "agribusiness" directly contributed to the development and differentiation of agricultural service industries.

The 1969 Census of Agriculture was the first in which the Bureau of the Census employed the mail-out/mail-back methodology and also the first to include a census of agricultural services. This special census was inaugurated because of the growing need for data on this new and expanding part of the agricultural economy. The area of the new enumeration consisted of the standard industrial classification (SIC) major group 07, agricultural services, which included establishments primarily engaged in supplying agricultural services for others on a fee or contract basis. For 1974 and 1978 this major group was subdivided into the following services: Soil preparation (group 071), crop (072), veterinary (074), animal, except veterinary (075), farm labor and management (076), and landscape and horticultural (078). These groups covered such services as cotton ginning; grain grinding and mixing (custom); combining; picking, sorting, grading, and packing of fruits and vegetables; animal hospitals for livestock; and animal breeding and artificial insemination.

For 1974 and 1978, supplemental data were collected from farm operators on receipts for agricultural services on the standard agricultural census report forms, while, for cotton ginning, additional data were compiled from the reports collected during the ginning season each year. Operations identified in the census of agriculture as having a significant volume of receipts and

primarily engaged in providing agricultural services were transferred to the census of agricultural services. The addresses of such operations were matched to the existing agricultural services census mailing list to eliminate duplications prior to their being added to the latter.

Definition of an Agricultural Service Establishment

The 1978 Census of Agricultural Services, like those for 1969 and 1974, was conducted on an establishment basis. For census purposes, an agricultural service establishment was defined as an economic unit primarily engaged in performing services, for a fee or on a contract basis, in any of the following activities covered by SIC major group 07¹:

Industry subgroup	Detailed industry	Description
071		Soil Preparation Services
	0711	Soil Preparation Services: Establishments primarily engaged in land breaking, plowing, application of fertilizer, seed bed preparation, and other operations for improving the soil.
072		Crop Services
	0721	Crop Planting, Cultivating, and Protection: Establishments primarily engaged in performing a variety of crop planting, cultivating, and protection operations. Establishments primarily engaged in complete citrus grove maintenance are classified in Industry 0762, and those providing a combination of services from soil preparation through harvest are classified in Industry 0729.
	0722	Crop Harvesting, Primarily by Machine: Establishments primarily engaged in mechanical harvesting, picking, and combining of crops, and related activities, using machinery provided by the service firm. Farm labor contractors providing personnel for manual harvesting are classified in Industry 0781.

¹Executive Office of the President, Office of Management and Budget, Statistical Policy Division, *Standard Industrial Classification Manual, 1972* (U.S. Government Printing Office, Washington, D.C., 1972). pp. 25-27.

Industry subgroup	Detailed industry	Description
	0723	Crop Preparation Services for Market, Except Cotton Ginning: Establishments primarily engaged in performing a variety of operations on crops subsequent to their harvest, with the intent of preparing them for market or further manufacture. Establishments primarily engaged in stemming and redrying of tobacco are classified in Industry 2141.
	0724	Cotton Ginning: Establishments primarily engaged in ginning cotton.
	0729	General Crop Services: Establishments primarily engaged in providing a combination of services from soil preparation through harvest, except farm labor and management services which are classified in Group 076.
074		Veterinary Services
	0741	Veterinary Services for Livestock, Except Animal Specialties: Establishments of licensed practitioners primarily engaged in the practice of veterinary medicine, dentistry, or surgery, for cattle, hogs, sheep, goats, and poultry. Establishments of licensed practitioners primarily engaged in treating all other animals are classified in Industry 0742.
	0742	Veterinary Services for Animal Specialties: Establishments of licensed practitioners primarily engaged in the practice of veterinary medicine, dentistry, or surgery, for animal specialties. Animal specialties include horses, bees, fish, fur-bearing animals, rabbits, dogs, cats, and other pets and birds except poultry. Establishments of licensed practitioners primarily engaged in veterinary medicine for cattle, hogs, sheep, goats, and poultry are classified in Industry 0741.
075		Animal Services, Except Veterinary
	0751	Livestock Services, Except Services for Animal Specialties: Establishments primarily engaged in performing services, except veterinary, for cattle, hogs, sheep, goats, and poultry. Dairy herd improvement associations are also included in this industry. Establishments primarily engaged in the fattening of cattle are classified in Industry 0211. Establishments engaged in incidental feeding of livestock as a part of holding them in stockyards for periods of less than 30 days (generally in the course of transportation) are classified in Industry 4789. Establishments primarily engaged in performing services, except veterinary for animals except cattle, hogs, sheep, goats, and poultry are classified in Industry 0752.
	0752	Animal Specialty Services: Establishments primarily engaged in performing services, except veterinary, for pets, equines, and other animal specialties. Establishments primarily engaged in performing services other than veterinary for cattle, hogs, sheep, goats, and poultry are classified in Industry 0751.

Industry subgroup	Detailed industry	Description
076		Farm Labor and Management Services
	0761	Farm Labor Contractors and Crew Leaders: Establishments primarily engaged in supplying labor for agricultural production or harvesting. Establishments primarily engaged in machine harvesting are classified in Industry 0722.
	0762	Farm Management Services: Establishments primarily engaged in providing farm management services, including management or complete maintenance of citrus groves, orchards, and vineyards. Such activities may include cultivating, harvesting, or other specialized activities, but establishments primarily engaged in performing such operations without management services are classified in the appropriate specific industry within Group 072.
078		Landscape and Horticultural Services
	0781	Landscape Counseling and Planning: Establishments primarily engaged in performing landscape planning, architectural, and counseling services.
	0782	Lawn and Garden Services: Establishments primarily engaged in performing a variety of lawn and garden services.
	0783	Ornamental Shrub and Tree Services: Establishments primarily engaged in performing a variety of ornamental shrub and tree services. Establishments primarily engaged in forestry services are classified in Major Group 08.

In order to be "primarily engaged," an establishment must have received at least 50 percent of its gross receipts from such activities during calendar year 1978. For cases in which no single activity accounted for 50 percent of gross receipts, the largest source must have been from agricultural services.

It is important to note that various changes have taken place in the structure of the SIC system which affect the comparability of data from census to census. For example, in 1969, establishments primarily engaged in hatching poultry for their own account or on a contract basis, and cattle feed lots operated on a contract or custom basis, were classified as agricultural service establishments according to the 1967 SIC manual. In 1974, however, these establishments were classified as farms according to the 1972 SIC manual and were excluded from the agricultural service census. As a result of the 1977 supplement to the 1972 SIC manual, grist mill operations, hay or alfalfa cubing establishments, and custom flour, feed, and grain milling establishments, all of which were included in previous agricultural service censuses, were deleted from the major group 07 and, therefore, were excluded from the 1978 census. On the other hand, with the addition of irrigation system operation services to the major group 07, data for this agricultural service activity are available from the 1978 census.

Also affecting data comparability between censuses is the \$2,500 minimum limit on dollar volume of business placed on

agricultural service establishments in 1978; since there was no satisfactory source list for these small establishments, complete coverage was not obtained, and, consequently, no attempt was made to include these establishments in the final tabulations of the 1978 census.

Scope of Census

The census of agricultural services was conducted by mail and covered the 50 States and the District of Columbia, and attempted to include every establishment meeting the Bureau's definition of an agricultural services operation and active during the census year.

The census was primarily concerned with the business characteristics of the establishments enumerated. The basic data requested included type of business, type of organization, gross receipts in 1978, payroll, number of employees, supplemental labor costs, capital expenditures, changes in value of depreciable assets, and expenditures for energy.

Planning

Planning and preparation for the 1978 census began well before the 1974 census was completed, and work on the enumeration continued into 1980. All this was integrated into the overall agriculture census operation, particularly with respect to assembly of the address list, preparation of the mailing packages, and mailout. Nevertheless, considerable independence was required in such areas as design of report forms and writing of processing and tabulation procedures.

Report Forms

Data from various source lists used in the compilation of the mail list for the 1978 census enabled the Bureau to identify agricultural service operations and, within broad categories, to determine the type of services provided as well. For the 1974 census, a single report form, the A40, was used for *all* agricultural service operations. Each addressee was asked to go through the entire form and complete those sections applicable to his or her operation. In order to reduce respondent burden in the 1978 census, the Bureau used several specialized data-collection forms, each type including a section with gross-receipts inquiries tailored for easier response from specific industry groups. All report form types contained a core of generalized inquiries addressed to all agricultural service establishments.

A total of four forms were used: the A40 versions A, B, C, and D. The A40A was sent to addresses representing soil preparation services, crop services, and cotton ginning. The A40B covered veterinary and animal services and the A40C enumerated landscape and horticultural services, while the A40D was a generalized form covering all types of agricultural services.

All four report forms were identical in format: Sections 1 through 7 requested general business data, i.e., type of business or activity, employer identification number (EIN), type of organization, period operated in 1978, dollar volume of business, payroll, and supplemental labor costs. Sections 9 through 16 were also standardized, requesting information on the geographic location of services performed; labor and payroll for services performed; gross receipts from products provided

in connection with services performed; other operations performed; capital expenditures (excluding land and mineral rights); changes in gross value of depreciable assets; expenditures for electricity, gasoline, petroleum, and other fuels; checks to assure completeness of the form; and the signature and telephone number of the person completing it.

Section 8, "Gross Receipts For Services Performed," varied in content with each version. In version A, section 8 was divided into four subsections. The first three subsections requested gross receipts for soil preparation services (plowing, harrowing, fertilizer spreading, and weed control before planting, etc.) and the number of acres serviced; crop services (planting, cultivating, harvesting, preparation for market, cotton ginning) and the number of acres and/or bales of cotton serviced; and other agricultural services excluding soil preparation and crop services. The fourth subsection asked for the sum of the three previous subsections or total gross receipts. In version B, section 8 was similarly divided, but into subsections on veterinary services, animal services except veterinary services (artificial insemination, livestock vaccination, boarding, showing or training, etc.), other agricultural services excluding veterinary and animal services, and the sum of the three previous subsections or total gross receipts. In version C, section 8 had only three subdivisions—landscape and horticultural services (counseling and planning, lawn and garden services, ornamental tree and shrub services, etc.), other agricultural services excluding landscape and horticultural services, and the sum of the two previous subsections or total gross receipts. Version D included all the other three versions' section 8 subdivisions plus a subsection on farm labor and management services.

The layout and general arrangement of all four versions of the A40 were identical. All were 14" x 21" sheets folded to 14" x 10½" with a left-hand fold. Printing was in black ink on white stock, but each version was shaded with a different color ink as an aid in sorting and identification—version A in light blue, version B in pink, version C in salmon, and version D in lavender. Separate instruction sheets for each version, printed in black ink on colored stock to match each version's shading, were included with the forms.

Mail List

The mail list for the 1978 Census of Agricultural Services was assembled from census records and from accessible records of other Government agencies. Specifically, the Internal Revenue Service supplied lists of persons and/or organizations who had filed form 1040 Schedule C (individual proprietorships), form 1065 (partnerships), or form 1120 or 1120S (corporations), and who were identified from these reports as agricultural service operations, as well as a list of agricultural service establishments filing employer's tax form 941 or 943.² In addition, various trade associations representing different agricultural service industry groups provided membership lists of their organizations.

² IRS form 941 (Employer's Quarterly Tax Return for Non-Agricultural Employees); IRS form 943 (Employer's Annual Tax Return for Agricultural Employees).

Altogether, the initial address list for the census of agricultural services contained over 700,000 names and addresses. This list was unduplicated with the main census list in the fall of 1978, and was reduced to 353,000 names and addresses.

Data from these source lists, as well as from the in-scope 1974 Census of Agricultural Services list, were used to identify agricultural service operations by activity in order to determine the form version to be mailed to each address; addresses for which the primary activity could not be determined were sent the D version of the A40 report form.

ENUMERATION

Initial Mailout

The final address list for the 1978 Census of Agricultural Services contained over twice as many names and addresses as were on the 1974 list and over four times as many as on the first agricultural services list used for the 1969 census. Some 8,000 cases on this final list were considered of questionable status and were withdrawn for further checks and confirmation of activity. The slightly truncated mail list was then used in the production of mailing address labels. The mailout packages were assembled and the address labels applied at the Bureau's Jeffersonville, Ind., facility. All of the packages carried third-class postage except those for Alaska and Hawaii, which were sent by first-class mail. Each mailing package contained the appropriate report form (A40A, A40B, A40C, or A40D), a file copy of the form for the respondent's records, an information sheet providing instructions for completing the form, a cover letter requesting prompt response, and a return envelope.

The initial mailout for the census of agricultural services was made from Jeffersonville during the week of January 15, 1979. The total number of each type of report form mailed was as follows:

Report form	Number mailed
Total	344,953
A40A	24,801
A40B	116,316
A40C	129,435
A40D	74,401

the nonrespondent addresses were used to create the mail list for the first followup. Address labels were produced during the week following the closeout. (A similar procedure was employed after each followup mailing.) The first followup to the agricultural services census consisted of a form letter A40(L3) requesting that the addressee respond and offering help if needed. The second consisted of the appropriate report form and a cover letter (A40(L4)). Additional letters were sent in the third, fifth, and sixth followups, while the report forms were again sent to nonrespondents in the fourth followup. The details of these mailings were as follows:

Closeout date	Materials mailed	Number mailed
(1st) Feb. 13	Followup letter L3 (in A40A through A40D versions)	234,852
(2nd) Mar. 13	Report form — total Followup letter L4 (in A40A through A40D versions)	162,997
	A40A	12,422
	A40B	54,340
	A40C	59,630
	A40D	36,605
(3rd) Apr. 3	Followup letter L5 (in A40A through A40D versions)	145,958
(4th) May 1	Report form — total Followup letter L6 (in A40A through A40D versions)	103,442
	A40A	8,684
	A40B	33,290
	A40C	37,510
	A40D	23,958
(5th) May 22	Followup letter L7 (in A40A through A40D versions)	94,031
(6th) June 26	Followup letter A40- L8 (general version sent to all form types)	66,632

Postmaster returns (PMR's), approximately 30,000 cases in all, were remailed in the second followup only.

Supplemental Mailing

By the second week of March the status of the 8,000 cases held from the initial agricultural services mail list had been confirmed to justify including them in the census. Accordingly, a supplement to the census mailing was done. Basic procedures were identical to those employed in the census, except that the periods between the closeout dates were narrowed slightly to shorten the total enumeration period, and a different set of followup letters was used. The mailing packages for each followup were similar to those used in the census. The volume of mailings for the initial mailout and each followup were as follows:

The vast majority of the addresses on the agricultural services mail list represented individual establishments, but 3,369 were constituent establishments of about 2,251 identified multiunit companies. For the purpose of data collection these cases were handled the same way as the single-unit addresses.

Followup Mailings

The agricultural services enumeration included six followup mailings. The closeout date for response to the initial mailing was February 13, after which computer tapes listing CFN's of cases checked in were matched against the mailing list and

Closeout date	Materials mailed	Number Mailed
(Initial mailout)— Mar. 13	Report forms — total A40A A40B A40C A40D Transmittal letter A43-L2S (general version sent with all form types)	7,985 923 2,990 2,035 2,037
(1st) Apr. 10	Followup letter A43- L3S	6,806
(2nd) May 3	Report forms — total (No counts by type available) Followup letter A43- L4S (general version sent with all form types)	5,219
(3rd) May 23	Followup letter A43- L5S	3,599
(4th) June 19	Report forms — total (No counts by type available) Followup letter A43- L6S (general version sent with all form types)	2,886
(5th) July 10	Followup letter A43- L7S	2,137
(6th) Aug. 2	Followup letter A40- L8	1,581

Telephone Followup

Each of the addresses on the agricultural services mail list was size-coded by an expected gross value of receipts, based on administrative or historical records. Since large operations represent a major share of the economic activity in the service sector, the Bureau believed their inclusion in the census totals was imperative if the data were to present a valid statistical picture. Accordingly, after the June 26th cutoff date for the last regular mail followup, 2,400 of the nonrespondent cases with expected receipts of \$40,000 or more ("must" cases) were referred to Agriculture Division analysts in Suitland for enumeration by telephone.

An additional telephone followup, of a 1-in-10 random sample of other nonrespondent cases, was also initiated, using the Bureau's regular telephone staff at the Jeffersonville, Ind., facility. Also, as processing of the agricultural service report forms progressed, problem cases—those with incomplete or inconsistent entries, or with other problems not covered in the Bureau's editing and processing instructions—were drawn out of the processing cycle for resolution by telephone and referred to the Suitland and Jeffersonville telephone staffs for followup. Between early July and the end of October 1979 the Jeffersonville staff enumerated 2,601 nonrespondent cases and handled 525 problem cases. The Suitland analysts completed report

forms by telephone for the 2,400 "must" cases and resolved an additional 1,189 problem cases referred to them from the overall workload in Jeffersonville.

Results

The results of the census revealed that while the source lists obtained from other agencies identified operations as belonging to SIC group 07 (agricultural services), many of these did not, for one reason or another, meet the Census Bureau's criteria for an establishment engaged primarily in providing agricultural services. The final response rate for the 1978 Census of Agricultural Services was approximately 83 percent; report forms were received by the Bureau for about 293,000, out of 352,938 cases mailed. Of these, 93,120 were in-scope and contributed to the census tabulations.

DATA PROCESSING

Precomputer Processing

Receipt and check-in—The first step in processing the data from the census of agricultural services was the receipt and check-in of the report forms and any correspondence related to the census. This was necessary to establish and maintain control of the forms, and to identify respondents' operations so their addresses could be deleted from the mail or telephone followup files. This phase of the operation was carried out by the staff of the Bureau's Jeffersonville, Ind., facility, and involved sorting out report forms with correspondence attached, postmaster returns (PMR's), and duplicates or multiple returns. The census file numbers (CFN's) from the report forms received were keyed to magnetic computer tape, and then were matched to the agricultural services address list. Nonrespondent addresses were selected for followup mailing. (PMR cases were also subjected to followup action.) This operation was repeated after each mailing cutoff date until the data-collection effort was closed out in August 1979.

Report forms with correspondence, multiple responses, and other problems were referred to the correspondence unit and/or to agricultural analysts.

Correspondence—The correspondence subunit of the agricultural services processing unit handled cases involving respondent-originated correspondence, Bureau-originated correspondence (concerning agricultural services), report forms with remarks or attached correspondence (e.g., copies of letters to congressional representatives, financial records, etc.), and correspondence referrals from other units.

Correspondence referred to the subunit was read by correspondence clerks on a first-in/first-out basis. When there was doubt as to how an individual case should be handled, it was referred to an agricultural services specialist; otherwise the correspondence was read, problem-resolution procedures were consulted, and proper action was initiated. When the action indicated in the procedures was taken, the clerk annotated the top of the report form and/or correspondence with what had been done before sending it on to the next appropriate process-

ing subunit. To aid the clerks in responding to problems presented by correspondence, a set of over 30 form letters and a manual of standardized paragraphs for insertion into tailored letters, addressing common and not-so-common problems, were prepared for the correspondence subunit.

Clerical screening and coding—The clerical screening and coding procedures were used to spot and reduce potential data-entry problems, identify and separate selected cases for further review, and ensure that each report form was properly and thoroughly prepared for keying and computer processing. A staff of clerks, technical assistants, and statisticians in Jeffersonville and at Bureau headquarters in Suitland, Md., carried out the screening and coding on a flow basis as the report forms arrived. After check-in, report forms were sent to the screening subunit and sorted by type of form before screening. The clerical staff processed the report forms by performing the following tasks:

1. Reviewing the report forms to select those with problems requiring technical review (insufficient or questionable responses, apparently out-of-scope, etc.).
2. Deleting entries such as "same," "ditto," etc., where referring to a numeric entry, and entering the numeric.
3. Converting spelled-out alpha entries to numeric (e.g., "five" to "5", etc.).
4. Referring to Agriculture Division analysts in Suitland all report forms for operations with estimated total receipts of \$100,000 or more.
5. Checking geographic area codes (GAC's) on labels against section 9 (Location of Services Performed) of the report form and referring those forms with errors for corrections.

The clerical screening staff was provided with a guide listing the problems most often encountered and the corrective actions to be taken. Problem cases were referred to the technical screening unit, where the technical staff carried out the following tasks:

1. Confirmed the status of possible out-of-scope report forms. Unresolved forms were referred to Suitland for further analysis.
2. Reviewed forms for indicated double entries, bracketed entries, and suspected multiunit status, and initiated the corrective action.
3. Resolved some of the inconsistent and/or incomplete forms by following a set of problem-resolution procedures.
4. Reviewed each section designated for technical review by the clerical screening unit and made whatever corrections were necessary and appropriate.
5. Referred to Agriculture Division analysts for professional review any cases that could not be resolved using the technical review procedures.

The professional staff of the Agriculture Division at the Bureau's Suitland headquarters was responsible for the resolu-

tion of problem cases and the followup of incomplete report forms. About 15,500 "must" and problem cases were referred for resolution.

Keying the data—After work units were screened, edited, and coded, they were passed on to the data keying staff. The data from each report form were keyed directly to magnetic computer tape. The work of each keying operator was verified on a sample basis to ensure a specified level of accuracy among the keying staff. (See p. 46 for details of the quality controls.) Corrections to records that had been rejected by the computer edit were also made by rekeying the corrected records for subsequent re-editing.

Once keyed onto computer tape, the data were transmitted to the Bureau's main computer facility at Suitland for computer editing and tabulation.

Computer Processing

Editing—The computer processing program for the 1978 Census of Agricultural Services was designed to perform certain tests and comparisons involving key ratios within the data, such as the acres serviced and the cost per acre for the services performed. These ratios were tested by comparing them to tolerance limits based on data from previous censuses and from current agriculture-related publications. As in the agriculture census, computer corrections of errors were made by (1) rounding, (2) substituting the sum of detail items for an inconsistently reported total, and/or (3) imputing items on the basis of one of several ratios in which the questioned component was contained.

During the computer edit process, records that met the criteria for an agricultural service establishment were retained and were assigned specific numeric codes according to characteristics, such as gross receipts and SIC type. Those records that did not meet the criteria were dropped from the data file and were transferred to the out-of-scope file.

Correction program—After the computer edit, case listings were produced by high-speed printer for each report form that had one or more items fail the edit program. These listings displayed the items for each form that had either failed to edit altogether or had been changed by the edit program. Each page of the listing contained all the failed or altered items for one establishment.

The failed-edit listings of all flagged items were analyzed by the Agriculture Division's professional staff at Suitland between October 1979 and January 1980. As each case was analyzed, an action code was assigned, and the case was either returned to the processing program or was deleted from the files. The codes and the actions taken were as follows:

Code	Action
1	Mark corrections—re-edit record
4	No corrections—change fail-edit flag to passed edit
5	Delete record from file
6	Make corrections—bypass edit

Tabulation of the data—The basic plan for the final publication tables was developed during the initial planning stages of the agricultural service census. Revisions based on working experience were made to the plans throughout the processing stage of the operation.

After the computer "runs" of the edit and correction programs were completed, the data were ready for tabulation. The Generalized Tabulation System (GTS) software program was used for the agricultural services census data, and cross-tabulations of preliminary data were produced by county, State, region, the United States, type of organization, and SIC code. The preliminary totals were reviewed, using previous census and other check data, to determine whether totals for a particular item were questionable.

This table review was intended to reduce the workload of post-tabulation adjustments to the data, although it was anticipated that further adjustments to the tables would be necessary to avoid disclosure of information about individual establishments. When errors were detected during the review, corrections were annotated and were keyed for transfer to the computer records.

All tabulations were examined to ensure that the data were reasonable and consistent. The preliminary tabulations review took place at the Suitland headquarters in April and May 1980, while a final review of tabulations occurred in July and August of that year. Agriculture Division clerks checked the tabulations, located the report forms that had to be reviewed in connection with problems in the tabulations, reviewed the table printouts for consistency of data within individual tables and among related tables, carried routine data changes to the

tables, assisted in the final consistency and completeness checks of tables before release, and made tabulations by hand for special projects.

The professional staff analyzed the data for reasonableness and accuracy, identified and located tabulation errors, reviewed the relevant report forms, decided what data changes were necessary and the most efficient method of transferring changes to the tables, and handled the transfer of the more complex changes to the tables.

The Agriculture Division staff at Suitland carried out disclosure analysis of the tabulations and made corrections on the basis of further review of the original report forms. Upon completion of all changes to the tabulations, a final check was made to ensure that all problems had been resolved. The final, corrected tables were released to the publication preparation staff in October 1980.

PUBLICATION PROGRAM

The publication program of the 1978 Census of Agricultural Services include both preliminary and final reports. A two-page preliminary report for agricultural services was published for each State in April-May 1980. These reports contained data on the number of establishments by primary activity, gross receipts, and payroll. The final results of the census were published in Volume 3, *Agricultural Services*, of the 1978 Census of Agriculture publication series. Volume 3, released in November 1980, contained data for agricultural services establishments at the U.S., State, and county levels (only limited data were shown for counties).

Special Censuses and Program Sample Surveys

INTRODUCTION

General Information

In addition to the farm enumeration and the census of agricultural services, the 1978 program included the decennial censuses of irrigation organizations and drainage (required by law—see below), a census of horticultural specialties taken with the cooperation of the USDA's Statistical Reporting Service, and several supplementary surveys. These last involved the investigation, as is usual after each census, of particular agricultural subjects, using samples drawn from the in-scope census files; for 1978, they were the sample surveys of farm and ranch irrigation, farm finance, and farm energy use.

Legal Authority

Title 13, United States Code, section 142, paragraph (b) directs that, in conjunction with the regular census of agriculture, censuses of irrigation and drainage be carried out "in 1979, in 1988, and every tenth year beginning after 1988. . . ." Section 193 further provides that the Secretary [of Commerce] "may make surveys and collect such preliminary and supplementary statistics related to the main topic of the census as are necessary to the initiation, taking, or completion thereof."

A major portion of the data for the census of drainage is obtained from the census of governments. The authority to conduct this census is given to the Bureau in section 161 of title 13, which provides for a census of governments in 1957 and in every fifth year thereafter.

Part of the data collected in the census of horticultural specialties was gathered by the Statistical Reporting Service (SRS). Report forms used in the census were designed in close cooperation with SRS, and data from that agency's surveys were incorporated into the census file. Under the provisions of title 13, addresses and individual records obtained by the Bureau of the Census cannot be made available to any agency or individual outside the Bureau, including the SRS, but the confidentiality regulations of the USDA, augmented by the authority of the Secretary of Commerce under section 6 of title 13, do permit the Bureau to have access to some SRS data. Paragraph (a) of section 6 states that the Secretary [of Commerce], "whenever he considers it advisable, may call upon any other department, agency, or establishment of the Federal Government, . . . for information pertinent to the work provided for in this title."

Reference Year and General Procedures

The Bureau requested calendar-year data for the censuses of irrigation organizations (1978) and drainage (1977 and 1978), while the reference year for the census of horticultural specialties and all three of the follow-on surveys was calendar year 1979. All of these data-collection efforts used mailout/mailback procedures supplemented by telephone enumeration. The pre-computer and computer processing of the data generally followed the broad outline of the same phase of the regular census program, but the General Tabulating System (GTS) software package was employed to tabulate the data. The statistics from these supplemental operations were printed and released as part of the 1978 census publication program.

The special censuses and program sample (follow-on) surveys of the 1978 Census of Agriculture are each described in greater detail below.

THE 1978 CENSUS OF IRRIGATION ORGANIZATIONS

Background Information

Introduction—Basic data on land irrigated were requested of farm operators in section 11 of the forms 78-A1(S) and 78-A1(N) used in the census of agriculture. Responses to this section provided some information on land being irrigated, as well as enabled the Bureau of the Census to identify farms employing irrigation for possible sampling in a follow-on survey (see below). Information from earlier censuses, USDA, trade associations, and the like indicated that one-half of the irrigated lands in the United States are supplied with water by a relatively small number of irrigation organizations. In many Western States particularly, agricultural operations are dependent on water supplied by irrigation projects or other irrigation organizations. In order to accurately describe irrigation in the United States, it was considered necessary to collect (1) data from water-supplying organizations that divert, store, and convey water from its source to the farm, as well as (2) on-farm irrigation characteristics.

Historical background—Data on irrigation organizations have been collected since 1910, when a separate census of irrigation "enterprises," or organizations supplying water to farms, was taken as part of the decennial census program. While data on

irrigation of farm lands have been collected in each decennial census of agriculture since 1890 and in the quinquennial census of agriculture starting in 1938, the enumeration of irrigation organizations has been undertaken only on a 10-year basis.

Scope—The census of irrigation organizations derived its data from an enumeration of irrigation organizations in 17 Western States¹ and Louisiana. Two report forms were used to collect data from irrigation organizations: the form 78-A60 for single-drainage-basin enterprises and the 78-A61 for those with operations in more than one basin. For census purposes, an irrigation organization was defined as "... a group of individuals, a company, a governmental district or agency, or an individual that operates facilities to supply irrigation water to two or more farms or ranches" or that stores water for irrigation purposes. Such an "organization" could be either formal and legal, as in a regular business venture, or an informal or cooperative arrangement.

The census covered any business entity, cooperative group, or district that delivered, conveyed, or stored irrigation water, or would normally do so. Report forms *were not* required for lateral ditches or small groups of water users who divided water obtained from, and paid fees directly to, a parent supply company. In such cases, the parent company was to include any such subsidiary or dependent operation in *its* report.

Planning and Preparation

Initial planning—Planning for the 1978 Census of Irrigation Organizations began in December 1976 when Bureau officials contacted the Water Resources Council (WRC). The Council agreed to act as coordinator of irrigation (and drainage) items requested for inclusion in the 1978 census program. The plan was to assemble, from administrative records (primarily from 1969 Census of Irrigation Organizations records and information supplied by State officials), an address list of irrigation organizations in the States covered by the census, and use that list as the universe for a mailout/mailback enumeration.

In February 1977, an interagency committee on the data requirements of the irrigation (organizations) census was formed with the following agencies represented at its first meeting:

- U.S. Department of Agriculture: Economic Research Service (ERS), Statistical Reporting Service (SRS)
- U.S. Department of Commerce: Bureau of the Census, Bureau of Economic Analysis
- U.S. Department of Defense: U.S. Army Corps of Engineers
- U.S. Department of Interior: Bureau of Reclamation (USBR)

The committee held a series of meetings throughout 1977² at which it considered the data requirements in the area of

irrigation organizations and made recommendations to the Bureau on the content of the report forms for this census and the follow-on survey of farm and ranch irrigation, and on the data to be processed and published for the census of drainage (see below).

March 1978 Content Pretest

Development of the report forms—By December 1977, proposed versions of the report forms for single- and multi-basin irrigation organizations had been designed and were submitted to the Office of Management and Budget (OMB) for approval for use in a content pretest in the spring of 1978. Each of the forms, the 77-A60-T1 for single-basin and the 77-A61-T1 for multi-basin organizations, were 21" x 17" sheets of white stock, folded to 10½" x 17". The A60-T1 had shading in blue, while the A61-T1 was shaded in green; both versions had printing in black ink. The content of the forms was similar, except that several sections of the 77-A61-T1 requested data for each basin or State in which the respondent organization had irrigation operations.

Sample selection and mailout—The Bureau decided early that the content pretest for the irrigation organizations survey would be a relatively small-scale activity, but the sample chosen was designed to provide a good geographic cross-section of operations in the States to be covered by the census. About 30 irrigation operations were selected randomly from the preliminary address lists of single-basin operations in 10 States (Arizona, California, Colorado, Idaho, Louisiana, Montana, Nebraska, South Dakota, Texas, and Washington), while approximately a dozen more addresses were chosen, at random, from the preliminary list of multi-basin operations for all the heavy-irrigation States. Pretest packages were assembled at Suitland in early March. Each contained the appropriate report form, a cover letter explaining the purpose of the pretest, a return envelope, an instruction sheet, and the appropriate hydrological unit map (or, in the case of some multi-basin organizations, two or more maps). A total of 332 pretest packages were mailed on March 22, with a requested response date of April 17.

Followup—A single mail followup to the pretest was conducted. By mid-April an overall response rate of 50 percent (including PMR's) had been achieved, and reminder letters were addressed and mailed to nonrespondents (PMR's were not remailed). By the end of April, 216 report forms and 28 PMR's had been received—an overall response rate of approximately 71 percent. A field followup was undertaken to try to determine operators' reactions to the report forms. In the first week of May representatives of the Bureau's Agriculture Division, assisted by members of the U.S. Geological Survey sworn in as temporary census agents, visited approximately 70 irrigation operations, evenly divided between respondents and nonrespondents, to interview the operators. The information from the field followup and analysis of the responses received to the report forms were used by the Agriculture Division to revise the report forms for the census proper.

Finalization of report form design—The Bureau found that operators had little difficulty answering most items, although

¹Arizona, California, Colorado, Idaho, Kansas, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, Oregon, South Dakota, Texas, Utah, Washington, and Wyoming.

²The later meetings were attended by representatives of various private and/or non-Federal governmental agencies, as well as officials from the Bureau of Indian Affairs (BIA), various offices and staffs within USDA (in addition to those listed), the U.S. Geological Survey, etc.

considerable use of business records was required. Nevertheless, certain changes in format and content were indicated. The items on the A60 and A61 comparing current acres irrigated, water delivered, etc., to the same kinds of data for the period 1972-1976, or to "normal" quantities, were changed. On both report forms, the format was altered from one asking the respondent to provide a specific percentage estimate of the change to one that provided a set of check-off boxes indicating the approximate degree and the percentage range of changes (e.g., "Much above average (50% or more)," "Above average (20% to 49%)," etc.).

The data item requesting the source of funds for improvements and new construction was deleted from the final design of both report forms.

The Bureau also decided to use two versions of the A60 single-basin report form. The revised standard A60 "blue" form would remain the principal single-basin report form, but an A60A version, identical in content and format to the A60, but with yellow shading instead of blue, was instituted for the enumeration of large single-basin operations. (The color coding was adopted to facilitate manual identification and sorting upon receipt.) A large single-basin operation was defined as any irrigation organization that (1) provided irrigation water for 10,000 acres or more or transferred 100,000 acre feet of water, or (2) exchanged 3,000 acre feet of water with two or more other organizations or 5,000 acre feet of water with one other organization.

Compilation of the Mailing List

Sources—The 1978 Census of Irrigation Organizations was to be primarily a mailout/mailback operation. The two principal sources of addresses for the 1978 census mailing list were the lists of in-scope irrigation organizations and A1 "must" cases from the 1969 Census of Agriculture. The 9-year lapse between the censuses of irrigation organizations meant that these lists were unavoidably out of date, and while they could serve as a starting point and core source, they would have to be extensively supplemented.

The 1977 Census of Governments provided addresses for irrigation and drainage operations run by local and/or State government agencies. The Bureau's contacts and conferences with the Bureaus of Reclamation and Indian Affairs included negotiations for the transfer of lists of addresses of irrigation operations controlled by those agencies for addition to the census mail universe. The USDA Agriculture Stabilization and Conservation Service (ASCS) was also contacted and supplied lists of irrigation organizations from its files.

The Bureau also consulted those offices of the State governments (e.g., State departments of agriculture, water conservation boards, etc.) with an interest in irrigation and/or agriculture for lists of irrigation organizations within each State. (Every State was contacted, but 24 reported no irrigation organizations.³)

³While the principal focus of the census of irrigation organizations was on the 18 "irrigation" States, there were operations listed, and enumerated, in other States as well. The number was very small (e.g., 2 in Arkansas, 17 in Florida, and so on), and the 1969 lists were used as the primary source for addresses for these operations.

Control cards—A control card containing, in both alphanumeric and coded form, name, address, size code, a control number, and the census file number (CFN) was prepared for each organization on each source list used. If available, size data included the number of users served, acres irrigated, and the volume of water conveyed. The cards, approximately 18,000 in all, were used first for a manual match to other source-list control cards to unduplicate the file, and to facilitate transfer of the coded information to address labels.

Assignment of census file numbers—Any irrigation organization that became part of the census address file had a census file number (CFN) assigned to it. Eleven-digit CFN's were generated by computer for each of the "irrigation" States; the first two-digits were the State code, followed by a three-digit county code, a five-digit serial number, and a check digit. Each county (parish in Louisiana) in the 18 "irrigation" States had 200 CFN's reserved for its use, with the numbers assigned to individual operations in each county as each address was added to the mail file for that county.

Preparation of Maps

The census packages sent to the organizations on the Bureau's mailing list included the appropriate State hydrological unit map (HUM—standard maps produced by the U.S. Geological Survey (USGS)) for each operation. The respondent was to use this map as a reference in providing drainage basin identification numbers and other data on the report form. For States (mostly in the East) with very few irrigation organizations, the Bureau purchased the required maps from USGS distribution centers. Over 12,000 maps would have been needed to cover the major irrigation States, but it was determined that partial State HUM's, with attached legends, would suffice in many cases and only about 9,200 complete maps were required. The USGS agreed to prepare the necessary maps and legends, including cutting and folding to Bureau specifications and delivery to the Bureau in November 1978, on a reimbursable basis.

Enumeration

General plan—The enumeration consisted of an initial mailing of report forms and other census materials, followed by a thank you/reminder letter, and three followup mailings to nonrespondents. There was no field followup of delinquent cases, but a telephone followup operation was undertaken. This latter effort was intended to improve the coverage of large, complex nonrespondent cases, but toward the end of the enumeration period significant numbers of small nonrespondent cases were added to the telephone file as well.

Preparations for the initial mailout—The Office of Management and Budget (OMB) approved the final designs for the report forms in August 1978. These, together with the respondents' file copy (A60 or A61 "grey") and the other materials for the initial mailout package (except the maps) were sent to the printers in October. In the meantime, the Bureau made arrangements for the production of the necessary HUM's and finalized the mail address lists.

The mailout materials were delivered to Suitland by the first week in November. The address list of irrigation organizations was keyed to magnetic tape shortly thereafter and the tape then was used for the production of the address labels for the initial mailout. The contents of the mailing packages for both single- and multi-basin organizations were similar in general makeup. Each package assembled contained the appropriate report form, respondent's reference copy of the form (A60 or A61 "grey"), and HUM with legend; a standard form BC-297 return envelope; a transmittal letter (form 78-A63(L1) for single-basin organizations, form 78-A61(L1) for multi-basin organizations, or special letters for organizations operated by the USBIA or the USBR); a form 78-A64(I) reference guide (an 8½-page instruction booklet for completing the report form); and, for USBIA and USBR cases, special instruction sheets. Address labels were applied manually to the census report forms, which then were inserted into the form BC-2107 outgoing envelopes. The mailout was done in the last week of December. The numbers of each type of report form mailed were as follows:

Report forms ¹	No. mailed
Total	12,252
78-A61 ("green") multi-basin report form	² 716
78-A60 ("blue") and 78-A60A ("yellow") single-basin report form	11,536

¹ See app. G for facsimiles.

² Includes 188 USBIA and 105 USBR operations.

Thank you/reminder letters—A combination thank-you and reminder letter, form 78-A70-L1, was sent to addresses on the census list about 3 weeks after the initial mailout, thanking operators who might have completed and returned the report forms and reminding nonrespondents of the requested return date.

Mail followup—Response to the initial mailing was fairly good, with approximately 5,800 completed report forms and nearly 1,300 PMR's received by the requested return date. The first regular followup letter, form 78-A63-L1, was mailed to 5,007 nonrespondent addresses on February 28. By mid-March an overall response rate (including PMR's) of about 67 percent had been achieved, and a second followup letter, form 78-A63-L3, was mailed to 3,988 delinquent cases. The final mail followup, using a form 78-A63-L4 letter requesting prompt response, involved a mailout to 3,588 addresses. By the end of May, the mailout/mailback operation had obtained completed report forms for 8,623 irrigation organizations, while 1,592 PMR's had been received. This yielded an overall mail response rate of approximately 84 percent. The remaining nonresponse cases, a little over 2,000 in all, were referred to the telephone followup unit for resolution.

Telephone followup—Telephone followup for the census of irrigation organizations was done by Agriculture Division personnel in Suitland. In the first week of May 1979, Agriculture Division analysts began making telephone contacts and carrying

out interviews to complete the requisite report forms for very large operations, and by the end of May some 600 cases had been resolved. With the referral of the remaining nonrespondents (about 2,000 in all), the staff began making calls to, and completing report forms for, irrigation organizations of all sizes.

Telephone followup continued through the summer and was closed down at the end of August 1979. At that time only 136 cases in the original census file remained unsatisfied, yielding an overall response rate (including approximately 1,600 PMR's) of 98.8 percent.

Precomputer Processing of the Data

General information—The precomputer processing of the data for irrigation organizations, except for data-keying, was done by Agriculture Division personnel at the Suitland office. The returns from the irrigation organizations had no barcodes, hence check-in and initial sorting was an entirely manual operation. Once the report forms had been edited, they were shipped to Jeffersonville for data-keying and computer processing.

Check-in—Check-in of report forms began in mid-January 1979, when the first responses were received at Suitland. The principal purpose of the check-in procedures was to remove respondent's names and addresses from the follow-up file, so that followup would be done only for nonrespondent cases, and the check-in unit continued its work until the mail enumeration was closed out at the end of May.

The check-in staff handled three primary types of materials, (1) completed report forms; (2) postmaster returns (PMR's); and (3) respondent-originated correspondence. The basic procedures for handling these three types of receipts were as follows:

1. **Completed report forms.** Clerks checked the contents of the return envelopes to ensure that the report form and map were included. The respondent's address and CFN were used to make a hand match to the previously labeled and sorted mailing packages for the first regular mail followup. When the corresponding followup package was located, it was removed from the file. After the first mail followup the manual match to followup packages was repeated. After this check-in procedure, the complete report forms and associated maps were sent to the editing staff for clerical and technical review.
2. **Postmaster returns (PMR's).** PMR's without address corrections were routed to the telephone unit, where calls were made to the appropriate Soil Conservation Service (SCS) office or post office for address corrections. If a new address was obtained, the PMR was sent to the typing unit for readdressing and remailing. If no new address information was obtained, the PMR was marked "No Address Located" and was referred to an analyst for disposition.
3. **Correspondence.** The category included all incoming letters unaccompanied by report forms. Letters requiring a reply were answered by standard form letters whenever possible. Otherwise, the letters were referred to the technical analysts for review and possible reply.

Clerical edit and technical review—A small staff of clerks at Suitland carried out the initial manual edit and review of report forms as they were referred from the check-in operation. This clerical edit was primarily concerned with preparing the data in the report forms for data keying. Analysts, assisted by the clerks, carried out the technical review, which involved a check of the report forms for accuracy and consistency.

The clerical edit staff received the A60 and A60A report forms from check-in and sorted them by State and CFN. Each report form was checked for obviously erroneous or illegible entries and for any other factors that could affect the keyability of the data. Specific instructions for a section-by-section edit of the single-basin report forms were provided to the edit clerks, and technical analysts were available to handle particular problems and to check the quality of the clerical edit.

Technical review of the report forms involved reviewing the corrections and changes made by the clerical staff, and a detailed check of each report form to (1) insure that the operation involved was in scope; (2) classify in-scope records by size and, if necessary, by type (i.e., single- or multi-basin); (3) check for possible evidence of other irrigation organizations not covered by the census (e.g., an entry showing exchange of water with an organization for which no report had been received and which was not on the Bureau's address list); (4) check for consistency in certain critical items, such as transfer of water (e.g., comparing one organization's report of water transferred to a second organization with the second organization's report of water received); and (5) separate data on A61 report forms for the several States and/or basins in which the respondent organization had operations and transcribe the data onto separate A60A forms.

As edit and review of the report forms were completed, they were sorted by State and CFN, batched into work units of approximately 100 forms each, and shipped to Jeffersonville for data keying.

Data keying—Once the forms were reviewed, edited, and coded, they were ready for data keying. Using the codes assigned to each data item during the clerical edit, the staff at Jeffersonville keyed the data from the report forms directly to disk, from which it was copied onto magnetic tape. Each data item on the report forms was uniquely identified, and only those that contained responses had to be keyed, in addition to the basic geographic and identification data for each report form.

Once the data were keyed and copied onto magnetic computer tape, they were transmitted via telephone datalink to Suitland for computer processing.

Computer Processing

General information—The computer processing phase of the census involved three principal operations: (1) a computer consistency edit, (2) analytical tabulations, and (3) data tabulations for publication. The computer consistency edit employed programs written specifically for editing the data from the irrigation organizations, while the analytical and data tabulations employed the Generalized Tabulation System (GTS) software program, adapted to produce the requisite tables for the census.

Computer batch edit—The batch edit program was designed to perform a series of tests and comparisons involving critical data/ or ratios within the data (particularly with respect to water transfer between organizations). These data or ratios were compared to tolerance limits developed using data from previous censuses, or were checked against each other for consistency. The edit program printed out lists of report forms in which errors or inconsistencies had been detected, together with the item codes of the errors.

The printouts of errors were reviewed and corrections made, after which the data were reedited in preparation for tabulation.

Tabulation of the data—After completion of the consistency edit and the correction of the data file, the data were ready for initial tabulation. The preliminary totals were produced and reviewed in December 1980 using previous census and other check data, and they showed aggregate data by State and by water resource region. A second, analytical tabulation, incorporating the corrections to the first set of tabulations, was reviewed in August. After final corrections were made, the final tables were produced and released to the publication preparation staff beginning in December 1981.

Publication

Data from the census of irrigation organizations were published in the *1978 Census of Agriculture, Volume 4, Irrigation*.

Volume 4 included data for irrigation organizations by State, water resource regions, and water resource subregions. The publication included not only the usual statistical tables, but a number of graphic tables and a series of maps showing the water resources regions and subregions.

1978 CENSUS OF DRAINAGE

Introduction

Purpose—Drainage of wetlands is one of the principal means by which more land has been brought into cultivation, and statistics on drainage are used in the estimation of agricultural production problems and of potential production capacity. Data collected on the organization and administration of public (i.e., local government-supported) drainage projects and organizations help in the assessment of total expenditures on agricultural ventures, and of the purposes for which funds are spent.

Historical information—Information on drainage of individual farms was collected as part of the censuses of agriculture for 1920, 1930, 1969, and 1974. For 1920 and 1930 these data were obtained for all farms in the 48 contiguous States (Alaska and Hawaii were added for 1969 and 1974), while for 1969 and 1974 data were collected only for farms with sales of \$2,500 or more.

Censuses of drainage covering publicly organized drainage projects and large private drainage projects were carried out in conjunction with the decennial censuses from 1920 to 1960 in all States in which such projects were reported. Beginning with the 1950 census, projects of fewer than 500 acres were excluded, while after 1960, those operations that were concerned solely with removing irrigation waste water were also

eliminated. (The reference years for all of these operations were generally the previous calendar years, i.e., the 1960 census collected data for 1959, but the 1978 Census of Drainage collected data for 1977 and 1978.) The scope of the census of drainage projects was further restricted in 1972, when it was limited to publicly organized projects (counties and special districts).

Planning and Preparation

Planning considerations—The two principal considerations in planning any census are (1) the need for the data, and (2) the collectability of the data desired. Planning for the 1978 Census of Drainage began in the spring of 1976 when arrangements were made to make available to the Agriculture Division staff certain data on drainage districts from the 1977 Census of Governments, and when the initial contacts with data users were made to investigate data needs.

From discussions with members of the Water Resources Council (which was also acting as the principal advisory and data-request coordinating body for the census of irrigation organizations) and other data users, it soon became evident that the USDA's Soil Conservation Service (SCS) would be the primary user of any drainage census data. Representatives of the Bureau and the SCS met several times to discuss data needs and data-collection methodology for the census of drainage. From these discussions it became obvious that there was no demand for drainage data for individual farms, and since farmers had always had great difficulty in supplying accurate drainage data anyway, the Bureau decided to reduce response burden by not collecting such data in the agriculture census itself.

Scope and data content—Data on drainage in the 50 States and the District of Columbia were collected and processed; the basic information was not, however, collected by the Bureau of the Census in a data-collection effort of its own, but was drawn from the data files of the 1977 Census of Governments. Additional data were collected for the Bureau by SCS field office personnel. The basic data and their sources, were as follows:

1. Total acres drained in 1978, by county, collected by the SCS.
2. Land-use data (for purposes of cross-tabulation with the SCS data) drawn from section 10 of the A1(S) and A1(N) census report forms.
3. Organizational and financial information on special drainage districts, drawn from the 1977 Census of Governments, and specially tabulated.

The Bureau's principal responsibility in the census of drainage, therefore, was processing and tabulating the information.

Data Collection

The data-collection activities for the 1978 Census of Agriculture are described in detail in chapter 4. Land-use data were requested from all agricultural operations.

The SCS produced estimates of acreage drained in each of over 3,000 counties, using on-the-ground surveys conducted by USDA field staffs, data from soil surveys, Agricultural Stabilization and Conservation Service (ASCS) records, local and State data sources, etc. The county inventories were combined and

summarized at the SCS's State offices, which forwarded the data to USDA headquarters in Washington, D.C., for referral to the Bureau of the Census. By the end of June 1979, data for nearly all the States had been received by the Bureau.

The data on drainage obtained from the 1977 Census of Governments concerned the organization and administration of special drainage districts. That census was based on a directory card listing showing the name of each local governmental unit, the county in which it was located, its mailing address, and selected characteristics (primarily revenue, expenditures, debt, and employment). This list was updated every 5 years, prior to each census of governments, using appropriate Federal and State publications, by review of the lists for each county by the county clerks and by using data from prec canvass surveys.

For the purposes of the census of drainage, the major activity of the 1977 Census of Governments was the mailout of directory cards to special districts (i.e., soil conservation, drainage, flood control, sewerage, etc.). Two versions of the "Local Government Directory Cards (Special Districts)" were used in this operation; the G-29 for special districts with a 1972 revenue of \$20,000 or more, or with a debt of \$500,000 or more; and the G-30 for special districts with revenue and debt of less than \$20,000 and \$500,000 respectively.

Approximately 26,000 G-29 and G-30 cards were mailed in December 1977. Followup of nonrespondents by mail and telephone was carried out in January and February 1978.

Each completed report form was reviewed for evidence of serious error or inconsistency, and correspondence was used to clear up problems. Approximately 2,550 of the special districts enumerated in the December mailing were identified as drainage districts, and the address, location, and characteristics of each were extracted from the census of governments data file for use in processing and tabulating the census of drainage.

Processing the Data

The data required relatively little processing prior to tabulation since the data from the census of governments had been tabulated already as part of the processing phase of that operation and were provided to the Agriculture Division as State-level aggregates. These numbers were posted manually to the single table included in the drainage census publication that showed the characteristics of drainage districts.

The county and State aggregate acreages received from the SCS were reviewed clerically and keyed at Suitland. The data were added to the 1978 census master data matrix as cell corrections, in order to facilitate cross-tabulation with the land-use data from the regular agriculture census report forms. After review and correction, the tables were released for publication.

Publication

Data from the census of drainage were released only in the *1978 Census of Agriculture Volume 5, Special Reports, Part 5, Drainage of Agricultural Lands*. Volume 5, part 5 contained a table showing the number, revenue, and expenditures, long-term debt, and number of employees, of special drainage districts by State, in 1977. Approximate land area, acreage of land drained, and land use were shown by county, State, region, and the United States.

1979 CENSUS OF HORTICULTURAL SPECIALTIES

Introduction

Purpose and history—Horticultural specialty operations—greenhouses, nurseries, etc.—currently gross several billion dollars annually, and constitute an increasingly important part of the overall agricultural economy. The rapid growth of this sector of agriculture in recent years has spurred demands by both Government and private data users for more current and detailed data in order to make accurate projections of growth, maintain the quality and quantity of production, and promote efficient product distribution.

A certain amount of information on the production of flowers, bulbs, nursery products, and seeds has traditionally been collected from farms in the census of agriculture; the 1890 census was the first to include a survey directed specifically at nurseries, floricultural establishments, seed farms, and the like. Thereafter, special censuses of horticultural specialty operations were conducted in conjunction with the regular censuses of agriculture for 1930, 1950, 1959, and 1969.

Scope—The 1979 Census of Horticultural Specialties covered all 50 States, and requested data from producers of bedding plants, foliage plants, potted and/or cut flowers, sod, flower seed, bulbs, vegetable seed, nursery products, greenhouse vegetables, and mushrooms. Data were also requested from florists and nursery operators (i.e., growers of woody plants, including fruit trees and environmentals). All data collected in the census of horticultural specialties were requested for calendar year 1979.

Preparations

Planning—The general plan for the horticultural census called for the actual data collection to be done in cooperation with the SRS, which would be carrying out its annual floriculture survey of about 8,000 operations in 28 States at the same time the Bureau would be conducting its census. The two agencies agreed to use identical report forms, except that both agencies' names would appear on the form used by the SRS while the Census Bureau's report form would carry only its own name. The SRS survey would collect data for all the addresses on its mailing list, under its "voluntary" authority, except in California, where the county agriculture commissioners were to use their revolving panels of addresses to enumerate horticultural operations. The Bureau's data collection effort involved mailing report forms to names and addresses identified from the census of agriculture as having horticultural operations, but that were not on the SRS survey lists.

Mailing lists—The mailing list for the non-SRS portion of the census consisted of a list of growers compiled from the 1978 Census of Agriculture. The names selected included growers whose main source of income was from the sale of horticultural products and totaled at least \$2,000, and growers who sold \$4,000 or more of such products, whose main source of income was something else. This list was supplemented by lists from the Department of Agriculture for the 28 States in which the horticultural census was a cooperative effort, and from lists of growers provided by trade associations. These lists were copied

onto computer tape and, in November 1979, were matched against SRS's and California county commissioners' lists. Duplicate names and addresses were deleted from the census file and the resultant list of some 24,000 cases became the Bureau's mail-address universe for the horticultural census.

Report forms—The standard report form for the horticultural census, the 79-A19, was developed using the 1969 form as a base, with the advice and suggestions of data users. The A19 was a 17 x 31½" sheet, folded to 17" x 10½", making six pages, with printing on both sides in black ink and shading in a yellow wash. The form requested data on type of horticultural operation; whether any flowering plants or plants to produce cut flowers or greens were grown; gross area used to produce selected cut flowers, flowering potted plants, bedding plants, etc.; quantity and sales of bedding plants, foliage plants, sod, bulbs, mushrooms, nursery products, vegetables grown under protection, or vegetable or flower seeds; land, structures, equipment, and irrigation; sales and purchases; selected production expenses; labor; and, for Hawaii only, cut and lei flowers.

A test of the proposed report form was carried out in August and September of 1979. A preliminary listing of horticultural operations was used to select a random national sample of 570 addresses for the test. Mailing packages, consisting of a test form 79-A19-T1, an A19(I) instruction sheet, a return envelope, and a cover letter explaining the need for the test, were assembled at Bureau headquarters in Suitland and were mailed on August 23. Three weeks later, a followup mailing, consisting only of a reminder letter requesting response and thanking those who had responded, was sent to the addresses on the test mailing list. Response was relatively low (about 47 percent, excluding postmaster returns), but the report forms received and analyzed indicated respondents had little difficulty completing them, and no significant changes in content were considered necessary.

Finalization of the report forms—The basic A19 report form was finalized in October 1979. The two versions to be used, the 79-A19.1 for the Bureau of the Census and the 79-A19.2 for the SRS floriculture survey, were sent to the printers in late October.

Data Collection

Preparation for the mailout—The printed materials for the Bureau and USDA mailings—report forms, record copies (the A19.1 and A19.2 "grey"), instruction sheets, brochures, etc.—were received in Jeffersonville, Ind., in the first week of December. The mailing packages were assembled by the clerical staff during December.

In the meantime, the final preparation of the Bureau's mailing list was underway at Suitland. It was originally planned to mail the horticultural census forms in early January 1980, but delays in the computer processing of the 1978 Census of Agriculture resulted in first, a postponement of the initial mailout, and then the adoption of a two-phase mailing. By early January, the address lists for 31 States were complete and had been unduplicated. The Bureau decided to prepare address labels for these cases and mail report forms to them imme-

diately, and then carry out a second mailing to the remaining 19 States as soon as possible thereafter. Accordingly, pressure-sensitive address labels for the 31 "completed" States were prepared, delivered to Jeffersonville, and applied to the mailing packages.

Initial mailout and followup—The first phase of the initial mailing was undertaken on January 22, 1980, when 14,239 census packages were mailed to horticultural operations in 31 States. Four weeks later, on February 25, the second phase took place, and 9,694 packages were mailed to operations in the remaining 19 States.

Three followup mailings to nonrespondents were carried out, broken down into mailings to phase 1 and phase 2 States to conform to the initial mailout. A new file of nonrespondent addresses was created for each followup, and address labels were prepared in the usual way. The followup packages consisted of letters requesting response and reminding operators that response was legally required. The characteristics of the mail followups were as follows:

Followup	Letter	1st phase		2nd phase	
		Date	No. mailed	Date	No. mailed
1	79-A19.1-L2	2/25/80	6,623	3/20/80	7,214
2	79-A19.1-L3	3/20/80	5,165	4/11/80	4,022
3	79-A19.1-L5	4/11/80	3,415	5/07/80	2,650

Supplemental mailings—Two small mailouts of complete census packages were made to addresses that were identified after the mailing list was finalized in February—424 on April 24 and 201 more on May 5. Inasmuch as these cases were mailed so late, there was no mail followup; delinquent cases were referred for telephone enumeration together with the nonrespondent address list used for the third mail followup.

Telephone followup—Immediately following the mailing of the third followup, *all* of the addresses in the delinquent file—some 5,000 in all (including the supplemental mailing cases)—were referred to the telephone unit for followup. Calls were made to nonrespondent operators from both the Bureau's Suitland and Jeffersonville facilities, using WATS and FTS lines. The telephone followup continued through the summer, and approximately 1,500 report forms were completed in this manner. Report forms continued to be received by mail for some time after the referral of these cases to the telephone staff, and as these were checked in, they were deleted from the telephone followup list.

Results—Overall response to the horticultural census was very good. By the end of August, the Bureau had achieved a 94.4-percent response rate.

The SRS data-collection effort—The SRS floriculture survey involved a sample of over 8,000 operations in 28 States (including the county commissioners' panels in California). The enumeration was a field interview operation, carried out by

USDA field staff during February, March, and April 1980. A total of 8,001 horticultural operations were enumerated and, after SRS had extracted the data necessary for its operations, the complete report forms were turned over to the Bureau of the Census for processing and incorporation into the census data file.

Data Processing

Check-in—Check-in of census report forms began in Jeffersonville in February, as soon as the first responses were received. The check-in unit was primarily concerned with removal of respondents' addresses from the followup lists, referral of correspondence, and the handling of postmaster returns (PMR's). All receipts with correspondence attached were referred to the agriculture census correspondence unit. First-time PMR's were remailed, as were second-time PMR's with address corrections. Second-time PMR's without address corrections were referred to Suitland for review and disposition by Agriculture Division analysts.

Clerical edit—Clerical editing of the report forms began in March 1980. Out-of-scope and blank report forms, and refusals, were sorted for special handling. Completed in-scope forms were subjected to a detailed clerical review to ensure internal consistency, completeness, and the readability of individual items (to make certain each form was keyable). Questionable or illegible items were verified by telephone whenever necessary. The form 79-A19.2 report forms received from SRS were processed in exactly the same fashion as the regular horticulture census returns.

Data keying and computer edit—In March 1981, after the clerical edit was completed, the report forms were sent to have the data keyed to disk and transferred to magnetic computer tape. The data then were transmitted to Suitland for computer editing. The latter included further internal consistency checks to detect unreasonable dollar values and/or questionable large entries. Inconsistent data cells were displayed for review and subject-matter specialists made necessary corrections.

Tabulation—The data from the horticultural census were tabulated using the GTS software package. Summary data were reviewed for consistency and were compared to historical data, and to current USDA estimates where available. After corrections were made, the data were submitted to disclosure review and the final tabulations were done.

Publication

State and county-level data on the number, size, value of sales, etc., of horticultural specialty establishments were published in the *1978 Census of Agriculture, Volume 5, Special Reports, Part 7, Horticultural Specialties*.

1979 FARM AND RANCH IRRIGATION SURVEY

Preparations

Purpose and Scope—The 1979 Farm and Ranch Irrigation Survey was planned to supplement the basic irrigation data

collected in the 1978 Census of Agriculture. A sample of agricultural operations could provide detailed information on irrigation practices, quantity of water applied, equipment utilization, expenditures, and crop production for irrigated farms, while keeping overall respondent burden as low as possible. By combining data from such a survey with information from the census proper and from the 1978 Census of Irrigation Organizations, a comparatively complete and detailed picture of agricultural irrigation in the United States could be assembled. Accordingly, the survey was designed to collect data from farms and ranches that had reported irrigation activities on their 1978 census forms. The sample was so structured that farms in the 17 Western States covered in the census of irrigation organizations, Florida, Louisiana, and Arkansas, were sampled heavily enough to provide data for "aggregated areas," for groups of counties called "aggregated subareas," and for States.⁴ Aggregate data were collected for the remaining 28 contiguous States (Alaska and Hawaii were excluded from the survey).

Report form pretest—Planning for the survey was carried on concurrently with that for the census of irrigation organizations. Drafts of test versions of the respective forms were prepared in early 1978, and a content pretest for the farm and ranch irrigation form was carried out at the same time as the irrigation organizations' test, also in early 1978. The test form 77-A62-T1, "Farm and Ranch Irrigation Survey," was a 16" x 21" sheet of white stock folded to 16" x 10-1/2" to form 4 pages. Printing was in black ink with shading in a salmon wash. The form requested data on irrigation in 1977, acreage, land use, comparison of acres irrigated in 1977 to those irrigated 1974-1976, irrigated and nonirrigated crop yields (for selected crops), method of irrigation, estimated quantity of water used, selected irrigation facilities, maintenance and repair costs for irrigation equipment and facilities, energy use for irrigation pumping (by power source), water received from irrigation water suppliers, any discontinuation of water supply affecting crop yields, irrigation uses (application of chemicals, land disposal of liquid livestock waste, etc.), and irrigation intentions for the next 3 years.

The pretest sample was chosen from the list of in-scope agricultural operations with irrigation of land reported in the 1974 census. A total of 600 addresses were chosen at random from these lists for the same 10 States used for the irrigation organizations pretest (Arizona, California, Colorado, Idaho, Louisiana, Montana, Nebraska, South Dakota, Texas, and Washington) and for one county each in North Carolina and Florida. Report forms were mailed to the pretest sample on March 13, 1978. There was no mail followup, but in the last week of April, personnel from the Bureau and the U.S. Geological Survey (USGS) began a field followup on non-respondents. This field operation was intended to obtain information on operators' reporting problems with the form rather

than complete the report forms, hence overall response rates remained relatively low. By mid-May, 303 completed A62-T1 questionnaires and approximately 25 PMR's had been received.

Finalization of the report form content—After the March pretest, the content of the report form was finalized. Overall content changes were relatively slight; sections on the time needed to complete the form (employed in the test version to aid in later forms design) and on irrigation intentions over the next 3 years were deleted, while the section on irrigated and nonirrigated yields was expanded to list more crops. There were also a number of changes in the format of certain sections to improve clarity. The general specifications for the form (i.e., size, ink used, shading, etc.) remained unchanged except that the sheet stock was 17" x 21" rather than 16" x 21."

Sample selection—The farm and ranch irrigation survey used a sample, stratified by acres irrigated, drawn from the 1978 Census of Agriculture list of in-scope operations reporting irrigation activities. The sample was designed to provide data for "irrigation regions," which were identical to USGS drainage regions, and for specified smaller areas, called aggregated areas, within the "heavy irrigation" States of the West, Florida, Louisiana, and Arkansas. All large irrigation operations (i.e., those in the 17 Western States and Louisiana with 1,000 acres irrigated or more, and in the East with 200 acres irrigated or more) were selected as "certainty" cases. Sampling of farms of smaller acreage irrigated varied, depending upon the stratum (e.g., farms with 500 to 1,000 acres irrigated might be sampled at a 1-in-3 rate, farms with 100 to 500 acres irrigated in a 1-in-10 rate, and so on). Further, while only irrigation regions were sampled in the Eastern States, irrigation subregions were sampled for the 17 Western "heavy irrigation" States, plus Louisiana, Arkansas, and Florida. Thus the sample could provide data for the groups of counties defined as irrigation subregions, and for States in the heavy irrigation areas, but only aggregate statistics would be produced for the "light irrigation" States. The sample selected constituted an approximate 10-percent sample of operations, some 31,000 in all, whose 1978 census returns reported using irrigation.

Data Collection

Preparations for mailout—The report form 79-A62 and the other materials for the initial mailing went to print in October 1979, and were delivered to Jeffersonville in December for mailing-package assembly. Each package consisted of the A62 report form, a copy of the A62 for the respondents records, a pamphlet explaining why the survey was being taken, an instruction sheet, return envelope, and a transmittal letter from the Director of the Bureau requesting prompt response. Assembly of the packages was completed in late February and early March, but delays in the computer processing of the 1978 census reports resulted, as with the other follow-on surveys, in a delay in completing the address list for the mailout. Accordingly, a similar multi-phase mailout plan was adopted. The characteristics of the initial mailout of the farm and ranch irrigation survey were as follows:

⁴ An aggregated area was identical to the USGS drainage basin, while "aggregated subareas" were groups of counties comprising a local irrigation area. Such a "subarea" would consist of complete counties, but might include counties in more than one State.

Mailing	Date	Quantity
Total		31,337
Single unit, single form (SUSF)		
Wave 1	3/2/80 - 4/4/80	10,114
Wave 2	4/28/80 - 5/13/80	19,033
Wave 3	6/17/80	465
Single unit, multiform (SUMF)	4/18/80 - 4/25/80	925
Census of agriculture area sample survey (CAAS).	6/25/80 - 6/27/80	175
Multiunits (MU).	6/6/80 - /11/80	625

Mail followup—The mail followup for the irrigation survey consisted of a reminder letter mailed to 6,249 wave-1 SUSF, and 522 SUMF cases between April 28 and May 9. Response to the irrigation survey was comparatively slow, and between the last week of May and the second week in August, the Bureau carried out four mail followups: The first and third involved complete survey packages, while the second and fourth consisted only of letters (the A62-L4 and A62-L6A or -L6B, respectively). The dates and the quantities mailed in these operations (all on a "flow" basis similar to the initial mailing) are given below:

Followup Mailings		
Mailing	Date	Quantity
1st followup		
TOTAL		17,968
SUSF		
Wave 1	5/23/80 - 5/28/80	5,844
Wave 2	6/17/80 - 6/25/80	10,987
Wave 3	6/21/80	322
SUMF	5/28/80 - 6/4/80	436
CAAS.	9/9/80 - 9/11/80	108
MU	7/23/80 - 7/28/80	271
2nd followup		
Total		14,299
SUSF:		
Wave 1	6/18/80	4,897
Wave 2	7/19/80	8,613
Wave 3	8/19/80	225
SUMF ¹	9/2/80 - 9/5/80	383
CAAS.	N/A	N/A
MU ¹	9/11/80 - 9/15/80	181
3rd followup		
Total		10,561
SUSF:		
Wave 1	7/17/80 - 7/21/80	3,433
Wave 2	8/11/80 - 8/13/80	7,072
Wave 3	9/16/80	56
4th followup		
Total		2,947
SUSF:		
Wave 1	8/12/80	2,947

¹ SUMF and MU cases were subject to two followup mailings in each of the follow-on surveys.

By the end of August, a total of about 21,400 report forms had been received at Jeffersonville, yielding an overall mail response rate of almost 71 percent.

Telephone followup—A telephone followup to nonrespondent cases was inaugurated from the telephone unit in Jeffersonville during the last week of August 1980. All nonresponse "certainty" cases and a sample of 1-in-6 noncertainty addresses (the latter selected at random from nonrespondents in each irrigation region or subregion), 3,648 cases in all, were selected for followup by telephone. Calls were made from Jeffersonville through October 1980, and 2,047 (about 56 percent) of the cases referred were resolved.

Results—Data collection for the irrigation survey was not closed out completely until November 1980, by which time nearly 26,000 report forms, or slightly more than 80 percent of the initial mailing, had been received.

Data Processing

Receipt and check-in—Receipts for the irrigation survey were sorted by type as they arrived in Jeffersonville. Correspondence without report forms attached, report forms (with and without correspondence), and PMR's were sent to the batching unit for check-in. After check-in keying, report forms with correspondence attached, or correspondence alone, were sent to the correspondence unit; PMR's were referred for remailing; and report forms were batched into work units of about 100 forms each before shipment to Suitland for precomputer editing.

Precomputer edit—The purpose of the precomputer edit was to identify report forms that were incomplete or covered out-of-scope operations, and to ensure the keyability of the in-scope forms. Editing began in April 1980, as soon as the first work units of forms were received in Suitland. As the work units arrived, they were opened and the report forms were sorted by State for the "heavy irrigation" States, and as "all other States" for the remaining 28 States. A detailed clerical review of each report form was carried out by Agriculture Division personnel to ensure the completeness of each form and the legibility of each data item. Problem cases (i.e., those with inconsistent or obviously incorrect entries, blank or partially blank forms, etc.) and "certainty" cases were referred to technical analysts for review and/or correction. The clerical staff made minor corrections, transcribed illegible entries, etc. Verification of each clerk's work was carried out by a technical analyst, who reviewed the first 300 forms edited by each clerk and spot-checked the work thereafter.

After all of the report forms in a work unit had been edited and corrected, the work unit was returned to Jeffersonville for keying. Data keying to magnetic tape began in the second week of June 1980.

Computer edit—The data keyed to tape in Jeffersonville were transmitted to Suitland by telephone datalink and, starting in July 1980, were subjected to a series of consistency and completeness computer edits. Problem items were "flagged" by the computer and were displayed for review and correction by technical analysts. Once all the data files produced in the collec-

tion effort had been edited, data for the remaining nonrespondent cases were imputed, using estimates of the characteristics of nonrespondent operations derived from the results of the telephone followup.

Tabulation—Data from the irrigation survey, identified by reported county and State, were tabulated, using the GTS software package, by State and by aggregated areas and subareas for the “heavy irrigation” States and for “all other States” (excluding Alaska and Hawaii). Analytical tabulations were displayed for review and correction by Agriculture Division technical analysts before the final tabulations were run.

Publication

Data from the irrigation survey were published in the *1978 Census of Agriculture, Volume 5, Special Reports, Part 8, 1979 Farm and Ranch Irrigation Survey*. Some additional unpublished data on irrigation are available.

1979 FARM FINANCE SURVEY

Introduction

Background and purpose—A certain amount of data on the various elements of farm finance has been collected since the first agriculture census was taken in the United States. Initially, the principal points of interest were the value of farm land and sales of agricultural products; in later censuses the data collection effort was expanded to include farm taxes as well as mortgage debt.

In 1979, a farm finance survey was carried out as part of the 1978 Census of Agriculture program. Data were collected on land in farms, value of land and buildings, rents, capital and operating expenditures, credit used for purchasing specific items, debts outstanding by kind and source, taxes, value of farm products sold, farm related income, off-farm income, land acquisition, off-farm work, and household characteristics.

One of the primary purposes of any of the Bureau's operations is to improve the quality of national and State statistics. Data on farm finances and debt are of interest to policy planners, legislators, and lending institutions. The USDA relies heavily on the survey data for preparing and benchmarking its annual farm sector accounts, as well as for numerous other statistical reviews. The survey is the only source of data on level of debt by farm size and type currently available. It is also unique in that it relates off-farm work and household characteristics to size and type of farm.

Planning and Preparation

General plan—Planning for the 1979 Farm Finance Survey began during the period of preparation for the 1978 census; several meetings were held during 1978 between Bureau staff and representatives of various data-user Government agencies to discuss plans and the content of the report form. The finance survey was planned as a two-stage operation: a sample of farm operators from the census proper would be selected and sent a

finance survey operator's report form and, thereafter, landlords identified by respondents would be sent a landlord's report form. A pretest of the operator and landlord forms was carried out in the fall of 1978, using addresses drawn from the 1974 census farm operator lists and landlord addresses from the operators' pretest responses.

Report form pretest—Test versions of the report forms, 77-A9A-T1 (operator) and 77-A9B-T1 (landlord) were prepared in the summer of 1978. The A9A-T1 was a 14" x 21" sheet of white stock, folded to 14" x 10-1/2", with printing on both sides in black ink, and with purple shading. It requested data on acreage and current value of land and buildings; purchases, expenditures, and credit used during 1977 for agricultural operations; debts; market value of agricultural products sold; off-farm income; taxes; assets owned by farm operator; net cash farm income of partnerships; income and expense from farm-related sources; off-farm work and education; and leased machinery and investor capital.

The A9B-T1, was a 14" x 21" sheet, folded to 14" x 10-1/2", with printing in black ink, and orange shading. It requested data on acreage and current value of land and buildings; purchases, expenditures, and credit used during 1977; debts; taxes; assets owned by landlord; rental income; total agricultural land ownership and sales; participation in management decisions; type of ownership; and characteristics and occupation of landlord.

Pretest packages, containing a report form, instruction sheet, cover letter, and return envelope, were mailed to a sample consisting of 1,470 operators on November 13, 1978. Only one followup was made; a letter requesting prompt response and thanking the addressee if he or she had already responded was mailed to all the addresses on the pretest mailing list 2 weeks after the initial mailout. Response was a little over 55 percent (812 forms were returned).

The mailout to landlords was made after a listing of addresses was compiled from the operators' report forms. On December 22, 698 pretest packages were mailed to landlords (the contents were virtually the same as for operators, except the A9B-T1 form and instruction sheet were used). A single followup letter was sent to all addresses on the pretest list on January 10, 1979. Response to the landlord pretest was a little over 56 percent (393 report forms were returned).

Finalization of report form content—The data collected from the pretest mailings were used in the design of the final report forms. The landlords had little apparent difficulty in completing the A9B-T1 and, except for a few minor format changes and the deletion of a separate cash expenditures column, the A9B was changed only slightly. Adjustments to the A9A were rather more extensive, including the deletion of the cash expenditures column and the entire section on machinery and investor capital. However, new sections on land acquisition, household characteristics, and production contracts were added, and the section on off-farm work was expanded.

Sample selection—The sample design for the finance survey called for a stratified systematic sample of the in-scope respond-

ents to the 1978 census, excluding abnormal farms, to provide State-level estimates. Approximately 45,000 single and multi-unit operations were selected nationwide.

Stratification was by size indication (i.e., total value of agricultural products sold) taken from respondents' census report forms. The characteristics of the sample strata and the number of operations selected in each stratum were as follows:

Number	Description	Number in sample
	Total sample	¹ 44,968
1-3	Total value of sales of \$0 to \$2,499	5,983
4	Total value of sales of \$2,500 to \$9,999	9,907
5-9	Total value of sales of \$10,000 to \$99,999	12,110
10-11	Total value of sales of \$100,000 to \$499,999	10,352
23-26	Total value of sale of \$500,000 or more	6,616

¹ Counts include multiunits selected for sample.

Data Collection

Preparations for mailout—The final versions of the report forms and all other materials for the initial mailouts to both operators and landlords were sent to the printer in October and November 1979 and, upon receipt at Jeffersonville, were assembled into mailing packages. The operator's package contained the 79-A9A "Farm Finance Survey—1979 Operator's Report," a form A9A "pink" copy for the respondent's records, the form A9A(l) instruction sheet, a brochure "Why a Farm Finance Survey," a form 79-A9A-L1B cover letter, and a return envelope. The landlord's package was similar in content, with the appropriate report forms, brochure, and cover letter A9B-L1 enclosed.

Address labels for the operators' mailout were produced in January and February 1980. Delays in completing the computer edit of 1978 census report forms for all the States led the Bureau to carry out the mailing to operators in three phases, as the sample lists and labels became available for each State. As the labels were produced, they were shipped to Jeffersonville for application.

Mailout and mail followup—The initial mailout to farm operators began in March 1980. Mailings had to be made on a modified flow basis not only because of the census processing delays, but also because a small percentage of addresses in the sample were in the samples for one or more of the other follow-on surveys as well. Therefore, it was decided to carry out a single initial mailout to include all of these cases. The initial mailout for landlords took place in September and October 1980 and followed the basic modified-flow pattern of the operator mailout. The primary mailing for each phase was carried out in three "waves" of irregular volume. The dates and counts for the initial operator and landlord mailout were as follows:

INITIAL MAILOUT				
Mailing	Operators		Landlords	
	Date	Quantity	Date	Quantity
Total . . .		44,968		34,202 mailed ² 3,400 not mailed
Single unit, single form (SUSF)				
Wave 1	3/21/80	38,054	9/2/80-9/4/80	21,512
Wave 2	5/6/80	224	9/25/80-10/1/80	3,968
Wave 3	6/18/80	1,317	12/16/80	8,722
Single unit, multi-form (SUMF) . . .	¹ 4/18/80-4/25/80	3,117	NA	NA
Census of Agriculture Area sample cases (CAAS) . . .	6/25/80-6/27/80	810		
Multiunits (MU) . . .	6/6/80-6/11/80	1,446		

¹ The cases involved operations that had been selected for inclusion in the samples of two or more followup surveys.

² Report forms were not mailed to landlords identified as Governmental agencies, railroads, oil and utility companies; or to churches, Indian reservations, schools, or other tax-free institutions.

Followup mailings were carried out in the same sequence as the initial mailouts (i.e., "waves" 1, 2, and 3; SUMF; CAAS). The first and third followup mailings involved complete survey packages—report form, records form, instruction sheet, cover letter, and return envelope—while the second followup consisted of a form letter requesting prompt response.

Immediately following the cut-off date for each mailout, a file of delinquent cases was created. Address labels were produced for each followup mailing, and the mailing packages were assembled, labeled, and mailed. The dates and counts for the various followup mailings were as shown on the following page.

Telephone followup—At the end of the August, after the completion of the SUSF mailings for the second followup to operators, the Bureau began a telephone followup of a random sample of nonrespondents, made up of 3,536 "certainty" and 1,932 "noncertainty" cases. Most of this enumeration was done by the telephone staff at Jeffersonville. Very large cases and special problem cases and refusals were called by members of the Agriculture Division staff at Suitland. The Jeffersonville telephone operation lasted until the end of December 1980, while a few calls continued to be made from Suitland during January and February 1981.

No telephone followup on nonrespondent landlord cases was done.

FOLLOWUP MAILINGS

Mailing	Operators		Landlords	
	Date	Quantity	Date	Quantity
Reminder letter (Wave 1 only) . . .	4/20/80	20,849		
1st followup				
Total		23,220		18,646
SUSF				
Wave 1	5/23/80- 5/28/80	19,430	9/25/80- 10/1/80	11,631
Wave 2	6/23/80	207	10/20/80- 10/22/80	3,165
Wave 3	7/21/80	979	1/28/80	3,850
SUMF	5/28/80- 6/4/80	1,469		
CAAS.	9/9/80-	509		
MU	7/23/80- 7/28/80	626		
2nd followup				
Total		14,512		13,577
SUSF				
Wave 1	6/23/80	11,964	10/16/80- 10/20/80	9,390
Wave 2	7/18/80	159	11/19/80	1,614
Wave 3	8/19/80	683	2/24/81	2,573
SUMF	9/2/80- 9/5/80	1,290		
CAAS.	NA	NA		
MU	9/11/80- 9/15/80	416		
3rd followup				
Total		12,745		6,835
SUSF				
Wave 1	7/17/80- 7/22/80	12,196	11/12/80	5,601
Wave 2	8/12/80	141	12/8/80	1,234
Wave 3	9/16/80	408		
4th followup				
Total		10,386		
SUSF	8/12/80	10,386		

report forms each for check-in keying, after which the receipts were resorted into batches for further processing. PMR's were referred for remailing, correspondence and report forms with correspondence attached were sent to the correspondence unit, and respondent report forms (including blank ones) were referred to the clerical edit staff.

Precomputer edit—When the report forms from operators were received, a number of processing steps were carried out prior to the precomputer edit: Landlord names and addresses were taken from the forms for the landlords' mailing list, previously identified out-of-scope cases were withdrawn, "must" cases (large farms) were pulled from the batches, and blank or largely incomplete cases were sent to the correspondence or telephone units for further contact with respondents.

The remaining forms were sent to the precomputer edit unit. The purposes of the precomputer edit were to identify and delete out-of-scope report forms, identify incomplete forms for additional followup, review the data on each report form for consistency, and ensure the keyability of each item on each report form.

Both operator and landlord report forms were edited on a State basis. Each data entry was examined for completeness and legibility, and the contents of each form were cross-checked for internal consistency. Problem cases or very large operations were referred to technical analysts for review. In some cases (e.g., if major portions of a form were left blank) the report forms were sent to the correspondence or telephone units for additional followup. Once completed by telephone, the report forms were cycled back through the precomputer edit. Any corrections necessary were made to the forms before they left the edit unit.

Report forms from "must," multiunit, and multiform cases were referred to technical analysts for review and disposition.

All operator report forms specifying off-farm work were coded for occupation and industry by the Current Population Surveys Branch of the Demographic Surveys Division. Approximately 12,000 reports were given three-digit codes indicating the occupation and type of industry of the operator and his or her spouse. The coding system was based on the industrial and occupational classification system used by the Bureau for the 1970 Census of Population and Housing.

After the initial edit, a sample of report forms was checked by a clerk other than the original editor, to verify the editing. The forms used in the verification edit were batched into work units of 100 each and were sent for data keying to magnetic tape.

Computer edit—The keyed operator data were subjected to a series of computer checks to determine whether all required entries had been made and were internally consistent. Problem items were "flagged" by the computer, and printouts displayed these items for review and correction by statistical analysts; the same procedures were followed later for the landlord survey data. Once all the data had been edited, a second, reconciliation, edit was carried out to assure that the data reported by operators and their landlords were consistent. Inconsistent items were displayed for review and correction. When operators reported data for a landlord, but no corre-

Results—Overall response to both the operator and landlord phases of the finance survey was somewhat lower than for the census proper, a not unexpected result in view of the detail of data requested and the sensitivity of a few of the items. Nonetheless the operators' mail and telephone response was 73 percent, while that from landlords was 76 percent.

Data Processing

Receipt and check-in—All receipts from both the operators and landlords were opened and sorted into work units of about 100

sponding landlord report had been received, it was necessary to impute data for the latter. Data on acreage and value of rented land were derived from the operators' report. Other items (except taxes) were imputed from the reports of comparable landlords in the same State. For nonmailed landlord reports only (1) the acreage and value of rented land and (2) cash rent were imputed, because most of these lands were essentially free of debt or taxes.

A total of 33,065 operator report forms and 40,835 landlord report forms were used in the preparation of the farm finance data for publication. Some 1,922 operator forms were found to be from operations that did not qualify as farms in 1979. A subsample of the approximately 10,000 nonrespondents was included in the telephone followup, and data collected from them were expanded to represent all nonrespondent cases. The difference between the 34,200 landlord forms mailed and the 40,835 included in the published tables resulted from the inclusion in the final tabulations of data for landlord report forms that were imputed. Some landlord forms that had been included in the mail operation were also eliminated because they did not meet the census definition of a landlord.

Tabulation—After the computer edits were completed, the data were tabulated. The tables were reviewed by statisticians and corrections were made before the final tables were generated. Data from the farm finance survey were tabulated by State, divisions, regions, and for the United States as a whole. Tabulations by USDA geographic regions were also prepared.

Publication

Data were published for States, divisions, regions, and the United States as a whole. Reliability estimates for selected items are provided in the publication.

The data from the finance survey were published in the *1978 Census of Agriculture*, Volume 5, *Special Reports*, Part 6, *1979 Farm Finance Survey*. Unpublished data were supplied to the USDA (which had provided partial funding for the survey) for its analysis and use in revising benchmark figures for its annual estimates.

1979 FARM ENERGY SURVEY

Preparations

Purpose and scope—The increasing importance of data on the use of various forms of energy in the United States led the Bureau of the Census to consider, during the planning stages of the 1978 Census of Agriculture, collecting information from farmers on the cost, volume, and kinds of energy used in their agricultural operations. The U.S. Department of Energy (DOE) and USDA both demonstrated considerable interest in obtaining as much detailed data of this nature as possible.

While the Census Bureau planned to include a section (25) in its standard census report forms requesting data on expenditures for selected types of energy (gasoline, LP gas, various fuels, etc.), gallons purchased and storage capacity, collection of all the detailed data desired was thought to be impractical in

the census itself. However, the importance of the information prompted the Bureau to design a follow-on sample survey to obtain at least some of these data from a sample of farm operators.

The 1979 Farm Energy Survey provided State- and national-level statistics on energy expenditures, volume of energy purchased (i.e., of gasoline, electricity, diesel fuel, etc.) and fuel-type and size of equipment. A sample consisting of 33,800 agricultural operations (excluding farms in Alaska and Hawaii, abnormal farms (i.e., institutional operations, etc.), and horticultural specialty operations) was selected from the list of in-scope respondents to the 1978 Census of Agriculture. The survey was carried out beginning in March 1980, and all data were collected for calendar year 1979.

General planning—The farm energy survey was the final sample survey to be selected for inclusion in the 1978 census program and planning was begun in August 1978. The Bureau held several meetings during the last quarter of the year with representatives of various data users to discuss the general plans for the survey and to consider data content of the report forms. A pretest of the proposed form was carried out from July through September 1979, and the survey itself was scheduled to begin in March 1980.

Content pretest—A test version of the farm energy survey report form, the 78-A35(T), was prepared by the Bureau in cooperation with a USDA work group that had been established to review energy data needs. The A35(T) was a 21" x 14" sheet of buff stock, folded to 10-1/2" x 14", with printing on both sides in black ink; there was no shading. The form was divided into 20 sections and requested data on acreage; estimated gross value of products sold; energy expenditure and usage; fuel storage facilities and amount of fuel stored; type of delivery service for fuels; custom work; tractors and other motorized vehicles and equipment; irrigation pumps and other electric motors, crop drying or tobacco curing facilities; air-conditioning, heating, and water heating facilities; acres of selected crops and gross value of sales of crops and livestock; time required to complete the report form; and the usual identification information.

The sample selected for the pretest consisted of a random sample of approximately 1,250 in-scope addresses drawn from the respondent lists from the 1978 census for 10 States⁵, plus cluster samples of about 100 respondent in-scope farms each in Lancaster Co., Pa., and Duplin Co., N.C.

Accordingly, 1,470 pretest packages, consisting of a report form, cover letter, instruction sheet, and return envelope, were assembled at Suitland and were mailed on July 9, 1979. Three weeks later, a second mailing was made to all pretest addresses. This mailing involved a complete pretest package, except that the cover letter was replaced with a "second request" letter. By the end of August, a response rate of 40 percent (approximately 600 report forms, including 20 PMR's) had been achieved. In early September, members of the Agriculture Division staff undertook field interviews of all the addresses in the cluster

⁵ Alabama, Delaware, Illinois, Iowa, Maine, Maryland, Pennsylvania, Washington, West Virginia, and Wisconsin.

samples. The purpose of this field followup was not to obtain complete report forms per se, although forms could be completed, but to get operators' reactions to the report form. By the end of September 1979, when mail receipts for the pretest were closed out and the field followup had been completed, 1,063 report forms had been filled out and returned to the Bureau.

Finalization of the report form—Significant changes were made to the energy survey report form as the result of responses obtained from the pretest. Most obviously, the size and general format of the form was changed to a 21" x 17" sheet of white stock, folded to 10-1/2" x 17", with printing on both sides in black ink, and shading in buff over the entire face of each page except for response boxes. Sections 2 (on gross value of all agricultural products sold) and 19 (time required for filing report) were deleted from the final design. A new section 2, requesting information on whether selected energy conservation measures were being used, was added to the form. In section 3 (energy expenditures and usage) the test form's request for "estimated amount used" of selected energy sources was changed to "estimated amount purchased," and in section 8, the year of manufacture was requested for wheel tractors instead of model year. The final version of the A35 energy survey form was approved and sent for printing in December 1979.

Sample selection—As was the case with the other follow-on surveys, the selection of a sample for the farm energy survey was held up by delays in processing the report forms for the 1978 Census of Agriculture. Nevertheless, sample selection began in December 1979. The result was a stratified sample of all agricultural operations (excluding abnormal farms and horticultural specialties) in the 48 contiguous States. All "certainty" cases⁶ and a random sample of all other agricultural operations were selected for enumeration. Selection frequency varied among the strata, which were established on the basis of 1978 census reported sales, and was set so as to provide reliable State-level estimates. The total number of cases selected, including all "certainty" and multiunit operations, was 33,810.

Data Collection

The initial mailout—The report forms and other materials for the initial mailout for the energy survey were shipped to Jeffersonville in December 1979, where they were assembled into mailing packages. Each package contained an A35 report form, a form A35 "gray" file copy for the respondent's records, a form A35(I) instruction sheet, an A36 information brochure, a form A8A outgoing envelope, and either a form A35-L1A or A-35-L1B transmittal letter.⁷

⁶Status as a "certainty" case was determined by the total value of agricultural products sold as reported in the 1978 Census of Agriculture. The minimum sales required varied among States; the smallest that would qualify an operation as a "certainty" case was \$250,000. In States with more extensive agricultural operations, the minimum sales requirement was as high as \$500,000.

⁷The L1B letter included a toll-free telephone number at the Bureau that respondents could call for assistance.

Address labels for the survey began to arrive in Jeffersonville in March and the energy survey mailout was done on the same flow basis used for the other follow-on surveys. The dates and totals for the initial mailout were as follows:

Initial Mailout		
Mailing	Date	Quantity
Total		33,810
Single unit, single form (SUSF)		
Wave 1	3/21/80 - 4/4/80	27,651
Wave 2	5/6/80	87
Wave 3	6/18/80	1,039
Single unit, multiform (SUMF)		
Regular	3/18/80 - 4/25/80	2,941
Census of agriculture area sample (CAAS) cases	6/25/80 - 6/27/80	769
Multiunit (MU)	6/6/80 - 6/11/80	1,323

Mail followup—Mail followup of the farm energy survey consisted of a reminder mailing to addresses sent survey packages in the earliest initial mailings and four regular followup mailings. Reminder letters were mailed on April 28 to 11,463 nonrespondent SUSF "wave 1" addresses and, in the second week of May, to 1,661 nonrespondent SUMF cases. The first and third of the regular followup mailings consisted of a survey package including a report form, instruction sheet, information brochure and return envelope. The second and fourth followups involved letters requesting response.

The address lists for each followup were compiled in the usual way (i.e., by matching respondent lists to the address list immediately following the return cutoff date for each mailing), and address labels were delivered to Jeffersonville for application to the preassembled mailing packages. All the followup mailings were carried out on the same flow basis as the initial mailout, although there was only one followup to area sample survey multiform cases and only two followup mailings were carried out for the regular multiform (SUMF) and multiunit (MU) cases. The dates and counts for the various phases of the followup mailings were as shown on the following page.

Telephone followup—At the end of August all nonrespondent "certainty" cases and a 1-in-6 random sample of nonrespondent noncertainty cases, approximately 2,900 in all, were referred to the telephone unit at Jeffersonville for possible followup. Calls to nonrespondents were made through September and October. When an operator was contacted, an attempt was made to collect the required data by telephone interview, or, if that was not possible, the farm operator was asked to complete the report form on his or her own and mail it back to the Bureau. By the time the telephone followup was closed down at the end of October, 2,000 additional cases had been resolved by telephone or by mail. The telephone followup included a subsample of nonrespondents that was expanded in the tabulations to represent all nonrespondent cases.

Followup Mailings		
	Date	Quantity
1st followup		
Total		14,064
SUSF		
Wave 1	5/21/80 - 5/26/80	10,855
Wave 2	6/19/80	64
Wave 3	7/21/80	702
SUMF, regular	5/28/80 - 6/4/80	1,386
SUMF, CAAS	9/9/80 - 9/11/80	482
MU	7/23/80 - 7/28/80	575
2nd followup		
Total		11,208
SUSF		
Wave 1	6/19/80	9,027
Wave 2	7/18/80	52
Wave 3	8/19/80	530
SUMF, regular	9/2/80 - 9/5/80	1,217
MU	9/11/80 - 9/15/80	382
3rd followup		
Total		8,230
SUSF		
Wave 1	7/17/80 - 7/22/80	7,863
Wave 2	8/11/80	47
Wave 3	9/16/80	320
4th followup		
Total		6,564
SUSF		
Wave 1	8/12/80	6,564

Results—Overall response to the farm energy survey was somewhat lower than for the census itself, but was comparable to the response rate attained for the other follow-on surveys. Approximately 27,400 A35 report forms (about 81 percent of the mail-out) were in hand before the closeout of the data-collection phase of the operation.

Data Processing

Receipt and check-in—As the mail returns began arriving in early April at Jeffersonville, they were opened and batched into work units of about 100 report forms each for check-in keying. After this, PMR's were referred for remailing and correspondence or report forms with correspondence attached were referred to the correspondence unit, while respondents' report forms were sorted by State, rebatched into work units of approximately 100 forms, and sent to the clerical edit staff. All clerical pro-

cessing of the report forms, except for special cases referred to analysts in Suitland, was done at Jeffersonville.

Precomputer edit and data-keying—The purposes of the precomputer, or clerical, edit were to (1) make certain the report forms could be keyed for computer processing, (2) identify and delete out-of-scope report forms, (3) determine which report forms required additional followup, and (4) review the data on each report form for accuracy and consistency. The clerical staff examined each data entry for eligibility, completeness, and consistency with other relevant items. Problem and multiunit cases, and report forms from very large operations were referred to technical analysts in Suitland for their review or, in cases where major portions of the forms had been left blank, to the correspondence or telephone units for additional followup. Corrections were made to each form as necessary before it was released from the clerical edit unit.

The edited report forms were sent on for data keying to magnetic tape beginning in the last week of April. After keying was completed, the data were transmitted to Suitland by telephone datalink for computer processing.

Computer edit—Beginning in December 1980, the keyed data were subjected to a series of computer checks at the Bureau's main computer facility at Suitland. These checks were similar, in general procedure and objective, to those carried out for the other follow-on surveys. Data for each operation were checked for completeness and internal consistency and problem items were "flagged" by computer for review by technical analysts. In some cases, data items left blank by respondents were imputed by computer, using values derived from similar operations. After analysts' corrections had been made, each case was reedited to ensure that the new data were consistent with other data.

Tabulation—The data were tabulated using the GTS software package. Tabulations were produced for the United States, divisions, regions, and States. A detailed review of the summary data was made to check consistency and reasonableness compared to the 1978 census and other related check data. Corrections were carried to the data file prior to the final tabulations. A series of special statistical tabulations were also generated specifically for research use by the Bureau and by USDA. (These special tabulations were not included in the publication for the survey, but are available to data users on a reimbursable basis.)

Publication

The data from the energy survey were published in the 1978 *Census of Agriculture*, Volume 5, *Special Reports*, Part 9, 1979 *Farm Energy Survey*. Estimates of the reliability of the sample data at national, division, region, and State levels, were provided in the publication.

1978 Census of Agriculture in Puerto Rico

INTRODUCTION

Historical Background

A census of the population of Puerto Rico was carried out in 1899, but there was no census of agriculture on the island taken until 1910. Thereafter, censuses of agriculture were conducted every 10 years in conjunction with the decennial population censuses.

Congress enacted legislation providing for quinquennial censuses of agriculture in the United States as early as 1915 (although because of the First World War the first such census was not carried out until 1925), but neither Puerto Rico nor the outlying areas were included in the mid-decade agricultural enumerations until 1964.¹ (A special census of agriculture in Puerto Rico was carried out by the Puerto Rico Reconstruction Administration in 1935, but this was the only nondecennial agricultural count taken.) The next agricultural census, covering the year 1969, was taken in 1970 in conjunction with the decennial census of population and housing, while the 1974 enumeration was once again an independent operation. In 1972, a decision was made to do the agricultural and other economic censuses at the same time (1983, for 1982), so as to provide data for the same reference year. (See chapter 1 for discussion.) In order to carry out this plan with a minimum disruption to census operations, the intercensal period between the 1974 agriculture census and the next census was shortened from 5 years to 4, so that the succeeding enumeration would be carried out for 1978, rather than 1979. (The economic censuses are conducted for years ending in "2" and "7", hence, with a second 4-year interval after the 1978 operation, the agriculture census would be carried out simultaneously with the economic enumeration for 1982.) However, the Bureau decided to take advantage of the presence in Puerto Rico in 1978 of the office staff and facilities of the 1977 Economic Censuses. The agricultural census schedule in the Commonwealth of Puerto Rico was advanced by nearly a year, so that the principal data-collection operations there would be carried out in the summer of 1978, rather than concurrently with the major enumeration in the 50 States, and would collect data for the 12-month period from July 1, 1977 through June 30, 1978.

Legal Authority and Special Agreement With the Commonwealth Government

The conduct of the 1978 Census of Agriculture in Puerto Rico was governed by the provisions of title 13, U.S. Code, and acts of the Legislature of Puerto Rico relating to censuses, to the extent that such acts were consistent with title 13. A special agreement between the Bureau of the Census and the Government of the Commonwealth of Puerto Rico, signed in August 1977, set forth the functions and responsibilities of the Bureau and of the Commonwealth Government in the census. The Bureau of the Census had final responsibility for planning and conducting the enumeration, including the operation of a temporary census office in Puerto Rico, the appointment of a supervisor of the census and of Bureau staff personnel as advisors and liaison to the census staff, and the maintenance of confidentiality. The Commonwealth Government agreed to make qualified personnel from the Puerto Rico agricultural agencies available to the Bureau on a reimbursable basis to work as "special farms" crew leaders. While the Census Bureau retained authority with regard to the final questionnaire content and tabulations to be published, it agreed to consult with the Commonwealth Government to determine if special data needs could be incorporated into the regular tabulation program. Any tabulations not included in the regular program were to be provided to the agencies at a nominal fee at the same time as the standard tabulations.

Definition of a Farm

The statistics collected in the 1978 Census of Agriculture in Puerto Rico relate to places with agricultural operations that qualified as farms according to the definition used by the Bureau of the Census. These included all places of three *cuerdas*² or more where agricultural products other than vegetables for home consumption were produced, or where any livestock or 15 or more chickens or other poultry were kept. Places of less than 3 *cuerdas* could qualify as farms if they had gross sales of agricultural products of \$100 or more during the 12 months from July 1, 1977 through June 30, 1978, or if they expected to have gross sales of \$100 or more during calendar year 1978.

¹ In 1957 an amendment to title 13 provided that Alaska, Hawaii, the Virgin Islands, Guam, and the Commonwealth of Puerto Rico were to be included in the quinquennial enumeration for 1964.

² A *cuerda* is approximately .97 of an acre.

PLANNING AND PREPARATION

Planning

Preliminary plans—Planning for the 1978 census in Puerto Rico started in early 1977. By May of that year, Agriculture Division staff were beginning to draw up preliminary plans for the 1978 agriculture census in the Commonwealth, and in July, representatives of the Bureau met with the Commonwealth Government's Interagency Advisory Committee to request assistance and coordinate planning. Initial plans called for a conventional operation, with the principal data-collection effort being undertaken concurrently with the census in the 50 States. However, as explained above, it was noted that the 1977 Economic Censuses of Puerto Rico would be underway in the first half of 1978, with an office established and administrative and field staffs in place. Rather than carry out the economic censuses, close down the operation, and then duplicate the entire effort in 1979, the Bureau suggested bringing the agricultural census forward a year, to mid-1978, thus utilizing the economic censuses' facilities to the greatest extent possible. This would result in considerable economies in both money and personnel, as well as provide the agriculture census with a pool of enumerators, crew leaders, and so on with some experience in census activities. The Commonwealth Government agreed to the change, and announced it publicly in September 1977.

Census schedule—Once the new date of the census was set, Bureau staff and representatives of the Commonwealth Government drew up a tentative schedule of census activities, as follows:

1977

Plan the major census operations with the Puerto Rico Agriculture Advisory Committee and officials of the Commonwealth Government.

Prepare a memorandum of agreement between the Bureau of the Census and the Commonwealth of Puerto Rico regarding the conduct of the census.

Prepare drafts of report forms and other necessary census materials.

Develop a control file for special farms, to be used in 1978.

1978

Translate final drafts of report forms and other census materials into Spanish.

Print report forms and other materials.

Carry out a test of the feasibility of using Puerto Rico Department of Agriculture farm lists as quality control lists for the census.

Evaluate results of the feasibility test.

Recruit and train the enumerator staff (as necessary) for the agriculture census.

Carry out a Special Farm Identification Survey to locate "special" farms for the mail portion of the census.

Conduct the enumeration.

Check in, review, and correct the census returns.

Ship report forms to Data Preparation Division, Jeffersonville, Ind., for data keying.

1979

Prepare specifications for computer processing and computer programs.

Key the data to computer tape for processing.

Perform computer edits and correct records.

Tabulate the data.

1980

Publish the results of the enumeration.

Every effort was made to adhere to this timetable, but events, most notably water damage to the Suitland computer facilities and the resultant scheduling-priority conflicts with both the 1977 Economic Censuses and 1980 Census of Population and Housing programs, caused considerable revision in the Puerto Rico schedule.

General plan for the census—The principal data-collection effort for the census was to be a two-part operation: the first part included the enumeration of "special farms," i.e., farms identified in the 1974 census as having 200 *cuerdas* or more, or sales of \$20,000 or more; while the second part of the census was the field enumeration, which covered "regular farms." "Special farms" were to be identified in a survey carried out by mail early in 1978, and then enumerated by mail concurrently with the regular field enumeration. For regular operations, report forms were to be completed by enumerators, with information supplied by respondents during personal interviews. Completed report forms for both kinds of operations would be subject to certain review procedures in the Puerto Rico field office, after which they would be shipped to Suitland for pre-computer processing.

Preparatory Operations

Report forms—The standard report form for Puerto Rico was the 78-A1(PR)SP, used for all farms in the Commonwealth. This was an 8-page, 10½" x 16" booklet printed on white stock with blue ink and shading. The A1 report form used for "special farms" was identical, except that it was printed on salmon-colored stock. (The mailing to special farms and the field enumeration used Spanish-language forms (hence the "SP" in the form number), although an English-language version was available upon request.)

The report form was divided into 28 sections that requested data on the following:

- Ownership, and/or renting/leasing of land from or to others
- Cuerdas* harvested and amount sold for selected crops
- Land use
- Irrigation
- Livestock and poultry inventory and sales, and sales of livestock and poultry products
- Products for home consumption
- Machinery, equipment, buildings, and facilities

- Hired workers
- Use of chemicals (herbicides, fungicides, other pesticides, lime, etc.)
- Expenses
- Value of sales of selected products
- Farm-related income
- Farm business organization
- Operator characteristics

Farm listing pretest—The general acceleration of the schedule of the census in Puerto Rico precluded extensive pretesting of the report form, but the design developed was very similar to the successful 1974 form and no major problems were anticipated. However, the Bureau believed that a test of the proposed farm-listing screening questions was necessary. In addition, the Puerto Rico Department of Agriculture (PRDA) offered the Bureau the use of its own farm lists for each municipio as a quality control resource to check coverage—i.e., enumerators' lists of farms canvassed could be compared by census personnel to the PRDA lists to determine whether complete coverage of farms in each municipio had been achieved. To be of any use, the control lists had to be accurate and up-to-date, so the Bureau took the opportunity to test both its screening questions and the PRDA's lists in a small-scale prelisting operation. Six municipios in the southwestern part of Puerto Rico (the least urbanized area) were chosen for the test, and a small staff of enumerators was sent into the field to identify and list the agricultural operations in each municipio. The prelisting was carried out in January and February of 1978. The proposed screening questions provided adequate means of identifying farms, and the operations listed were matched to the PRDA lists. The comparison revealed that the PRDA lists were incomplete for census purposes and the idea of using them as coverage quality control resources was dropped. Instead it was decided that a number of farm operations in each crew leader district should be prelisted, and then matched to enumerators' lists during the enumeration to identify areas with coverage problems.

Special farm identification survey—There was no complete and up-to-date list of the "special," or large, farms in Puerto Rico when the Bureau decided to enumerate them by mail, so an address list had to be compiled. A preliminary list was assembled, primarily from the 1974 census farm list and from the records of the Puerto Rico Department of Agriculture, which necessarily included a substantial number of addresses whose status as "special" farms was questionable. To determine the current status of these addresses, a farm identification survey was carried out in the spring of 1978. A report form, the 78-A30(PR)SP, was prepared that asked whether the recipient operated a farm, raised any crops for sale, or had any livestock or poultry, and the location of the farm. Respondents not actively farming, or who had reduced the size of their operations, would be removed from the list, while the names and addresses of any new operators obtained from farms that had changed operators would be added.

The first mailout for the identification survey was to be made from Suitland in March 1978, with two followup mailings in April, but preparations for the main census operation delayed

the initial mailout until April. This was only 3 months prior to Census Day (July 1) in the Commonwealth, but it was decided to go on with the survey mailing in the hope of improving the quality of the address list, although the followups were dropped. Accordingly, approximately 2,000 A30(PR)SP report forms were mailed to addresses on the special farms list in the second week of April. By the end of the first week in June, 749 forms (about 37-percent response) had been received. Since the mailing list had to be finalized some time before the actual mail-out to the special farms, scheduled for June 12, the identification survey was closed down at this point.

Field Organization and Training

General organization—The Bureau of the Census opened its office in San Juan, Puerto Rico, in October 1977, to prepare for the 1977 Economic Censuses. The local census manager was selected from several candidates and served as the principal manager of census operations for both the economic and agricultural censuses. While the primary concern of the field office and the staff during their first several months of operations was the economic enumeration, which began in January 1978, certain preliminary work on the agriculture census, such as the quality control list pretest, was carried out simultaneously with economic census operations. By May 1978, the office was changing its principal focus from the economic to the agricultural operation.

The Bureau's Field Division had primary operational responsibility for the field enumeration (although Agriculture Division's Outlying Areas Branch carried out most of the mailing operation) and a member of its regular staff was assigned to the Puerto Rico office as liaison between the office and Bureau headquarters. The Agriculture Division assigned members of its staff as technical advisors and reviewers during the enumeration, followup, and processing. Space for the census office, located in San Juan, was contracted for by the General Services Administration (GSA), and office equipment was also provided by the GSA, or was rented locally.

Regional census offices were not established for the 1978 enumeration. Instead, the seven supervisory crew leaders ran their district enumerations from their homes. Local municipio governments were contacted by the census office and provided space, on a temporary basis, for such local activities as crew leader and enumerator training, payroll computation, and so on.

Recruiting and training—Recruiting for the field enumeration staff began April 24, 1978. A total of 58 crew leaders and nearly 600 enumerators were required for the census, many of whom were selected from among people who had taken part in the economic censuses. By the last week of May, the crew leaders and over 500 enumerators had been selected. In mid-May, the Field Division liaison began conducting training classes for the seven supervisory crew leaders. When their own training was completed, the supervisory crew leaders then held 3-day training classes for their crew leaders on May 31 and June 1-2. The crew leaders, in turn, were responsible for training their enumerators, and conducted their own training classes during the period June 13-16. By June 19, the recruiting and training effort was complete and the field enumeration began.

Enumeration materials—The *Enumerator's Manual* (form A10 (PR)SP) and the *Training Guide for Enumerators* (A11(PR)SP) were the basic procedural volumes used to instruct the field staff. The *Enumerator's Manual* was the principal reference source for enumerators in the field.

There were also training guides for crew leaders (the A8(PR)SP), a *Crew Leader's Manual* (A9(PR)SP), and training guides for special farms and quality-control enumerators (because so few were produced, no form numbers were assigned). In addition, an *Office Procedures Manual* (A46(PR)SP) and an *Administrative Manual* (250(PR)SP) were available for use at the census field office. All of these materials, the enumerator, crew leader, and supervisory crew leader guides and manuals, and the office procedures manual, were prepared in English at Suitland, translated into Spanish by Bureau personnel, and reproduced prior to shipment to Puerto Rico.

The field and office staffs required detailed maps of the Commonwealth to facilitate complete enumeration. The Bureau's Geography Division prepared 1:20,000-scale detailed maps of each enumerator's area of responsibility, using information from aerial maps and U.S. Geological Survey "quad" maps, and aerial photographs of each enumeration district (ED) were provided to enumerators to supplement their maps.

Publicity—The publicity campaign for the 1978 Census of Agriculture in Puerto Rico had two major functions: to publicize the census and encourage cooperation and response, and to help in recruiting the census staff. The Bureau's Public Information Office (PIO) designed and produced a poster to help in the staff recruitment effort, and in April, 700 copies, each with 50 job-application/reply cards attached, were shipped to the Commonwealth to advertise both the census operation and the opportunities for employment on the agricultural census staff. News releases announcing the commencement of hiring for the census staff and the beginning of the enumeration itself were also prepared and sent to the San Juan office for release to some 85 major media outlets across the island.

With relatively little time available for the campaign to have its effect, the Bureau concentrated its effort on the broadcast media as the likeliest method of reaching the greatest number of farm operators in the shortest period of time. A set of color slides on the census, together with a taped narration, was developed and five kits were made up (one with English narration and four with Spanish) for release to the five Puerto Rico television stations. In addition, a set of two 60-second, one 30-second, and three 15-second radio spots was prepared and sent to 75 radio stations in the Commonwealth. (As in the 50 States, these tapes, slides, etc. were broadcast on a public-service basis.) All of these materials, developed initially by the PIO, were translated and recorded at Department of Commerce facilities in Washington, D.C.

A request was also made to the Governor's office that the first week of the enumeration be proclaimed the "Week of the Census of Agriculture." The proclamation was prepared and issued, and responsibility for publicizing it was assumed by the census office.

The publicity campaign was of relatively short duration and, coming as it did so soon after the economic census, put a con-

siderable public service burden on the local news media. Nevertheless, the Bureau received substantial help from the local media and considered the publicity campaign successful.

ENUMERATION

Special Farms Enumeration

Mailout—The enumeration of special farms in Puerto Rico was a two-stage operation, consisting of a mailout of report forms to addresses on the Bureau's special-farms list, followed within a month or so by a field followup of nonrespondent cases. The mailing packages for special farms, each containing a 78-A1(PR)SP report form, a return envelope, a form 78-A1(PR)-L1 cover letter, and an instruction sheet, were assembled and had address labels applied at Jeffersonville. Some 3,000 packages were prepared in mid-June and were shipped to San Juan, arriving there on June 23. The packages were immediately delivered to the post office and mailed to farm operators.

Field followup—By the third week of July, 335 responses to the special farms mailing had been received and the census office was preparing for the field followup of nonrespondents. Seven crew leaders assigned to the special farm enumeration, one for each of seven special crew leader districts, were employees of the Puerto Rico agricultural agencies. Their duties and responsibilities were similar to those assigned to crew leaders in the regular field operation (see below for details). Some of the enumerators selected from the field staff already involved in carrying out the census of small and medium-sized farms were given a special 3-day training session between July 19 and 22, primarily to familiarize them with the special-farms control lists, the Special Farm Identification Survey form 78-A30(PR)SP, etc. Each enumerator was given a kit containing the control list of special farms in his or her assigned area (one enumerator was generally responsible for the special farms in several regular enumerators' districts), a supply of A1(PR)SP report forms, and the A30(PR)SP's for special farms in the area, as well as the necessary manuals and maps. The field followup of special farms began the next day, July 23.

Special-farms enumerators visited every address on their Special Farms Control List and completed an A1(PR)SP report form for every operation, unless the land had been idle or retained for nonagricultural purposes during the 12 months preceding the enumeration.

Work on the enumeration of special farms continued for nearly 10 weeks, until the end of the first week of September 1978. Approximately 500 A1(PR)SP report forms were received by mail, while over 2,500 were completed by the field staff. An attempt was made, early in the census, to follow up selected large nonrespondents by telephone, but only a handful of cases were successfully resolved in this way and the use of the telephone for this purpose was discontinued at the end of July. A total of 3,052 agricultural operations were enumerated by the special-farms data-collection effort.

Field Enumeration

Taking the census—For the purposes of the field enumeration, Puerto Rico was divided into seven supervisory crew leader

districts (SCLD's). Each SCLD, in turn, contained between 6 and 10 crew leader districts (CLD's)—58 in all—which were made up of individual enumeration districts (ED's). Each enumerator was assigned a specific geographic area (his or her ED) to canvass and was provided with a census kit that included a supply of form A1(PR)SP questionnaires to be filled out for each farm operator interviewed, a map (to be updated as the canvassing proceeded) and an aerial photograph of the ED, a "skip list" of special farms not to be enumerated, and a record book for the ED. The record book had a cover (form A-5(PR)SP) that identified the enumerator and the supervisor, the ED, municipio, and barrio involved (each ED *usually* encompassed an entire barrio), and the enumeration procedure code (see below). It also contained a supply of form A3(PR)SP Listing Pages and A4(PR)SP Nonresident Operator Cards. The A3(PR)SP contained the screening questions asked for each respondent in order to determine whether his or her place was a farm, while the A4(PR)SP cards were used to record basic information about nonresident farm operators and their farms. (A4(PR)SP's were also completed at closeout time for callback failures.)

In predominantly rural ED's, the canvassing was done using "procedure A." Procedure A involved door-to-door canvassing, except in built-up residential areas called "clusters," where there were 50 or more buildings, each on half a *cuerda* or less of land. Enumerators could "spot check" households in clusters to inquire among the residents as to whether anyone operated a farm, and enumerate any operators so identified in the usual way. Clusters were shown on the ED maps as shaded areas, but if an enumerator found an area qualifying as a cluster but not shown as such on the ED map, he or she outlined the area on the map and assigned a cluster letter to it. Such "new" clusters were canvassed after the crew leader had reviewed the map or area involved and decided which method (door-to-door, or spot-check) was to be used.

"Procedure B" canvassing was used in ED's that were in mostly urban areas, or that had 10 or fewer farms listed in the 1974 Census of Agriculture of Puerto Rico. For procedure B ED's, the names and addresses of known farms (drawn from 1974 census lists) were entered on the A-3(PR)SP Listing Pages in the record book for the ED, and the enumerator visited each address.

In both procedures, the enumerator began the interview by asking the respondent the name of the head of the household and a screening question as follows:

Did you in the last 12 months raise, produce or sell any crops, vegetables for sale, ornamental or flowering plants, or have—

1 or more cattle?

1 or more pigs?

15 or more poultry?

If the respondent answered "yes" to any part of this inquiry, the enumerator then asked if the place had three or more *cuerdas*. If so, a completed questionnaire was required. Places of less than 3 *cuerdas* qualified as farms if the gross sales from

agricultural products from July 1, 1977 through June 30, 1978, or the expected gross sales during the calendar year 1978, were \$100 or more.

When a place qualified as a farm but contained no housing unit, or the operator did not live in any housing unit on the place, the enumerator completed an A4(PR)SP Nonresident Operator Card for the farm and assigned the first unused A4(PR)SP serial number to the operation. Enumerators consulted neighbors, or any other likely source, to obtain the addresses of nonresidential operators. If the operator lived in the same ED as the farm in question, the enumerator completed a report form when visiting the operator's residence. If the operator lived outside the ED containing his or her farm, the case (with the appropriate A4 card) was referred by the enumerator to his or her crew leader, who then referred it to the crew leader in whose district the farm operator lived.

Callbacks—When an enumerator found no one at home, neighbors were contacted to try to determine whether or not the household was engaged in agricultural operations. If it could be established that no one in the household was involved in farming, no callback was required, but if this could not be confirmed the enumerator was to find out the best time to call back and note it in the A3(PR)SP listing for the address. Any additional information regarding the address was included in the "Remarks" section of the listing book. Enumerators were to try to make callback visits as soon as possible after the initial one, so as to avoid an accumulation of delayed work.

Field Review and Quality Control

The quality control plan for the 1978 census involved three distinct phases: an observation period for enumerators, a field review of the enumerators' completed work, and a match of enumerators' farm listings to quality-control prelists to check for coverage.

The observation period involved the selection by each crew leader of the four enumerators who, in the crew leader's judgment, had the most difficulty in performing their required duties. The crew leaders accompanied the enumerators selected when the latter began canvassing. Any difficulties the enumerators might have were noted and they were retrained if necessary. No enumerator chosen for observation was permitted to begin canvassing without supervision until he or she had demonstrated a satisfactory capacity to the crew leader.

As early in the enumeration as possible, the crew leaders carried out a review of the work of their other enumerators. This review covered all aspects of the enumeration—field canvassing techniques, completion of forms, listing, etc. Those passing this review continued working, while those who failed it were either retrained or released, depending on the nature of their problem.

A second review of all of the materials for each ED—listing pages, report forms, map, etc.—was done by the crew leader or supervisory crew leader responsible before those materials were accepted as complete.

A coverage check of each CLD was also carried out by a staff of quality-control enumerators. Prior to the start of the field

enumeration, 30 quality-control enumerators selected four addresses at random within each CLD and prelisted those places and the five consecutive addresses immediately following them that should be visited by an enumerator. This prelist then was compared to the enumerators' listing pages during the crew leaders' review of their enumerators' work to determine whether or not complete coverage was being obtained. It was found that, in general, very good coverage was being achieved by field enumerators.

Enumeration Results

By the end of July approximately 24,000 A1(PR)SP report forms had been filled out for places identified as having agricultural activities. The enumeration continued until September 9, when the canvass of the last outstanding ED was completed. While some 33,700 report forms were filled out during the enumeration, those that were identified as representing places that were considered out of scope (i.e., not meeting the farm definition), or were found to be duplicates, were deleted from the census file. A total of 31,983 in-scope forms were identified and contributed data for tabulation and publication.

POST-ENUMERATION EVALUATION SURVEY

While a general evaluation of the agricultural census in Puerto Rico was not carried out, the Bureau conducted a post-enumeration evaluation survey in an attempt to determine how thoroughly enumerators had completed census report forms, and the effect, if any, of editing and processing procedures (particularly imputation for missing data) on the accuracy of the statistical summaries drawn from the census data. The survey design called for the selection of a sample of completed special and regular farm cases. Photocopies of the report forms for the sample cases were to be made and any changes made by the editing staff were to be marked out; each report form was then to be closely reedited for consistency of reported data—no imputation for missing items was to be done. Report forms that failed this edit, that is, those with missing data or incomplete or inconsistent entries, were to be subjects of a field followup, with an enumerator visiting each subject operation in an attempt to obtain the necessary data. Once the followup operation was completed, the report forms would be reedited, and the data from the sample would be processed and tabulated for comparison to the data from the same operations as processed by the regular census procedures.

Plans for the evaluation survey were completed and approved in August and September 1978. The sample was to consist of approximately 1,500 cases: a stratified (by estimated value of sales) sample of 500 special farms and a systematic sample of 1,000 "other" farms selected on an island-wide basis.

The reedit of the sample report forms began in late September, and the first cases for field followup were sent to the enumeration staff early in October. (This enumeration staff consisted of former crew leaders and supervisory crew leaders.) The field followup phase of the survey was completed by the

end of October, and the editing of the report forms from the followup was finished in November. Thereafter, all of the report forms, including those that had passed the first reedit, were packed and shipped to Suitland.

The original plans for the survey had called for the data from the sample report forms to be processed and tabulated for comparison between the data from (a) the same report forms *before* the normal field-office edit, and (b) the data from the report forms *after* the edit, to determine the degree of change caused by the edit, or the improvement of coverage and completeness of data collected presumably achieved in the survey. However, by the time the sample data arrived in Suitland, budget and personnel constraints on the Bureau's computer facilities and staff precluded immediate processing. It was decided, therefore, to defer completion of the evaluation survey until resources could be more easily spared from other work.

DATA PROCESSING

General Information

The processing of the data collected in the 1978 Census of Agriculture in Puerto Rico involved the following operations:

Operation	Dates
Clerical editing of the report forms in Puerto Rico and Suitland	7/78-12/78
Data keying and verification at Jeffersonville	11/78-2/79
Format and consistency edit by computer	2/79-3/79
Technical review of format and consistency edit rejects	2/79-3/79
Correction of data rejects	2/79-4/79
Tabulation of the data	9/79-9/80

Editing

The report forms for Puerto Rico were first reviewed clerically in the San Juan field office on a flow basis as the completed documents were submitted from the field enumeration staff. The preliminary edit was concerned with such functions as rewriting unreadable entries, deleting unnecessary entries, moving misplaced entries to the correct location, converting fractional or decimal *cuerda* entries into *centesimos* (hundredths), coding specified entries, and so on. Subject-matter specialists in Suitland were consulted when specific technical problems were encountered.

Upon completion of the field enumeration and the field office edit, the report forms were shipped via air freight to the Outlying Areas Branch of the Agriculture Division, in Suitland, where they were reviewed for completeness and consistency to insure keyability. These clerically edited forms then were shipped to the Data Preparation Division in Jeffersonville where they were keyed directly onto disk, using the key codes pre-

printed on the report forms, and then copied onto magnetic tape.

After keying, the data were ready for computer processing and were transmitted via datalink to the Bureau's computer facilities at Suitland for execution of the format and consistency edit programs. The specifications for these programs were furnished in decision logic tables (DLT's) by the subject-matter specialists in the Agriculture Division. The format edit program arrayed the data into a workable record format and carried out checks for a number of items, using parameters established in the DLT's from which the programs were written. The format edit checked for illegal items (data-keying errors), nonresponse to required items, items reported or keyed as negative values, out-of-scope records, and the correct check digit (identification number) for each record.

Data and/or out-of-scope records rejected by the format edit program then were displayed for subject-matter specialists' review and correction. Records "passing" the format edit, or corrected and returned to the file, were subjected to a second, more complex edit program, which—

1. Made consistency checks (a procedure in which the computer matched totals of data reported to the sum of the data detail).
2. Set "flags" (i.e., indicators, recognizable by the computer program and human reviewers, that a particular piece of information was incorrect or inconsistent with other data elsewhere in the same report).
3. Imputed missing or incorrect entries using values derived from data supplied by the Puerto Rico Department of Agriculture and/or from local farm and marketing associations.
4. Coded each record for size, by the number of *cuerdas*; economic class, by the value of sales; for type of farm (whether dairy farm, sugarcane farm, etc.); for tenure of the operator (owner, part owner, tenant, manager, etc.); for type of organization (individual, partnership, corporation, etc.); and age and main occupation of the operator (i.e., agricultural or nonagricultural).

Upon completion of the first edit pass, a listing of "flagged" cases was printed. These cases were reviewed by subject-matter specialists in Suitland and necessary corrections were coded and keyed using key-to-tape encoders, after which the records were edited again by the computer and were inserted into the data records on tape. (A flagged case might undergo several computer edits, since changing any one item could cause related items to be inconsistent with the corrected data, thus requiring additional consistency checks.)

The edited and corrected data file was then ready for tabulation.

Tabulation

Table layouts and specifications were furnished by the Bureau's subject-matter specialists, and the General Tabulation System (GTS) software package was used to produce the data

tabulations. Three major sets of tabulations were prepared, one each for all farms in Puerto Rico, all farms in each of the five agricultural regions of the island (as delineated by the Commonwealth Government), and all farms by municipio. These sets also were cross-tabulated by type of farm, class, size, tenure of operator, etc., for farms with a total annual value of production of \$1,200 or more.

The tables produced were reviewed in Suitland for consistency and accuracy, and corrections to any errors were carried to the data tapes before the final tables were released for print.

COMPARABILITY OF THE DATA

The data produced by the 1978 Census of Agriculture in Puerto Rico were, in general, comparable to those produced in earlier censuses. The change of procedures for 1978, from a purely field-interview operation to one combining data from field interviews and mail enumeration, had no significant effect on the comparability of the data, but the inclusion in the censuses from 1969 onward of some places of less than 3 *cuerdas* and the difference in the reference periods of the censuses did affect some of the data.

The 1978 data are most directly comparable to those of 1974, inasmuch as most of the items requested in 1974 were also requested in 1978, with the exception of additional information requested in 1978 on selected crops under cultivation and on products for home consumption. For 1969, operations with sales of more than \$1,200 were asked additional questions on irrigation; ornamental and flowering plants; machinery, buildings, and equipment; hired workers; insecticides, herbicides, and fungicides; other farm-related income; and type of farm organization. The 1964 census requested data on equipment and facilities, off-farm work, and expenses, of all farms with sales of more than \$1,200, but of only one-fifth of farms with sales of less than that amount.

PUBLICATION PROGRAM

No preliminary report was published for Puerto Rico. The census data for Puerto Rico were published in the *1978 Census of Agriculture, Volume 1, State and County Data, Part 52, Puerto Rico*. Data were presented for all farms for the island as a whole, for the five agricultural regions, and for each of the 78 municipios. The data include land in farms; major uses of farm land; size of farms; tenure and characteristics of operators; organization; inventory of selected machinery, equipment, buildings, and facilities; agricultural chemicals purchased; irrigation; selected production expenses; income from sales of agricultural products; farm-related income; crops harvested and sold; inventory and sale of livestock and poultry and their products; ornamental and flowering plants and lawn grass; selected crops under cultivation; and products for home consumption. Summary data were also presented for farms with sales of \$1,200 or more, by tenure and characteristics of operator, type of organization, size of farm, value of sales, and type of farm.

No unpublished data are available from the 1978 census in Puerto Rico.

Chapter 8.

Census of Agriculture in Outlying Areas

INTRODUCTION

General Information

Historical background—For census purposes, the “Outlying Areas” of the United States include American Samoa, Guam, the Trust Territory of the Pacific Islands, and the Virgin Islands. The 1978 Census of Agriculture was the ninth such enumeration on Guam and the Virgin Islands while the agricultural enumeration conducted as part of the 1980 Census of Population and Housing was the seventh agriculture census of American Samoa and the second for the Northern Mariana Islands. (The latter were part of the Trust Territory of the Pacific Islands until July 1981.)

Censuses of agriculture on Guam were taken in conjunction with the decennial censuses of population from 1920 through 1960. In 1964, a change in title 13 required inclusion of the Virgin Islands and Guam in each census of agriculture of the United States. The first census of agriculture in the Virgin Islands was carried out in 1917, shortly after their acquisition from Denmark, and the second in 1930, after which agricultural enumerations of the Virgin Islands were part of the decennial censuses. In 1964, the islands were included in the quinquennial census.

The 1980 Census of Agriculture was the seventh such enumeration for American Samoa. The first agricultural census was taken there in 1920; since then one has been conducted every 10 years, in conjunction with the censuses of population. The Northern Mariana Islands were first enumerated for agricultural purposes as part of the 1970 Census of Population and Housing, but the agricultural data were released as part of the publication program for the 1969 Census of Agriculture. The Census Act does not require that all of these territories be included in the quinquennial enumerations, hence they were omitted from the 1974 program and were not subject to an agricultural enumeration until the 1980 decennial census got underway.

Legal authorization—Title 13, United States Code—Census, contains the legal authority for the collection of agricultural data in the outlying areas. Section 142, paragraph (a) directs the taking of a census of agriculture in 1979, in 1983, and in every fifth year thereafter. Section 191, paragraph (a) requires the inclusion in the census of the Virgin Islands, Guam, the Commonwealth of the Northern Mariana Islands, the Commonwealth of

Puerto Rico, “and as may be determined by the Secretary [of Commerce], such other possessions and areas over which the United States exercises jurisdiction, control, or sovereignty.” Paragraph (b) of section 191 authorizes the Secretary of Commerce to use data collected by the Governors or other highest Federal official (if the data are collected in accordance with plans prescribed or approved by the Secretary) for censuses taken in the Virgin Islands, Guam, the Commonwealth of the Northern Mariana Islands, or areas or possessions not specifically designated in paragraph (a).

Special arrangements—Contracts were made in January 1978 with the Governors of Guam and the Virgin Islands, and in December 1979 with the governments of the Northern Mariana Islands and American Samoa, for the conduct of the census of agriculture in their jurisdictions. The report forms, training materials and instructions, and other necessary census materials were provided by the Bureau of the Census. An official of the government of Guam received training at the Bureau of the Census as project manager for the census on Guam, while personnel from Bureau headquarters trained the project manager for the census in the Virgin Islands. Since the agriculture enumeration in the Northern Mariana Islands and American Samoa was carried out as an adjunct to the 1980 Census of Population and Housing, the decennial census staff conducted the agricultural census as well. The recruiting and training of the local field and office staffs, the supervision of appointments and payrolls, and other local administrative matters were the responsibility of the respective territorial governments. Bureau employees were assigned to the staffs of the census supervisors for American Samoa and the Northern Mariana Islands to serve as advisers.

Farm definition and reporting periods—The definitions of a farm used for the censuses on Guam and the Virgin Islands were the same as those employed in the 1974 enumeration. For the Virgin Islands, a farm was defined as a “place” of three acres or more on which any field crops or vegetables were harvested or gathered during the 12-month period between July 1, 1977 and June 30, 1978, or on which there was a combined total of 10 or more fruit or nut trees or plants, any livestock, or 10 or more poultry at the time of enumeration. Places of less than three acres were counted as farms if their sales of agricultural products between July 1, 1977 and June 30, 1978 amounted to at least \$100, or if they could normally be expected to produce

agricultural products in sufficient quantity to provide sales amounting to at least \$100. On Guam a farm was defined as a place on which any crops, vegetables, or fruits were harvested or gathered during 1977, or on which there was any livestock or 15 or more poultry at the time of enumeration. In the Northern Mariana Islands and in American Samoa, a farm was defined as any place that had 15 or more poultry (chickens, ducks, guineas, etc.); 5 or more livestock (cattle, hogs, goats, etc.); a combined total of 10 or more fruit or nut trees or plants; or any place of 100 square meters or more on which root or field crops or vegetables were harvested for sale during 1979.

The reference dates for the various data items for each of the areas were as shown below.

CENSUS OF AGRICULTURE ON GUAM AND IN THE VIRGIN ISLANDS

Census Schedule

The reduction of the intercensal period from 5 years to 4 years following the 1974 Census of Agriculture meant that the 1977 Economic Censuses on Guam and the Virgin Islands were underway as preparations began for the 1978 Census of Agriculture in those areas. The Bureau took advantage of this circumstance by bringing forward the agricultural enumeration schedules for the islands as far as could be done without interfering with the other economic censuses, and utilizing the office and administrative arrangements made for the economic operations as far as possible for the agricultural enumeration. On Guam, the agricultural census office was established in Agana, in the rented office space vacated by the economic census office. In the Virgin Islands, the office was established at the Virgin Islands Department of Agriculture research station outside Charlotte Amalie.

The planning for the 1978 census began in 1977, when initial contacts with the territorial governments were made and a ten-

tative schedule of census activities was drawn up. The proposed schedules for Guam and the Virgin Islands are given below. (The census was carried out with very little deviation from this schedule; the only significant change involved a 2-month postponement in completion of development work on the report form for Guam.)

Census Schedule		
Activity	Virgin Islands	Guam
Development of report form.	2/78	1/78
Printing of report forms	4/78	3/78
Development of farm list.	5/78	3/78
Preparation of training and enumeration materials	5/78	3/78
Assembly of materials and shipment	5/78	3/78
Organization of field office and recruiting of staff	6/78	4/78
Training	6/78	4/78
Enumeration.	8/78	4/78
Processing of the report forms.	3/79	3/79
Publication.	4/80	4/80

Map Preparation

Maps used by the central census offices, crew leaders, and the enumeration staff were prepared at the Bureau's Jeffersonville, Ind., facility. Preliminary versions were drawn up in early 1978, using the 1974 census maps as primary references, and were referred to the respective territorial governments for review and correction. While relatively few changes were necessary with respect to the Virgin Islands maps, those for Guam required updating because of the extensive military reservations on the island. Data from the Defense Mapping Agency were used to make the necessary corrections.

Census Reference Dates

Data item	Virgin Islands	Guam	Northern Mariana Islands	American Samoa
Acres (land in farms)	Enumeration Day	Enumeration Day	Enumeration Day	Enumeration Day
Fruit, nut, and tree crops	Enumeration Day	Enumeration Day	Enumeration Day	Enumeration Day
Fishery—sale.	(X)	Last 12 months	Last 12 months	Last 12 months
Livestock and poultry on place	Enumeration Day	Enumeration Day	Enumeration Day	Enumeration Day
Livestock and poultry sold	Last 12 months	Last 12 months	(X)	(X)
Chicken eggs sold	Last 12 months	Last 12 months	Last 12 months	Last 12 months
Equipment and facilities.	Enumeration Day	Enumeration Day	Enumeration Day	Enumeration Day
Crops harvested (acres, production)	Last 12 months	Last 12 months	Last 12 months	Last 12 months
Land use	Last 12 months	Last 12 months	Last 12 months	Last 12 months
Expenses	Last 12 months	Last 12 months	(X)	(X)
Sales of agricultural products.	Last 12 months	Last 12 months	(X)	(X)
Hired workers.	Last 12 months	Last 12 months	(X)	(X)

X Not applicable.

Training and Reference Materials

The duties of each member of the census staff and the enumeration and processing procedures for the operation in Guam and the Virgin Islands were contained in the *Procedures Manual*, form A25 ((G) for Guam and (VI) for the Virgin Islands). The A25 manuals served as the principal guides for the recruiting and training of the census staffs and for the overall conduct of the enumeration.

The particular duties of the various members of the census staffs were explained in a series of reference manuals. The project managers and their assistants received the *Supervisor's Reference Manual*, form A20, for their own use, and used the *Training Guide*, form A15, for the courses they conducted for their field enumeration staffs. The enumerators each received an *Enumerator's Reference Manual*, form A10, which explained their duties and gave detailed instructions for conducting interviews and filling out the report forms and other documents. Since much of the initial review of the report forms was to be done in the census offices, copies of *Clerical Instructions for Reviewing, Editing, and Coding Questionnaires*, form A21, were provided to the office staffs.

All of the materials were in English and were prepared and printed or reproduced by the Census Bureau at its Suitland headquarters.

Staffs and Training

The organization of the census staffs for Guam and the Virgin Islands was essentially identical, although the field enumeration staff for Guam was larger than its counterpart in the Virgin Islands. The composition of the two staffs was as follows:

Staff	Guam	Virgin Islands
Total	22	10
Project manager/census supervisor . .	1	1
Assistant manager/supervisor	2	1
Office clerical staff	4	2
Enumerators	15	6

The project managers were responsible to the Director of the Bureau of the Census for the conduct of the census in their respective territories. Their specific duties included most of the administrative arrangements for establishing the census offices and carrying out the enumeration.

The notices announcing vacancies on the census staffs were posted on Guam and in the Virgin Islands a month before the training classes for the employees were to begin. With the exception of the project manager on Guam, the territorial governments did not assign people to temporary duty with the enumeration operation; instead, all candidates for jobs were given written tests by the project managers, and were notified if they had been hired. All employees had to be American citizens, and while there was no official requirement that any be bilingual, the practical problems involved, particularly on Guam,

meant that facility with the local language was needed and was taken into account in the assignment of enumeration areas.

The project manager for Guam came to Bureau headquarters in March 1978 to receive his supervisor's training, while a Bureau staff member went to the Virgin Islands to carry out the supervisor's training course there on June 26, 1978. The enumerators' training courses and the assistant project manager's training on Guam were carried out on April 3-5 and June 28-30 on Guam and in the Virgin Islands, respectively.

Taking the Census

General information—Each enumerator was given an assignment map, a form A5 *Record Book*, and a supply of agricultural report forms before the enumeration began. The assignment map covered the area each enumerator was to cover, with the boundaries outlined in heavy orange lines, and showed the principal ground features and roads. The A5 *Record Book* contained three forms the enumerators were to use daily: the A2 Listing Sheets, the A3 Enumerator's Daily Report, and the A4 Daily Record of Progress. The A2 Listing Sheet served as a record of the enumerator's canvass, and contained a series of screening questions which the enumerator was to ask in order to determine whether or not a place was an agricultural operation. (Some of the A2 sheets contained prelisted names and addresses of farm operators, compiled from 1974 records and/or local Department of Agriculture listings.) The A3 daily report was a card that the enumerator completed each day. The number of A1's completed, callbacks made, and so on, were listed, and the card was submitted to the crew leader so that the enumerator's area could be monitored. The A4 progress record was a further aid in this, in that each enumerator used it to keep track of the number of A1's completed each day as well as provide a running total for the assignment.

Enumeration areas and enumeration districts—Each enumerator was assigned a district or area and made responsible for its complete enumeration. Guam was divided into 20 enumeration districts (ED's), corresponding to the island's election districts. These ED's were grouped for census purposes into 13 enumeration areas (EA's), each containing about 120 farms. Each enumerator was assigned one EA. The Virgin Islands were divided into six ED's, four on St. Croix and one each on St. Thomas and St. John. Each enumerator was assigned one ED.

Methods of enumeration—Enumerators interviewed each head of a household in the assigned ED or EA, asking a series of screening questions to determine whether or not the household was engaged in agricultural operations that met the census definition of a farm.

To insure complete coverage of each ED and to reduce duplication, rules were established for enumerating farms on, or overlapping, ED boundaries, and farms operated by persons not living in the same ED as the agricultural operation. If a farm overlapped an ED boundary, the enumerator in whose ED the household operating the farm was located was responsible for its enumeration. If a farm was completely within an ED but was operated by someone living elsewhere, the case was referred to the crew leader for the ED in which the operator lived for assignment to the appropriate enumerator.

In the Virgin Islands, the enumeration was carried out using prelists of the agricultural operations prepared from 1974 census data and information supplied by the Virgin Islands Department of Agriculture. Enumerators were also to visit any households not listed that appeared to have agricultural operations.

On Guam, three different enumeration procedures, A, B, and C, were used, depending on the characteristics of each ED, the ED being designated for a specific procedure prior to the enumeration. In procedure A (used in predominantly rural areas), the enumerators carried out a door-to-door canvass, filling out A1 report forms as necessary and making certain that a line number from the A2 listing and a dwelling symbol were entered on their area maps for each dwelling in the ED. Procedure B was used in ED's with occasional built-up areas. The same methods were used as in "A" ED's except for built-up areas where groups of 25 or more dwellings were found, each on less than one-third hectare (about an acre). In these areas, the enumerators were to list only those dwellings associated with agricultural operations. Procedure C ED's were those generally more urban areas in which extensive prelists of agricultural operations were used. Enumerators visited each address on the list. If any unlisted agricultural operations were found, these too were to be enumerated and added to the lists.

If any enumerators were unable to satisfactorily perform their duties, or if an enumerator resigned, crew leaders were to suspend operations in the ED involved until another enumerator could be shifted to complete the work. Fortunately, this occasion never arose.

Callbacks—Often, enumerators were unable to complete the necessary report forms on the first visit to a household because the operator was not home, his or her records were not ready, or for some other reason. In such cases, enumerators were to make arrangements for a return visit, a "callback," in order to complete the necessary materials. Whenever possible, these return visits were made by appointment, at a time most convenient for the respondent, but enumerators were encouraged to complete each one within 3 days of the initial visit.

Controls and reports—Enumerators submitted reports of their work to the crew leaders daily, using the A3 or A4 forms described above. The crew leaders, in turn, summarized the work done by the enumerators every week on form A6, Weekly Progress Report of Enumeration. The A6 showed for each week the number of lines filled on the A2 listing, the number of questionnaires completed, the number of callbacks pending, the hours worked by each enumerator, and the mileage for vehicles used in the enumeration for that week. The A6's were sent to the project managers each Monday and the data from them were cabled to Bureau headquarters the next day, providing a weekly report of the progress of the enumeration.

Field Review

Crew leaders were responsible for reviewing the work of their enumerators. In addition to reporting progress and checking slow enumerators, each crew leader carried out two systematic reviews of each enumerator's work, the first during the initial 3

or 4 days the enumerator was on the job, and a second, final review when each ED assignment was completed.

The purpose of the first review was, essentially, to make certain that (1) each enumerator was using proper procedures, (2) each ED was covered completely, and (3) callbacks were not accumulating. When errors were discovered, the crew leaders pointed them out and ensured that corrective action was taken. The second review was made as each enumerator completed his or her assignment. The crew leader checked every fifth report form completed unless there were 10 or fewer involved, in which case all were checked for accuracy, consistency, and completeness. If two or more forms were unsatisfactory, all the questionnaires from the enumerator in question were reviewed. Rejected report forms were returned to the enumerator for additional callbacks and work, unless a satisfactory explanation could be given as to why information was missing. (E.g., the enumerator was unable to find anyone at home after two visits, the respondent refused to provide the information, the housing unit in question was vacant and no one in the vicinity was able to provide any information about it, etc. All of these cases were then referred to the enumerator's supervisor for final clearance.)

CENSUS OF AGRICULTURE IN AMERICAN SAMOA AND NORTHERN MARIANA ISLANDS

General Information

The census of agriculture in American Samoa and the Northern Mariana Islands was an adjunct to the 1980 Census of Population and Housing in those areas, and was conducted under the supervision of the Bureau's Decennial Census Division (DCD). The Agriculture Division's part in the operation involved designing the questionnaires to be used, writing enumeration procedures for the agriculture part of the census, and processing and tabulating the data once the completed forms were forwarded to Suitland.

Inasmuch as the enumeration took place in April of 1980, the data were collected for calendar year 1979. In the previous census of agriculture in the outlying areas of the Pacific, taken as part of the 1970 Decennial Census, the Trust Territory of the Pacific Islands had also been enumerated. For 1980, however, the territorial authorities suggested that the census of agriculture of the Trust Territory of the Pacific Islands not be conducted by the Bureau of the Census since the territorial government had itself recently carried out an agricultural census. The Secretary of Commerce, authorized under title 13 to determine which of the outlying areas not specified in the title will be covered in the census, acceded to the suggestion of the territorial government, so that of the various local jurisdictions comprising the Trust Territory, only the Northern Mariana Islands were included in the agriculture census program.

Planning and Preparation

Census schedule—The DCD's Outlying Areas Branch was established in July 1978 and served as the central planning and coordinating office for the population, housing, and agriculture

censuses of American Samoa and the Northern Mariana Islands. The schedule was as follows:

Item	Begin	End
Planning	7/78	3/80
Preparation of training and enumeration materials	9/79	2/80
Opening of area offices.	1/80	(NA)
Shipment of training and enumeration materials to area offices.	12/79	3/80
Recruitment of staff	1/80	4/80
Training of crew leaders and enumerators	3/80	3/80
Enumeration.	4/80	5/80
Quality control and office review of report forms	4/80	5/80
Closing of area office.		6/80
Processing	5/80	12/80

Map preparation—Master maps, showing each enumeration district (ED), and central-office, crew-leader, and enumerator maps, were prepared by the Geography Division between October 1979 and January 1980. In the maps for the Northern Mariana Islands, the ED's were delineated in such a way as to allow comparability with the ED's used in the census taken by the local government in 1974.

Training and reference materials—The general reference source for the census office operations in the outlying areas was the *Office Operations Manual*, form D-513-0A. Chapter 2 of this manual contained instructions about the screening questions to be asked of each household to ascertain whether any agricultural operations were being carried on, while chapter 3 included a section on the review of the agricultural report forms. The *Coordinator's Manual*, form D-508-0A, described the duties of the census coordinator/supervisor, while the *Crew Leader's Manual*, form D-555-0A, and the *Enumerator's Manual*, form D-549-0A, provided detailed instructions for persons holding those positions. Each of these manuals contained separate sections or chapters, where appropriate, on the agricultural census. In addition, a *Questionnaire Reference Book for Agriculture*, form 80-A10 ((AS) and (NM), for American Samoa and the Northern Marianas respectively), was provided to the enumerators and crew leaders with explanations and detailed instructions for the form 80-A1 report forms. The census coordinators and census advisors in each of the outlying areas also received verbatim training guides to insure uniform training of crew leaders (form D-655-0A) and enumerators (form D-649-0A).

All these materials were in English and were prepared and reproduced by the DCD at the Bureau's Suitland headquarters. Those portions of the reference materials dealing with the agricultural census were drawn up by the Agriculture Division's Outlying Areas Branch.

Staffing, training, and expenditures—The staffs for the census in American Samoa and the Northern Mariana Islands were

similarly organized. The composition of the 1979/80 census staffs was as follows:

Staff	American Samoa	Northern Mariana Islands
Total	119	73
Census advisor.	1	1
Census coordinator	1	1
Census administrator	1	1
Administrative assistant	1	1
Clerks.	4	4
Field operations supervisor	1	1
Crew leaders	15	7
Enumerators.	95	57

All candidates for jobs were required to take an oath to protect the confidentiality of census information.

The census coordinators were appointed by the governors of the areas and were generally responsible for the overall conduct of the census in their respective areas. However, the census advisor was a U.S. Bureau of the Census employee and was specifically responsible to the Director of the Bureau for maintenance of acceptable statistical standards and adherence to Bureau procedures and requirements.

Recruiting began in January 1980. All candidates for jobs were given written tests by the census coordinators, administrators, and/or the census advisors; candidates who passed the test were interviewed before final selection for hiring. In both areas, crew leaders and enumerators with facility in the local language were required, since many of the inhabitants spoke little or no English. Crew leaders were given a 3-day training session during the second week of March 1980 to familiarize them with their pre-census, enumeration, followup, and field review duties. The enumerator staffs were trained a total of 24 hours in the week immediately preceding April 1, 1980.

The Bureau of the Census provided funding for the basic census; any proposed expansion of the enumeration by the local government (special questions, surveys, etc.) had to be paid for by the local government, and the procedures used had to meet the Bureau's statistical and methodological standards. (This provision did not become effective, since no expansion of the census was requested.) Initial sums corresponding to 80 percent of the total field budget were advanced to the territorial governments for the conduct of the censuses, with the remaining 20 percent of the budgeted funds held in reserve, to be made available if necessary.

Agriculture census report forms—The report forms 80-A1(AS), for American Samoa, and 80-A1(NM), for the Northern Marianas, were 16" x 14" sheets of white stock folded to 8" x 14", with printing and shading in black ink. They were essentially identical in content: Data were requested on land in agriculture; vegetables and field crops; fruits, nuts, and tree crops; land use; livestock and poultry; fishery; selected equipment and facilities; and operator characteristics. An item asked

whether any other persons in each household (other than the operator being interviewed) had any agricultural operations. The principal difference between the two versions was in the land use section; while the 80-A1(NM) employed conventional wording asking for data on land owned, rented, or leased by or to an individual operator, the section in the form for American Samoa included inquiries as to whether or not any of the land being used was *matai* land.¹

Taking the Census

General information—Each enumerator was given a kit, containing a map of the enumeration district (ED) to be canvassed, a supply of population and housing and agriculture census questionnaires; an *Address Register*, form D-104-0A, for the ED to be covered; and copies of the appropriate *Questionnaire Reference Book* and *Enumerator's Manual*. The ED map showed the boundaries of the area the enumerator was to canvass, as well as roads, built-up areas, and natural features. The address register contained a cover sheet identifying the enumerator and the ED involved, and listing pages for recording name, address or location description, geographic code, serial number, etc., for each household enumerated. The listing page also included check-off boxes showing which household had qualified for inclusion in the agriculture census, and, if so, how many agricultural report forms were required. Daily progress of work—living quarters enumerated, agricultural report forms filled out, callbacks made, and the like—was recorded on the cover sheet of the address register.

Enumeration methodology—The decennial census in the outlying areas was a house-to-house canvass of each ED. Enumerators were to visit and fill out a census questionnaire for every household. The last page of the population and housing questionnaires for American Samoa and the Northern Marianas included a section containing screening questions to determine whether or not any individual operated a farm. These were as shown in the next column.

Enumerators completed a form 80-A1 for any household that gave an affirmative answer to any of these questions, regardless of where the agricultural land was located within the ED. If the person operating the farm also had farmland or other agricultural operations outside the ED in which he or she lived, the enumerator was to include the data on those operations on the report form as well. In cases in which a form 80-A1 had already been filled out in another ED, each enumerator was required to fill out the identification sections of the form 80-A1 (parts A and B, giving the operator's name and address, and items 1-4 of section 1, showing acreage), and write in the "Remarks" space: "Completed Questionnaire obtained by Enumerator in _____ (name of District or Area)." For cases where an agricultural operation was controlled or managed by someone living outside the ED in which it was located, the

¹ A *matai* is the chief or head of an extended family or tribe-like group. Land occupied and used by the group is traditionally considered *matai* land, although the *matai* may not personally have possession or use of it. This arrangement presents some difficulties in collecting and tabulating agricultural data.

Section C	
1. Does anyone living in this house operate a farm?	☐ Yes ☐ No
2. Does this place have 15 or more poultry (chickens, ducks, guineas, etc.)?	☐ Yes ☐ No
3. Does this place have 5 or more livestock (cattle, hogs, goats, etc.)?	☐ Yes ☐ No
4. Is there a combined total of 10 or more fruit, nut, or tree crops on this place?	☐ Yes ☐ No
5. Does this place have 100 square meters or more on which root or field crops or vegetables were harvested for sale during 1979?	☐ Yes ☐ No
ENUMERATOR — If this house is on a farm but you are unable to contact the farm operator OR THIS HOUSE IS VACANT, find out the name of the person to contact and the address (if the farm operator does not live here) and enter here: ↘ Name of operator (or, if vacant, owner of the house) _____ Address _____ _____ If "Yes" to questions 1, 2, 3, 4 or 5 — — FILL AN AGRICULTURE QUESTIONNAIRE	

enumerators were to try to obtain the name and address of the operator, partially fill out a form 80-A1 (as above), and note in the "Remarks" section that the enumerator for the appropriate district or area should complete a form 80-A1 for the operation. Callbacks were to be made to places for which no report form could be completed on the first visit. (This normally occurred when the person having agricultural operations was absent.)

Review and edit—The crew leaders were immediately responsible for the quality of coverage and data collection in the census and carried out two reviews of their enumerators' work. The first was conducted as soon as possible after training and after each enumerator had begun his/her job. This review was primarily concerned with making certain that correct procedures were followed and the ED's were covered completely. The crew leaders checked each enumerator's address register and map, edited as many completed population and housing questionnaires as possible, and reviewed a one-in-five sample of the agriculture forms completed. (If there were fewer than 10 questionnaires, all were reviewed.) If corrections were necessary, the enumerator(s) involved were informed and, whenever necessary, retrained in the correct procedures.

The final review (when the enumerator turned in his or her completed assignment) involved a detailed check of the address register and map, to ensure that a report form had been filled out for each household, and a review of the agriculture questionnaires. This review was patterned on the first one; every fifth report form was thoroughly checked, unless there were fewer than 10 involved, in which case all were checked. The field edit was intended to identify and correct possible problems as soon as possible after they occurred, and to ensure that all appropriate items were completed and the data provided were legible. If forms were filled out incorrectly or data were missing, enumerators revisited the household concerned to complete the necessary information.

The crew leaders also conducted a coverage check of their districts, visiting and listing a sample of households before the enumeration got underway, and determining at the time of the review of the enumerator's work whether those households had been enumerated. This check, however, was principally concerned with the population and housing census.

Quality control—As crew leaders finished the final review of the report forms and address registers, the completed materials were forwarded to the census offices, where they were separated by type (agriculture, and population and housing) and were batched into work units, each consisting of the report forms from one or more ED's from one crew leader district.

DATA PROCESSING

Guam and Virgin Islands

The census of agriculture on Guam and in the Virgin Islands was completed by the late summer of 1978 and the report forms were shipped to the Bureau's headquarters in Suitland. There, Bureau employees edited the forms, withdrawing from further processing any that did not meet the Bureau's definition of a farm. The edit checked the forms for consistency and completeness, and adjusted errors in calculation, units of measure, inconsistencies, or misplaced entries on the basis of data available from the same report or from nearby operations of the same type.

After editing, the forms were shipped to the Bureau's Jeffersonville facility for processing. Later, the data were keyed to magnetic tape and transmitted for tabulation to the Bureau's central computer facility in the Suitland headquarters via data-link telephone transmission lines. While the computers were used to make the basic tabulations and cross-tabulations, they were not employed to reproduce the tables. Instead, the Agriculture Division's Outlying Areas Branch prepared and typed the tables, and posted the computer tabulations to them by hand. After table verification and review, the data were subjected to disclosure analysis and were released for printing in April 1980.

American Samoa and Northern Mariana Islands

Upon completion of the census of agriculture in American Samoa and the Northern Marianas, the report forms were sent to Suitland, where Bureau employees performed a further edit and hand-tabulated the materials. The tables were then prepared and typed, and the tabulations posted to the tables by hand. The tables for the Commonwealth of the Northern Mariana Islands were verified and the data released for publication in April 1981, while those for American Samoa were verified and released in the following July.

PUBLICATION PROGRAM

Data from the 1978 Census of Agriculture for the outlying areas were published in the reports of the *1978 Census of Agriculture*, Volume 1, *Area Reports*, Part 53, *Guam*; 54, *Virgin Islands*; 55, *American Samoa*; and 56, *The Northern Mariana Islands*. (No preliminary reports were published for any of the outlying areas.)

These four parts present data for farms and farm characteristics; land in farms and land use; size of farm; tenure and characteristics of the operator; amount harvested of fruits and nuts, vegetables, and field crops; selected machinery and equipment; and inventory of livestock and poultry and their products. Data on the value of sales of agricultural products and on selected farm expenditures are found in this volume also for the Virgin Islands and for Guam, but not for the Northern Mariana Islands and American Samoa.

Coverage Evaluation and Research

COVERAGE EVALUATION PROGRAM

Purpose

The Bureau of the Census routinely evaluates various phases of all of its major censuses and makes available to data users information on the limitations of the statistical data. A coverage evaluation has been carried out for each census of agriculture since 1945, and the results have been published for every census since 1950. The essential methodology has remained relatively unchanged, although techniques have been refined and sample design has been improved.

The coverage evaluation program for the 1978 Census of Agriculture, like its predecessors, was designed primarily to provide—

1. National and regional measures of the accuracy of census farm counts and of selected data items, such as land in farms and value of farm sales, to aid users in the utilization and interpretation of the data.
2. Estimates indicating the characteristics of missed farms.
3. Estimates of the accuracy of the census area sample, and identification of potential problem areas.
4. Information on factors associated with census error.
5. Identification of problem areas to improve coverage in future censuses.

General Procedures

The general procedures for the 1978 coverage evaluation were as follows:

1. An area probability sample of farm operators was obtained from a post-enumeration survey (PES) of the census of agriculture area sample (CAAS) and a sample of farms identified in the 1978 Annual Housing Survey (AHS). These served as a representative basis for measuring the census universe. (A sample was employed in the evaluation because more intensive enumeration and processing techniques, which would yield higher quality results, could be used than were possible in a nationwide census.)
2. The farms in the base sample were matched to the census mailing lists and census reports to establish the relationship between the base sample units and the census.

3. Followup operations were carried out to check and clarify differences between base sample farms and census responses and to establish "true" values.

4. The results were processed, tabulated, analyzed, and published.

The various phases of the evaluation are described in more detail below.

Sample Survey Designs and Methodologies

The 1978 Annual Housing Survey (AHS)—The census of agriculture evaluation sample from the AHS was used primarily to obtain information on the number and characteristics of farms operated by individuals living in urban areas (i.e., places with populations of 2,500 or more, and thus not covered in the census of agriculture area sample (CAAS)), as well as to provide certain measures of error for misclassified farms on the mail list.

The regular AHS sample for 1978 consisted of delineated sample areas spread geographically across the 50 States. Sampling rates differed in rural and urban areas; for the former, the sample rate was approximately 1 in 650, while the rate in the latter was 1 in 1,300. The sample thus selected included about 72,000 housing units. Field interviewers visited each housing unit between October 1978 and January 1979 and interviewed the occupants or, if the unit was vacant, informed persons (i.e., landlords, rental agents, neighbors, etc.). A series of screening questions were attached to the standard AHS questionnaire for purposes of identifying households with agricultural operations. If a household had agricultural operations, the address was included in the census evaluation sample.

The CAAS Post-Enumeration Survey (PES)—The PES was an evaluation study carried out in December 1978, following the completion of the data-collection phase of the CAAS. The PES sample consisted of a 1-in-30 subsample of the approximately 6,400 area segments used in the CAAS, selected systematically across the 48 contiguous States and including 212 segments in all, each containing about 75 households.

An intensive field enumeration of the PES segments was carried out by a field staff under the supervision of the Bureau's regional offices. All members of each household in each segment were listed in the PES listing books (only the "head of the

household" had been listed in the CAAS itself), and the most knowledgeable member of the household was interviewed for the survey. In each case, the interviewee was asked, for each person in the household, the following five screening questions:

1. Did (this person) have any cattle, hogs, sheep, poultry, or horses for sale or use during 1978?
2. Did (this person) have any other livestock or animal specialties during 1978?
3. In 1978, did (this person) raise or sell any crops, such as corn or hay?
4. Did (this person) raise FOR SALE any vegetables, berries, nursery or greenhouse products?
5. Did (this person) have 20 or more fruit or nut trees?

Callbacks were made in the event that no one was home when an interviewer first contacted a household. When several return visits were made without result, the case was referred to the telephone unit.

Matching, Mailing, and Processing Operations

The principal processing operations for the coverage evaluation were as follows:

1. Receipt of PES and AHS responses.
2. Clerical match of PES and AHS sample cases, on last-name basis, to 1978 census mail list, and classification of sample cases as matches, possible matches, and non-matches.
3. Review after matching operations.
4. Mailout of report form A90, "Evaluation of the 1978 Census of Agriculture," to all nonmatch and possible match cases, with followup of nonrespondents.
5. Attempt to match returned A90 report forms to the census mailing list.
6. Telephone followup of nonrespondents to resolve matching problems and differences.
7. Preparation of data for keying.
8. Computer edit and edit review.
9. Data tabulation and publication.

Bureau headquarters received the PES and AHS data early in 1979, and the match to the census mail file was carried out from January through April. When a positive match was made, no further search was done, but possible matches and non-matches were subject to verification and were held in the active matching file until the entire census mail list had been checked.

The first matching operation was completed in April 1979, and the mailing list for the A90 evaluation questionnaires was prepared. The A90 requested basic data on acreage and ownership, crops harvested, livestock and poultry, location, operator characteristics (residence, race, age, etc.), and census status (i.e., whether or not a 1978 census report form had been received). In June 1979, A90 questionnaires were mailed to

approximately 4,300 possible matches and nonmatches from the PES and AHS address lists. Three followup mailings to nonrespondents were made, at approximately 3-week intervals, beginning in early July 1979. By the end of September, approximately 60 percent of the report forms had been received. A telephone followup of the remaining nonrespondent cases was begun in October and was closed out 2 months later.

The second matching operation took place in February and March 1980. This was a further attempt to locate evaluation-sample farms on the census mailing list, using the additional information available from completed A90 report forms. When a match occurred, a computer printout of the census data record for that case was obtained from the census data file. The data from the census and the corresponding A90 report form were compared, particularly with respect to acreage reported and farm classification. Individual operations then were assigned a code identifying them as included, overcounted, or missed in the census. Each of these major categories had subdivisions within them relating to acreage, part of the sample, or part of the census involved.

Tabulation

Preparation of most of the coverage check data for keying, and the keying itself, were completed in February 1981. The computer program for the consistency edit was completed early in 1981, and computer edit and tabulation of the data were finished in June.

Publication

The results of the coverage evaluation program were published in early 1982, in the *1978 Census of Agriculture, Volume 5, Special Reports, Part 3, Coverage Evaluation*. The publication included tables showing estimates for the number of farms, land in farms, and total value of products sold. Since the sample was too small to provide reliable county- or State-level data, estimates were published only for regions and the United States.

PROCESSING EVALUATION SAMPLE

The purpose of the processing evaluation sample of the 1978 Census of Agriculture was to investigate the effect of the data processing operations on census data. The sample of addresses used for this evaluation study was selected from the final census mailing list immediately after completion of the second matching and unduplication operation in the fall of 1978. In order to facilitate detailed evaluation of the data, separate samples were drawn at the county, State, and national levels. Each of these samples, in turn, was divided into three sub-samples. The individual records in each sample were identified during processing by a special processing-sample code printed on the mailing label.

The county-level sample consisted of all addresses on the 1978 census mailing list for six counties in six different States; the counties selected and the number of addresses from each in the sample were as follows:

County	No. of addresses
Total	16,332
Bingham Co., Idaho	2,548
Jones Co., Miss.	2,142
Madison Co., Ill.	3,295
Robeson Co., N.C.	4,431
Roosevelt Co., N.Mex.	1,583
Wayne Co., N.Y.	2,333

These counties were chosen for the sample because they were (1) geographically dispersed, (2) a reasonable cross-section of farming in the United States, (3) among those counties for which individual data records from the 1974 census had been retained, and (4) large enough to provide useful data, but small enough to be manageable.

The State-level sample was drawn from the entire census address list for Kansas. The list was stratified, based on estimated economic size codes, to permit more detailed study of individual records as follows:

Stratum	Total value of products (TVP) sold	Sampling interval	No. of addresses
Total . .			8,171
1	\$200,000 or more, abnormal farms, and multiunits	4	4,737
2	\$80,000—\$199,999	9	977
3	\$20,000—\$79,999	32	973
4	Less than \$20,000	53	1,484

Each stratum was systematically sampled.

The national sample was selected in much the same way, using the same stratum definitions but different random starts and intervals. The characteristics of the national sample were as follows:

Stratum	Interval	No. of addresses
Total		6,136
1	70	1,217
2	200	1,207
3	500	1,468
4	1,200	2,244

If an address selected for the national sample was found to also be on either the State or a county sample, the address was dropped from the national sample and was not replaced.

The sample cases were mailed the appropriate census report forms and were followed up in exactly the same manner as the regular census cases. Upon receipt in Jeffersonville, each report form was keyed and submitted to the processing operation. Sample cases were identifiable by a code number on their mailing labels, and this code was entered into the computer tape record of each case with the other data. Thereafter, each time a sample case was processed through the computer edit, a copy of the record was made. Since a number of cases were recycled through the edit because of errors or omissions, there were several copies of their records, each showing any changes

made as a result of the processing. Once all the sample records had been processed successfully, they were combined into one file and sorted by CFN. Thereafter, separate files were produced for the Nation, Kansas, and the six sample counties, for use as in-house resource material for Bureau planning and program design.

SPECIAL COVERAGE STUDIES

Introduction

The AHS and PES samples, used principally for overall coverage evaluation, also provided a good deal of information useful in examining the specific characteristics of the agricultural operations missed, as well as of coverage obtained in the census of agriculture area sample. In late 1980, the Bureau undertook three special, small-scale studies of the data files obtained through the AHS and PES to investigate cases of (1) farms missed in the census due to misclassification as out-of-scope, (2) farms missed in the census of agriculture area sample (CAAS), and (3) farms overcounted in the CAAS.

General Procedures

The misclassification study—The misclassification study used the AHS sample as the basis for an investigation of the misclassification of agricultural operations as out-of-scope by the census. The contents of the evaluation folder maintained for each operation was carefully reviewed, including the coverage evaluation report form (A90) itself, telephone followup materials, materials from the mail list search, and the AHS supplementary questionnaire. If new information was found for any case, an additional search of the mail list was made. Analysts conducted a final review to determine the correct classification of each case and reasons for the misclassifications.

The results of the study, when weighted to provide estimates for the entire census, indicated the net "missed farms" total was 42,688, or about 1.9 percent of all farms.

Farms missed in the CAAS—This study was an attempt to determine why farms were missed in the CAAS. The 21 missed-farm cases from the PES were analyzed. When weighted, these cases represented 22,320 missed farms in the CAAS. Each case was classified with respect to the coverage by various Bureau mail-list and enumeration efforts.

The characteristics of the sample were as follows:

No. of cases	Weight No. of farms	Coverage classification
21	22,320	Total
3	4,320	Not listed in CAAS; non-match to A4 (Farm and Ranch Identification Survey)
1	690	Not listed in CAAS; match to A4
15	16,140	Listed but no agricultural operations in CAAS; non-match to census mail list; non-match to A4
2	1,170	Listed but no agricultural operations in CAAS; non-match to census mail list; match to A4 out-of-scope

A detailed review of each of the 21 sample cases was completed for this study. The CAAS and PES listing books were reviewed to verify match or nonmatch status, any notes in the books were reviewed, CAAS and PES maps were matched to determine if the household locations were the same, and all other information in the evaluation folder for each case was rechecked.

In general, the conclusions reached by the study, although based upon a relatively small number of cases, were that (1) problems often arose when the respondent for a household in the CAAS was not the operator of the farm, (2) enumerators needed further instruction about obtaining the full name of the head of the household, (3) the importance of enumerators' exploring every road or driveway to cover isolated households should be further emphasized, (4) only the latest maps should be used in a door-to-door canvass, and (5) small farm operations are those that are missed most often, frequently because the operators do not consider themselves to be running farms or ranches and are unfamiliar with the Bureau's definition of a farm.

The CAAS overcount study—Estimates made using PES data indicated that approximately 7,000 operations were overcounted in the CAAS. Overcount occurred when a CAAS farm should have been matched to the census mailing list but was incorrectly classified as a nonmatch; thus the same farm was included in both the CAAS and the regular census. The overcount study involved a careful review and analysis of the five overcount cases from the PES. When weighted, these cases represent 7,700 overcounted farms in the CAAS. All materials in their respective folders were examined and all microfilm search records were rechecked. Farm data from the CAAS and the census were also compared to determine if there was duplication.

The study of these five cases could lead to only the most tentative conclusions. Nevertheless, analysis indicated that there were three recurrent problems with these specific cases: (1) misspelled names in the CAAS and/or the census mail list, (2) different addresses for the same operation, and (3) alternative names for the sample operations.

Chapter 10.

Dissemination of Census Data

INTRODUCTION

The function of the publication phase of the census of agriculture is to make data available to data users as quickly as possible after collection, while maintaining the Bureau's standards of statistical quality, reliability, and comparability.

The plan for the 1978 publications was generally similar to that of the 1974 program. The data were to be made available in one or more forms—printed reports, computer tapes, and microfiche. Preliminary county and State reports would be issued separately while final county- and State-level data would be included in the volume 1 reports. The preliminary and final reports would include data for all agricultural operations qualifying as farms under the census definition (i.e., agricultural operations with a total value of sales in the census year of \$1,000 or more) and for farms with sales of \$2,500 or more.

The original plans for the publication program called for extensive use of the COMp80 (computer output to microfilm) videocomposition system for development of reproduction copy. However, budget restrictions and lack of access to the necessary equipment led to the use of this system only in the preparation of the preliminary reports and for selected sections of later volumes. The Bureau's high-speed printer (HSP), the Government Printing Office's (GPO) Linotron system, and the GTS computer software packages were all used to some extent in preparing the reproduction copy for the printed publications. All published printed reports were produced by photo-offset in the standard 8½" x 11" page size.

One significant change in the data release program for 1978 was the production of computer tapes of preliminary-report data, as well as final data tapes. For previous censuses, only tapes containing final data had been developed and made available to users.

Comparability of Data

The 1978 census program employed several new data-collection procedures in order to improve coverage of agricultural operations, including a farm and ranch identification survey prior to the census, improvements to the census address list, and a direct enumeration area sample (the census of agriculture area sample survey (CAAS)). These procedures improved the coverage of farms in the 1978 census compared to that of earlier censuses, particularly at the State level, since 1978

statistics for States include data from both the mail list enumeration and estimates from the direct enumeration. This necessarily affects the comparability of 1978 State-level data to those from earlier censuses, which did not include these estimates.

The 1978 county-level farm counts were derived entirely from the mail enumeration and are more nearly comparable to earlier census totals, although the farm counts may have increased substantially for some counties because of improved coverage of small farms in the mailing lists. Acreage and inventories data at the county level are generally comparable to data from earlier censuses.

The 1974 coverage evaluation program indicated that the proportion of farms missed by the census varied widely between States, from less than 1 percent in Nebraska to nearly one-third of all farms in West Virginia. Missed farms, typically, were very small or part-time operations; the percentage missed was generally higher in States with a large proportion of farms of these types. For 1974, missed farms accounted for about 11 percent of all farms, but only 6 percent of land in farms, and smaller percentages of sales and production items. The proportion of total farms in each State represented by the 1978 CAAS followed a similar pattern. Most farms missed in the census were subject to identification and estimation using CAAS data. This factor had a greater effect on State counts of farms and farms reporting than on production, sales, and inventory items.

Changes in the farm definition also affected comparability of data. Data for 1978 and 1974 are directly comparable in this respect, but are comparable to 1969 and earlier censuses only for farms with sales of \$2,500 or more. Data for these farms were not affected by changes in the farm definition. Even this limited degree of comparability was affected by the different methodologies used to collect the data. The first mailout/mailback enumeration was in 1969, while earlier censuses employed door-to-door canvasses. Differences in the timing of the censuses also had an effect on comparability prior to 1969.

Fluctuations from one census to another in the price of agricultural products sold have an effect on the comparability of data; this was particularly true for such high inflation periods as 1974-1978.

Quantity of 1978 Statistics Published

The total number of pages published in the 1978 State and County reports was somewhat less than for 1974. The quantity of data presented was approximately the same, due primarily to more efficient and compact presentation of tabular data in the printed volumes. The number of pages of tables and text in the preliminary county reports for 1978 was nearly identical to the 1974 total, approximately 12,300 in all. For 1978, the 56-part Volume 1, *State and County Data* set, which includes final county (or equivalent) data for each State and outlying area (including American Samoa and the Northern Mariana Islands), contained approximately 28,800 pages of text and tabular data. Volume 2, *Statistics by Subject*, which for 1974 comprised 1,500 pages of statistics, was canceled for 1978 as a result of budgetary restrictions. The 1978 volume 3, *Agricultural Services* publication includes 142 pages of tabulations, compared with 111 pages in the 1974 edition. Volume 4, *Irrigation*, has 360 pages of data. Since the irrigation census is carried out every 10 years, there was no 1974 irrigation publication; for the 1969 census, 341 pages of data were published in a separate irrigation report.

PUBLICATION PROCESS

Production Control and Reporting System

The Publications Services Division (PSD) was primarily responsible for preparing the tables and text (provided by the Agriculture Division) for the data volumes for publication. A centralized control and reporting system enabled PSD to monitor the flow of publication work for major activities from receipt of the specifications until the return of the bound reports from the printers. The control records covered all aspects of the planning, editorial, design and graphics, printing, and printing-review activities to ensure an orderly flow of work through the production operations. These records also permitted any component of a publication to be located prior to printing, so that corrections could be made. Periodic reports were produced on progress of the publication work for any given report series currently in development and production. Sponsoring offices thus could know the status of their publications and identify problem areas and materials needed from the various units involved.

Publication Steps

The major operations in the 1978 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, 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, high-speed printer, or video composer output.

Preprint standard or repetitive copy such as the titles, head-notes, boxheads, stubs, and folios.

C. Text and introductory materials:

Plan and write manuscript.

Edit manuscript for Bureau policy, grammar, and style.

Review and correct galleys.

Prepare page dummies.

Review and correct page dummies.

Prepare camera copy (mechanicals).

Preprint repetitive copy.

D. Maps and charts:

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

2. Steps required for each individual report:

A. Tables:

For typewritten 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.

Review and correct tables.

Add folios and rule tables.

For phototypeset 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 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 paper copies or film negatives for review.

Consolidate all revisions or corrections onto a master proof.

Review and correct film negatives.

B. Maps and charts:

Establish basic designs.

Preprint chart worksheets and base art.

Prepare specifications to produce charts on the computer.

Produce camera copy.

Review and verify for accuracy.

C. Completed report:

Assemble component parts.

Prepare printing requisition, form CD-10.

Conduct final editorial review of camera copy.

Mark camera copy with printing specifications.

Procure printing.

3. Steps required for implementing publication program:

Prepare production timetables implied in the above steps and estimate completion dates, adjusted as required.

Establish priorities, expedite production, coordinate programs, and report progress.

Periodically review progress and problems.

Monitor detailed expenditure to anticipate surpluses or deficits.

Grouping and Binding of Reports

The publication program for the 1978 Census of Agriculture included a series of preliminary reports and the final data reports. Two types of preliminary reports were issued: the two-page county-level "Major Results" preliminary summary reports sent to census respondents, if they requested a copy, and the "regular" four-page county preliminary reports issued separately, beginning in October 1979. Preliminary reports were also issued for all States, the four geographic regions, and the United States. The volume 1 county final reports were bound in one book per State or outlying area, except Georgia and Texas, each of which required two books. (In these two cases, chapters 1 and 2 were bound together while chapter 3 was bound separately.)

Printing, Pricing, and Distribution

Photo-offset print, first used for the 1940 decennial census publications, was employed for the major portions of the succeeding censuses of agriculture and for all of the 1974 and 1978 agricultural censuses' publications. The negatives required for the photo-offset printing procedure were made from the pages of tables produced by the Linotron, high-speed printer (HSP), or videocomposition systems. The Linotron and videocomposition systems provided a complete negative as the final product, while the HSP produced tables on paper from which

the printers made their own negatives. Camera copy of the preliminary reports and the last few State reports of volume 1 were videocomposed. Volume 3 camera copy and part of the volume 1 reports for Puerto Rico were done using HSP output, while the remainder of the volume 1 outlying areas reports were typewritten. Most volume 4 tables were prepared on Linotron, while the remainder of the volume 4 tables and all of the volume 5 tables were done using the GTS software package and the HSP.

Once the camera copy was prepared, it was checked for conformity to Bureau printing, pricing, and distribution policies. All the printing was either done by, or procured through, the U.S. Government Printing Office (GPO). Both the preliminary and final reports for the 1978 Census of Agriculture were subcontracted to private printers.

The Superintendent of Documents handles sales and distribution of selected Government publications. The sponsoring agency (in this case, the Bureau of the Census) pays all preparation costs and for the printing of copies for its own use. The only costs passed to the buyers are for the actual printing, postage, and handling. This enables the Bureau and other Federal agencies to make information available to the public at a nominal charge. Prices of individual publications sold through GPO are based on a schedule established by that agency; prices for publications not printed by GPO are equivalent.

The Bureau makes some free distribution of its data publications, as they become available, to reference libraries. The Superintendent of Documents is responsible for sending Bureau publications to over 1,200 libraries designated as Government depositories (about 150 of which (usually at very large educational institutions) receive all, or nearly all, of the Bureau's publications). Census publications are also distributed to about 100 other libraries, usually at colleges located in cities with large populations. Libraries on both lists indicate to the Bureau which kinds of the publications they wish to receive. All are sent the annual *Statistical Abstract of the United States* (containing summary data from the most recent censuses), and most receive the U.S. summary reports for the major censuses.

The availability of census reports is publicized through the Superintendent of Documents, the Department of Commerce and its field offices, and other interested organizations. The Bureau also distributes press releases on new publications, order forms, a monthly product announcement, and an annual catalog of publications. Most of these materials include brief descriptions of each series of reports and the anticipated or actual date of publication.

The Bureau of the Census maintains a supply of its various reports for its own use at its Jeffersonville, Ind., facility. However, the primary responsibility for storage and sale of census report is in the hands of the Superintendent of Documents.

1978 Census of Agriculture Printed Reports

Preliminary reports—A four-page preliminary report was published separately for each county, parish (in Louisiana), independent city, and combined election district (for Alaska)

in the United States having 10 farms or more, as well as for each State, the four geographic regions, and the United States. (The publication dates for the preliminary reports, by State, are listed in app. E.) These reports contain data for all farms (i.e., agricultural operations with sales during the census year of \$1,000 or more) and for farms with sales of \$2,500 or more. Limited data are also shown for agricultural operations that had less than \$1,000 in sales during the census year, but that would have qualified as farms under the census definition used prior to 1976. The preliminary reports were published between October 1979 and January 1981.

A two-page preliminary report on agricultural services was published during April-May 1980 for each State. Each report contained data on the number of establishments by primary activity, gross receipts, and payroll.

Volume 1, State and County Data—A separate report was published for each of the 50 States, the United States, the Commonwealth of Puerto Rico, Guam, the Virgin Islands, American Samoa, and the Northern Mariana Islands. Despite the inclusion of American Samoa and the Northern Marianas, the 56-part volume 1 set for the 1978 census was published in 58 separate books, one less than was required for the 1974 census data.

Data are shown in the State reports for all farms and for farms with sales of \$2,500 or more. A table is also included showing data for agricultural operations with sales of less than \$1,000, which would have qualified as farms under the definition used prior to 1976.

Each State report is divided into three chapters. Chapter 1 contains detailed data at the State level classified by size of farm, tenure, age and occupation of operator, type of organization, value of products sold, and major standard industrial classification (type) of farm. Chapter 2 consists of county-level data for selected major items, and for miscellaneous crop, live-stock, and poultry items. Chapter 3 contains 5 pages of detailed data for the State and for each county.

Each State and county report includes the 1978 data for each item and 1974 data for the same item (whenever available) for purposes of comparison.

The volume 1 reports for the 50 States and the United States summary were published between January and August 1981. The reports for the outlying areas were published in two phases. Those for Puerto Rico, Guam, and the Virgin Islands were released in July and August 1980. Those for American Samoa and the Northern Mariana Islands were printed one year later because the census of agriculture was conducted at a later date (in conjunction with the 1980 Census of Population and Housing).

Volume 2, Statistics by Subject—This volume was to consist of nine parts showing selected data for States, divisions, regions, and the United States. Budgetary restraints compelled the Bureau to reduce the publication program for the 1978 census. While the data intended for volume 2 were useful, they were deemed less necessary than other data and the Bureau decided to cancel the publication of this volume. To compensate as much as possible for this cancellation, most of the summarized

data published in the *Statistics by Subject* report in previous censuses were included in Volume 1, *State and County Data*, Part 51, *United States*.

Volume 3, Agricultural Services—Volume 3, published in November 1980, contains data for establishments primarily engaged in soil preparation, crop, veterinary, other animal, farm labor and management, landscape, and horticultural services. Data were published on dollar volume of business, payroll, supplemental labor costs, gross receipts by type of services performed, labor and payroll, gross receipts from products provided in connection with services performed, capital expenditures, changes in gross value of depreciable assets, and expenditures for energy and petroleum products. Selected statistics are shown for the four-digit SIC (standard industrial classification) codes, and by size and type of organization. Data are presented for each county, each State, the District of Columbia, and the United States.

Volume 4, Irrigation—Irrigation data collected in the 1978 Census of Agriculture and the 1978 Census of Irrigation Organizations were published by States, divisions, regions, and for drainage basins. Irrigation data included crop acreage irrigated and irrigated land use. Organization data include number of farms served, irrigated acres served, quantity of water used and conveyed, inventory of irrigation facilities and equipment, and financial characteristics. Volume 4 was published in April 1982.

Volume 5, Special Reports—Volume 5 consists of a series of special reports covering specific aspects of the 1978 census. Originally, nine separate reports were planned; however, budgetary restrictions compelled a reduction in the publication program. Parts 1 (*Graphic Summary*) and 2 (*Ranking Counties and States*) were canceled, although, later the *Graphic Summary* was reinstated. The special reports publication program for the 1978 Census of Agriculture was as follows:

Part 1, *Graphic Summary*, contains maps and charts relating to the agriculture census data.

Part 2, *Ranking Counties and States* (canceled).

Part 3, *Coverage Evaluation*, describes the coverage check of the census, and the process evaluation sample.

Part 4, *Procedural History*, includes selected data collection forms.

Part 5, *Drainage of Agricultural Lands*, presents data on special drainage districts, and on land drained by county, State, region, and the United States.

Part 6, *Farm Finance Survey*, presents selected data estimates on the financial characteristics of farm operators and landlords by State, region, and the United States.

Part 7, *Census of Horticultural Specialties*, contains data on the number of establishments, production and sales characteristics of horticultural specialty operations by State, region, and the United States.

Part 8, *Farm and Ranch Irrigation Survey*, presents data on land irrigated and irrigation practices of 20 "heavy irrigation" States, for all other States, and for the United States.

Part 9, *Farm Energy Survey*, contains data estimates of various forms of energy used on the farm, storage facilities, and equipment by State, region, and the United States.

The Volume 5 *Special Reports* are scheduled for publication in early 1982. (See app. E for publication dates for each part.)

MICROFICHE

The published reports of the 1978 Census of Agriculture were reproduced on microfiche. Microfiche is one of the more economical and efficient methods of storing and retrieving data, and is similar to, although more compact than, microfilm. Each fiche, a 4" x 6" sheet of film, is capable of containing a descriptive heading and as many as 96 standard-size pages of printed data, with each page of a printed report photographically reduced 24 times, to approximately thumbnail size. Thus the entire 553-page volume 1 report for South Dakota, for example, is reproduced on six microfiche sheets, and the entire volume 1 data set, stored on microfiche, could be carried in a briefcase.

Data from the 1978 Census of Agriculture volumes on microfiche are sold through the Data User Services Division, U.S. Bureau of the Census, Washington, D.C., and are available approximately 1 to 2 months after the printed reports are issued.

COMPUTER TAPES

The Bureau of the Census first made computer tapes of county-level data available to users for the 1964 Census of Agriculture. These tapes contained the data from the preliminary county reports, while the tapes for 1969 and 1974 were developed from the final county reports. In addition, for the 1969 and 1974 censuses, the county miscellaneous tables were made available on tape as a separate data file, enabling users to retabulate data for specific geographic areas or to manipulate the statistics in whatever manner was most useful to them. For the 1978 census, the eagerness of users to acquire computer tapes of the census data led the Bureau to issue two tape data files, one of the preliminary and the second of the final reports data. The former contained the information from the preliminary county reports. These were made available to users on five reels of tape on a flow basis during 1980. In December 1980, after all the preliminary reports had been released, a consolidated file of the preliminary data was prepared and tapes were released for sale to users. While the initial "flow release" file was contained on five standard-size, 1,600 bits-per-inch (BPI) tape reels, the consolidated file was available on either two 1,600 BPI, or one 6,250 BPI, reel.

The specifications for the tape reels for the 1978 data are as follows:

Tape width:	½ inch
Reel size:	10½ inch, 2,400 feet maximum length

Logical record size:	Ten 1,980-character record segments.
Field size:	Variable
Recording density:	1,600 or 6,250 bits per inch (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:	0.60 inch

The price of each preliminary data tape covers only the cost of producing, documenting, and handling the tape, and postage to mail it. Complete tape files could be purchased for specific States or groups of States. These could be drawn from the census files onto a separate reel and purchased that way. (The price of a reel containing data for more than one State was slightly higher than for a reel with a single State's data.)

The final data tapes were produced and handled through Agriculture Division as a special tabulation and were sold for \$1,000 per set. A set contained county data for all 50 States, and included data from the volume 1; *State and County Data* county tables, as well as 21 selected tables from the county summary data. These final tapes contained more data items than did the preliminary tapes, covering such additional subjects as machinery and equipment, livestock inventory frequencies, and a complete listing of crops grown.

USERS' CONFERENCES

The Bureau of the Census has carried out a program of data users' conferences after each census of agriculture since 1969. These meetings were held to give data users an opportunity to meet with members of the Bureau's staff to discuss the census publications and data tapes, their contents, and the uses that could be made of the data. Each conference was held only after a local group interested in the agricultural statistics agreed to sponsor or underwrite part or all of the expenses of the Bureau's representative attending the meeting, and to make all the necessary arrangements, including reserving facilities, registration, etc. Each users' conference was held at a location convenient to the data users within a State or, when users in two or more adjacent States had requested a meeting, at a place most convenient to all those wishing to attend.

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

A total of 15 such users conferences were held between October 1980 and April 1981. (See app. D for locations, dates, and sponsors of these conferences.) Attendance at the conferences averaged about 50 participants.

Appendix A

Historical Notes

NINETEENTH CENTURY

Origins of the Census

The beginnings of the agricultural census stem from article I, section 2 of the Constitution of the United States, which requires an "enumeration" (the word "census" was not used) of the population of each State at least once every 10 years. The intent of the writers of this section was to provide for an equitable distribution of seats in the House of Representatives, but it was not long before the rapid growth of the Nation, in economic activity as well as population, prompted the Federal Government and other interested parties to look for some means of measuring that growth. The first effort in this direction was made when a number of items on the kind, quantity, and value of goods manufactured were included in the decennial census of 1810. The United States was, of course, primarily an agricultural nation, but it was not until the census of 1820 that any question concerning agriculture was included among the inquiries, and then it asked only how many people were engaged in agriculture. (About 70 percent of the population at that time was so engaged.)

The first attempt to collect information on agriculture as a national industry was made in the sixth decennial census, that of 1840. Inquiries on forest products, cereals, other crops, and livestock were included; and the results were published with the other census data. However, the agriculture statistics, which were collected by U.S. Marshals and their assistants under the overall supervision of the Secretary of State, were not sufficiently detailed or reliable to be useful and demands were made that more data be collected using methods that would insure accuracy.

Expansion of the Census

The 1850 census is considered the first "modern" enumeration in that it began to assume some of the specialized organization that has since characterized all the censuses. (In fact, a select committee of the House of Representatives recommended the establishment of a bureau of statistics, but that had to wait another 50 years.) Responsibility for the census was transferred from the Department of State to the newly created Department of the Interior. Separate sets of questions were prepared for collecting data on six subject areas, one of which was agricultural production.

The agricultural questionnaire requested data for a specified time period—inventories as of June 1, 1850, and production for the year ending on that date. Production quantities were asked for 32 crops, ranging from wheat and rye to silk cocoons and beeswax. For the first time the value, as well as the number on

hand, of livestock was requested, as was the value of orchard production, produce from market gardens, homemade manufactures, and slaughtered animals. Total counts of farms and of acreage and value of farmland were published for the first time and showed approximately 1.4 million farms with some 294 million acres under cultivation. The total value of land in farms, buildings, livestock, machinery, and equipment came to nearly \$4 billion.

The 1860 and 1870 censuses of agriculture were generally similar to the 1850 enumeration, although the 1870 data were presented using maps as well as statistical tables. For 1880 the immediate conduct of the census in the field was made the responsibility of local supervisors appointed by the President and confirmed by the Senate. These supervisors hired and trained enumerators and reviewed their work. The content of the agricultural schedule (questionnaire) itself was also altered for 1880, increasing the total number of inquiries and including questions on tenure, weeks of hired labor, costs of building and maintaining fences, and cost of fertilizer purchased. Furthermore, special questionnaires were prepared for collecting production data on cereals, meat, tobacco, hops, cotton culture and the cottonseed oil industry, forest products, fruitgrowing and orchards, and sheep and wool. Most of these special forms were individual, that is, a separate form was used to enumerate each operation and was either completed by an enumerator that specialized in the subject-matter area or by the respondent, who was asked to mail the completed questionnaire to the census office.

The expansion of the regular schedule continued for 1890, when questions were added on irrigated land, milk production, and produce for canning. Special questionnaires were once more used for certain operations and the population census schedule included requests for data on farm mortgages.

The 1900 agriculture schedule was generally similar to that used in 1890 except that race of operator was requested for the first time. The most significant change in procedures was the introduction of the use of punchcards and electric tabulating machines in the processing of the census data. The machines were first used in the 1890 population census, and were adapted for the agricultural enumeration with the development of an automatic sorting machine (needed because of the great number of crop cards used in processing) and the use of a new keypunch machine.

TWENTIETH CENTURY

General Information

Program developments—During the whole of the 19th century, the censuses were conducted by temporary organizations

established prior to the beginning of an enumeration (very often within a few weeks or months of the date) and disbanded once it was completed. This fleeting and informal organization proved less and less effective as the number of units reporting grew. By the turn of the century, the advantages of a permanent Bureau of the Census (workload distribution, capacity to carry out censuses and/or surveys in other than census years, enhanced planning capability, etc.) had become so obvious that, in 1902, Congress provided for its establishment. The new Bureau was first placed in the Department of the Interior, but after a decade it moved into the new Department of Commerce and Labor. When that was split into two separate Departments in 1913, the Bureau was incorporated into the Department of Commerce, where it has since remained.

Until after the turn of the century, agricultural censuses had been carried out solely as part of the decennial enumerations. This began to change in 1909, when Congress authorized the taking of a mid-decade census of agriculture in 1915 and every 10 years thereafter. While this action established the quinquennial agricultural enumeration, the section requiring one for 1915 was repealed and the first mid-decade enumeration was not carried out until 1925. In the meantime, other specialized censuses had been added to the agricultural operation: In 1910 a decennial census of irrigation was inaugurated, and in 1920, a census of drainage; these, along with agriculture, remained part of the decennial census program through 1950, while quinquennial censuses of agriculture were taken in years ending in "5." In 1952, Congress acted to change the dates of agricultural enumerations, legislating that they be taken for years ending in "4" and "9," with the irrigation and drainage censuses done only for years ending in "9." In 1972, the Bureau and the Department of Commerce recommended changing the dates of the agricultural censuses to years ending in "2" and "7," to bring them into conjunction with the other economic censuses. In 1976 Congress enacted a law directing that censuses of agriculture be taken in 1979, 1983, and every fifth year thereafter (i.e., for 1978, 1982, etc.). A special census of horticultural specialties, first taken as part of the 1890 census and then in conjunction with the agricultural censuses of 1930, 1950, 1959, and 1969, was again part of the 1978 census, but was not given the periodic status accorded to irrigation and drainage.

Reference and enumeration dates—Through 1950, the census of agriculture was normally taken in the spring, when the door-to-door enumeration was carried out in the censuses of population and housing. Data on farm production was requested for the previous calendar year and inventories were asked for as of the date of the enumeration. The 1920, 1925, 1935, and 1945 agricultural censuses were begun in January of those years (and hence carried some data for the previous years), while the 1954, 1959, and 1964 censuses were begun in the fall of those years and requested production date for the same year. (Specific enumeration dates varied from area to area as an attempt was made to sandwich the census canvassing between the harvest season and the onset of severe winter weather.) The use of the mailout/mailback technique, begun in the 1969 census, enabled

farm operators to report data immediately following the reference year, as report forms were mailed at the end of the year with a request that they be returned promptly. This permitted collection of inventory data as of December 31 of the reference year, making the data comparable to U.S. Department of Agriculture estimates, while leaving the reference year itself unchanged.

Enumeration—The traditional method of carrying out an agricultural census has been a farm-to-farm canvass, with an enumerator asking all the questions and completing the report form. For the 1950 census, however, the Bureau tried a new methodology; an interview questionnaire (i.e., one in which the questions are phrased as if they were being asked by an interviewer) was delivered to rural route boxholders. A letter was enclosed requesting each farm operator to complete the report form and hold it until an enumerator came to pick it up. This technique proved moderately successful and was used until 1969. (A version of this methodology was tried in 1925, 1930, and 1935, when the same procedures were used, except that the enumerator transcribed to the official census schedule any data entered by the respondent on a delivered questionnaire.)

The 1969 census saw the introduction of the mailout/mailback census in the agriculture enumeration. Address lists were compiled from the 1964 census records and listings from the Internal Revenue Service, Social Security Administration, and U.S. Department of Agriculture, and farm operators were mailed questionnaires together with letters requesting that they complete the report forms and mail them back to the Bureau. The use of enumerators in the field was restricted to the censuses of Puerto Rico and the outlying areas, and certain limited follow-up activities. The mailout/mailback technique was used again in the 1974 and 1978 censuses. The use of the mail procedure has presented certain problems, most notably the difficulty in compiling complete address lists and in obtaining timely responses from operators. When the coverage evaluation survey for the 1974 Census of Agriculture revealed that the incompleteness of the address register nearly duplicated the 1969 experience, a supplemental appropriation was sought and obtained to improve the accuracy of State totals for the 1978 census by incorporating the results of an area segment sample (see "Sampling" below). For 1969, 1974, and 1978, six or seven follow-up mailings, plus the enumeration by telephone of 70,000 to 100,000 cases over a period of several months, were necessary to obtain adequate response levels. Nevertheless, the advantages of the methodology, in saving tax dollars and in convenience to the farm operators, were considered to outweigh its drawbacks.

Questionnaire Format and Content

Format—A separate census of agriculture report form has been used for each farm since 1900, with the exception of 1945 when a booklet format provided for recording the data for one farm per line. The number of questions on any given census has varied widely, although the Bureau has generally tried to keep respondent burden as low as possible consistent with the

need for the data. These conflicting goals have led to a number of compromises in every census operation and to experiments during the 1940's and 1950's in "tailoring" report forms to the different regions of the country or even to individual States. In the 1940 census, this tailoring effort resulted in a special questionnaire for each of nine regions of the country. In 1945 this was reduced to seven such schedules, but for 1950 no fewer than 41 questionnaires tailored for States or groups of States were used. This enabled the Bureau to collect a great deal of data, but caused considerable processing and tabulating difficulties. For 1954, the total number of customized forms was reduced to 21 regional versions. The 1959 census once more saw 40 differing questionnaires, while for 1964 each State or outlying area had its own version (some 53 in all).

The advent of the mail census for 1969 saw the introduction of standardized A1 and A2 (short) report forms, with special questionnaires used only for Hawaii, the outlying areas, Puerto Rico, and agricultural services. Subjects covered only in decennial censuses of irrigation, drainage, and horticultural specialties also had special questionnaires. Except for design changes with regard to mail handling, a similar format was used for 1974. The 1978 census saw something of a return to more numerous report forms: there were sample and nonsample questionnaires, similar (in their use) to the A1 and A2, for agricultural operations, and four agricultural services forms, one for each major agricultural service activity. Differing ink colors were used on the forms to aid in processing and storage.

Content—In addition to a simple measure of production, the census of agriculture has been used to provide data on the effects of technological change on American agriculture and on the social and economic characteristics of farm operators and their families. Collection of these data on the agriculture report forms permits cross-tabulations of personal and farm data, providing a more complete picture of both agriculture and the agricultural population.

The 1920 census was the first to attempt to collect a significant amount of data on farmers' access to current technology. In addition to the usual production and inventory questions, farm operators were asked if they had gas or electric lighting in their homes, or if they owned any tractors, automobiles, or trucks. For 1930, the lighting item was narrowed to electricity only, while for 1940 an attempt was made to try to quantify the availability of electric power by asking if power was available within one-quarter mile of the farm, while other items asked what kinds of roads adjoined the farm, and whether it had a telephone. The 1945 census saw the addition of questions on the presence of new kinds of equipment, such as combines and milking machines, while items on other kinds of machinery and equipment (in 1950, cornpickers and pickup balers; in 1954, field forage harvesters, and so on) were added as the pace of the mechanization of agriculture increased.

Items on purely socioeconomic concerns (as opposed to borderline items such as electricity and telephones in the 1920's and 1930's) began to appear with the 1910 census when questions on hired labor were included. Over the years, increasing interest in measures of farm-versus-nonfarm employment and income have resulted in the addition of a number of questions

designed to collect data on those areas. While the race and tenure of farm operators has been asked in all the censuses of this century, the 1978 enumeration included an item on the ethnic background of the operator as well. Of more specifically economic interest, the agriculture census has been used to collect data for special studies of particular kinds of farms. In 1910, census data were used for a study of Southern plantations, and items were added in 1945, 1950, 1954, and 1959 to identify "multiple-unit operations," and landlord-tenant operations in the South. The 1969 census of agriculture report form was the first to inquire about the business organization of the farm (i.e., individual, partnership, corporation, etc.), an item that was also included on the 1974 and 1978 questionnaires. For 1978, an item on whether the land the respondent was operating was held under foreign ownership or control any time during the census year was included on the census form.

Sampling

The use of sampling as a statistical technique with regard to census of agriculture data received its first real stimulus in World War II. The need for an analysis of certain special problems relating to agriculture, given time and cost restraints, led to the sampling of the 1940 Census of Agriculture data for special tabulations. The experience gained in this operation, plus the fact that many of the inquiries requested by data users could not be practicably included on a general census form, led to the decision to incorporate the use of sampling in conducting the 1945 census.

Data required at the county level were asked of all farms, while data required on a State level were asked only of a sample of farms. For enumeration purposes, each county was divided into segments, each of which was expected to contain an average of five farms, and a 1-in-18 sample of segments was drawn, within which report forms that included the sample inquiries were used. In the meantime, various administrative records were used to identify and list the 50,000 farms with largest sales or the largest acreages or livestock inventories in 1945. The sample inquiries also were asked of these large farms, and their responses, in combination with the 1-in-18 sample of all other farms, were combined to provide a 1-in-14 sample of agricultural operations in the United States.

In 1950, the census once more covered all farms, but sample questions were asked of all large farms, i.e., those with sales of \$70,000 or more or with geographically variable acreage or livestock minimums, and one-fifth of all remaining farms. A similar sample technique was used in 1954, when special questions went to about 22.5 percent of all farms, and continued in use until 1969, when the mailout/mailback enumeration replaced the traditional farm-to-farm canvass.

The implementation of the mail census for 1969 also saw a change in the sampling frame used. A standard report form, the A1, was sent to all farms expected to have sales of \$2,500 or more, while a short form, the A2, was sent to 50 percent of all other operators. Sampling was not used in the 1974 enumeration; A1 forms were used for farms with sales of \$2,500 or more, while A2 forms were sent to all other operators. For 1978, the

Bureau once again drew a sample of the mailing list consisting of large farms (those with expected sales of at least \$40,000, although that limit was higher in some States) and abnormal farms (i.e., farms operated by institutions, such as hospitals, government agencies, etc.), and a 1-in-5 sample of all other farms with sales of \$1,000 or more. This yielded a sample of about 26 percent. Sample farms received a report form containing a number of additional items concerned with energy expenditures, production expenses, use of fertilizers, machinery and equipment, use of chemicals, and market value of land and buildings, as well as of the regular questions.

Further, because of the difficulty experienced in compiling a complete list of farm operators, an area segment sample was implemented to supplement the mailing list for the 1978 census. This sample consisted of approximately 6,400 area segments, each expected to contain about 10 farms. The sample segments were completely canvassed by enumerators. Farms enumerated in the area segment sample were matched to the mailing list; those that could not be matched were used to provide data for making estimates, at the State level, of the characteristics of farms not included on the census list. (For details of the area sample, see chapter 4.)

Follow-On Sample Surveys

In 1955, a sample survey of farm expenditures was conducted by mail; the operations in the sample were selected from respondents to the 1954 Census of Agriculture. Subsequently, each agriculture census program has included at least one follow-on survey. The 1959 and 1964 census programs included the 1960 and 1965 farm finance surveys; the 1969 census was augmented by the 1971 farm enterprise surveys (one for each of nine major type-of-farm enterprises, such as tobacco, poultry, etc.) and a farm finance survey. For 1974, the basic census form for farms with \$2,500 or more in sales included some finance questions, and follow-on surveys of corporate and business activities, farm and ranch partnership operations, and contracts and binding agreements were carried out.

For the 1978 census program, the Bureau carried out surveys of farm finance, farm and ranch irrigation practices, and farm energy use (all these operations used 1979 as the reference year). A census of horticultural specialties, covering all growers of greenhouse or nursery products, mushrooms, or sod that had sales of \$2,000 or more in 1978, was done at the same time. In order to avoid a double reporting burden on certain floriculturists in some 28 States in which the U.S. Department of Agriculture takes an annual survey of floriculture operations with sales of \$10,000 or more, a cooperative arrangement was negotiated whereby USDA collected the data from the growers on their list, using the full-scale horticultural specialties census report form, and forwarded the forms to the Census Bureau after extracting the floriculture data. (A similar arrangement had been used for the 1970 Census of Horticultural Specialties.)

Processing and Presenting the Data

The introduction of rudimentary mechanical processing and tabulating around the turn of the century was a major method-

ological innovation for the census. The processing methods used by the Bureau did not undergo a comparable alteration in methodology or equipment until the introduction of computers after World War II. Technological improvement did, of course, continue. In 1940, for example, the punchcards used in the census were subjected to the first mechanical editing; an electric collator compared the fields on each card for consistency as the cards passed through an electrical reading and editing station. Rejected cards were listed and clerically reviewed.

For the 1964 census, the data on the punchcards were transferred to magnetic computer tapes and most of the editing and tabulating was done by computer, using programs written for such operations. The computer systems included high-speed printers that produced copies of the programmed tables for review, correction, and rerun. The data were keyed directly to the magnetic tape for the 1974 census, skipping the punchcard process altogether, with a certain amount of editing performed electronically while the keying was carried out.

The major innovations in the presentation of agriculture census data in the 20th century as compared to the 19th, aside from separation from the decennial census publication program, have been (1) the publication of individual reports for States and counties; (2) a considerable increase in the number of special reports on subjects such as land tenure, use of machinery and equipment, farm chemicals, etc.; (3) the institution of graphic summaries of farm data as a regular part of the publication program; and (4) the availability to the user of data on computer tapes and microfiche.

The publication of State, county, and various special reports may be considered the natural result of the growth in demand for access to data. The graphic summaries, on the other hand, represent an attempt to present a considerable volume of data in other than purely tabular form. While agriculture census reports for 1870 and after generally included a number of charts and graphs, the first separate graphic publication was not produced until 1948. Using data from the 1945 agricultural census, this initial effort presented data on farm tenure and land use. The 1950 and later censuses saw expansion of this graphic summary program as it became a regular part of the publication process. The 1969 census graphic summary was the first to use computer-generated maps, of which it contained over 200, while the 1974 publication was further expanded to over 300 maps, as well as numerous computer-generated charts and graphs.

Agriculture census data on computer tape were first made available to data users in the 1964 census, when tapes of the preliminary data were prepared and offered for sale. The final data were used for the 1969 and 1974 census tapes, but the preliminary data were used again for 1978 in order that the Bureau might make tapes available to data users as quickly as possible after the census. The 1964 published reports were the first to be made available on microfiche; since then, production of microfiche of all published tabulations has been included as a regular part of the publication program. For 1978, the use of microfiche was expanded to include unpublished tabulations not available to users in any other form.

Appendix B

Key Personnel

INTRODUCTION

Several hundred people working at a wide variety of tasks were required to carry out the 1978 Census of Agriculture, but a relatively small number of these carried the principal responsibility for planning, developing, integrating, and supervising the various phases of the operation. This appendix is a directory of the key people in the executive staff, operating divisions, and various offices, who had these responsibilities during the conduct of the census, from July 31, 1977, through September 30, 1981.

EXECUTIVE STAFF

Director

The Director determined policies and directed the programs of the Bureau, taking into account applicable legislative requirements and the needs of users of statistical information. The Director was responsible for the conduct of the activities of the Bureau of the Census and for coordinating its statistical programs and activities with those of other Federal statistical agencies, with due recognition of the programs developed and regulations issued by the Department of Commerce and the Office of Management and Budget.

The Director was assisted by a Deputy Director who shared his responsibilities and carried out the duties of the Director in the latter's absence. During most of the 1978 census period there were six Associate Directors and seven Assistant Directors on the executive staff, as well as several Special Assistants, a Legal Advisor, and three Bureau units—the Public Information Office, the Program and Policy Development Office, and the Data User Services Division—that reported to the Director.

Daniel B. Levine, Acting Director, from Jan. 1981, and May-July 1979

Vincent P. Barabba, July 1979-Jan. 1981

Robert L. Hagan, Acting Director, Apr.-May 1979

Manuel D. Plotkin, to Apr. 1979

Alfred J. Tella, Special Adviser

Deputy Director

Daniel B. Levine, from May 1979

Robert L. Hagan, to May 1979

Theodore G. Clemence, Senior Advisor, from July 1980

Sherry L. Courtland, Senior Advisor, Dec. 1979-July 1980

Assistant Director for International Programs

(Established, Feb. 1980.)

Meyer Zitter, from Feb. 1980

Associate Director for Economic Fields

The Associate Director for Economic Fields planned and directed the economic statistical programs, and advised the Director in these fields. Aided by an Assistant Director for Economic and Agriculture Censuses (who was also the Chief of the Economic Census Staff), the Associate Director for Economic Fields supervised the Agriculture, Business, Construction Statistics, Economic Surveys, Foreign Trade, Governments, and Industry Divisions, as well as the Economic Census Staff and, from Aug. 1981, the Center for Economic Studies.

Shirley Kallek

Elmer S. Biles, Senior Economic Advisor, to July 1981

Elinor J. Champion, Economic Statistician, from Oct. 1979

Milton Eisen, Senior Economic Advisor, Jan. 1980-Feb. 1981

Leo J. Kearns, Special Assistant, to June 1978

Thomas L. Mesenbourg, Economic Statistician, from Feb. 1981

Sterling J. Nicholson, Economic Statistician

Max Shor, Special Assistant, to Aug. 1979

Assistant Director for Economic and Agriculture Censuses

Michael G. Farrell, from Aug. 1981

Richard B. Quanrud, to July 1981

Lawrence A. Blum, Special Assistant

Beverly M. Eng, Statistician, from Jan. 1980

Claggett A. Jones, Computer Specialist

Robert S. Taylor, Special Assistant

Center for Economic Studies

(Established, Aug. 1981.)

Gaylord E. Worden, Chief, from Aug. 1981

Associate Director for Information Technology

(Associate Director for Electronic Data Processing prior to Oct. 1979.)

This Associate Director planned and directed programs for electronic data processing operations and techniques, and advised the Director in these matters. He was responsible for the Computer Operations, Systems Support, Systems Development, and Technical Services Divisions.

W. Bruce Ramsay, from June 1978
James W. Turbitt, Acting Associate Director, to June 1978

Assistant Director for Computer Services
(Assistant Director for EDP Operations prior to Oct. 1979.)

Howard N. Hamilton, from May 1979

Automated Data Processing (ADP) Planning Staff
(Established, Oct. 1979.)

Richard L. Pauly, Acting Chief, from Mar. 1981
James R. Pepal, Chief, Oct. 1979-Mar. 1981

Associate Director for Administration
(Established, July 1979; formerly Associate Director, for Administration and Field Operations.)

The Associate Director provided administrative management services to all components of the Bureau of the Census and advised the Director in these matters. He directed the Administrative Services, Budget, Data Preparation (until July 1979), Data User Services (until July 1979), Field (until July 1979), Finance, Organization and Management Systems, Personnel, and Publications Services Divisions, the Decennial Processing Staff (until July 1979), and the Equal Employment Opportunity Office (from July 1979).

James D. Lincoln, from July 1979
James W. Turbitt, to Jan. 1979

Assistant Director for Administration
(Abolished, July 1979; reestablished, Feb. 1981.)

O. Bryant Benton, Acting Assistant Director, from Sept. 1981
Vacant, Feb.-Sept. 1981
James D. Lincoln, Feb.-July 1979

Assistant Director for Field Operations
(Abolished, July 1979.)

Curtis T. Hill, to July 1979

Associate Director for Field Operations
(Established, July 1979.)

This Associate Director planned and directed programs of field data collection and noncomputer-processing operations, and advised the Director in these matters. He directed the Data Preparation, Field, and Geography Divisions, and the Decennial Processing Staff.

C. Louis Kincannon, Acting Associate Director, from Aug. 1981
Shirley Kallek, Acting Associate Director, Oct.-Nov. 1979, and July-Aug. 1981
George E. Hall, Acting Associate Director, June-July 1981
Rex L. Pullin, May 1980-June 1981; Acting Associate Director, Nov. 1979-May 1980
Curtis T. Hill, July-Oct. 1979

Assistant Director for Processing
(Established, Feb. 1981.)

C. Louis Kincannon, Acting Assistant Director, from Aug. 1981
C. Thomas DiNenna, Mar.-July 1981

Associate Director for Statistical Standards and Methodology

This Associate Director planned and directed programs relating to the statistical adequacy of proposed collections and the application of appropriate statistical methodology and techniques, programs of geographic services (until July 1979), and programs for the enhancement of the availability and utility of data to meet State and local government needs, and advised the Director in these fields. This Associate Director supervised the Geography (until July 1979) and Statistical Research Divisions, the Center for Social Service Research (established Mar. 1979 as the Center for Human Factors Research; the name was changed in Aug. 1980), the Research Center for Measurement Methods, and the Center for Census Use Studies (the latter was incorporated into the Statistical Research Division in Apr. 1978 and, in July 1979, was transferred to the Data User Services Division as Census User Research).

Barbara A. Bailar, from Oct. 1979; Acting Associate Director, Aug.-Oct. 1979
Leon Gilford, Acting Associate Director, May-Aug. 1979
Robert L. Hagan, Acting Associate Director to Oct. 1977 and Mar.-May 1979
Harold Nisselson, Oct. 1977-Feb. 1979
Eli S. Marks, Chief Census Research and Technical Advisor, to Dec. 1980
Kirk M. Wolter, Senior Mathematical Statistician, from Nov. 1980

Assistant Director for Statistical Standards and Methodology
(Abolished, Feb. 1978.)

Vacant, from Oct. 1977
Harold Nisselson, to Oct. 1977

Assistant Director for Statistical Research
(Established, Feb. 1981.)

Roger H. Moore, from Mar. 1981

Associate Director for Demographic Fields

The Associate Director for Demographic Fields planned and directed the social and demographic statistical programs and advised the Director in these areas, as well as directed the Demographic Census and Demographic Surveys Divisions, and other divisions not immediately involved in the 1978 Census of Agriculture.

Meyer Zitter, Acting Associate Director, from Aug. 1981
Daniel B. Levine, Acting Associate Director, July-Aug. 1981
George E. Hall, July 1979-July 1981

Daniel B. Levine, Acting Associate Director, May-June 1979;
Associate Director to May 1979

DIVISIONS

Administrative Services Division

This division secured space, supplies, and equipment; arranged for communications, transportation, and related services; and designed the census questionnaires in conjunction with the Agriculture Division.

Robert L. Kirkland, Chief, from May 1981 (Acting Chief, Jan.-May 1981)

O. Bryant Benton, Acting Chief, June 1980-Jan. 1981

Henry J. Husmann, Chief, to June 1980

William C. Fanning, Assistant Chief, from July 1981

Daniel L. Levin, Assistant Chief, Feb. 1979-Sept. 1980

Robert N. Scheller, Assistant Chief, to Feb. 1979

Forms and Mail Management Branch

Albert W. Cosner, Chief

Property and Supply Branch

Carroll J. Cummings, Chief, Feb. 1979-June 1981

Daniel L. Levin, Chief, to Feb. 1979

Library and Information Branch

Betty B. Baxtresser, Chief

Records and Facilities Branch

George J. Sollo, Chief, from Nov. 1980

Peter E. Gagnon, Chief, Dec. 1978-Nov. 1980

Ralph E. Gooch, Chief, to Dec. 1978

Agriculture Division

The Agriculture Division formulated and developed overall plans and programs for the collection, processing, and dissemination of statistical data from surveys or censuses relating to agriculture, agricultural activities or products, equipment and facilities, irrigation and drainage enterprises, and cotton ginning. It planned and developed systems and prepared computer programs for the data-processing of agricultural information, and conducted research and prepared analytical reports, monographs, and special studies related to agricultural production in the United States.

Arnold L. Bollenbacher, Chief, from May 1980

Messrs. Arnold L. Bollenbacher, John E. Adkins, George E. Pierce, and Charles E. Rogers served as acting chief of the division for one month each during the period Jan.-Apr. 1980. Vacant, Jan. 1980-Apr. 1980

Orvin L. Wilhite, Chief, to Jan. 1980

Douglas J. Miller, Special Assistant, to Nov. 1980

Carol Cuellar, Administrative Officer, from Apr. 1981

Peggy Kelly, Administrative Officer, Jan. 1979-Aug. 1980

Lois G. Miller, Administrative Officer, to Jan. 1979

J. Thomas Miller, Consultant

John Ternus, Agriculture Information Specialist, from Jan. 1978

John E. Adkins, Assistant Chief, Operations

Joseph A. Horak, Assistant Chief, Agricultural Statistics, Nov.-May 1981

Arnold L. Bollenbacher, Assistant Chief, Agricultural Statistics, to Nov. 1980

Ralph A. Graham, Computer Systems Analyst

Edward J. James, Statistician, to Jan. 1981

Kenneth R. Norell, Assistant Chief, Special Surveys

George E. Pierce, Chief, Census Planning Staff

Patricia A. Clark, Statistician

Douglas J. Miller, Statistician, from Nov. 1980

Richard R. Storm, Statistician, to July 1980

Agriculture Census Programming Branch

(Established in Jan. 1979, when Programming Branch was divided into two branches.)

Billy Stark, Chief, from Nov. 1979

Stephen M. Schobel, Chief, Jan.-Nov. 1979

Martin S. Harahush, Computer Systems Analyst, from Jan. 1979

Morris A. Murray, Computer Programmer, from Jan. 1979

Sharon C. Spivey, Computer Programmer, from Jan. 1979

Special Census/Surveys Branch

(Established in Jan. 1979, when Programming Branch was divided into two branches.)

Lowell T. Wrucke, Chief, from Jan. 1979

Allen J. Blackburn, Computer Programmer, from Jan. 1979

Amozetta Ratliff, Computer Programmer, from Jan. 1979

Diane J. Simmons, Computer Programmer, from Jan. 1979

Vincent J. Vabolis, Computer Technician, from Jan. 1979

Programming Branch

(Abolished, Jan. 1979.)

Stephen M. Schobel, Chief, to Jan. 1979

Martin S. Harahush, Computer Systems Analyst, to Jan. 1979

Diane J. Simmons, Programmer, to Jan. 1979

Morris J. Murray, Programmer, to Jan. 1979

Billy E. Stark, Computer Systems Analyst, to Jan. 1979

Alberta L. Jackson, Technician, to Jan. 1979

Sharon C. Spivey, Computer Programmer, to Jan. 1979

Allen J. Blackburn, Computer Programmer, to Jan. 1979

Amozetta Ratliff, Computer Programmer, to Jan. 1979

William M. Sandusky, Computer Programmer, to Jan. 1979

Procedures Branch

Avon B. Floyd, Chief, from Aug. 1980 (Statistician, to Aug. 1980.)

Lloyd C. Brown, Chief, to Aug. 1980
 Henry B. Evans, Statistician
 Donald F. Cheza, Statistician, from Mar. 1978
 Beverly E. Battle, Statistician, from Apr. 1978

Farm Economics Branch

(Data Analysis Branch, Jan. 1980-Oct. 1981.)

John A. Blackledge, Chief
 Emile N. Hooker, Statistician
 Mary K. Richter, Statistician
 John H. Barrett, Statistician
 James A. Liefer, Statistician
 Joseph M. Miller, Statistician

Crop Statistics Branch

(Data Postcheck Branch, Jan. 1980-Oct. 1981.)

Donald R. Jahnke, Chief
 Hubert E. Sites, Statistician
 Carl N. McAllister, Statistician
 Frank J. Shelton, Statistician
 Neng W. Chin, Statistician
 Francis D. Tolson, Statistician, from Jan. 1978
 Paulette M. Bonchak, Statistician, from Jan. 1978

Livestock Statistics Branch

(Control and Analysis Branch, Jan. 1980-Oct. 1980.)

Thomas D. Monroe, Chief
 John A. Branch, Statistician
 Beverly Ann Fair, Statistician
 James C. Vogelsang, Statistician, from Jan. 1978
 Gordon H. Lester, Jr., Statistician
 Linda Jane Hutton, Statistician

Irrigation and Drainage Branch

Kenneth R. Norell, Acting Chief, from Nov. 1980
 Joseph A. Horak, Chief, to Nov. 1980
 William R. Adams, Statistician
 Frederick W. Ruggles, Statistician

Outlying Areas Statistics Branch

John C. Womack, Chief, from June 1980
 Kenneth R. Norell, Acting Chief, May 1979-June 1980
 William W. Perry, Chief, to May 1979
 Linda R. Walters, Statistician
 Manuel J. Ortiz, Statistician
 Demosthenes Biribilis, Statistician, from Jan. 1981

Agricultural Services Branch

(Abolished, June 1980.)

John C. Womack, Chief, to June 1980
 Demosthenes Biribilis, Statistician, to June 1980

Program Research and Development Branch

Darrell D. Prochaska, Chief

Jane Y. Dea, Statistician
 William C. Davie, Statistician

Research and Methods Branch

David D. Chapman, Chief, from June 1978
 Harold V. Edwards, Chief, to Dec. 1977
 Tommy W. Gaulden, Mathematical Statistician

Jeffersonville Staff

William A. Harlan, Statistician
 James C. Vogelsang, Statistician, to Jan. 1978
 Arlon M. Scott, Statistician

Farm and Ranch Identification Survey Branch

(Established, Sept. 1980.)

John H. Barrett, Chief, from Sept. 1980

Area Sample Survey Branch

(Established, Sept. 1980.)

Thomas J. Manning, Chief, from Apr. 1981
 Vacant, to Apr. 1981

Budget Division

This division performed budget functions that included the preparation of official budget estimates and justifications, and the allocation and control of funds.

Joseph P. Bellomo, Chief, from Sept. 1981
 Vacant, June-Sept. 1981
 Thomas E. Beck, Chief, to June 1981

Budget Control and Operational Analysis Branch

James P. Eaton, Chief, from Dec. 1981
 Vacant, Aug. 1980-Dec. 1981
 John J. Dycus, Chief, from Aug. 1980

Budget Planning and Presentation Branch

Daniel F. Owens, Chief

Program Budget Review and Authorization Branch

John J. Dycus, Chief, Aug. 1979-Aug. 1980
 Evelyn M. Hollabaugh, Chief, Sept. 1978-June 1980
 Ives G. Morony, Chief, to Sept. 1978

Computer Operations Division

This division operated and managed the electronic computers and related auxiliary equipment of the Bureau; planned and performed associated coordination services; and provided user services, such as documentation, source program optimization, programming methodologies, and standards to facilitate the use of the Bureau's automatic data processing (ADP) resources.

C. Thomas DiNenna, Chief, to Jan. 1981 and from July 1981

James R. Pepal, Acting Chief, Mar.-June 1981

Howard N. Hamilton, Acting Chief, Jan.-Mar. 1981

George M. Bowden, Assistant Chief, Administration, from Oct. 1981

James E. Steed, Assistant Chief, Operations, from June 1981

John E. Halterman, Assistant Chief, Operations, to June 1981

Joseph J. Sferrella, Assistant Chief, Hardware Support, from Sept. 1981

Joseph V. Marean, Assistant Chief, Hardware Support, Feb.-June 1981

Administrative Staff

(Established, Oct. 1979.)

Donald R. James, Administrative Officer, from Jan. 1980;
Budget Analyst, Oct. 1979-Jan. 1980

Computer Maintenance Branch

(Transferred from Systems Development Division, Feb. 1981.)

Vacant, from Sept. 1981

Joseph J. Sferrella, Chief, Feb.-Sept. 1981

Facilities Operations Branch

Willie E. Clark, Chief, from July 1981

Jesse J. Verdeja, Chief, to July 1981

Data Management Branch

John D. Hooper, Chief, from July 1981

Willie E. Clark, Chief, to July 1981

Peripheral Equipment Branch

(Transferred from Systems Development Division,
Feb. 1981; abolished, Oct. 1981.)

Joseph J. Sferrella, Acting Chief, June-Oct. 1981

Joseph V. Marean, Acting Chief, Feb.-June 1981

Maintenance Training and Diagnostics Branch

(Transferred from Systems Development Division,
Feb. 1981; abolished, Oct. 1981.)

Joseph J. Sferrella, Acting Chief, July-Oct. 1981

Robert P. Stephens, Chief, Feb.-July 1981

Systems Testing and Acceptance Branch

John D. Hopper, Acting Chief, from July 1981

Vacant, Aug. 1980-July 1981

Robert L. Mills, Chief, to Aug. 1980

Programming Methods and Standards Branch

(Abolished, Feb. 1981.)

Vacant, May 1980-Feb. 1981

William W. Lovelace, Chief, Oct. 1979-May 1980

Scheduling and Control Staff

(Established, Oct. 1979.)

Jesse J. Verdeja, Chief, from July 1981

John D. Hopper, Chief, Oct. 1979-July 1981

User Training and Information Branch

(Established, Oct. 1979; transferred to Systems
Support Division, Feb. 1981.)

Carol M. Vaughan, Chief, Oct. 1979-Feb. 1981

Computer Analysis and Management Branch

(Established, Oct. 1981.)

Gary H. Dickerson, Chief, from Nov. 1981

ADP Acquisition Staff

(Established, Oct. 1981.)

George M. Bowden, Acting Chief, from Oct. 1981

Data Preparation Division

This division performed large-scale clerical and related operations, such as labeling questionnaires, assembling mailing packages, precomputer editing and coding of returns, data entry, and clerical review of computer-generated reject records, and generated necessary correspondence related to these operations.

Don L. Adams, Chief

Patricia M. Clark, Assistant Chief, Operations, from July 1978

Kathern M. Clay, Assistant Chief, Methodology, Procedures and Quality Control, to Jan. 1979

Personnel Management Staff

Stanley M. Domzalski, Chief

Support Services Staff

Kurt L.G. Legait, Chief, from Apr. 1979

Management and Procedures Branch

Jerry L. Hartman, Chief

Operations Scheduling Staff

Jennie Spencer, Chief

Statistical Methods and Quality Control Branch

Juanita Jones, Chief

Data Systems Branch

George E. Wilson, Chief, from Feb. 1978

Vacant, Jan.-Feb. 1978.

Kurt L.G. Legait, Chief, to Dec. 1977

Geography Branch

Gary Doyle, Chief, from Sept. 1980
 Rebecca Lamon, Acting Chief, Feb.-Sept. 1980
 Wendell McManus, Chief, to Feb. 1980

Reproduction and Materials Distribution Branch

William L. Pangburn, Chief

Periodic Censuses Operations Branch

Patricia M. Clark, Acting Chief, from Jan. 1981
 Rebecca Lamon, Chief, to Jan. 1981

Agriculture Processing Section

Joyce Conn, Operations Officer, from Dec. 1980; Supervisory Operations Assistant, to Dec. 1980
 Betty Atkins, Mail Supervisor, Dec. 1978-Sept. 1979
 Keith Lacy, Supervisory Statistician, Nov. 1978-June 1980
 Darwin Abbott, Supervisory Statistical Assistant, Dec. 1978-Sept. 1980
 Lucille Avis, Supervisory Clerical Assistant, Dec. 1978-July 1980
 Linda Broadus, Supervisory Clerical Assistant, Dec. 1978-Aug. 1980
 Darrell Farabee, Supervisory Statistical Assistant, Oct. 1978-Feb. 1980
 Helen Fouts, Supervisory Statistical Assistant, Dec. 1978-Sept. 1979
 Fredella Haymaker, Supervisory Operations Assistant, Dec. 1978-Oct. 1979
 Kathy Holland, Supervisory Operations Assistant, Dec. 1978-Jan. 1980
 Doris Higdon, Supervisory Statistical Assistant, Dec. 1978-June 1980
 Helen Luse, Supervisory Statistical Assistant, Dec. 1978-Aug. 1980
 Kenneth Miller, Supervisory Statistical Assistant, Dec. 1978-Aug. 1980
 Frances Schaffstein, Supervisory Statistical Assistant, from Dec. 1979; Supervisory Operations Assistant, Dec. 1978-Dec. 1979
 Mary Alice Skeens, Supervisory Statistical Assistant, Dec. 1978-Jan. 1980
 Mary Ann Staples, Supervisory Operations Assistant, Dec. 1978-Sept. 1979
 Vera Stoner, Supervisory Statistical Assistant, Dec. 1978-Sept. 1980
 John Thomas, Supervisory Operations Assistant, Dec. 1978-Sept. 1979
 Mildred Tunget, Supervisory Statistical Assistant, Dec. 1978-Nov. 1980

Data User Services Division

This division planned, coordinated, and administered a comprehensive data dissemination and user services program to help users identify, acquire, understand, and use Census Bureau

products and services. It conducted seminars, workshops, and conferences; prepared user aids and reference materials, and promoted Bureau products and services; prepared statistical compendia; designed and developed special tabulations and distributable computer programs; served as the focal point for the coordination of requests for data tapes containing published and unpublished data, and maps; coordinated the Bureau's regional user services programs with State and local governments and other organizations; and prepared histories of the Census Bureau's activities.

Michael G. Garland, Chief

William Lerner, Assistant Chief, to Aug. 1979
 Donald S. Luria, Assistant Chief, to June 1980
 Marshall Turner, Assistant Chief, from Jan. 1980
 Paul T. Zeisset, Assistant Chief, from Jan. 1981

Census History Staff

Frederick G. Bohme, Chief
 Michael A. Hovland, Agriculture Census Historian

Customer Services Branch

Forrest B. Williams, Acting Chief, from Apr. 1980
 Larry W. Carbaugh, Chief, to Apr. 1980

Systems and Programming Staff

Larry Finnegan, Chief

State and Regional Programs Staff

(Established, Mar. 1979; State Data Center Staff, to Aug. 1980.)

Larry W. Carbaugh, Chief, from Apr. 1980
 Vacant, to Apr. 1980

Data Access and Use Staff

James P. Curry, Chief

User Training Branch

Deborah O. Barrett, Chief

Decennial Census Division

(Demographic Census Staff, to Mar. 1978)

This division provided overall direction for program planning for the 1980 Census of Population and Housing. In cooperation with the Agriculture Division, the Outlying Areas Branch of the Decennial Census Division prepared plans and materials for carrying out a census of agriculture for American Samoa and the Commonwealth of the Northern Mariana Islands.

Peter A. Bounpane, Acting Chief from Dec. 1980

Gerald J. Post, Acting Chief, Apr.-Dec. 1980

Messrs. Morris L. Gorinson, Gerald J. Post, and Clifton S. Jordan each served as Acting Chief of the division for one

month in rotation during the period Feb.-Apr. 1980

Gerald J. Post, Assistant Chief, Data Collection and Geography

Rachel F. Brown, Assistant Chief, Program Management, from Aug. 1980

Morris L. Gorinson, Assistant Chief, Program Management, July 1977-July 1980

Outlying Areas Branch

Irma F. Harahush, Acting Chief from July 1981

Carmina F. Young, Chief, July 1978-July 1980

Field Division

This division directed those segments of the censuses and supplemental surveys that were conducted by personal enumeration through the Bureau's regional and other field offices, and collected and edited questionnaires used in the Puerto Rico census.

Lawrence T. Love, Jr., Acting Chief, from Jan. 1981; Assistant Chief, Research and Methodology, to Jan. 1981

Messrs. Porter S. Rickley, Arthur G. Dukakis, and Stanley D. Moore each served as acting chief of the division for one month, on a rotational basis, during the period Oct.-Dec. 1980.

Richard C. Burt, Chief, Aug. 1979-Aug. 1980; Acting Chief, June-Aug. 1979

Curtis T. Hill, Acting Chief, Apr.-June 1979

Forrest P. Cawley, Chief, July 1978-Apr. 1979

Curtis T. Hill, Chief, to July 1978

George T. Reiner, Assistant Chief, Economic Programs, from June 1979

Charles H. Hancock, Assistant Chief, Management, from July 1981

Cecil B. Matthews, Assistant Chief, Management, to June 1981

Field Methods Research Staff

Richard F. Blass, Chief, from Apr. 1977

Training Branch

Vacant, June-Sept. 1981

Marilyn McKenna, Chief, to May 1981

Economic Surveys Branch

Jonathan Spendlove, Chief, from Oct. 1979

Darren F. Althouse, Chief, to Sept. 1979

Michael Weiler, Survey Statistician

Regional Offices

Atlanta, Ga.

Forrest P. Cawley, Director, from Apr. 1979

Thomas W. McWhirter, Director, to Feb. 1979

John A. Kazmaier, Jr., Assistant Director, from Jan. 1981

James Avore, Assistant Director, June 1979-Jan. 1981

Wayne Wall, Data User Services Officer

Boston, Mass.

Arthur G. Dukakis, Director

Leo J. Kearns, Assistant Director, from Jan. 1981

George H. Catts, Assistant Director, June 1979-Jan. 1981

George T. Reiner, Assistant Director, to May 1979

Judith Cohen, Data User Services Officer

Charlotte, N.C.

Joseph Harris, Director, from June 1981; Acting Director, Jan.-June 1981; Assistant Director, from Nov. 1980

Joseph R. Norwood, Director, to Jan. 1981

John E. Bell, Assistant Director, to Nov. 1980; Supervisory Survey Statistician, from Nov. 1980

Lawrence McNutt, Data User Services Officer

George M. Reynolds, Jr., Technician

Chicago, Ill.

Stanley D. Moore, Director

James L. Johnson, Assistant Director, from Jan. 1981

Dwight Dean, Assistant Director, to Jan. 1981

Stephen Laue, Data User Services Officer

Dallas, Tex.

John E. Reeder, Jr., Director, from Oct. 1980; Acting Director, Aug.-Oct. 1980

Percy R. Millard, Director, to Aug. 1980

Bennie Daniels, Assistant Director, from Sept. 1980

Eugene T. Flynn, Assistant Director, to Sept. 1980

Valerie M. McFarland, Data User Services Officer

Denver, Colo.

William F. Adams, Director, from June 1981; Acting Director, Feb.-June 1981; Assistant Director, to Feb. 1981

Leo C. Schilling, Director, Dec. 1979-Feb. 1981; Acting Director, Aug.-Dec. 1979

Richard C. Burt, Director, to Aug. 1979

Gerald O'Donnell, Data User Services Officer

Detroit, Mich.

Robert G. McWilliam, Director

Robert J. Peterson, Assistant Director

Timothy Jones, Data User Services Officer

Kansas City, Kans.

Marvin L. Postma, Director, from June 1980; Acting Director, Jan.-June 1980

Vacant, Nov.-Dec. 1979

Rex L. Pullin, Director, to Nov. 1979

Gene Bremer, Assistant Director, to Aug. 1981

Stephen T. Mann, Assistant Director, from Oct. 1980

Kenneth Wright, Data User Services Officer

Los Angeles, Calif.

C. Michael Long, Director
 Dean Schroeder, Assistant Director
 Elden J. Steinfeld, Data User Services Officer

New York, N.Y.

William F. Hill, Director, from Mar. 1980; Acting Director,
 Jan.-Mar. 1980; Assistant Director, to Jan. 1980
 John C. Cullinane, Director, to Jan. 1980
 Richard L. Bitzer, Assistant Director, from July 1980
 Jeffery Hall, Data User Services Officer

Philadelphia, Pa.

John Kuntz, Acting Director, from June 1981
 Porter S. Rickley, Director, to June 1981
 Assistant Director, Vacant, from June 1981
 David Lewis, Data User Services Officer

Seattle, Wash.

Leo C. Schilling, Director, from Feb. 1981
 Dannie L. Martin, Acting Director, Jan.-Feb. 1981; Assistant
 Director, from Feb. 1981
 John E. Tharaldson, Director, to Jan. 1981
 Larry Hartke, Data User Services Officer

Finance Division

This division performed financial analysis, maintained financial accounts, coordinated payroll and leave audits, and prepared financial reports.

William A. Prentice, Chief

General Accounting Branch

Russell S. Price, Chief, from Oct. 1980
 Carl H. White, Chief, to Oct. 1980

Control Accounts Section

Herman H. Marcelle, Chief

Payroll Section

Gladys Martinez, Chief, from June 1981
 Joyce H. Long, Chief, to June 1981

Management Accounting Branch

Donald L. Howard, Chief

Reports and Analysis Section

William L. Love, Chief

Cost and Payments Section

Connie J. Vahovic, Chief

Systems Accounting Staff

Linda J. Vacheresse, Chief

Organization and Management Systems Division

This division planned and conducted management analysis and support functions, including the carrying out of organizational improvement studies, maintenance and control of the Bureau's integrated administrative data base, systems designs and inspection, and other management analysis and research duties.

Michael S. McKay, Acting Chief, from Sept. 1981; Assistant
 Chief, to Sept. 1981
 O. Bryant Benton, Chief, to Sept. 1981

Administrative Systems Branch

(Administrative Data Processing
 Branch, to Oct. 1980.)

Jane S. Munsey, Chief, from Feb. 1978
 Vacant, to Feb. 1978

Automatic Data Processing Operations Branch

(Established, Oct. 1980.)

William J. Lyons, Chief, from Dec. 1980
 Jane S. Munsey, Acting Chief, to Dec. 1980

Directives and Reports and Management Branch

F. Dale Ferrar, Chief, from Sept. 1978
 Vacant to Sept. 1978

Management Services Branch

Ives Morony, Chief

Management Systems and Inspection Branch

Michael S. McKay, Acting Chief, from June 1981
 Bernard H. Cranford, Chief, to June 1981

Personnel Division

This division provided personnel management services, which included position classification and pay administration, recruitment and employment, employee relations and services, labor relations, selection research and validation, and related personnel operations.

David P. Warner, Chief, from Dec. 1980
 George M. Bowden, Chief, to Dec. 1980
 Russell L. Valentine, Assistant Chief, from Dec. 1980

Classification Branch

(Established, Apr. 1980.)

Robert Bush, Chief, from Apr. 1980

Employee Relations and Services Branch

Russel L. Valentine, Acting Chief, from Sept. 1981
 George J. Sabo, Chief, Mar. 1980-Sept. 1981; Acting Chief,
 Jan.-Mar. 1980
 Larry K. Goodwin, Chief, to Jan. 1980

Employment and Classification Branch
(Abolished, Apr. 1980.)

David P. Warner, Chief, to Apr. 1980

Employment Branch
(Established, Apr. 1980.)

Bettie Bryant, Chief, from Apr. 1980

Employee Development Branch
(Abolished, Apr. 1980.)

Barbara Stanard, Acting Chief, to Apr. 1980

Processing Branch
(Operations Branch, to Apr. 1980.)

Beverly M. Harley, Chief, from June 1981
Virginia Grimley, Chief, to June 1981

Upward Mobility Office
(Abolished, Apr. 1980.)

Barbara Stanard, Chief, to Apr. 1980

Personnel Research Branch
(Selection Research and
Validation Branch, to Oct. 1980.)

Barbara H. Lacey, Chief

Training and Career Development Branch
(Established, Apr. 1980.)

Barbara Stanard, Chief, from Apr. 1980

Special Programs and Evaluation Staff
(Established, Mar. 1981.)

Kathleen M. Hurrel, Chief, from Mar. 1981

Program and Policy Development Office

In consultation with the Director's office, this unit assisted in the overall planning and evaluation of Bureau-wide programs; reviewed and evaluated program accomplishments in relation to plans; served as the focal point for determining and assessing goals and long-range policy and resource plans for the Bureau as a whole and provided emergency planning support to the Bureau; advised on all congressional matters related to the Bureau's activities, and served as the primary point of coordination on such activities with the Congress in collaboration with the Departmental Office of Congressional Affairs.

Sherry L. Courtland, Chief, from July 1980; Assistant Chief, to Dec. 1979

Theodore G. Clemence, Chief, to July 1980

Mark F. Ferber, Congressional Affairs Advisor, from Feb. 1980

Penelope E. Harvison, Congressional Liaison Officer

Public Information Office

This office directed the information, publicity, and press relations programs for the censuses, including preparation and dissemination of press releases and articles to general and specialized news media, and provided other assistance to news representatives.

Daniel B. Levine, Acting Chief, from June 1981

Henry H. Smith, Chief, to June 1981

Eugene M. Cagle, Assistant Chief

Richard Ritter, Public Information Specialist

Publication Services Division

This division provided editorial, design and composition, and printing services for census questionnaires and publications.

Raymond J. Koski, Chief

Wayne Massey, Special Assistant, from Dec. 1979

Printing Branch

Milton S. Andersen, Chief

Sarajane Goodwin, Printing Specialist

Publications Planning and Graphics Branch

Gerald A. Mann, Chief

Deborah L. Callison, Editor

Publications Composition Branch

Arlene Duckett, Chief, from Dec. 1979

Wayne Massey, Chief, to Dec. 1979

Systems Development Division

(Established, Oct. 1979.)

This division planned and developed general-purpose applications of new technology to the solution of Bureau problems, researched new programming languages and techniques, and conducted research and development concerned with requirements for new technology and future systems designs for various programs of the Bureau.

Judy M. Bedell, Chief, from Oct. 1979

Jerry Bell, Assistant Chief, Applied Technology, from Dec. 1979

Samuel Thompkins, Acting Assistant Chief, Computer Sciences, from June 1980

William T. Alsbrooks, Assistant Chief, Computer Sciences, Oct. 1979-Apr. 1980

Sharon Beltz, Administrative Liaison and Budget Analyst, from Oct. 1979

Computer Programming Research Staff
(Abolished, Dec. 1980.)

Eli Hellerman, Chief, Oct. 1979-Dec. 1980

Data Base Management Systems Branch

Howard R. Prouse, Chief, from Feb. 1981

Warren Besore, Chief, Apr. 1980-Feb. 1981; Computer Programmer, Oct. 1979-Apr. 1980

Jerry Bell, Acting Chief, Dec. 1979-Apr. 1980

Melroy D. Quasney, Acting Chief, Oct.-Dec. 1979

Future Systems Design Staff

(Future Systems Design Branch,
to June 1980.)

Samuel Thompkins, Chief, from June 1980

Vacant, Apr.-June 1980

Melroy Quasney, Chief, Dec. 1979-Apr. 1980

B. Thomas Taylor, Chief, Oct.-Nov. 1979

Generalized Software Development Branch

Lynn A. Hollabaugh, Chief, Apr. 1980-Oct. 1981

Jerry Bell, Acting Chief, Dec. 1979-Apr. 1980

Melroy Quasney, Chief, Oct.-Dec. 1979

Graphic Software Branch

Bernard E. Baymler, Chief, from May 1980

Lynn Hollabaugh, Acting Chief, Apr.-May 1980

Lawrence E. Cornish, Chief, Oct. 1979-Apr. 1980

Geographic Data Base Development Staff

Judy M. Bedell, Acting Chief, from Apr. 1980

William Alsbrooks, Acting Chief, Dec. 1979-Apr. 1980

Matthew A. Jaro, Chief, Oct.-Dec. 1979

Systems Support Division

(Established, Oct. 1979.)

This division planned for and provided the activities required to maintain the Bureau's computers, communication facilities, and auxiliary hardware at required levels of operating effectiveness; and developed, modified, and maintained operational support software at performance levels necessary to meet mission objectives.

Larry J. Patin, Chief, from Oct. 1979

B. Thomas Taylor, Assistant Chief, Software Support, from Nov. 1979

Joseph V. Marean, Assistant Chief, Hardware Support, Oct. 1979-Feb. 1981

Computer Maintenance Branch

(Transferred to Computer Operations Division, Feb. 1981.)

Joseph J. Sferrella, Chief, Oct. 1979-Feb. 1981

Programming Assistance and Languages Branch

(Established, Feb. 1981; formerly Languages and Special Processors Branch, System Support Division, and Programming Methods and Standards Branch (part), Computer Operations Division.)

Charles C. King, Chief, from Dec. 1979

Maintenance Training and Diagnostics Branch

(Transferred to Computer Operations Division, Feb. 1981.)

Robert P. Stephens, Chief, Oct. 1979-Feb. 1981

Operating Systems Branch

Gary H. Dickerson, Chief, from Oct. 1979

Peripheral Equipment Branch

(Transferred to Computer Operations Division, Feb. 1981.)

Vacant, Apr. 1980-Feb. 1981

Joseph E. Forkish, Chief, Oct. 1979-Apr. 1980

Peripheral Systems Branch

Ronald R. Swank, Chief, from June 1980

Vacant, Oct. 1979-June 1980

User Training and Information Branch

(Transferred from Computer Operations Division, Feb. 1981.)

Vacant, from Apr. 1981

Carol M. Vaughan, Chief, Feb.-Apr. 1981

Technical Services Division

This division planned and performed engineering services, including research, development, and maintenance, to provide and support electro-mechanical and electronic equipment required for automated document handling and data capture; and provided for a developmental program for devising solutions to data communication problems.

Robert E. Joseph, Chief, from Sept. 1981; Acting Chief, June-Sept. 1981; Assistant Chief, from Oct. 1979

McRae Anderson, Chief, Oct. 1979-June 1981

Engineering Services Branch

Robert J. Varson, Chief, from Oct. 1979

Special Projects Branch

Robert F. Clark, Chief, from Oct. 1979

Data Capture Systems Branch

Carl A. Walker, Chief, from Oct. 1979

FOSDIC Applications Branch

Erne E. Wilkins, Chief, from Oct. 1979

Appendix C

Advisory Committee on Agriculture Statistics

The Census Advisory Committee on Agriculture Statistics was established by the Secretary of Commerce in 1952, at the direction of the Office of Management and Budget. The Committee's mission is to advise the Director of the Bureau of the Census on the kinds of information to be obtained and published, based on the data needs of major agriculture-oriented organizations, their members, and other users of agricultural statistics.

The organizations represented on the Committee take part at the invitation of the Secretary of Commerce. Each participating organization appoints a member, subject to the concurrence of the Director of the Bureau of the Census. Members serving during the 1978 census period are listed below:

Organization	Representative
Agricultural Publishers Association	Richard J. Pommrehn
American Agricultural Economics Association	Bruce L. Gardner, from 1979 Luther Tweeten, 1978-1979 M.L. Upchurch, to 1978
American Farm Bureau Federation	John Hosemann, from 1978 W.E. Hamilton, to 1978
American Farm Bureau Women's Committee	Vacant from 1981 Mrs. Guy Gross, 1978-1981 Mrs. Chester Smith, to 1978
American Feed Manufacturers Association	Norman Coats
American Meat Institute	Dewey Bond
Conference of Consumer Organizations	William Fosse, from 1981 Sally Hatfield, 1978-1981 Vacant, 1977-1978 Robert L. Caummisar, to 1977
Farm and Industrial Equipment Institute	LeVon S. Fife

Organization	Representative
Federal Statistics Users' Conference	John T. Wilkens, from 1980 Carleton C. Dennis, to 1980
The Irrigation Organization	Thomas J. Schiltz
National Agri-Marketing Association	Orville M. Thompson
National Agricultural Chemicals Association	Dudley Clark
National Association of State Universities and Land-Grant Colleges	Louis M. Thompson
National Council of Farmer Cooperatives	Paul Weller
National Farmers Organization	Ann Bornstein, from 1979 Charles Frazier, to 1979
National Farmers Union	John Stencil
National Food Processors Association	Yuli Wexler, from 1979 Lawrence Van Meir, to 1979
The National Grange	Robert Frederick
Rural Sociological Society	Ronald C. Wimberly, from 1981 Richard D. Rodefelf, to 1981 Kenneth R. Farrell
*U.S. Department of Agriculture Economics, Statistics and Cooperatives Service (member organization of the Committee, 1977-1980)	
*U.S. Department of Agriculture, Statistical Reporting Service (member organization of the Committee to 1977, and from 1980)	William Kibler

*Administrator is ex-officio member. The Economics, Statistics and Cooperatives Service (ESCS) was formed in 1977 by combining the Statistical Reporting Service (SRS) and the Economic Research Service (ERS), both of which were represented on this Committee until that time. When ESCS was dissolved in 1980, SRS was reinstated on the Committee, but ERS was not.

1978 Census of Agriculture Data User Conferences

Date	Location	Sponsors ¹
Oct. 22, 1980	Albany, N.Y.	Departments of Rural Sociology and Agricultural Economics, Cornell University New York State Data Center, New York State Department of Commerce
Nov. 18, 1980	Indianapolis, Ind.	Cooperative Extension Service, Purdue University Indiana Bankers Association Indiana Department of Commerce Indiana Farm Bureau Co-op Indiana Food Processors Association Indiana Meat Packers Association Indiana Retail Grocers Association Indiana State Chamber of Commerce Indiana State Library School of Business, University of Indiana
Nov. 19, 1980	St. Louis, Mo.	Center for Urban and Environmental Research and Services, Southern Illinois University Doane Agricultural Service, Inc. Illinois State Data Center Cooperative Industry and Trade Administration, U.S. Department of Commerce Missouri State Data Center St. Louis Regional Office, U.S. Department of Commerce
Dec. 4, 1980	Madison, Wis.	Wisconsin State Data Center
Jan. 28, 1981	Nashville, Tenn.	Economics and Statistics Service, U.S. Department of Agriculture Middle Tennessee Chapter, American Statistical Association Tennessee Department of Agriculture Tennessee State Data Center
Jan. 30, 1981	Tallahassee, Fla.	Center for Professional Development and Public Service, Florida State University Florida Department of Agriculture Florida Department of Commerce
Feb. 3, 1981	Kansas City, Mo.	Agribusiness Development Council, Chamber of Commerce of Greater Kansas City Missouri State Data Center Missouri State Library
Feb. 5, 1981	College Station, Tex.	Department of Rural Sociology, Texas A & M University Texas Agricultural Experiment Station Texas Agricultural Extension Service
Feb. 10, 1981	College Park, Md.	Delaware State Data Center Department of Agricultural and Resource Economics, University of Maryland Maryland State Data Center New Jersey State Data Center Pennsylvania State Crop Reporting Service Virginia State Data Center

¹ The Bureau of the Census was a cosponsor of all of the data user conferences.

Date	Location	Sponsor ¹
Mar. 3, 1981	Corvallis, Oreg.	Extension Service, Oregon State University Oregon State Data Center
Mar. 5, 1981	Fresno, Calif.	Extension Service, University of California Fresno County & City Chamber of Commerce California State Data Center U.S. Department of Agriculture, State Coordination & Administration Committee,
Apr. 1, 1981	Bloomington, Ill.	Community Research Services, College of Continuing Education and Public Service, Illinois State University Illinois Farm Bureau Illinois State Data Center
Apr. 8, 1981	Ames, Iowa	College of Agriculture and Cooperative Extension Service, Iowa State University Iowa Department of Agriculture Iowa Department of Soil Conservation Iowa State Data Center
Apr. 22, 1981	Baton Rouge, La.	Department of Experimental Statistics, Louisiana State University Louisiana State Data Center
Apr. 23, 1981	Little Rock, Ark.	Arkansas State Data Center College of Agriculture and Home Economics, Department of Agricultural Economics, Department of Agricultural Economics and Rural Sociology, and Industrial Research and Extension Center, University of Arkansas

¹The Bureau of the Census was a cosponsor of all of the data user conferences.

Publications in Selected Series

Preliminary reports were published for all counties (for combined districts in Alaska) with 10 or more farms during the census period, each State, geographic regions, and the U.S. Each report consisted of four pages of data and sold for 25 cents.

Volume 1, *State and County Data* reports were published for the United States, each State, Puerto Rico, Guam, the Virgin Islands, American Samoa, and the Northern Mariana Islands. Each State report contained State summary data and a separate set of tabulations for each county (or equivalent) in the State

with 10 or more farms during the census year. Volume 3, *Agricultural Services*, was a single report showing data for the U.S., the District of Columbia, and for States and counties. Volume 4, *Irrigation*, was also a single report, with tabulations for regions, divisions, States, and drainage basins. Volume 5, *Special Reports*, was a series of eight separate reports addressing particular subjects, including the data from the follow-on survey program, the graphic summary, and this procedural history.

Preliminary Reports

Geographic division and State	No. of reports	Date approved for printing		Date published	
		First report	Last report	First report	Last report
United States.	1	—	—	—	12/3/80
Northeast Region	1		11/10/80		12/3/80
North Central Region.	1		11/10/80		12/3/80
South Region	1		11/10/80		12/3/80
West Region.	1		11/10/80		12/3/80
New England					
Maine	17	5/9/80	5/9/80	5/22/80	5/22/80
New Hampshire.	11	5/2/80	5/2/80	5/14/80	5/14/80
Vermont	15	4/29/80	5/7/80	5/13/80	5/22/80
Massachusetts	13	5/8/80	5/8/80	5/22/80	5/22/80
Rhode Island.	6	4/10/80	4/10/80	4/29/80	4/29/80
Connecticut	9	4/30/80	4/30/80	5/14/80	5/14/80
Middle Atlantic					
New York.	59	6/26/80	7/9/80	7/16/80	7/29/80
New Jersey.	21	5/27/80	6/10/80	6/11/80	6/24/80
Pennsylvania.	67	6/25/80	7/9/90	7/22/80	7/29/80
East North Central					
Ohio	89	7/22/80	8/4/80	8/1/80	9/2/80
Indiana	93	8/8/80	8/25/80	8/2/80	9/15/80
Illinois.	103	6/23/80	6/27/80	7/11/80	7/22/80
Michigan	83	7/28/80	8/4/80	8/14/80	8/27/80
Wisconsin.	72	4/7/80	4/7/80	4/17/80	4/21/80
West North Central					
Minnesota.	87	10/21/80	10/28/80	11/7/80	11/24/80

Preliminary Reports—Continued

Geographic division and State	No. of reports	Date approved for printing		Date published	
		First report	Last report	First report	Last report
Iowa	100	6/17/80	6/26/80	7/7/80	7/18/80
Missouri	155	7/25/80	8/6/80	8/25/80	9/2/80
North Dakota	54	10/6/80	10/8/80	10/20/80	10/24/80
South Dakota	64	9/15/80	9/15/80	9/30/80	10/8/80
Nebraska	94	8/11/80	8/13/80	9/3/80	9/15/80
Kansas	106	8/24/80	10/10/80	9/15/80	10/31/80
South Atlantic					
Delaware	4	1/9/80	1/9/80	1/28/80	2/7/80
Maryland	24	10/20/79	10/30/79	10/22/79	11/26/80
Virginia	98	6/18/80	7/11/80	7/10/80	7/30/80
West Virginia	54	4/25/80	5/2/80	5/6/80	5/14/80
North Carolina	100	9/2/80	9/3/80	9/22/80	9/26/80
South Carolina	47	9/30/80	9/30/80	10/20/80	10/24/80
Georgia	160	11/10/80	11/10/80	12/4/80	12/8/80
Florida	67	11/7/80	11/13/80	11/24/80	11/24/80
East South Central					
Kentucky	121	7/11/80	7/14/80	7/28/80	8/1/80
Tennessee	96	6/27/80	7/2/80	7/23/80	7/29/80
Alabama	68	9/3/80	9/11/80	9/25/80	10/1/80
Mississippi	83	10/8/80	10/14/80	10/31/80	11/24/80
West South Central					
Arkansas	76	8/14/80	8/25/80	9/9/80	9/15/80
Louisiana	64	9/2/80	9/11/80	9/26/80	10/23/80
Oklahoma	78	9/24/80	9/24/80	10/15/80	10/24/80
Texas	255	11/24/80	11/26/80	12/11/80	1/15/81
Mountain					
Montana	57	10/23/80	10/29/80	11/20/80	11/24/80
Idaho	45	7/29/80	8/4/80	8/27/80	8/28/80
Wyoming	24	5/27/80	6/6/80	6/11/80	6/24/80
Colorado	62	7/9/80	7/25/80	7/29/80	8/14/80
New Mexico	32	11/6/80	11/13/80	11/21/80	12/4/80
Arizona	15	9/22/80	9/22/80	10/15/80	10/23/80
Utah	30	8/14/80	8/21/80	9/8/80	9/15/80
Nevada	17	8/11/80	8/15/80	9/8/80	9/15/80
Pacific					
Washington	40	6/26/80	6/27/80	7/22/80	7/24/80
Oregon	37	6/2/80	8/14/80	6/18/80	6/18/80
California	57	7/28/80	7/18/80	9/8/80	9/9/80
Alaska	6	7/18/80	7/18/80	7/29/80	8/1/80
Hawaii	5	8/22/80	8/26/80	9/15/80	9/15/80

Volume 1, State and County Data

Part No.	State and outlying area	No. of books	Date published	No. of pages	Price
1	Alabama	1	7/28/81	588	\$11.00
2	Alaska	1	7/9/81	196	6.00
3	Arizona	1	7/15/81	280	7.00
4	Arkansas	1	7/9/81	624	11.00
5	California	1	6/25/81	532	11.00
6	Colorado	1	7/17/81	544	11.00
7	Connecticut	1	4/2/81	232	6.50
8	Delaware	1	1/14/81	212	6.50
9	Florida	1	6/30/81	578	11.00
10	Georgia	2	8/3/81	1,112	17.00
11	Hawaii	1	7/24/81	192	6.00
12	Idaho	1	6/4/81	192	9.00
13	Illinois	1	5/18/81	780	11.00
14	Indiana	1	5/21/81	720	12.00
15	Iowa	1	5/21/81	756	11.00
16	Kansas	1	7/2/81	792	13.00
17	Kentucky	1	6/25/81	880	13.00
18	Louisiana	1	7/30/81	560	11.00
19	Maine	1	4/17/81	276	7.00
20	Maryland	1	3/26/81	332	9.00
21	Massachusetts	1	4/16/81	260	6.50
22	Michigan	1	7/2/81	668	11.00
23	Minnesota	1	7/30/81	688	12.00
24	Mississippi	1	8/6/81	668	11.00
25	Missouri	1	6/25/81	848	13.00
26	Montana	1	7/9/81	512	10.00
27	Nebraska	1	7/9/81	716	12.00
28	Nevada	1	6/2/81	272	7.00
29	New Hampshire	1	4/2/81	240	6.50
30	New Jersey	1	5/21/81	316	8.50
31	New Mexico	1	8/5/81	376	8.00
32	New York	1	5/15/81	544	10.00
33	North Carolina	1	7/23/81	768	12.00
34	North Dakota	1	8/10/81	496	9.50
35	Ohio	1	6/10/81	704	12.00
36	Oklahoma	1	6/24/81	640	11.00
37	Oregon	1	4/29/81	408	8.50
38	Pennsylvania	1	5/8/81	584	10.00
39	Rhode Island	1	4/2/81	212	6.50
40	South Carolina	1	7/30/81	468	9.50
41	South Dakota	1	7/24/81	576	11.00
42	Tennessee	1	6/1/81	744	12.00
43	Texas	2	8/3/81	1,656	21.00
44	Utah	1	6/1/81	362	8.00
45	Vermont	1	4/17/81	264	7.00
46	Virginia	1	6/4/81	752	12.00
47	Washington	1	5/15/81	424	8.50
48	West Virginia	1	4/2/81	500	10.00
49	Wisconsin	1	3/20/81	608	11.00
50	Wyoming	1	4/20/81	328	8.00

PUBLICATIONS IN SELECTED SERIES

Volume 1, State and County Data—Continued

Part No.	State and outlying area	No. of books	Date published	No. of pages	Price
51	United States	1	8/25/81	568	\$10.00
52	Puerto Rico	1	10/27/80	228	10.00
53	Guam	1	6/23/80	56	3.50
54	Virgin Islands	1	6/23/80	40	2.25
55	American Samoa	1	8/26/81	40	2.75
56	Northern Mariana	1	8/26/81	40	2.75

Volumes 2 through 5

Volume	Title	Date published	No. of pages	Price
2	Statistics by Subject		- Cancelled -	
3	Agricultural Services	12/10/80	185	\$5.50
4	Irrigation	16/4/82	360	10.00
5	Special Reports			
	Part 1 Graphic Summary	3/28/42	204	8.00
	Part 2 Ranking Counties and States		- Cancelled -	
	Part 3 Coverage Evaluation	6/24/82	30	2.25
	Part 4 Procedural History	9/83*	NA	NA
	Part 5 Drainage of Agricultural Lands	11/10/81	100	5.00
	Part 6 Farm Finance Survey	8/27/82	264	7.50
	Part 7 Census of Horticultural Specialties	5/7/82	196	7.00
	Part 8 Farm and Ranch Irrigation Survey	12/28/82	188	8.00
	Part 9 Farm Energy Survey	10/26/82	188	7.00

*Estimated date of publication.

NA Not available.

Outline of Principal Activities

Activity	Starting Date	Completion Date
Content Pretest, July 1977		
Mailing date	July 1977	July 1977
Followup mailing	Aug. 1977	Aug. 1977
Field interviews of selected respondents and nonrespondents	Aug. 1977	Aug. 1977
Content Pretest, January 1978		
Mailing date	Jan. 1978	Jan. 1978
Receipt and check-in	Feb. 1978	Apr. 1978
Processing and analysis	Feb. 1978	Aug. 1978
Mail List Development		
Address list compilation		
Source — 1974 census list	Nov. 1977	Dec. 1977
Source — economic census lists, standard statistical establishment lists, USDA special lists, etc.	Jan. 1978	Feb. 1978
Farm and Ranch Identification Survey		
Content test mailout	Oct. 1977	Oct. 1977
Evaluation of test response	Nov. 1977	Dec. 1977
Finalization of form content	Dec. 1977	Dec. 1977
Printing of A4 form	Jan. 1978	Feb. 1978
Compilation of survey mailing list	Feb. 1978	Mar. 1978
Mailout	May 1978	May 1978
1st followup	June 1978	June 1978
2nd followup	June 1978	July 1978
3rd followup	July 1978	Aug. 1978
4th followup	Aug. 1978	Aug. 1978
Census mailing list development		
Mailing list matching	Sept. 1978	Oct. 1978
Final unduplication of mailing list	Oct. 1978	Dec. 1978
1978 Census of Agriculture Area Sample Survey		
Preparation		
Field procedures test		
Sample segment selection	Feb. 1978	Feb. 1978
Field staff training	Mar. 1978	Apr. 1978
Field enumeration	Apr. 1978	Apr. 1978
Sample segment selection	May 1978	May 1978

Activity	Starting Date	Completion Date
Printing of area sample report forms and other materials	June 1978	Aug. 1978
Staff training	Oct. 1978	Oct. 1978
Field enumeration	Oct. 1978	Dec. 1978
Match of area sample addresses to census address list	Jan. 1979	Feb. 1979
1978 Census of Agriculture for the United States		
Printing of report forms	Aug. 1978	Nov. 1978
Mailing of report forms		
Initial mailing	Dec. 1978	Dec. 1978
Supplemental mailing	Feb. 1979	Feb. 1979
Reminder letter mailing	Jan. 1979	Mar. 1979
1st followup	Feb. 1979	Apr. 1979
2nd followup	Mar. 1979	May 1979
Special April followup	Apr. 1979	Apr. 1979
3rd followup	Apr. 1979	May 1979
4th followup	Apr. 1979	June 1979
5th followup	May 1979	July 1979
6th followup	June 1979	Aug. 1979
Tenant/successor mailout	Feb. 1979	Mar. 1979
Followup mailing	June 1979	June 1979
Supplemental Hawaii followup	July 1979	July 1979
Telephone followup	Jan. 1979	Nov. 1979
Data processing		
Pre-computer processing		
Screening	Jan. 1979	Aug. 1979
Technical review	Feb. 1979	Nov. 1979
Data keying	Jan. 1979	Nov. 1979
Computer processing		
Formatting	Mar. 1979	Feb. 1980
Batch edit	Mar. 1979	Feb. 1980
Failed-edit correction	Mar. 1979	Feb. 1980
Final data merge	Mar. 1979	Mar. 1980
Imputation for nonresponse	Mar. 1979	Mar. 1980
Tabulation of data		
Analytical tabulations	Oct. 1979	Mar. 1980
Preliminary tabulations	Oct. 1979	Mar. 1980
Tabulations for counties, States, divisions, regions, and the United States	Aug. 1980	Apr. 1981

Activity	Starting Date	Completion Date	Activity	Starting Date	Completion Date
1978 Census publication program			Enumeration	Apr. 1980	May 1980
County preliminary reports	Oct. 1979	Jan. 1981	Processing	May 1980	Dec. 1980
Volume 1, State and Country Data	Mar. 1981	Aug. 1981	Publication	May 1981	Aug. 1981
Volume 3, Agricultural Services	Nov. 1980	Dec. 1980			
Volume 4, Irrigation	Dec. 1981	Apr. 1981	1978 Census of Agricultural Services		
Volume 5, Special Reports			Planning	Feb. 1977	Dec. 1978
Part 1, Graphic Summary	Oct. 1981	Apr. 1982	Compilation of the mailing list	Feb. 1977	Dec. 1978
Part 3, Coverage evaluation	Oct. 1981	June 1982	Report forms design	Feb. 1977	May 1978
Part 4, Procedural history	Dec. 1979	Sept. 1983	Initial mailout	Jan. 1979	Jan. 1979
Part 5, Drainage of Agricultural Lands	Nov. 1979	Nov. 1981	1st followup	Feb. 1979	Feb. 1979
Part 6, Farm Finance Survey	Sept. 1980	Aug. 1982	2nd followup	Mar. 1979	Mar. 1979
Part 7, Census of Horticultural Specialties	May 1980	May 1982	3rd followup	Apr. 1979	Apr. 1979
Part 8, Farm and Ranch Irrigation Survey	Dec. 1980	Dec. 1982	4th followup	May 1979	May 1979
Part 9, Farm Energy Survey	Oct. 1980	Oct. 1982	5th followup	May 1979	May 1979
Computer tapes	Feb. 1980	Aug. 1981	6th followup	June 1979	June 1979
			Supplemental mailing	Mar. 1979	Mar. 1979
1978 Census of Agriculture for Puerto Rico			1st followup	Apr. 1979	Apr. 1979
Planning	May 1977	Dec. 1977	2nd followup	May 1979	May 1979
Pretest	Jan. 1978	Feb. 1978	3rd followup	May 1979	May 1979
Special farms identification survey	Apr. 1978	June 1978	4th followup	June 1979	June 1979
Printing of report forms	Mar. 1978	Apr. 1978	5th followup	July 1979	July 1979
Enumeration			6th followup	Aug. 1979	Aug. 1979
General field enumeration	June 1978	Sept 1978	Telephone followup	June 1979	Oct. 1979
Post-enumeration survey	Oct. 1978	Oct. 1978	Data processing	Jan. 1979	Feb. 1980
Processing the data	July 1978	Sept 1980	Tabulation	Apr. 1980	Oct. 1980
Publication	Oct. 1978	Oct. 1978	Publication		
			Preliminary reports	Apr. 1980	May 1980
1978 Census of Agriculture for the Virgin Islands			Final report	Nov. 1980	Nov. 1980
Planning	Feb. 1978	Mar. 1978			
Printing the report forms	Apr. 1978	Apr. 1978	1979 Census of Horticultural Specialties		
Organization of the census office	June 1978	June 1978	Planning	Jan. 1978	Aug. 1979
Enumeration	Aug. 1978	Aug. 1978	Content pretest	Aug. 1979	Sept. 1979
Processing the data	Mar. 1979	Apr. 1979	Compilation of the mailing list	Jan. 1979	Nov. 1979
Publication	Apr. 1980	Apr. 1980	Finalization of report form content	Oct. 1979	Oct. 1979
			Initial mailout		
1978 Census of Agriculture for Guam			1st phase	Jan. 1980	Jan. 1980
Planning	Mar. 1978	Mar. 1978	2nd phase	Feb. 1980	Feb. 1980
Printing the report forms	Mar. 1978	Mar. 1978	1st followup	Feb. 1980	Mar. 1980
Organization of the census office	Apr. 1978	Apr. 1978	2nd followup	Mar. 1980	Apr. 1980
Enumeration	Apr. 1978	Apr. 1978	3rd followup	Apr. 1980	May 1980
Processing	Mar. 1979	Mar. 1979	4th followup	May 1980	May 1980
Publication	Apr. 1980	Apr. 1980	Telephone followup	June 1980	Sept. 1980
			SRS data collection	Feb. 1980	Apr. 1980
1979 Census of Agriculture for American Samoa and the Northern Mariana Islands			Processing	Feb. 1980	Apr. 1980
Planning	Jul. 1978	Mar. 1980	Publication		
Printing of report forms	Sept 1978	Feb. 1980	Preliminary reports	Oct. 1981	Oct. 1981
Organization of the census offices	Jan. 1980	Jan. 1980	Final report	Dec. 1981	Dec. 1981
			1978 Census of Irrigation		
			1978 Census of Irrigation Organizations		
			Planning	Dec. 1976	Mar. 1978

OUTLINE OF PRINCIPAL ACTIVITIES

Activity	Starting Date	Completion Date	Activity	Starting Date	Completion Date
Pretest mailout	Mar. 1978	Mar. 1978	Publication	Dec. 1981	Dec. 1981
Followup	Apr. 1978	Apr. 1978			
Finalization of report form content	May 1978	June 1978	1978 Census of Drainage Planning	Apr. 1976	Dec. 1977
Compilation of the mailing list	June 1977	Aug. 1978	Collection of selected data from the 1977 Census of Governments and USDA statistical operations	Dec. 1977	June 1979
Printing of report forms	Sept 1978	Nov. 1978	Followup of nonrespondents to applicable 1977 Census of Government report forms	Jan. 1978	Feb. 1978
Mailout	Dec. 1978	Dec. 1978	Processing	Jan. 1978	Nov. 1981
Reminder mailing	Jan. 1979	Jan. 1979	Publication	Dec. 1981	Dec. 1981
1st followup	Feb. 1979	Feb. 1979			
2nd followup	Mar. 1979	Mar. 1979			
3rd followup	Apr. 1979	Apr. 1979			
Telephone followup	May 1979	Aug. 1979			
Processing the data	Jan. 1979	Oct. 1981			

Appendix G

Report Forms

CHANGES IN THE STANDARD REPORT FORMS

Background Information

Title 13, United States Code, gives final responsibility for determining the content and design of all census data-collection forms to the Secretary of Commerce, who may delegate this function to the Director of the Bureau of the Census. As in previous censuses, interested organizations, including the U.S. Department of Agriculture and the Bureau of Economic Analysis, offered recommendations and suggestions regarding the content and general design of the report forms, and an *ad hoc* committee composed of representatives of agriculture-oriented public and private organizations discussed data needs and advised the Bureau on report form format. The Bureau's Census Advisory Committee on Agriculture Statistics reviewed all the proposals submitted, and made recommendations on the priorities assigned to various items on the final version of the forms.

The Bureau used two report forms to collect data from farms for the 1974 census, the 74-A1 ("long") form for farms with sales of \$2,500 or more, and the 74-A2 ("short") form for farms with sales of less than \$2,500 (Hawaii had a separate single form for all farms—a tailored version of the A1), while agricultural services operations were sent the 74-A40 report form. A major goal of the planning effort for the 1978 census was to reduce overall respondent burden imposed by use of the standard report forms. Part of this could be done by redesigning the forms themselves, but part could also be done by finding a way to collect data on items that did not apply to all farms, or which were peculiarly burdensome, only from the minimum number of farms necessary to provide reliable county-level statistics. Accordingly, the Bureau decided for 1978 to use sampling for certain items asked of farm operators and, in the agricultural services census, to make more use of specialized versions of the A40 report form. Hawaii, once again, was the only State to have a separate report form for the agricultural census.

The 1978 A1 "sample" and "nonsample" report forms are discussed below, while the report forms for the census of agricultural services are discussed on page 122, and those for Puerto Rico and the outlying areas, on page 122-123. Facsimiles of selected report forms, followup letters, etc., are reproduced following page 124.

U.S. Report Forms

Standard Form A1

Introduction—The form 74-A1 used in the 1974 census was a 20-page booklet and its use to collect data from the majority of

farms resulted in considerable adverse reaction from operators. This unusually intense response stimulated a detailed review of both the general format and design of the standard report form, and of the specific data items requested of farm operators. The conclusion of this study was that the report forms could be designed to collect the necessary data while substantially reducing respondent burden through the use of sampling techniques for gathering particularly sensitive information.

General design—For 1978 the "booklet" design for the standard report form was discarded in favor of a larger sheet (21" x 14" for the nonsample form, folded to 10½" x 14") folder-style format. The use of a "short" form for small farms was also abandoned, and all the "100-percent" data items (i.e., requested of all farms) were placed on the A1(N) nonsample form. The A1(S) sample report form included six additional sections of questions (and an extra half-page, so that the form measured 14" x 27", but folded to 14" x 10½" with 6 pages) covering use of fertilizers, use of chemicals, machinery and equipment, energy expenditures, selected production expenses, and estimated value of land and buildings.

As an aid in clerical handling, the A1(N) and A1(S) were given blue and yellow shading respectively, while the A1(S), used for "Must" cases, received a green shading.

Changes in the Data Requested—While the larger page-size of the 1978 report form meant the total loss of page area compared to the 1974 report form was considerably less than the total reduction in number of pages might suggest (4 pages for the A1(N) and 6 pages for the A1(S) compared to 20 pages for the 1974 A1 report form), there was still a substantial loss of space available. Part of this reduction could be compensated for through such obvious expedients as slightly smaller type size and less page area for each section of the form. A two-column page format was adopted, which was more efficient in terms of usage of available space and clarity for respondents. However, more substantial means of reducing the space required (as well as respondent burden) could be realized only by eliminating data items that were not needed at the county level, and by combining and rearranging sections, wherever possible.

The following 1974 data items or sections were deleted from the design for the 1978 nonsample form (A1(N):

- Type of rental arrangement
- Sales of forest products
- Commercial fertilizer used for specific crops
- Salaries for corporation officers
- Irrigation methods and quantity of water used

Drainage
 Grain storage facilities
 Futures markets
 Contracts
 Injuries and illnesses
 Other production expenses
 Income and expenses from farm-related sources
 Farm credit
 Family income from off-farm sources

Further, 1974 sections 5-9 requesting data on various crops (corn, small grains, sorghum or milo, peanuts, soybeans, dry beans, dry peas, tobacco, cotton, irish potatoes, sweet potatoes, or sugar) were consolidated into a single simplified section (2, "Were any of the following crops harvested from this place in 1978?") that asked for acres and quantity of each crop harvested, and acres of each irrigated. Much of the detailed data collected in 1974 for costs of materials for individual types of chemicals used, and for quantities and costs of several categories of feed (including roughages) purchased, were deleted from the report form. Many of the redundant totals requested on the 1974 form for cross checking the data in the production expenses and value of agricultural products sold sections were also eliminated.

While every effort was made to reduce the total number of inquiries, certain high priority items were added to the "100-percent" portion of the report forms; items on acres set aside in Federal farm programs were inserted in section 1 (acreage in 1974) and requests for the total value of Government Commodity Credit Corporation (CCC) loans for cotton and grain were included in section 9 (Gross Value of Crops Sold). Two sections were added: section 18 requested the value of direct sales of agricultural products to individuals for human consumption, and section 21 asked whether any of the land "in this place" was held under foreign ownership. In addition, the separate sections on hired and contract labor, and production expenses, were combined into a single section (26). The item on the number of contract laborers supplied was deleted while the respondent was asked whether the hired workers had worked less than 150 days, or more than 150 days.

Among the sample items, all of which were based on items from the 1974 report form A1, separate sections on expenditures for energy (section 25) and other selected production expenses (26) were used in place of the single section employed for 1974. The 1978 form requested more detailed data on energy expenditures than for 1974, including gallons purchased and on-farm storage capacity for selected fuels.

Form A1(H), Hawaii

As in previous mailout/mailback censuses, a separate report form, the A1(H), was used for Hawaii. In general, the report forms used for Hawaii in the censuses have been very similar to the standard ones, except for the crops sections, which request information on crops particularly important to agriculture in the islands. The form 78-A1(H) was similar to the A1(S) in general design, layout, format, and appearance (except a blue-green wash was used for the A1(H)), and many of the same

changes were made in terms of deletions of items requested for 1974 and items added for 1978.

Changes specifically related to the A1(H) included moving the item on payroll and employment into the section on expenditures. Sections of the 1974 form requesting data on field corn, sorghums or milo (section 6), peanuts, ginger or lotus roots, toro, irish potatoes or sweet potatoes (section 7), and hay or green crop (section 10), were combined into a single "other crops" section (6) on the 1978 report form.

Form A40, Agricultural Services

While the content of the agricultural services report form for 1978 was very similar to that used for 1974, a major change in format was made. Instead of a single report form for all agricultural services, four tailored forms, the A40A, A40B, A40C, and A40D, were used. The format and content of all four were identical except for section 8, requesting gross receipts for services performed. The "A" requested acreage and gross receipts for soil preparation and crop services, "B" asked for gross receipts for veterinary and nonveterinary animal services, "C" covered landscape and horticultural services, and the "D" form contained a combined version of section 8 that included requests on all of the services covered by the other forms. Sections 13, 14, and 15 (capital expenditure; changes in gross value of depreciable assets; and expenditures for electricity, gasoline, petroleum, and other fuels) of the 1978 forms requested data only of establishments with sales of \$50,000 or more.

A single section (16) was added to the 1978 report forms, providing space for the respondent to cross-check answers for consistency and accuracy. As an aid to quick identification and manual handling, each of the A40 forms was shaded in a different color ink—the A40A in blue, the A40B in pink, the A40C in salmon, and the A40D in purple.

Puerto Rico and the Outlying Areas

Form A1(PR), Puerto Rico

The form 78-A1(PR) was used for all farms in Puerto Rico. The standard form 78-A1(PR) was an 8-page booklet, printed in blue ink on white stock with blue shading. While the basic format, overall design, and reference period were similar to the 1974 version, there were significant changes in the specific data requested. The following items were deleted from the report form for 1978:

Rent paid	Working oxen yesterday
Farms operated (by respondent) as salaried manager	Cows "milked" and quarts of milk "produced yesterday"
Pastureland cultivated for cutting only	Number of sprinklers
Cuerdas of vegetables planted	Number of farm ponds
Value of sales of ornamental and flowering plants	Sharecroppers
	Unspecified production expenses

The following items were added to the report form, either as new sections, or to sections already part of the form:

<i>Cuerdas</i> under cultivation of sugarcane, coffee, pineapple, rice, and all fruit (new section No. 12)	Machinery and equipment
Method of irrigation (i.e., gravity, sprinklers, drip)	Number of fighting cocks
Highest grade or years of school completed	Boars of all ages
Major source of irrigation water	Agriculture production for home consumption (new section No. 19)
	Sweet cooking peppers
	Expenditures for medicine and drugs
	Mangoes

A significant change in the arrangement of the remaining data-collection sections of the report form was the division of the 1974 section 3, "Main Crops," into two sections, No. 3, "Sugarcane," and No. 4, "Tobacco, Pineapple, and Coffee."

Form A1(G), Guam

The form 78-A1(G), used for the enumeration of farms on Guam, was similar in design and layout to the 1974 version, but, as with the A1(PR), certain data items were changed. Two items asking whether the respondents farm had running water and electricity were moved from section 1 (land in agriculture) to a new section on equipment and facilities, and the 1974 section 7, requesting data on the source and ownership of workpower used on the place (i.e., power equipment and work animals) was also dropped. Two sections were added to the 1978 form—section 7, "Selected Expenditures in 1977," and section 8, "Equipment and Facilities Used on the Place in 1977."

Form A1(VI), Virgin Islands

The A1(VI) for 1978 was nearly identical to the 1974 form in overall design, except a somewhat larger folding sheet was used. Content was also similar, except that the 1974 section (8) on market value of sales of farm products was deleted, and the market value of sales of each product was asked in the appropriate crop or livestock section. Somewhat more detailed data were requested on crops, notably the pounds of field crops sold in the last 12 months, and the number of fruit trees, nut trees, or plants sold in the last 12 months.

Items on source and ownership of workpower used on the place were deleted from the 1978 section (7) on equipment and facilities, as was an item on whether there was a telephone on the place.

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U.S. CENSUS BUREAU REPORT -

DUE 7 DAYS AFTER RECEIPT OF FORM

Form Approved: O.M.B. No. 41-S77090

FORM 78-A4
(12-9-77)U.S. DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS**1978 FARM AND RANCH
IDENTIFICATION SURVEY**

(Please correct any error in name and address including ZIP code)

NOTICE - Response to this inquiry is required by law (title 13, U.S. Code). By the same law YOUR REPORT TO THE CENSUS BUREAU IS CONFIDENTIAL. It may be seen only by sworn Census employees and may be used only for statistical purposes. Your report CANNOT be used for purposes of taxation, investigation, or regulation. The law also provides that copies retained in your files are immune from legal process.

► RETURN TO ◀

Bureau of the Census
1201 East Tenth Street
Jeffersonville, Indiana 47132

CENSUS
USE ONLY

01

02

03

04

05

Please read ►

The purpose of this inquiry is to determine the extent to which you are engaged in any agricultural activities. **TO AVOID ADDITIONAL REQUESTS**, please complete and return this form promptly whether you have any agricultural activities or not.

► Item 1 - Acreage in 1978

Report land owned, rented, or used by you, your spouse, or by the partnership, corporation, or organization for which you are reporting. Include ALL LAND REGARDLESS OF LOCATION OR USE - cropland, pastureland, rangeland, woodland, idle land, house lots, land used for nursery, feedlots, greenhouses, orchards.

Item 1a. All land owned ☐

Item 1b. All land rented or leased FROM OTHERS, including land worked by you on shares, used rent free, in exchange for services, payment of taxes, etc. (Include leased Federal, State, and railroad land. DO NOT include land used on a per-head basis under a grazing permit.) ☐

Item 1c. All land rented or leased TO OTHERS, including land worked on shares by others and land subleased. Also complete item 2 below. ☐

Item 1d. ADD acres owned (item 1a) and acres rented (item 1b), then SUBTRACT acres rented to others (item 1c), and enter the result in this space. If zero, enter "0". →

None	Number of acres
	11
	12
	13
	14

► Item 2 - If land is rented TO OTHERS (item 1c above), please enter the following information for each renter.

Name of renter	Mailing address (Include ZIP code)	Number of acres
		15
		16
		17

Please continue on reverse side

► **Item 3 –** Indicate which of the following items you expect to raise or produce in 1978 on the acres reported in item 1d. (Include products grown under CONTRACT for others, DO NOT include agricultural production on land rented to others.)

		YES	NO
a. Livestock – cattle, hogs, sheep, horses, etc., and their products (Include dairies and feedlots.)	18	1 ☐	2 ☐
b. Poultry – chickens, turkeys, ducks, etc., and their products.	19	1 ☐	2 ☐
c. Crops – corn, sorghums, soybeans, wheat, rice, hay, cotton, tobacco, peanuts, potatoes, sugar, etc.	20	1 ☐	2 ☐
d. Vegetables and berries for sale – sweet corn, melons, etc.	21	1 ☐	2 ☐
e. Fruit and nut trees – citrus, grapevines, etc. (If less than 20 trees or vines, mark "NO.")	22	1 ☐	2 ☐
f. Nursery or greenhouse products, or sod grown for sale	23	1 ☐	2 ☐
g. Other agricultural activities – fur-bearing animals, bees, honey, poultry hatcheries, fish in captivity, etc. – Specify	24	1 ☐	2 ☐

► **Item 4 –** What is the estimated value of all agricultural products expected to be sold in 1978 from the acres reported in item 1d? (DO NOT include the value of production or sales from land you rented to others.)

25

1 ☐ None	4 ☐ \$2,000–\$39,999	6 ☐ \$100,000–\$199,999
2 ☐ \$1–\$999	5 ☐ \$40,000–\$99,999	7 ☐ \$200,000 or more
3 ☐ \$1,000–\$1,999		

► **Item 5 –** For business purposes, do you operate the acres reported in item 1d under any name other than the one shown (or corrected) in the address label?

26

- 1 ☐ Yes – List other name(s) and addresses _____
- 2 ☐ No _____

► **Item 6 –** If you will NOT engage in any agricultural activities in 1978 on the acres reported in item 1d, mark (X) the reason below.

27

- 1 ☐ All land has been sold – Enter name and mailing address of present owner or operator and date of sale in remarks below.
- 2 ☐ All land is rented to others.
- 3 ☐ All land reported in item 1d is idle, or retained for other non-agricultural use – Explain use in remarks below and give the year in which the land was last operated as a farm.
- 4 ☐ Other – Explain and give name of present operator, if any, in remarks below.

Remarks _____

► **Item 7 –** Person preparing this report.

Name	28 Date	Telephone	
		29 Area code	Number

FORM 78-A1(A) 6-23-78 U.S. DEPARTMENT OF COMMERCE BUREAU OF THE CENSUS NOTICE - Response to this inquiry is required by law (title 13 U.S. Code). By the same law YOUR REPORT TO THE CENSUS BUREAU IS CONFIDENTIAL. It may be seen only by sworn Census employees and may be used only for statistical purposes. Your report CANNOT be used for purposes of taxation, investigation, or regulation. The law also provides that copies retained in your files are immune from legal process. 1978 CENSUS OF AGRICULTURE AREA SAMPLE		CENSUS USE ONLY <table border="1" style="width:100%; border-collapse: collapse;"><tr><td style="width:25%;">035</td><td style="width:25%;">036</td><td style="width:25%;">037</td><td style="width:25%;">038</td></tr><tr><td>039</td><td>040</td><td>041</td><td>042</td></tr></table> Key identification data			035	036	037	038	039	040	041	042
035	036	037	038									
039	040	041	042									
Part I - IDENTIFICATION Items 1 through 6 - Copy from A3 Record Book <table border="1" style="width:100%; border-collapse: collapse;"><tr><td style="width:25%;">1. State</td><td style="width:25%;">2. County</td><td style="width:25%;">3. Segment number</td><td style="width:25%;">4. A3 Line number</td></tr></table> 5. Name - First, Middle initial, Last 6. Mailing address a. Route/Box/Street b. Post Office 7. What is your (the person listed in item 5) telephone number? 8. In what year did you begin to operate any part of this place? 9. Do you have a Federal Employer Identification Number for this farm or ranch operation? ☐ YES - Enter the EI number ☐ NO Part II - TYPE OF ORGANIZATION Mark (X) type of organization as shown in column 8 of A3 Listing Sheet and ask questions for that type. Complete only one part of this page. Data reported for subsequent sections of questionnaire relate to the specific operation reported here. ☐ Type A - INDIVIDUAL OR FAMILY OPERATION (Sole proprietorship) 1. For business purposes, is this farm or ranch operated under any name other than your own? ☐ YES → ☐ NO 2. During the past two years, have you received mail at any address other than the one I have listed? ☐ YES → ☐ NO 3. Does this farm or ranch employ a hired manager who is primarily in charge of the farm or ranch operations? ☐ YES - Go to item 4 ☐ NO - SKIP to page 2 4. Who is the hired manager? ☐ Person named in part 1, item 5 - SKIP to page 2 ☐ Other - Specify and SKIP to page 2 Name Mailing address - Route/Box/Street Post Office State ZIP code ☐ Type B - PARTNERSHIP OPERATIONS (Include family partnerships) 2. For business purposes, what name and mailing address is used for this partnership? Name Mailing address - Route/Box/Street Post Office State ZIP code 3. How many partners are there? Partners 3. What is the name and mailing address of each partner? ☐ Person named in part 1, item 5 - Do not list ☐ Other - Specify (Use "Remarks" if more space is required.) a. Name Mailing address - Route/Box/Street Post Office State ZIP code b. Name Mailing address - Route/Box/Street Post Office State ZIP code 4. Does this partnership employ a hired manager who is primarily in charge of the farm or ranch operations? ☐ YES - Go to item 5 ☐ NO - SKIP to item 6 5. Who is the hired manager? ☐ Person named in part 1, item 5 - SKIP to page 2 ☐ Other - Specify and end interview 6. Which partner is primarily in charge of the farm or ranch operations? ☐ Person named in part 1, item 5 - SKIP to page 2 ☐ Other partner - Specify and end interview ☐ None - Go to item 7 7. Who is the eldest partner? ☐ Person named in part 1, item 5 - SKIP to page 2 ☐ Other - Specify and end interview Part II - TYPE OF ORGANIZATION - Continued ☐ Type C - INCORPORATED UNDER STATE LAW 3. 1. What is the current name and mailing address of this corporation? 2. Is this a family-held corporation? YES NO 3. Are there more than 10 stockholders? YES NO 4. Does this corporation have other separate and distinct farm and ranch operations? ☐ YES - Enter location(s) and name(s) below ☐ NO - SKIP to item 5 (1) Location (State and County) Name (2) Location (State and County) Name 5. During the past two years, has this farm or ranch used any name or address other than the current corporation name and mailing address? ☐ YES → ☐ NO 6. Does this farm or ranch employ a hired manager who is primarily in charge of the farm or ranch operations? ☐ YES - Go to item 7 ☐ NO - SKIP to item 8 7. Who is the hired manager? ☐ Person named in part 1, item 5 - SKIP to page 2 ☐ Other - Specify and end interview 8. Who is primarily in charge of the farm or ranch operations? ☐ Person named in part 1, item 5 - SKIP to page 2 ☐ Other - Specify and end interview ☐ Type D - OTHER ORGANIZATIONS 4. 1. What type of organization operates or controls the operations of this farm or ranch unit? 995 ☐ Estate ☐ State or Local Government ☐ Other - Specify ☐ Trust ☐ Federal Government ☐ Cooperative 2. What is the name and mailing address of this organization? 3. What is the name and mailing address used for this farm or ranch operation? 4. During the past two years, has this farm or ranch used any other name or mailing address? 5. Does this organization employ a hired manager who is primarily in charge of the farm or ranch operations? ☐ YES - Go to item 6 ☐ NO - SKIP to item 7 6. Who is the hired manager? ☐ Person named in part 1, item 5 - SKIP to page 2 ☐ Other - Specify and end interview 7. Who is primarily in charge of the farm or ranch operations? ☐ Person named in part 1, item 5 - Go to page 2 ☐ Other - Specify and end interview					1. State	2. County	3. Segment number	4. A3 Line number				
1. State	2. County	3. Segment number	4. A3 Line number									

Section 1 - First, I would like to ask you about all the land you used in 1978.

Include all agricultural land owned, rented, or used by you, your spouse, or by the partnership, corporation, or organization for which you are reporting. Include ALL LAND, REGARDLESS OF LOCATION OR USE - cropland, pastureland, rangeland, woodland, idle land, house lots, etc.

■ During 1978, how many acres did you or will you -

1. Own at anytime? ☐ None ☐ 043

2. Rent or lease from others? Including land worked on shares; used rent free in exchange for services, payment of taxes, etc. Include leased Federal, State, and railroad land. (Exclude land used on a per-head basis under a grazing permit.) Also complete item 5 below. ☐ 044

3. Rent or lease to others? Including all land worked on shares by others and land subleased. Also complete item 6 below. ☐ 045

4. ACRES IN THIS PLACE - ADD acres owned (item 1) and acres rented (item 2), then SUBTRACT acres rented TO OTHERS (item 3), and enter the result in this space. ☐ 046

a. Is ... the correct number of acres that you operated or expect to operate in 1978?

☐ YES ☐ NO - Verify and adjust as necessary.

These acres are the "ACRES IN THIS PLACE" for this census report

If zero acres in this place, refer to chapter V in your Enumerator's Reference Manual.

5. (If acres in item 2) What is or will be the name and address of each landlord and the number of acres rented, used rent free, or worked on shares from each?

Name of landlord	Mailing address (Include ZIP code)	Number of acres
		047
		048
		049

List additional landlords in the "Remarks."

6. (If acres in item 3) What is or will be the name and address of each renter and the number of acres rented to each?

Name of renter	Mailing address (Include ZIP code)	Number of acres
		050
		051
		052

List additional renters in the "Remarks."

a. Of the land you rented or leased to others, how many acres did you or will you own? ☐ None ☐ 053 ☐ Acres

7. During 1978 did you or will you have any Federal or State grazing permits on a per-head basis; such as, Forest Service, Taylor Grazing, Indian Reservations, etc.? ☐ 054 ☐ Yes ☐ No ☐ 2

8. How many set aside acres do you have in the Federal Farm Program in 1978? ☐ None ☐ 055 ☐ Acres

9. LOCATION OF AGRICULTURAL ACTIVITY FOR THIS PLACE

a. In what county do you expect the largest value of your agricultural products to be raised or produced? ...

County name	State	Number of acres
Principal county		056
Other counties		057
		058
		059

b. Do you or will you have agricultural operations in any other county(ies)? (Enter the county name(s) etc.) ...

Remarks

Now I would like to ask you about the agricultural operations on this place in 1978. Since you may not have harvested, sold, bought, etc., all of the items that you plan to this year, you may need to estimate the answer to some questions.

Section 2 - Were or will any of the following crops be harvested from this place in 1978?

	How many acres were or will be harvested?	How much was or will be harvested?	How many acres were or will be irrigated?
1. Field corn for grain or seed (Report quantity on a shelled-weight basis.) ☐	067	068 OR Bu. Cwt. 069	070
2. Field corn for silage or green chop ☐	073	074 Tons, green	075
3. Wheat for grain ☐	076	077 Bu.	078
4. Oats for grain ☐	079	080 Bu.	081
5. Barley for grain ☐	082	083 OR Bu. Lbs. 084	085
6. Sorghums for grain or seed (Include milo) ☐	088	089 Tons, green	090
7. Sorghums for silage or green chop (Exclude sorghum-sudan crosses.) ☐	091	092 Bu.	093
8. Soybeans for beans ☐	094	095 Bales	096
9. Cotton ☐	097	/10 Lbs.	099
10. Tobacco - all types ☐	100	/10 Cwt.	102
11. Irish potatoes ☐		/10 Bu.	/10
12. Sweetpotatoes and yams ☐		/10 Bu.	/10

Section 3 - Was or will any DRY HAY, GRASS SILAGE, HAYLAGE, or GREEN CHOP be cut or harvested from this place in 1978? (Include sorghum-sudan crosses and hay cut from pastures.)

003

1 ☐ YES - Complete this section

2 ☐ NO - Go to section 4

If cuttings were or will be made for both dry hay and grass silage, haylage, or green chop from the same fields, report the acreage in the appropriate items under DRY HAY and also under GRASS, SILAGE, HAYLAGE, and GREEN CHOP.

■ DRY HAY

(If two or more cuttings of dry hay were or will be from the same acres, report acres only once, but report total tons from all cuttings.)

■ Were or will any of the following crops be harvested?

1. Alfalfa and alfalfa mixtures for hay or dehydrating ☐ None
2. Small grain hay - oats, wheat, barley, etc. ☐
3. Other tame dry hay, clover, lespedeza, timothy, Bermuda grass, Sudan grass, etc. ☐
4. Wild hay ☐

■ GRASS SILAGE, HAYLAGE, AND GREEN CHOP

(If two or more cuttings of grass silage, haylage, or green chop were or will be made from the same acres, report acres only once, but report total tons from all cuttings.)

5. Grass silage and haylage ☐
6. Hay crops cut and fed green (green chop) ☐

How many acres were or will be harvested?	How much was or will be harvested? (Report either dry or green weight as indicated)	How many acres were or will be irrigated?
103	104 Tons, dry	105
106	107 Tons, dry	108
109	110 Tons, dry	111
112	113 Tons, dry	114
115	116 Tons, green	117
118	119 Tons, green	120

Section 4 – Was there a combined total of 20 or more FRUIT TREES, including GRAPEVINES, CITRUS AND NUT TREES ON THIS PLACE IN 1978? (Do not include abandoned trees)

- 004 1 ☐ YES – Complete this section
2 ☐ NO – Go to section 5

Total acres	How many acres were or will be irrigated?
121	122
10	10

1. How many acres were in bearing and nonbearing fruit orchards, citrus or other groves, vineyards, and nut trees on this place in 1978?
2. Which kinds of fruit and nut trees were on this place in 1978? (Show Flash Card)

From the list at the right, enter name and code for the fruit trees, grapevines, and nut trees on this place in 1978. Report the following information for each crop even if not harvested because of low prices, damage from hail, frost, etc. For interplanted trees, estimate the area covered by each kind of fruit. If other crops were interplanted with trees, see Reference Manual, Ch. IV.

Crop name	Code	How many trees or vines were of –		How many acres of all ages?	What was or will be the quantity harvested?	Unit of measure Mark one			Lbs. per box
		Nonbearing age?	Bearing age?			Lbs.	Tons	Boxes	
		1	2	10	3	4	1	2	3
		1	2	10	3	4	1	2	3
		1	2	10	3	4	1	2	3
		1	2	10	3	4	1	2	3
		1	2	10	3	4	1	2	3

NONCITRUS CROPS		Code	CITRUS CROPS		Code
Apples	123		(Report quantity harvested in 1977–78 from bloom of 1977)		
Apricots	129		Grapefruit	267	
Avocados	135		Lemons	279	
Cherries	147		Oranges	297	
Grapes – dry weight	171		Tangelos	303	
Grapes – fresh weight	177		Tangerines and mandarins	309	
Olives	207		Other citrus – Specify	315	
Peaches	225				
Pears	231				
Plums and prunes – fresh weight	243				
Prunes – dry weight	249				
Other noncitrus – Specify	261				

If more space is needed, use the "Remarks."

Section 5 – Were or will any VEGETABLES, SWEET CORN, MELONS, etc., be harvested FOR SALE from this place in 1978?

- 005 1 ☐ YES – Complete this section
2 ☐ NO – Go to section 6

For Florida, report for September 1, 1977 through August 31, 1978 harvest season; for all other States report for calendar year 1978.

Acres	How many acres were or will be irrigated?
375	376
10	10

1. From how much land were or will vegetables be harvested in 1978?
2. Which vegetable crops were or will be harvested from this place in 1978? (Show Flash Card)

If more than one vegetable crop was harvested from the same acres, report acres for each crop. Report crops grown under protection in section 6.

Crop name	Code	How many acres were or will be harvested?	How many acres were or will be irrigated?
		10	10
		10	10
		10	10
		10	10
		10	10
		10	10

If more space is needed, use the "Remarks."

Crop name	Code	Crop name	Code
Asparagus	379	Cucumbers and pickles	411
Beans, snap (bush and pole)	381	Eggplant	415
Beets	383	Garlic	421
Broccoli	385	Honeydew melons	423
Cabbage	391	Lettuce and romaine	427
Cantaloups and Persian melons	395	Lima beans, green	429
Carrots	397	Mustard greens	431
Cauliflower	399	Onions, dry	433
Celery	401	Onions, green	435
Collards	407	Okra	437
Cowpeas (blackeyed and other green cowpeas)	409	Peas, green, including English (exclude green cowpeas)	441
		Peppers, sweet	443
		Peppers, hot	445

Section 6 – Were or will any NURSERY and GREENHOUSE PRODUCTS, sod, bulbs, flowers, flower seeds, vegetable seeds and plants, vegetables under glass or other protection, or MUSHROOMS be grown FOR SALE on this place in 1978?

- 006 1 ☐ YES – Complete this section
2 ☐ NO – Go to section 7

Area irrigated	
Square feet	Acres
477	478
10	10

1. How many square feet or acres of all products were or will be irrigated?
2. Which products were or will be grown on this place for sale in 1978? (Show Flash Card)

Product name	Code	How many square feet under glass or other protection in 1978?	How many acres in the open in 1978?	Gross value of sales in 1978	
				Dollars	Cents
		1	10	2	
		1	10	2	
		1	10	2	

If more space is needed, use the "Remarks."

Product name	Code	Product name	Code
Bedding plants (include vegetable plants)	479	Foliage and flowering plants	491
Bulbs	482	Mushrooms	494
Cut flowers and cut florist greens	485	Sod harvested	497
Nursery products (include environmental, lining-out stock, fruit and nut trees, and vines)	488	Vegetable and flower seeds	500
		Greenhouse vegetables	503
		Other – Specify	506

Section 7 – Were or will any STRAWBERRIES, CRANBERRIES, or OTHER BERRIES be harvested FOR SALE from this place in 1978?

- 007 1 ☐ YES – Complete this section
2 ☐ NO – Go to section 8

■ Which crops were or will be harvested from this place in 1978? (Show Flash Card)

Crop name	Code	How many acres were or will be harvested?	How much was or will be harvested?	How many acres were or will be irrigated?
		10	2	10
		10	2	10
		10	2	10

If more space is needed, use the "Remarks."

Crop name	Code	Crop name	Code
Blackberries and dewberries (pounds)	509	Raspberries (pounds)	533
Blueberries, tame (pounds)	512	Strawberries (pounds)	536
Blueberries, wild (pounds)	515	All other berries (pounds) – Specify	539
Cranberries (100-lb. barrels)	521		

Section 8 – Were or will any other crops be harvested from this place in 1978 – such as rice, peanuts, field seeds, sugar crops, or other crops not previously reported?

- 008 1 ☐ YES – Complete this section
2 ☐ NO – Go to section 9

■ Which crops were or will be harvested from this place in 1978? (Show Flash Card)

Crop name	Code	How many acres were or will be harvested?	How much was or will be harvested?	How many acres were or will be irrigated?
		1	2	
		1	2	
		1	2	
		1	2	
		1	2	
		1	2	
		1	2	
		1	2	
		1	2	

If more space is needed, use the "Remarks."

Crop name	Code	Crop name	Code
Alfalfa seed (pounds)	542	Proso millet (bushels)	665
Beans, dry field and seed (100-pound bags)	554	Red clover seed (pounds)	671
Beans, dry lima (100-pound bags)	557	(100-pound bags) or (bushels) or (barrels)	677
Buckwheat (bushels)	575	Rice	680
Corn cut for dry fodder, hogged or grazed (acres only)	581	(bushels) or (barrels)	683
Cowpeas for dry peas (bushels)	584	Rye for grain (bushels)	686
Emmer and spelt (bushels)	599	Ryegrass seed (pounds)	689
Fescue seed (pounds)	602	Safflower (pounds)	692
Flaxseed (bushels)	605	Sorghums cut for dry forage or hay (tons, dry weight)	698
Grains, mixed (bushels)	614	Sorghums hogged or grazed (acres only)	701
Kentucky Bluegrass seed (pounds)	629	Sugar beets for sugar (tons)	719
Lespedeza seed (pounds)	638	Sugarcane for sugar (tons)	722
Mint for oil (pounds of oil)	644	Sugarcane for seed (tons)	725
Peanuts for nuts (pounds)	656	Sunflower seed (pounds)	734
Peas, dry field and seed (pounds)	659	Timothy seed (pounds)	746
Popcorn (pounds, shelled)	662	Other crops (pounds) – Specify	773

Section 9 – The next questions relate to the gross value of the crops sold or to be sold from this place in 1978 before taxes and expenses. Estimates are acceptable. Include the value of the landlord's and/or contractor's share, estimating if necessary.

What will be the total dollar value of sales in 1978 from –

	None	Dollars	Cents
1. Grains sold in 1978, including Government CCC loans, include corn for grain, grain sorghums, rice, wheat and other small grains, soybeans, dry beans, dry peas and cowpeas, flaxseed, sunflower seed, popcorn, and safflower?		776	
a. Of the total, how much will be received in 1978 from Government CCC loans?		777	
2. Cotton and cottonseed including Government CCC loans?		778	
a. Of the total, how much will be received in 1978 from Government CCC loans?		779	
3. Tobacco?		780	
4. Field seeds, grass seed, hay, forage, and silage?		781	
5. Vegetables, sweet corn, and melons? – DO NOT include Irish potatoes or sweetpotatoes, report them in item 8 below.		782	
6. Fruits, nuts, berries – such as apples, peaches, grapes, citrus, pecans, strawberries, etc.?		783	
7. Nursery and greenhouse products?		784	
8. Other crops – peanuts, Irish potatoes, sweetpotatoes, sugar beets, sugarcane, mint for oil, hops, etc.? – Specify		785	

Section 10 – The next questions refer to the use of the land in this place during 1978. If the same land had more than one use in 1978, REPORT THAT LAND ONLY ONCE in the first "use" listed below that applies. (Show Flash Card)

1. Copy ACRES IN THIS PLACE from section 1, item 4, page 2 Acres

2. In 1978, how many acres of cropland were or will be –

	None	Number of acres
a. Harvested? (Include all land from which crops were or will be harvested or hay was or will be cut, and all land in orchards, citrus groves, vineyards, and nursery and greenhouse products. Add acres in sections 2–8. This total must be equal to or less than the total acres reported harvested in sections 2–8.)		787
b. Used for pasture or grazing? (Include rotation pasture and grazing land that could have been used for crops without additional improvements.)		788
c. Cropland used for cover crops, legumes, and soil-improvement grasses, but NOT harvested and NOT pastured?		789
d. Land on which all crops failed? (Exclude land in orchards and vineyards on which the crop failed. Such acreage is to be reported in item 2a.)		790
e. In cultivated summer fallow?		791
f. Idle?		792
3. How many acres of woodland were or will be – (Include all woodlots and timber tracts and cutover and deforested land with young timber growth.)		793
a. Pastured?		794
b. Not pastured?		795
4. How many acres of other pastureland and rangeland did you have in 1978? (Include any pastureland other than cropland and woodland pasture.)		796
5. How many acres of all other land did you have in 1978, such as house lots, ponds, roads, wasteland, etc.? (Include any land not reported in items 2 through 4 above.)		797
6. TOTAL ACRES – Add the acres reported in items 2 through 5 (Should be the same as item 1 above.)		798

Section 11 – Was or will any land in this place be irrigated at any time in 1978?

Irrigated land is all land watered by any artificial or controlled means – sprinklers, furrows or ditches, spreader dikes, etc. Include supplemental, partial, and preplant irrigation.

1. YES – Complete this section

2. NO – Go to section 12

	None	Number of acres irrigated
1. How many acres of the following were or will be irrigated in 1978?		799
a. HARVESTED LAND – (Reported in section 10, item 2a) – (Include land from which hay was cut and land in bearing and nonbearing fruit and nut crops.)		800
b. PASTURELAND OR RANGELAND – (Reported in section 10, items 2b and 4) – (Include spring flooding if water diverted or spread by dams, spreader dikes, canals, ditches, pipes, or other works.)		801
c. OTHER LANDS – Such as land not harvested due to complete crop failure, idle land, land in cultivated summer fallow, or land in cover crops and soil-improvement grasses		802
d. TOTAL ACRES – (Add acres reported in a, b, and c and enter total here.)		

Section 12 – Did you or anyone else have or expect to have any CATTLE or CALVES on this place in 1978?

1. YES – Complete this section

2. NO – Go to section 13

	None	INVENTORY on this place December 31, 1978
As of DECEMBER 31, 1978, how many –		803
1. CATTLE AND CALVES of all ages will be on this place?		Total all ages
Of these cattle and calves, how many will be –		804
a. BEEF COWS? (Include beef heifers that will have calved.)		Beef cows
b. MILK COWS kept for production of milk or cream for sale or home use? (Include dry milk cows and milk heifers that will have calved.)		805
		Milk cows
c. HEIFERS AND HEIFER CALVES? (Exclude heifers that will have calved.)		806
		Heifers and heifer calves
d. STEERS, STEER CALVES, BULLS, AND BULL CALVES?		807
		Steers and bulls of all ages

(Sum of a, b, c, and d must equal 1. If not, verify and adjust as necessary.)

Of the CATTLE AND CALVES SOLD OR TO BE SOLD FROM THIS PLACE in 1978, how many were or will be – (Include those fed on this place on a contract or custom basis. Also report as sold, cattle moved from this place to a feedlot for further feeding.)

	None	Number sold in 1978	Gross value of sales
			Dollars Cents
1. Calves weighing less than 500 pounds?		808	809
2. Cattle, including calves, weighing 500 pounds or more?		810	811
a. Of the total cattle sold, how many were or will be FATTENED on this place on GRAIN OR CONCENTRATES for 30 days or more and sold for slaughter?		812	813

What will be the gross value of DAIRY PRODUCTS sold from this place in 1978? (Report goat dairy products in section 15.)

	None	Gross value of sales
		Dollars Cents
814		

Section 13 – Did you or anyone else have or expect to have any HOGS or PIGS on this place in 1978?

1. YES – Complete this section

2. NO – Go to section 14

	None	INVENTORY on this place Dec. 31, 1978
As of DECEMBER 31, 1978, how many –		815
1. HOGS and PIGS of all ages will be on this place?		Total
Of these hogs and pigs, how many will be –		816
a. HOGS and PIGS used or to be used for BREEDING?		Breeding
b. OTHER HOGS and PIGS?		817
		Other

(Sum of a and b must equal 1. If not, verify and adjust as necessary.)

2. How many litters –

	None	Number of litters
a. Were farrowed on this place between December 1, 1977 and May 31, 1978?		818
b. Were or will be farrowed between June 1, 1978 and November 30, 1978?		819

How many HOGS and PIGS were SOLD or will be sold from this place in 1978?

	None	Number sold in 1978	Gross value of sales
			Dollars Cents
820		821	
822		823	

Section 14 – Did you or anyone else have or expect to have SHEEP or LAMBS on this place in 1978?

1. YES – Complete this section

2. NO – Go to section 15

	None	INVENTORY on this place December 31, 1978	How many will be sold in 1978?
1. How many SHEEP and LAMBS of all ages will be on this place on Dec. 31, 1978?		824	825
a. Of the expected inventory, how many will be EWES 1 year old or older?		826	

How many SHEEP and LAMBS were or will be SHORN on this place in 1978?

	None	Number shorn	How many pounds of wool were or will be shorn?
827		828	

What is the expected value of sales of sheep, lambs, and wool from this place in 1978?

	None	Gross value of sales
		Dollars Cents
829		

Section 15 - Did you or anyone else have or expect to have any HORSES, BEES, FISH, OTHER LIVESTOCK, or ANIMAL SPECIALTIES in 1978?

015

- 1 ☐ YES - Complete this section
2 ☐ NO - Go to section 16

How many of the following do you expect to have on this place December 31, 1978?

1. Horses and ponies of all ages ☐
2. Mules, burros, and donkeys ☐
3. Mink and their pelts ☐
- a. Mink females used or to be used for breeding ☐
4. Any other livestock or animal specialties such as (Show "List A" on Flash Card.) In captivity on this place in 1978? (Enter name and code from "List A.") ☐
- Name Code

INVENTORY on this place Dec. 31, 1978	What was or will be the total number sold in 1978?	How much was or will be the gross value of sales in 1978?	
		Dollars	Cents
830	831	832	
833	834	835	
836	837	838	
863			

5. What will be the quantity and value of other livestock products sold from this place in 1978? (Show "List B" on Flash Card.) ☐

Name Code

Acres under water for aquaculture	Total quantity sold in 1978	Gross value of sales	
		Dollars	Cents
2	OR Pounds	1	
	Gallons	\$	
1	OR Pounds	2	
3	OR	\$	
/10	Number		

6. Did you or will you have any fish or other aquaculture products grown in captivity on this place in 1978? None (Show "List C" on Flash Card.) ☐

Name Code

List A			
Name	Code	Name	Code
Colonies of bees	839	Other goats	848
Angora goats	842	Rabbits and their pelts	851
Milk goats	845	Chinchillas and their pelts	854
		Specify	860

List B			
Name	Code	Name	Code
Mohair sold	864	Catfish	872
Goats milk sold	866	Trout	876
Honey sold	868	Tropical and baitfish	880
Other livestock products - Specify	870	Specify	888

List C			
Name	Code	Name	Code
Other fish	884	Other aquaculture products - Specify	888

Section 16 - Did you or anyone else have or expect to have any POULTRY such as CHICKENS, TURKEYS, DUCKS, etc., on this place in 1978? (Include poultry grown for others on a contract basis.)

016

- 1 ☐ YES - Complete this section
2 ☐ NO - Go to section 17

1. On Dec. 31, 1978, how many chickens will be on this place that are -

- a. Hens and pullets of laying age? ☐
- b. Pullets 3 months old or older not yet of laying age? ☐
- c. Pullet chicks and pullets under 3 months old? (Exclude commercial broilers.) ☐
2. How many will be BROILERS, fryers, and other meat type chickens, including capons and roasters? ☐
3. How many turkeys will be -
- a. Turkeys for slaughter? (Exclude breeders.) ☐
- b. Turkey HENS kept for breeding? ☐

4. Did you have any OTHER POULTRY raised in captivity - such as ducks, geese, pigeons or squab, pheasants, quail, etc.? ☐

Poultry name Code

Poultry name Code

Name	Code	Name	Code	Name	Code
Ducks	904	Pigeons or squab	908	Quail	912
Geese	906	Pheasants	910	All other poultry - Specify	914

5. How many poultry will be hatched on this place in 1978 and placed or sold, such as chickens, turkeys, ducks, etc.? Specify kind of poultry ☐

6. What will be the incubator egg capacity on December 31, 1978? ☐

7. What will be the gross value of sales of poultry and poultry products (eggs, etc.) sold from this place in 1978? (Include estimated value of poultry and poultry products moved from this place by contractors and others.) ☐

INVENTORY on this place Dec. 31, 1978	What was or will be the total number sold in 1978?
892	893
894	895
896	897
898	899
900	901
902	903

Gross value of sales	None	Number
916		
917		

Gross value of sales	None	Dollars	Cents
918			
\$			

Section 17 - Did or will you have any income in 1978 from MACHINE WORK, CUSTOMWORK, and OTHER AGRICULTURAL SERVICES PROVIDED for others in 1978?

017

- 1 ☐ YES - Complete this section
2 ☐ NO - Go to section 18

1. How much will you receive in 1978 from machine work, customwork, and other agricultural services PROVIDED FOR OTHERS in 1978 for planting, plowing, harvesting, livestock breeding, etc.? ☐

Dollars	Cents
919	
\$	

2. What kind of work was or will be done? ☐

Section 18 - During 1978 have you sold or will you sell any crops, livestock, or livestock products DIRECTLY TO INDIVIDUALS FOR HUMAN CONSUMPTION at roadside stands, farmers markets, pick your own, etc.?

018

- 1 ☐ YES - Complete this section
2 ☐ NO - Go to section 19

1. What will be the gross value of those direct sales? ☐

Dollars	Cents
920	
\$	

2. What products are sold? ☐

Section 19 - ENUMERATOR TRANSCRIPTION ITEM (Mark from page 1.)

• TYPE A - INDIVIDUAL or FAMILY OPERATION 921
(Sole proprietorship) ☐

• TYPE B - PARTNERSHIP OPERATIONS
(Include family partnerships) ☐

922

• TYPE C - INCORPORATED UNDER STATE LAW

Is this a family held corporation? ☐ YES ☐ NO

Are there more than 10 stockholders? ☐ YES ☐ NO

• TYPE D - OTHER ORGANIZATIONS, such as cooperative, estate or trust, prison farm, grazing association, etc. ☐

Section 20 - OPERATOR CHARACTERISTICS AND OCCUPATION (If respondent is not operator, adjust questions 1 through 7 to reflect operator information.)

1. Do you (operator - person in charge or senior partner) live on this place? ☐ YES ☐ NO

923

2. What is your RACE? (Show Flash Card) ☐

924

1 ☐ White
2 ☐ Negro or Black
3 ☐ American Indian
4 ☐ Asian or Pacific Islander
9 ☐ Other - Specify

3. What is your AGE? ☐ Years old

925

4. Mark the sex of the operator (or senior partner). ☐ Male ☐ Female

926

5. Are you of Spanish origin or descent, such as Mexican, Mexican American, Cuban, or other Spanish? ☐ YES ☐ NO

927

6. At what occupation did you spend the majority (50 percent or more) of your work time in 1978? (For partnerships consider all members of the partnership together) ☐ Farming ☐ Other

928

7. How many days will you work at least 4 hours per day off this place in 1978? (Include work at a nonfarm job, business, or on someone else's farm. Exclude exchange farm work.) ☐

929

1 ☐ None
2 ☐ 1-49 days
3 ☐ 50-99 days
4 ☐ 100-149 days
5 ☐ 150-199 days
6 ☐ 200 days or more

Section 21 - Will any land in this place be held under FOREIGN OWNERSHIP in 1978?

021

- 1 ☐ YES - Complete this section
2 ☐ NO
3 ☐ Don't know
- Go to section 22

Of the total acres in this place, how many were owned by -

None	Acres
930	
931	

1. Individuals who are NOT citizens of the United States? ☐

2. A foreign held corporation, unincorporated association, or a foreign government? ☐

Section 22 – Was or will any COMMERCIAL FERTILIZER, including ROCK PHOSPHATE, or LIME be used on this place during 1978?

022

- 1 ☐ YES – Complete this section
 2 ☐ NO – Go to section 23

1. On how many acres of cropland (excluding cropland pastured) were or will commercial fertilizers be used in 1978? (Acres reported in section 10, items 2a and 2c-2f) ☐
2. On how many acres of pastureland and rangeland were or will commercial fertilizers be used in 1978? (Acres reported in section 10, items 2b and 4) ☐

None	Acres fertilized
	932
	933

3. How many tons of lime were or will be used on this place and on how many acres was or will it be applied in 1978? (Do not include land plaster or gypsum or lime for sanitation.) ☐

None	Tons	Acres
	934	935

Section 23 – Were or will any INSECTICIDES, HERBICIDES, FUNGICIDES, NEMATOCIDES, OTHER PESTICIDES, or OTHER CHEMICALS be used on this place in 1978?

023

- 1 ☐ YES – Complete this section
 2 ☐ NO – Go to section 24

Include any materials provided by you, your landlords, or contractors. If multipurpose chemicals were or will be used, report acreage treated for each purpose.

1. On how many acres were or will sprays, dusts, granules, fumigants, etc., (fungicide, herbicide, insecticide, nematocide) be used to control –

None	Number of acres on which used
	936
	937
	938
	939
	940

- a. Insects on hay and other crops? ☐
- b. Nematodes in crops? ☐
- c. Diseases in crops and orchards (blights, smuts, rusts, etc.)? ☐
- d. Weeds, grass, or brush in crops and pasture? ☐

2. On how many acres were or will chemicals for defoliation or for growth control of crops or thinning of fruit be used? ☐

3. Were or will any chemicals be used for –

- a. Insect control on livestock and poultry, including treatment of buildings? ☐ 941 ☐ YES ☐ NO
- b. Sanitation, rodent and bird control, etc. (Include time for sanitation.) ☐ 942 ☐ YES ☐ NO

Section 24 – The next items relate to MACHINERY AND EQUIPMENT expected to be on this place on December 31, 1978. (Include only equipment used or to be used for agricultural operations in 1977 or 1978.)

1. What will be the estimated market value of ALL machinery, equipment, and implements usually kept on this place and used for the farm or ranch business as of December 31, 1978? (Include cars, trucks, tractors, combines, plows, disks, harrows, dryers, pumps, motors, irrigation equipment, dairy equipment including milkers and bulk tanks, livestock feeders, grinding and mixing equipment, etc.)

Estimated market value	
Dollars	Cents
943	
\$	

2. How many of the following items will be on this place December 31, 1978? (Report only if used in 1977 or 1978.)

None	Total number on this place on December 31, 1978	Of the total, HOW MANY were manufactured in the last 5 years (1974-1978)? (Number)
	944	945
	946	947
	948	949
	950	951
	952	953
	954	955
	956	957
	958	959
	960	961
	962	963

- a. Automobiles ☐
- b. Motortrucks (Include pickups) ☐
- c. Wheel tractors other than garden tractors and motor tillers ☐
- d. Grain and bean combines, self-propelled only ☐
- e. Corn heads for combines ☐
- f. Other corn pickers and picker-shellers ☐
- g. Cotton pickers excluding strippers ☐
- h. Mower conditioners ☐
- i. Pickup balers ☐
- j. Field forage harvesters, shear bar or flywheel type ☐

Section 25 – How much was or will be spent during 1978 FOR THE FOLLOWING ENERGY and PETROLEUM PRODUCTS FOR THE FARM BUSINESS? (Show Flash Card)

Include expenditures paid by you or others for production of crops, livestock, or other agricultural products for this place in 1978.

	Expenditures		How many gallons will be purchased in 1978?	What will be the storage capacity on this place on Dec. 31, 1978?
	Dollars	Cents		
1. Gasoline for farm business ☐	966		967	968
2. Diesel fuel for the farm business ☐	969		970	971
3. LP gas, butane, propane for the farm business (4.5 lbs. = 1 gallon) ☐	972		973	974
4. Fuel oil for the farm business ☐	975		976	977
5. Natural gas for the farm business ☐	978			
6. Kerosene, motor oil, and grease for the farm business ☐	979			
7. Electricity for the farm business ☐	980			
8. Other – coal, wood, coke, etc. ☐	981			

Section 26 – Now I have some questions about SELECTED PRODUCTION EXPENSES paid by you and others for this place in 1978

Include best estimates of expenses to be paid by you (the operator), your landlord, contractors, buyers, and others for production of crops, livestock, and other agricultural products in 1978. DO NOT INCLUDE expenses connected with performing customwork for others, operation of nonfarm activities, businesses, or services; or household expenses not related to the farm business.

- During 1978 how much do you expect to spend for –

1. The purchase of livestock and poultry such as cattle, calves, hogs, pigs, sheep, lambs, goats, horses, chicks, poult, pullets, etc.? ☐

2. All feed purchased for livestock and poultry, include grain, hay, silage, mixed feeds, concentrates, etc.? ☐

- a. Of the total feed purchased how many tons are expected to be commercially mixed formula feeds, supplement, concentrates, etc.?

(Do not include ingredients purchased separately, such as soybean meal, cottonseed meal, and urea.)

Tons	Tenths	Dollars	Cents
984		985	
	/10	\$	

3. Animal health costs for livestock and poultry? (Include veterinarian services, serums, vaccines, medicines, etc.) ☐

4. Seeds, bulbs, plants, and trees purchased? ☐

5. Commercial fertilizers to include rock phosphate and gypsum? (Report cost of application in item 9 below.) ☐

6. Agricultural chemicals to include insecticides, herbicides, fungicides, other pesticides, lime, etc.? (Report cost of application in item 9 below.) ☐

7. Hired farm or ranch labor, include paid family workers? ☐

- a. Of the hired farm or ranch workers, how many will work –

- (1) 150 days or more in 1978? ☐
- (2) Less than 150 days in 1978? ☐

8. Contract labor? – Include expenditures primarily for labor, such as harvesting of fruit, vegetables, berries, etc., performed on a contract basis by a contractor, a crew leader, a cooperative, etc. ☐

9. Customwork, machine hire and rental of machinery and equipment? – Include expenditures for use of equipment and for customwork such as grinding and mixing feed, plowing, combining, corn picking, drying, silo filling, spraying, dusting, fertilizing, etc. (Exclude cost of cotton ginning.) ☐

Section 27 – WHAT IS YOUR BEST ESTIMATE OF THE CURRENT MARKET VALUE OF THE LAND AND BUILDINGS FOR THE (acres reported in section 1, items 1, 2, and 3) –

	Estimated current market value of land and buildings	
	Dollars	Cents
1. Land and buildings you own? ☐	996	
2. Land and buildings you rented or leased FROM OTHERS? ☐	997	
3. Land and buildings you rented or leased TO OTHERS? ☐	998	
Enumerator's signature	999	Date (Month/day) Year
		1978

Section 28 – When the data have been tabulated, do you want a summary sheet showing major Census results for your county?

029

- 1 ☐ YES ☐ NO

Enumerator – Go to column 9 of the A3 Listing Sheet and ask question. Be sure to follow the instructions contained in the column headings.

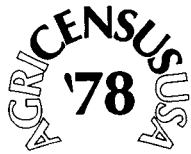
**PLEASE KEEP THIS SHEET AND THE STICKER
UNTIL MARCH 1, 1979**

In January 1979 you will probably receive from the Bureau of the Census a 1978 Census of Agriculture report form 78-A1 in the mail. IT WILL NOT BE NECESSARY FOR YOU TO FILL OUT THAT FORM; you have already provided the needed information to our enumerator.

The label below is a "signal" to us that you have provided the information. When the report form arrives, peel the label off this sheet and attach it to the form to the right of the address label already on the form. Please be sure not to cover the address label. Then return the form in the preaddressed envelope provided. If you should receive more than one report form, please return all forms with an address on them in the same envelope.

If you lose the sticker before the report form arrives (or if you receive more than one report form), write "COUNTED IN 1978" on the front of the report form and return it. If you do not receive a 1978 Census of Agriculture report form by March 1, 1979, you may discard this sheet and the label.

THANK YOU for your cooperation and assistance in making the 1978 Census of Agriculture a success.

		I HAVE BEEN COUNTED	
Name			
Address			
City		State	ZIP code
CENSUS USE ONLY	Segment ☐	☐	Line ☐

FORM 78-A15 (6-8-78)

DUE BY FEBRUARY 15, 1979

Form Approved: O.M.B. No. 41-S78025

NOTICE Response to this inquiry is required by law (title 13, U.S. Code). By the same law YOUR REPORT TO THE CENSUS BUREAU IS CONFIDENTIAL. It may be seen only by sworn Census employees and may be used only for statistical purposes. Your report CANNOT be used for purposes of taxation, investigation, or regulation. The law also provides that copies retained in your files are immune from legal process.

In correspondence pertaining to this report, please refer to the 11-digit Census File Number (CFN)

FORM 78-A1(N)
(4-10-78)U.S. DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS

1978 CENSUS OF AGRICULTURE

COMPLETE AND RETURN TO

Bureau of the Census
1201 East Tenth Street
Jeffersonville, Indiana 47132

Note → Please read the Information Sheet before completing the form.

If book figures are not available, reasonable estimates may be used. If filing by Feb. 15 causes an undue burden, a time extension request may be sent to the above address. Include your 11-digit Census File Number (CFN) as shown in your address label in all correspondence to us.

If you received more than one report form, enter extra Census File Number(s) here and return extra copies with your completed report.

CENSUS USE ONLY	035	036	037	038
	039	040	041	042

(Please correct errors in name, address, and ZIP code.)

SECTION 1 ACREAGE IN 1978

If the acres you operated in 1978 changed during the year, refer to the INFORMATION SHEET, Section 1.

Report land owned, rented, or used by you, your spouse, or by the partnership, corporation, or organization for which you are reporting. Include ALL LAND, REGARDLESS OF LOCATION OR USE — cropland, pastureland, rangeland, woodland, idle land, house lots, etc.

- None ☐ Number of acres
- | |
|-----|
| 043 |
| 044 |
| 045 |
| 046 |
- All land owned ☐
 - All land rented or leased FROM OTHERS, including land worked by you on shares, used rent free, in exchange for services, payment of taxes, etc. Include leased Federal, State, and railroad land. (DO NOT include land used on a per-head basis under a grazing permit.) Also complete item 5 below. ☐
 - All land rented or leased TO OTHERS, including land worked on shares by others and land subleased. Also complete item 6 below. ☐
 - ACRES IN THIS PLACE — ADD acres owned (item 1) and acres rented (item 2), then SUBTRACT acres rented TO OTHERS (item 3), and enter the result in this space. ☐

For this census report these are the "ACRES IN THIS PLACE."
If the entry is zero please refer to the INFORMATION SHEET, Section 1.

5. If you rented land FROM OTHERS (item 2) enter the following information for each landlord.

Name of landlord	Mailing address (include ZIP code)	Number of acres
		047
		048
		049

List additional landlords on a separate sheet of paper.

6. If you rented land TO OTHERS (item 3), enter the following information for each renter.

Name of renter	Mailing address (include ZIP code)	Number of acres
		050
		051
		052

List additional renters on a separate sheet of paper.

- a. Of the land you rented or leased to others, how many acres did you own? ☐ None 053 ☐ Acres

7. During 1978, did you have any Federal or State grazing permits on a per-head basis; such as Forest Service, Taylor Grazing, Indian Reservations, etc.? ☐ 054 ☐ 1 Yes ☐ 2 No

8. How many set aside acres did you have in the Federal Farm Program in 1978? ☐ None 055 ☐ Acres

9. LOCATION OF AGRICULTURAL ACTIVITY FOR THIS PLACE

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

Principal county →	County name	State	Number of acres
			056
			057
			058
			059

- b. If you also have agricultural operations in any other county(ies), enter the county name(s), etc. . .

INSTRUCTIONS

Sections 2 through 8 provide space for reporting crops harvested during 1978. Please report your crops in the appropriate section. Do not include crops grown on land rented to others. Use section 8 to report ONLY those crops NOT listed in sections 2 through 7.

SECTION 2 Were any of the FOLLOWING CROPS harvested from this place in 1978?

None ☐	Acres harvested	Quantity harvested	Acres irrigated
1. Field corn for grain or seed (Report quantity on a shelled-weight basis) . . . ☐	067	068 Bu. OR 069 Cwt.	069
2. Field corn for silage or green chop . . . ☐	070	071 Tons, green	072
3. Wheat for grain . . . ☐	073	074 Bu.	075
4. Oats for grain . . . ☐	076	077 Bu.	078
5. Barley for grain . . . ☐	079	080 Bu.	081
6. Sorghums for grain or seed (include milo) . . . ☐	082	083 Bu. OR 084 Lbs.	084
7. Sorghums for silage or green chop (exclude sorghum-sudan crosses) . . . ☐	085	086 Tons, green	087
8. Soybeans for beans . . . ☐	088	089 Bu.	090
9. Cotton . . . ☐	091	092 Bales	093
10. Tobacco — all types . . . ☐	094 /10	095 Lbs.	096 /10
11. Irish potatoes . . . ☐	097 /10	098 Cwt.	099 /10
12. Sweetpotatoes and yams . . . ☐	100 /10	101 Bu.	102 /10

SECTION 3 Was any DRY HAY, GRASS SILAGE, HAYLAGE, or GREEN CHOP cut or harvested from this place in 1978? (Include sorghum-sudan crosses and hay cut from pastures.)

- 003 ☐ 1 YES — Complete this section
☐ 2 NO — Go to section 4

If cuttings were made for both dry hay and grass silage, haylage, or green chop from the same fields, report the acreage in the appropriate items under DRY HAY and also under GRASS SILAGE, HAYLAGE, and GREEN CHOP.

■ DRY HAY

(If two or more cuttings of dry hay were made from the same acres, report acres only once, but report total tons from all cuttings.)

Acres harvested	Quantity harvested (Report either dry or green weight as indicated)	Acres irrigated
1. Alfalfa and alfalfa mixtures for hay or dehydrating . . .	103 Tons, dry	104
2. Small grain hay — oats, wheat, barley, etc.	106 Tons, dry	107
3. Other tame dry hay, clover, lespedeza, timothy, Bermuda grass, Sudan grass, etc. . .	109 Tons, dry	110
4. Wild hay . . .	112 Tons, dry	113

■ GRASS SILAGE, HAYLAGE, AND GREEN CHOP

(If two or more cuttings of grass silage, haylage, or green chop were made from the same acres, report acres only once, but report total tons from all cuttings.)

Acres harvested	Quantity harvested (Report either dry or green weight as indicated)	Acres irrigated
5. Grass silage and haylage . . .	115 Tons, green	116
6. Hay crops cut and fed green (green chop) . .	118 Tons, green	119

SECTION 9 GROSS VALUE OF CROPS SOLD from this place in 1978, BEFORE taxes and expenses (Refer to the INFORMATION SHEET, Section 9.) Report your best estimate of the value for each of the following groups of crops sold from this place in 1978. Include the value of the landlord's and/or contractor's share, estimating if necessary. Include value of Government CCC loans. 1. Grains sold in 1978, including Government CCC loans — corn for grain, grain sorghums, rice, wheat and other small grains, soybeans, dry beans, dry peas and cowpeas, flaxseed, sunflower seed, popcorn, and safflower ☐ None ☐ Dollars ☐ Cents a. Of the total, how much was received in 1978 from Government CCC loans? . . . ☐ None ☐ Dollars ☐ Cents 2. Cotton and cottonseed, including Government CCC loans ☐ None ☐ Dollars ☐ Cents a. Of the total, how much was received in 1978 from Government CCC loans? . . . ☐ None ☐ Dollars ☐ Cents 3. Tobacco ☐ None ☐ Dollars ☐ Cents 4. Field seeds, grass seeds, hay, forage, and silage ☐ None ☐ Dollars ☐ Cents 5. Vegetables, sweet corn, and melons — DO NOT include Irish potatoes or sweet potatoes, report them in Item 8 below. ☐ None ☐ Dollars ☐ Cents 6. Fruits, nuts, berries — apples, peaches, grapes, citrus, pecans, strawberries, etc. ☐ None ☐ Dollars ☐ Cents 7. Nursery and greenhouse products ☐ None ☐ Dollars ☐ Cents 8. Other crops — peanuts, Irish potatoes, sweet potatoes, sugar beets, sugarcane, mint for oil, hops, etc. — Specify ☐ None ☐ Dollars ☐ Cents	SECTION 12 Did you or anyone else have any CATTLE or CALVES on this place in 1978? 012 ☐ YES — Complete this section ☐ NO — Go to section 13 • DECEMBER 31, 1978 INVENTORY 1. CATTLE AND CALVES of all ages (Total of a, b, c, and d below) ☐ None a. BEEF COWS — Include beef heifers that had calved ☐ None b. MILK COWS kept for production of milk or cream for sale or home use — Include dry milk cows and milk heifers that had calved ☐ None c. HEIFERS AND HEIFER CALVES — Exclude heifers that had calved ☐ None d. STEERS, STEER CALVES, BULLS AND BULL CALVES ☐ None • CATTLE AND CALVES SOLD FROM THIS PLACE IN 1978 (Include those fed on this place on a contract or custom basis. Also report as sold, cattle moved from this place to a feedlot for further feeding.) 2. Calves weighing less than 500 pounds ☐ None 3. Cattle, including calves weighing 500 pounds or more ☐ None a. Of the total cattle sold, how many were FATTENED on this place on GRAIN or CONCENTRATES for 30 days or more and SOLD for SLAUGHTER? ☐ None • DAIRY PRODUCTS SOLD FROM THIS PLACE IN 1978 4. Gross value of sales of DAIRY PRODUCTS from this place in 1978. Report goat dairy products in section 15. ☐ None
SECTION 10 LAND USE IN 1978 1. Copy ACRES IN THIS PLACE from section 1, item 4, page 1. Acres NOTE: If the same land had more than one use in 1978, REPORT THAT LAND ONLY ONCE — in the use first listed below that applies. For example, cropland harvested and also pastured is to be reported only as "Cropland harvested." 2. CROPLAND ☐ None ☐ Number of acres a. Cropland harvested — Include all land from which crops were harvested or hay was cut, and all land in orchards, citrus groves, vineyards, and nursery and greenhouse products. ☐ 787 b. Cropland used only for pasture or grazing — Include rotation pasture and grazing land that could have been used for crops without additional improvements. ☐ 788 c. Cropland used for cover crops, legumes, and soil-improvement grasses, but NOT harvested and NOT pastured ☐ 789 d. Cropland on which all crops failed (Exception: Do not report here land in orchards and vineyards on which the crop failed. Such acreage is to be reported in Item 2a.) ☐ 790 e. Cropland in cultivated summer fallow ☐ 791 f. Cropland idle ☐ 792 3. Woodland — Include all woodlots and timber tracts and cutover and deforested land with young timber growth. ☐ 793 a. Woodland pastured ☐ 794 b. Woodland not pastured ☐ 795 4. Other pastureland and rangeland — Include any pastureland other than cropland and woodland pasture ☐ 796 5. All other land — Land in house lots, ponds, roads, wasteland, etc. Include any land not reported in items 2 through 4 above. ☐ 797 6. TOTAL ACRES — Add the acres reported in items 2 through 5 (Should be the same as Item 1 above.) ☐ 798	SECTION 13 Did you or anyone else have any HOGS or PIGS on this place in 1978? 013 ☐ YES — Complete this section ☐ NO — Go to section 14 • DECEMBER 31, 1978 INVENTORY 1. HOGS and PIGS of all ages (Total of a and b below) ☐ None a. HOGS and PIGS used or to be used for BREEDING ☐ None b. OTHER HOGS and PIGS ☐ None • LITTERS FARROWED 2. LITTERS FARROWED on this place between — a. December 1, 1977 and May 31, 1978 ☐ None b. June 1, 1978 and November 30, 1978 ☐ None • HOGS AND PIGS SOLD 3. HOGS and PIGS SOLD from this place in 1978 ☐ None 4. Of the hogs and pigs sold, how many were sold as FEEDER PIGS for further feeding? ☐ None
SECTION 11 Was any LAND in this place IRRIGATED at any time in 1978? Irrigated land is all land watered by any artificial or controlled means — sprinklers, furrows or ditches, spreader dikes, etc. Include supplemental, partial, and preplant irrigation. 011 ☐ YES — Complete this section ☐ NO — Go to section 12 1. How many acres of each of the following classifications of land were irrigated in 1978? a. HARVESTED LAND reported in section 10, item 2a — Include land from which hay was cut and land in bearing and nonbearing fruit and nut crops. ☐ None ☐ Number of acres irrigated b. PASTURELAND or RANGELAND reported in section 10, items 2b and 4 — Include spring flooding if water diverted or spread by dams, spreader dikes, canals, ditches, pipes, or other works. ☐ 800 c. ANY OTHER LANDS — Such as land not harvested due to complete failure, idle land, land in cultivated summer fallow, or land in cover crops and soil-improvement grasses. ☐ 801 d. TOTAL LAND IRRIGATED (Total of a, b, and c above.) ☐ 802	SECTION 14 Did you or anyone else have any SHEEP or LAMBS on this place in 1978? 014 ☐ YES — Complete this section ☐ NO — Go to section 15 • DECEMBER 31, 1978 INVENTORY 1. SHEEP and LAMBS of all ages ☐ None a. EWES 1 year old or older ☐ None • SHEEP AND LAMBS SOLD 2. SHEEP and LAMBS SHORN ☐ None 3. What was the gross value of sales of sheep, lambs, and wool from this place in 1978? ☐ None

SECTION 15 Did you or anyone else have any HORSES, BEES, FISH, OTHER LIVESTOCK, or ANIMAL SPECIALTIES in 1978?

015

- 1 ☐ YES - Complete this section
2 ☐ NO - Go to section 16

	INVENTORY Number on this place Dec. 31, 1978	Total number sold in 1978	Gross value of sales	
			Dollars	Cents
1. Horses and ponies of all ages ☐	830	831	832	
2. Mules, burros, and donkeys ☐	833	834	835	
3. Mink and their pelts ☐	836	837	838	
a. Mink females used for breeding ☐	863			
4. Other livestock or animal specialties in captivity (Enter name and code from "List A" below.)				
Name _____ Code _____		1	2	\$
5. Livestock or animal products (Enter name and code from "List B" below.)	Acres under water for aquaculture	Total quantity sold in 1978	Gross value of sales	
Name _____ Code _____			Dollars	Cents
6. Fish and other aquaculture products (Enter name and code from "List C" below.)				
Name _____ Code _____				

Name	Code	Name	Code	Name	Code
Colonies of bees	839	Other goats	848	Worms	857
Angora goats	842	Rabbits and their pelts	851	All other livestock - Specify	860
Milk goats	845	Chinchillas and their pelts	854		

Name	Code	Name	Code	Name	Code
Mohair sold	864	Catfish	872	Other fish - Specify	884
Goats milk sold	866	Trout	876	Other aquaculture products - Specify	888
Honey sold	868	Tropical and baitfish	880		
Other livestock products - Specify	870				

If more space is needed, use separate sheet of paper

SECTION 16 Did you or anyone else have any POULTRY such as CHICKENS, TURKEYS, DUCKS, etc., on this place in 1978? (Include poultry grown for others on a contract basis.)

016

- 1 ☐ YES - Complete this section
2 ☐ NO - Go to section 17

	INVENTORY Number on this place Dec. 31, 1978	Total number sold in 1978
894	895	
896	897	
898	899	
900	901	
902	903	
904	905	
906	907	
908	909	
910	911	
912	913	
914	915	
916	917	
918	919	
920	921	
922	923	
924	925	
926	927	
928	929	
930	931	
932	933	
934	935	
936	937	
938	939	
940	941	
942	943	
944	945	
946	947	
948	949	
950	951	
952	953	
954	955	
956	957	
958	959	
960	961	
962	963	
964	965	
966	967	
968	969	
970	971	
972	973	
974	975	
976	977	
978	979	
980	981	
982	983	
984	985	
986	987	
988	989	
990	991	
992	993	
994	995	
996	997	
998	999	
1000	1001	
1002	1003	
1004	1005	
1006	1007	
1008	1009	
1010	1011	
1012	1013	
1014	1015	
1016	1017	
1018	1019	
1020	1021	
1022	1023	
1024	1025	
1026	1027	
1028	1029	
1030	1031	
1032	1033	
1034	1035	
1036	1037	
1038	1039	
1040	1041	
1042	1043	
1044	1045	
1046	1047	
1048	1049	
1050	1051	
1052	1053	
1054	1055	
1056	1057	
1058	1059	
1060	1061	
1062	1063	
1064	1065	
1066	1067	
1068	1069	
1070	1071	
1072	1073	
1074	1075	
1076	1077	
1078	1079	
1080	1081	
1082	1083	
1084	1085	
1086	1087	
1088	1089	
1090	1091	
1092	1093	
1094	1095	
1096	1097	
1098	1099	
1100	1101	
1102	1103	
1104	1105	
1106	1107	
1108	1109	
1110	1111	
1112	1113	
1114	1115	
1116	1117	
1118	1119	
1120	1121	
1122	1123	
1124	1125	
1126	1127	
1128	1129	
1130	1131	
1132	1133	
1134	1135	
1136	1137	
1138	1139	
1140	1141	
1142	1143	
1144	1145	
1146	1147	
1148	1149	
1150	1151	
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1154	1155	
1156	1157	
1158	1159	
1160	1161	
1162	1163	
1164	1165	
1166	1167	
1168	1169	
1170	1171	
1172	1173	
1174	1175	
1176	1177	
1178	1179	
1180	1181	
1182	1183	
1184	1185	
1186	1187	
1188	1189	
1190	1191	
1192	1193	
1194	1195	
1196	1197	
1198	1199	
1200	1201	
1202	1203	
1204	1205	
1206	1207	
1208	1209	
1210	1211	
1212	1213	
1214	1215	
1216	1217	
1218	1219	
1220	1221	
1222	1223	
1224	1225	
1226	1227	
1228	1229	
1230	1231	
1232	1233	
1234	1235	
1236	1237	
1238	1239	
1240	1241	
1242	1243	
1244	1245	
1246	1247	
1248	1249	
1250	1251	
1252	1253	
1254	1255	
1256	1257	
1258	1259	
1260	1261	
1262	1263	
1264	1265	
1266	1267	
1268	1269	
1270	1271	
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(Sections 22 through 27 were collected from only 20 percent of the farms; see text)

SECTION 22 Was any COMMERCIAL FERTILIZER, including ROCK PHOSPHATE, or LIME used on this place during 1978? 022 ☐ YES - Complete this section ☐ NO - Go to section 23 <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;">1. Acres of cropland fertilized in 1978, other than cropland used only for pastures reported in section 10, item 2b</td> <td style="width: 20%; text-align: center;">Acres fertilized 932</td> </tr> <tr> <td>2. Acres of pastureland and rangeland fertilized in 1978 reported in section 10, items 2b and 4</td> <td style="text-align: center;">933</td> </tr> </table> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;">3. LIME - tons of lime used and acres on which applied (Do not include land plaster or gypsum or lime for sanitation)</td> <td style="width: 10%; text-align: center;">None</td> <td style="width: 10%; text-align: center;">Tons of lime 934</td> <td style="width: 10%; text-align: center;">Acres limed 935</td> </tr> </table>	1. Acres of cropland fertilized in 1978, other than cropland used only for pastures reported in section 10, item 2b	Acres fertilized 932	2. Acres of pastureland and rangeland fertilized in 1978 reported in section 10, items 2b and 4	933	3. LIME - tons of lime used and acres on which applied (Do not include land plaster or gypsum or lime for sanitation)	None	Tons of lime 934	Acres limed 935	SECTION 25 EXPENDITURES FOR ENERGY and petroleum products for the farm business during 1978 Include expenditures paid by you and others for production of crops, livestock, and other agricultural products from this place in 1978. <table style="width: 100%; border-collapse: collapse;"> <tr> <th rowspan="2"></th> <th colspan="2">Expenditures</th> <th rowspan="2">Gallons purchased in 1978</th> <th rowspan="2">Storage capacity on this place (in gallons)</th> </tr> <tr> <th>Dollars</th> <th>Cents</th> </tr> <tr> <td>1. Gasoline for farm business</td> <td>966</td> <td></td> <td>967</td> <td>968</td> </tr> <tr> <td>2. Diesel fuel for the farm business</td> <td>969</td> <td></td> <td>970</td> <td>971</td> </tr> <tr> <td>3. L.P. gas, butane, propane for the farm business (4.5 lbs. = 1 gallon)</td> <td>972</td> <td></td> <td>973</td> <td>974</td> </tr> <tr> <td>4. Fuel oil for the farm business</td> <td>975</td> <td></td> <td>976</td> <td>977</td> </tr> <tr> <td>5. Natural gas for the farm business</td> <td>978</td> <td></td> <td></td> <td></td> </tr> <tr> <td>6. Kerosene, motor oil, grease, for the farm business</td> <td>979</td> <td></td> <td></td> <td></td> </tr> <tr> <td>7. Electricity for the farm business</td> <td>980</td> <td></td> <td></td> <td></td> </tr> <tr> <td>8. Other - coal, wood, coke, etc.</td> <td>981</td> <td></td> <td></td> <td></td> </tr> </table>		Expenditures		Gallons purchased in 1978	Storage capacity on this place (in gallons)	Dollars	Cents	1. Gasoline for farm business	966		967	968	2. Diesel fuel for the farm business	969		970	971	3. L.P. gas, butane, propane for the farm business (4.5 lbs. = 1 gallon)	972		973	974	4. Fuel oil for the farm business	975		976	977	5. Natural gas for the farm business	978				6. Kerosene, motor oil, grease, for the farm business	979				7. Electricity for the farm business	980				8. Other - coal, wood, coke, etc.	981																																
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SECTION 23 Were any INSECTICIDES, HERBICIDES, FUNGICIDES, NEMATOCIDES, OTHER PESTICIDES, or OTHER CHEMICALS used on this place in 1978? 023 ☐ YES - Complete this section ☐ NO - Go to section 24 Include any materials provided by you, your landlords, or contractors. For each item listed, report acres only once. If multipurpose chemicals were used, report acreage treated for each purpose. <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;">1. Sprays, dusts, granules, fumigants, etc., (fungicide, herbicide, insecticide, nematocide) to control -</td> <td style="width: 20%; text-align: center;">Number of acres on which used 936</td> </tr> <tr> <td>a. Insects on hay and other crops</td> <td style="text-align: center;">937</td> </tr> <tr> <td>b. Nematodes in crops</td> <td style="text-align: center;">938</td> </tr> <tr> <td>c. Diseases in crops and orchards (blights, smuts, rusts, etc.)</td> <td style="text-align: center;">939</td> </tr> <tr> <td>d. Weeds, grass, or brush in crops and pasture</td> <td style="text-align: center;">940</td> </tr> </table> 2. Chemicals for defoliation or for growth control of crops or thinning of fruit 3. Were any chemicals used for - a. Insect control on livestock and poultry; including treatment of buildings? 941 ☐ Yes ☐ No b. Sanitation, rodent and bird control, etc.? 942 ☐ Yes ☐ No	1. Sprays, dusts, granules, fumigants, etc., (fungicide, herbicide, insecticide, nematocide) to control -	Number of acres on which used 936	a. Insects on hay and other crops	937	b. Nematodes in crops	938	c. Diseases in crops and orchards (blights, smuts, rusts, etc.)	939	d. Weeds, grass, or brush in crops and pasture	940	SECTION 26 SELECTED PRODUCTION EXPENSES paid by you and others for this place in 1978 Include your best estimates of expenses paid by you, your landlord, contractors, buyers, and others for production of crops, livestock, and other agricultural products in 1978. DO NOT INCLUDE expenses connected with performing customwork for others; operation of nonfarm activities, businesses, or services; or household expenses not related to the farm business. <table style="width: 100%; border-collapse: collapse;"> <tr> <th rowspan="2"></th> <th colspan="4">Selected expenditures</th> </tr> <tr> <th>Dollars</th> <th>Cents</th> <th></th> <th></th> </tr> <tr> <td>1. Livestock and poultry purchased - cattle, calves, hogs, pigs, sheep, lambs, goats, horses, chicks, poults, started pullets, etc.</td> <td>982</td> <td></td> <td></td> <td></td> </tr> <tr> <td>2. Total feed purchased for livestock and poultry - grain, hay, silage, mixed feeds, concentrates, etc.</td> <td>983</td> <td></td> <td></td> <td></td> </tr> <tr> <td>a. Commercially mixed formula feeds purchased - complete, supplement, concentrates. 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SECTION 24 MACHINERY AND EQUIPMENT on this place on December 31, 1978 (Include only equipment used for agricultural operations in 1977 or 1978.) • Value of ALL machinery and equipment on this place, December 31, 1978 1. What is the estimated market value of ALL machinery, equipment, and implements usually kept on this place and used for the farm or ranch business? Include cars, trucks, tractors, combines, plows, disks, harrows, dryers, pumps, motors, irrigation equipment, dairy equipment including milkers and bulk tanks, livestock feeders, grinding and mixing equipment, etc. <table style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2">Estimated market value</th> </tr> <tr> <th>Dollars</th> <th>Cents</th> </tr> <tr> <td>943</td> <td></td> </tr> </table> • SELECTED machinery and equipment on this place, December 31, 1978. (Report only if used in 1977 or 1978.) <table style="width: 100%; border-collapse: collapse;"> <tr> <th></th> <th>Total number on this place on December 31, 1978</th> <th>Of the total, HOW MANY were manufactured in the last 5 years (1974-1978)? (Number)</th> </tr> <tr> <td>2. Automobiles</td> <td>944</td> <td>945</td> </tr> <tr> <td>3. Motortrucks (Include pickups)</td> <td>946</td> <td>947</td> </tr> <tr> <td>4. Wheel tractors other than garden tractors and motor tillers</td> <td>948</td> <td>949</td> </tr> <tr> <td>5. Grain and bean combines, self-propelled only</td> <td>950</td> <td>951</td> </tr> <tr> <td>6. Corn heads for combines</td> <td>952</td> <td>953</td> </tr> <tr> <td>7. Other corn pickers and picker-shellers</td> <td>954</td> <td>955</td> </tr> <tr> <td>8. Cotton pickers (Exclude cotton strippers)</td> <td>956</td> <td>957</td> </tr> <tr> <td>9. Mower conditioners</td> <td>958</td> <td>959</td> </tr> <tr> <td>10. Pickup balers</td> <td>960</td> <td>961</td> </tr> <tr> <td>11. Field forage harvesters, shear bar or flywheel type</td> <td>962</td> <td>963</td> </tr> </table>	Estimated market value		Dollars	Cents	943			Total number on this place on December 31, 1978	Of the total, HOW MANY were manufactured in the last 5 years (1974-1978)? (Number)	2. Automobiles	944	945	3. Motortrucks (Include pickups)	946	947	4. Wheel tractors other than garden tractors and motor tillers	948	949	5. Grain and bean combines, self-propelled only	950	951	6. Corn heads for combines	952	953	7. Other corn pickers and picker-shellers	954	955	8. Cotton pickers (Exclude cotton strippers)	956	957	9. Mower conditioners	958	959	10. Pickup balers	960	961	11. Field forage harvesters, shear bar or flywheel type	962	963	SECTION 27 ESTIMATED MARKET VALUE OF LAND AND BUILDINGS Please give your best ESTIMATE of the CURRENT MARKET VALUE of land and buildings for the acres reported in section 1, items 1, 2, and 3, page 1. <table style="width: 100%; border-collapse: collapse;"> <tr> <th rowspan="2"></th> <th colspan="2">Estimated current market value of land and buildings</th> </tr> <tr> <th>Dollars</th> <th>Cents</th> </tr> <tr> <td>1. All land owned</td> <td>996</td> <td></td> </tr> <tr> <td>2. All land rented or leased FROM OTHERS</td> <td>997</td> <td></td> </tr> <tr> <td>3. All land rented or leased TO OTHERS</td> <td>998</td> <td></td> </tr> </table>		Estimated current market value of land and buildings		Dollars	Cents	1. All land owned	996		2. All land rented or leased FROM OTHERS	997		3. All land rented or leased TO OTHERS	998																																
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Form 78-A1(I)
(10-17-78)U.S. DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS

INFORMATION SHEET

1978 CENSUS OF AGRICULTURE

GENERAL INFORMATION

WE NEED A COMPLETED REPORT FORM FROM EVERYONE receiving this request. Please follow the instructions given below for completing section 1. You will then be able to determine what additional information is to be provided.

1. The enclosed census report form is being used by farms and ranches throughout the entire United States. Because it is meant for use in all parts of the country, it may contain sections and inquiries which do not apply to you. In this case, mark the "None" or "No" box and go on to the next item or section.

2. If You Receive More Than One Report Form
If you have multiple farming operations, you should complete a report for EACH SEPARATE and DISTINCT production unit, that is, each individual farm, ranch, feedlot, greenhouse, etc., or combination of farms, etc., for which you maintain SEPARATE records of operating expenses and sales, livestock and other inventories, crop acreages, and production. Return any duplicate or extra report forms in the same envelope with the report(s) you complete so we can remove the extra addresses from our mail register. In the space provided to the right of the address label of the report form you complete, write the 11-digit number from the label of the extra form or forms.

3. Partnership Operations

A partnership is an association of two or more persons who have agreed (informally or under legal contract) on the amount of their contributions and profit distributions.

Complete only ONE report for the entire partnership farm and ranch operation, including all partners' shares on the same report. If two or more report forms were received for the partnership see 2 above.

Partners who also have separate operations of their own should complete reports for those separate operations. For additional information on Partnerships see section 19 below.

4. How To Enter Your Responses On The Report Form

Please enter your answers in the proper spaces, on the correct lines, and in the units requested, i.e., dollars, bushels, tons, etc. Write any explanation outside the answer spaces or on a separate sheet of paper.

Enter whole numbers unless the "Tenths" column is provided, such as reporting acres of Irish potatoes in section 2. If you have 1/2, 1/4, or 1/3 of an acre, convert to tenths. For example convert 1/2 to 5/10, 1/3 to 3/10, 1/4 to 2/10, etc.

If you do not recall exact figures, please give your best estimate. You may indicate "Est." (for estimated) beside the answer, if you like. For all dollar items, we need only whole dollars, although a "Cents" column is provided for those who wish to report cents.

COMPLETING THE REPORT FORM

Section 1 — ACREAGE IN 1978

This section determines the land for which you should report agricultural activities. It also provides space for reporting landlords, renters, and location(s) of agricultural activities.

Changes in the Acres Operated in 1978 — Report all land that YOU USED during 1978, and the crops and livestock production on that land, even if some or all of it was no longer a part of your operation on December 31, 1978.

If you had agriculture operations at any time during 1978, but quit farming before December 31, 1978, report your 1978 crop and livestock production and sales from that land for the portion of the year that you operated the land. Please explain in the margin of the report form (or on a separate sheet of paper) that you quit farming or ranching during 1978 and give the approximate date and the name and address of the present operator, if known.

If you acquired land for agricultural operations, but did not use it for livestock or crop production in 1978, include the land in section 1. Please explain in the margin or on a separate sheet of paper.

Completing Items 1, 2, 3, and 4 of Section 1 — Use items 1, 2, and 3 to determine the acres of land that are your responsibility for the purpose of making the agriculture census report. Include all land that you were associated with in 1978, regardless of location or use, but do not include holdings of residential property not associated with agricultural operations. Report all land in whole acres in this section.

Item 1 — Land Owned — Report all land owned in 1978 whether held under title, purchase contract or mortgage, homestead law, or as heir or trustee of an undivided estate, by you and/or your spouse, or by the partnership, corporation, or organization for which you are reporting.

Item 2 — Land Rented or Leased FROM Others — Report all land rented by you, even though the landlord may have supplied equipment, fertilizer, or other materials and/or some supervision of the work.

INCLUDE in item 2 —

- Land (for agricultural uses) that you rented FROM others for cash payments
- Land worked on a share basis
- Land (owned by someone else) which you used rent-free
- Federal, State, Indian, or railroad land rented or leased by the acre

DO NOT INCLUDE in item 2 — Land used on a per-head or animal unit license or permit basis, such as land used under section 3 of the Taylor Grazing Act, National Forest Land, or Indian Reservation Permit Land.

Item 3 — Land Rented TO OTHERS — Cash tenants, share tenants, and share croppers are farm operators for census purposes and are responsible for making the agriculture census report for the land they operate.

INCLUDE in item 3 —

- Owned land rented TO others for cash or a share of the crops or livestock
- Land which you rented from others and then subleased to others in 1978
- Land rented out for residential or other nonfarm purposes, if it was part of the land reported in item 1 or 2
- Land worked for you by someone else on a share-of-crop basis
- Land which you allowed others to use rent-free

NOTE: Please enter the names and addresses of renters, tenants, and sharecroppers in item 6.

Item 4 — Acres in this Place — This is the sum of the land that you owned in 1978 (item 1), PLUS the land that you rented FROM others (item 2), MINUS the land that you rented TO others (item 3). It is very important that you report this figure correctly (even if "0" acres), since the remainder of your report should cover only those operations on "the Acres in This Place" reported in item 4.

"Zero Acres in Place" — Should you complete the rest of this form?

If you yourself had crop or livestock activities on the land for any portion of the year, you should complete the rest of the form. See "Changes in Acres Operated in 1978," above.

If all your land was operated by a renter or sharecropper for all of 1978, you do not have to complete the entire form. In this case, you should:

- Complete item 6 for renter.
- Skip to section 28 and complete Name, Address, Telephone number, etc.
- Explain briefly in the margin or on separate paper that you did not operate a farm or ranch in 1978. For example, "All land rented out," "Sold Farm," "Retired," etc., and give the approximate date that

you quit operating. If you sold your farm, please give the name and address of current owner or operator, if known.

d. Mail the form in the return envelope provided.

Item 7 — Grazing Permits — In some States, government lands and Indian lands are used for grazing livestock under permit or special license, with payments on a per-head or animal unit basis. This land should NOT be included as part of item 2, "Land rented or leased FROM others," or item 4, "Total Acres in This Place." But you should include in your report any livestock located on permit land in 1978.

Sections 2—8 — CROPS

Sections 2 through 8 provide space for reporting crops harvested during the 1978 crop year from the land shown in section 1, item 4, of your report. Please report your crops in the appropriate section. Do not include any crops grown on land rented, leased, or worked on shares by others during 1978.

Acres Harvested — Enter the acres harvested in 1978. Round fractions to whole acres except where tenths are requested, as for Irish potatoes.

Quantity Harvested — The units of measure on the report form are those most commonly used throughout the country. If you use a different unit of measure, please convert your figure for quantity harvested to the unit requested. If harvest is incomplete by December 31, 1978, please estimate the total quantity harvested.

Crop Irrigation — For each crop irrigated, report number of acres irrigated. Irrigation is defined as land watered by artificial or controlled means — sprinklers, furrows or ditches, spreader dikes, purposeful flooding, etc. Include acres that received supplemental, partial, and preplant irrigation. For any crop not irrigated, leave "Acres irrigated" blank.

How to Report Crops Harvested

a. **Sections 2 and 3** — In these two sections, separate lines are provided for reporting each of several crops widely grown in the United States. Do not write in data for any other crops.

b. **Sections 4—8** — In each of these sections, report any of the crops listed in the same section. To report a crop in any of these sections, (1) find the crop name and the code number in the list in the section; (2) enter crop name and code in the first two columns of the first available answer line in the section; (3) enter the information requested in the headings of the remaining columns.

Example: A farmer harvested 20 acres of alfalfa seed, yielding 6,000 pounds, and 30 acres of red clover seed, yielding 8,400 pounds. (He did not irrigate either crop.) He would enter the following in section 8:

SECTION 8			
Have any OTHER CROPS harvested from this place in 1978 — crop details			
List each seed, sugar crop, or other crop not previously reported			
☐ Yes Complete this section ☐ No Do not complete			
Crop name	Code	Acres harvested	Quantity harvested
Alfalfa seed	542	20	6,000
Red clover seed	671	30	8,400

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

Two or More Crops Harvested From The Same Land (Double-Cropping) — Report the total acres and production of each harvested crop in the appropriate section of the report form.

Example: A farmer harvested 1,230 bushels of wheat from 40 acres in 1978, then planted and harvested 1,550 bushels of soybeans from the same 40 acres before the end of the year. He irrigated the soybeans but not the wheat.

Correct entries			
	Acres	Bushels	Acres irrigated
Item 3 Wheat	40	1,230	—
Item 8 Soybeans	40	1,550	40

Sections 2-8 - CROPS - Continued

Interplanted Crops and "Skip Row" Planting - If two crops were grown at the same time in alternating strips in the same field, report the portion of the field used for each crop.

Example: A 60 acre field was planted in cotton and soybeans, with two rows of cotton followed by an area of the same width planted in soybeans. Thirty acres of soybeans would be reported in section 2, item 8, and 30 acres of cotton in section 2, item 9.

Vegetables - Report acres of vegetables harvested FOR SALE. Do not report acres of vegetables for home use. Report the total acreage of each vegetable crop harvested.

Example: You harvested 10 acres of lettuce from a field in 1978, then replanted the field to lettuce and harvested the 10 acres again. Enter only 10 acres of land from which vegetables were harvested in item 1 of section 5, but write in 20 acres of lettuce harvested in item 2 of section 5.

Fruit and Nuts - In counting the combined total of 20 or more trees and vines, include those for home use as well as those maintained for sale of the production (exclude abandoned trees).

If crops other than fruit and nut trees and vines were interplanted with trees or vines, report the total acres for BOTH the orchard and the interplanted crops harvested.

Example: If 20 acres of cotton were grown in a 30 acre pecan orchard, you would report 20 acres of cotton in section 2, item 9, and 30 acres of pecans in section 4.

Avocados, Olives, Sugarcane

Avocados - For California report the quantity harvested from November 1, 1977 through November 30, 1978. For Florida report the quantity harvested from April 1978 through March 1979, estimating if necessary.

Olives - Report the quantity harvested from the bloom of 1977 for the October 1977 to March 1978 harvest season.

Sugarcane - For Florida and Texas report cuttings from November 1977 through April 1978. For Louisiana and Hawaii report for the 1978 crop year.

Section 9 - GROSS VALUE OF CROPS SOLD

Report the values received during 1978, regardless of the year in which the crops were harvested. Give gross values (before deducting taxes and expenses). If full payment was not received for a crop or crops sold in 1978, report only the amount actually received in 1978.

For value of grains and cotton, include as sold the value of government CCC loans received in 1978 but not loans obtained from any other government or private source.

Section 10 - LAND USE

The purpose of this section is to classify the acres you reported in section 1, item 4, by principal use in 1978. Do not include any acres you rented TO others (reported in section 1, item 3).

Land Used for Multiple Purposes - If part of your land was used for more than one purpose in 1978, report that land on the line for the use first listed, and NOT on the line for the second use. For example, if you plowed under a cover crop, and planted and harvested a grain crop, report the land in item 2a, "Cropland harvested," but NOT as "Cropland used for cover crop, legumes, . . . etc." (item 2c).

Double Cropping - When more than one crop was harvested from the same land in 1978, report that land only ONCE as "Cropland Harvested," item 2a of this section.

Interplanted Crops - If you interplanted crops, such as cotton in an orchard, report the total land used for both crops only ONCE, as "Cropland Harvested," in item 2a.

Section 12-16 - LIVESTOCK AND POULTRY

Animals and Poultry to be Included in the Report - Report all animals and poultry on the place on December 31, 1978. Include all owned by you and any kept by you for others. Include animals on unfenced land, on National Forest land, on district land or cooperative grazing association land, or on rangeland administered by the Bureau of Land Management on a per-head or lease basis (such as on wheat pasture). Include poultry (broilers, layers, turkeys, etc.) fed under contract on "This Place." Include livestock and poultry kept on this place for home use, 4H projects, etc.

Number sold - Report all animals and poultry sold or removed from this place including those sold for a landlord or given to a landlord as his share or to others in trade or in payment for goods and services. Include animals of all ages without regard to ownership or who shared in the receipts if the animals were located on the place 30 days or more and were sold or removed from the place in 1978.

Sales from Contract and Custom Feeding Operations - Include animals and poultry (including poultry under contract) fed on this place on a contract or custom basis if they were removed from the place in 1978.

Value of Sales - Be sure to report the total gross value of sales of animals and poultry without deducting cost of feed, cost of livestock purchased, cost of hauling and selling, etc. If the sale price or value is not known, give your best estimate of their value when they left this place.

Animals Moved to Another Place - For animals removed from this place to another place, such as for further feeding, report the number as sold and give your best estimate of their market value when they left this place.

Animals to be Excluded from the Report - Do not report any animals or poultry kept under a share arrangement on land rented TO others in 1978.

Animals Sold from Another Place - Animals owned by you, but held and sold from someone else's place should NOT be included. For example, do not report cattle purchased elsewhere, fed in, and sold from a feedlot not part of this place.

Animals Bought and Sold - Do not include animals bought and resold within 30 days. Such purchases and sales are considered "dealer" transactions.

Fat Cattle Sales - Do not include with fattened cattle in item 3a of section 12:

- Veal calves which were fattened primarily on milk, or
- Dairy cows fed only the usual dairy ration before being sold, or
- Cattle and calves that were sold for further feeding.

All Other Livestock - Specify the name of any other livestock, animal specialty, or livestock products on or sold from this place that have not been accounted for elsewhere on this form.

Example: Bees sold (colonies, packages, pounds); semen sales, animals bred and sold for laboratory use; birds, frogs, etc.

Section 19 - TYPE OF ORGANIZATION

Use the following definitions to assist you in determining the type of organization for your operation.

Individual or Family Operation (Sole Proprietorship) - Defined as a farm or business organization controlled and operated by an individual. Includes family operations that are not incorporated and not operated under a partnership agreement.

Partnership Operation - Defined as two or more persons who have agreed on the amount of their contribution (capital and effort) and the distribution of profits. Co-ownership of land by husband and wife or joint filing of income tax forms by husband and wife does not constitute a partnership, unless the agreement to share contributions, decisionmaking, profits, and liabilities exists. Producing products under contract or under a share rental agreement does not constitute a partnership.

Corporation - Defined as a legal entity or artificial person created under the laws of a State to carry on a business. This definition does not include cooperatives.

Other - Such as cooperative (defined as an incorporated or unincorporated enterprise or association created and formed jointly by the members), estate or trust (defined as fund of money or property administered for the benefit of another individual or organization), prison farm, grazing association, Indian reservation, etc.

Section 20 - OPERATOR CHARACTERISTICS AND OCCUPATION

This section applies to the characteristics and occupation of the individual owner, operator, senior partner, or person in charge for the type of organization reported in section 19 of the form.

For Individual or Family Operation (Sole Proprietorship) - Complete this section for the operator.

For Partnership Operations - Complete items 1 through 5 and 7 (of this section) for the "Senior Partner." The "Senior Partner" is the individual who is mainly responsible for the agricultural operations on this place. Consider the oldest partner as the "Senior Partner" if each shares equally in the day-to-day management decisions. For item 6 (Principal Occupation) consider all members of the partnership together. Please include as "Farming" worktime at all types of agricultural enterprises, including specialties, such as greenhouses, nurseries, mushrooms, ranching, feed lots, broiler feeding, etc.

For Incorporated and Other Operations (Co-operatives, Estates, etc.) - Complete section 20 for the person in charge, such as hired manager, business manager, or other person primarily responsible for the on-site, day-to-day operation of the farm or ranch business.

Section 22 - COMMERCIAL FERTILIZER

Report acres on which commercial fertilizer was applied during 1978. If some acres where fertilized more than once, report acres ONLY ONCE.

Section 24 - MACHINERY AND EQUIPMENT

The estimated market value in item 1 refers to ALL machinery and equipment kept on this place and used for the farm business. The value should be an estimate of what the machinery and equipment would sell for in its present condition, not the replacement or depreciated value.

Section 26 - SELECTED PRODUCTION EXPENSES

Include expenses paid by you and by anyone else for the production of crops, poultry, livestock, and other agricultural products on this place. Also include expenses incurred even if payment was not made in 1978. Please give estimates if you do not know the exact figures. For example, if you grew broilers or fed cattle for others, include in item 1, as purchases, your best estimate of the value of the baby chicks or cattle at the time they were brought to this place. Also include in item 2, the value and amount of all feed purchased by you or someone else for use on this place.

Do not include expenses related to nonfarm activities (trading and speculation, or livestock dealer activities).

Hired Labor - Expenditures for hired labor should include gross wages or salaries, commissions, paid bonuses, and leave pay before deductions, plus the value of benefits paid by you - Social Security taxes, unemployment insurance, etc. Do not include room and board, house rent, or other items paid in kind.

Form Approved O.M.B. No. 41-578025

DUE BY FEBRUARY 15, 1979

NOTICE Response to this inquiry is required by law (title 13, U.S. Code). By the same law YOUR REPORT TO THE CENSUS BUREAU IS CONFIDENTIAL. It may be seen only by sworn Census employees and may be used only for statistical purposes. Your report CANNOT be used for purposes of taxation, investigation, or regulation. The law also provides that copies retained in your files are immune from legal process.

In correspondence pertaining to this report, please refer to the 11-digit Census File Number (CFN)

FORM 78-A1(H)
(7-25-78)U.S. DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS**1978 CENSUS OF AGRICULTURE**

HAWAII

COMPLETE AND RETURN TO

Bureau of the Census
1201 East Tenth Street
Jeffersonville, Indiana 47132**Note** Please read the Information Sheet before completing the form.

If book figures are not available, reasonable estimates may be used. If filing by Feb. 15 causes an undue burden, a time extension request may be sent to the above address. Include your 11-digit Census File Number (CFN) as shown in your address label in all correspondence to us.

If you received more than one report form, enter extra Census File Number(s) here and return extra copies with your completed report.

CENSUS USE ONLY	035	036	037	038
	039	040	041	042

(Please correct errors in name, address, and ZIP code.)

SECTION 1 ACREAGE IN 1978

If the acres you operated in 1978 changed during the year, refer to the INFORMATION SHEET, Section 1.

Report land owned, rented, or used by you, your spouse, or by the partnership, corporation, or organization for which you are reporting. Include ALL LAND, REGARDLESS OF LOCATION OR USE — cropland, pastureland, rangeland, woodland, idle land, house lots, etc.

	None	Number of acres
1. All land owned	☐	043
2. All land rented or leased FROM OTHERS, including land worked by you on shares, used rent free, in exchange for services, payment of taxes, etc. Include leased Federal, State, and railroad land. (DO NOT include land used on a per-head basis under a grazing permit.) Also complete item 5 below.	☐	044
3. All land rented or leased TO OTHERS, including land worked on shares by others and land subleased. Also complete item 6 below.	☐	045
4. ACRES IN THIS PLACE — ADD acres owned (item 1) and acres rented (item 2), then SUBTRACT acres rented TO OTHERS (item 3), and enter the result in this space.	☐	046

For this census report these are the "ACRES IN THIS PLACE."

If the entry is zero please refer to the INFORMATION SHEET, Section 1.

5. If you rented land FROM OTHERS (item 2) enter the following information for each landlord.

Name of landlord	Mailing address (include ZIP code)	Number of acres
		047
		048
		049

List additional landlords on a separate sheet of paper.

6. If you rented land TO OTHERS (item 3), enter the following information for each renter.

Name of renter	Mailing address (include ZIP code)	Number of acres
		050
		051
		052

List additional renters on a separate sheet of paper.

- a. Of the land you rented or leased to others, how many acres did you own? ☐ None 053 ☐ Acres
7. During 1978, did you have any Federal or State grazing permits on a per-head basis, such as Forest Service, Taylor Grazing, Indian Reservations, etc.? ☐ 054 ☐ Yes ☐ No
8. How many set aside acres did you have in the Federal Farm Program in 1978? ☐ None 055 ☐ Acres

9. LOCATION OF AGRICULTURAL ACTIVITY FOR THIS PLACE

- a. In what county was the largest value of your agricultural products raised or produced?
- | County name | State | Number of acres |
|------------------|-------|-----------------|
| Principal county | | 056 |
| Other counties | | 057 |
| | | 058 |
| | | 059 |
- b. If you also have agricultural operations in any other county(ies), enter the county name(s), etc.

INSTRUCTIONS

Sections 2 through 6 provide space for reporting crops harvested during 1978. Please report your crops in the appropriate section. Do not include crops grown on land rented to others. Use section 6 to report ONLY those crops NOT listed in sections 2 through 5.

SECTION 2 Was any SUGARCANE or PINEAPPLES harvested or growing on this place in 1978?

- 002
- 1 ☐ YES — Complete this section
- 2 ☐ NO — Go to section 3

	Acres harvested or for future harvest	Quantity harvested	Acres irrigated
1. Sugarcane for sugar harvested in 1978 (Do not report tons of raw or refined sugar)	722	723 Tons of cane	724
2. Sugarcane for seed	725	726 Tons	727
3. Sugarcane NOT harvested in 1978	731		733
4. Pineapples harvested in the year ending May 31, 1978	061	062 Tons	063
5. Pineapples NOT harvested in the year ending May 31, 1978	064		066

SECTION 3 Were any VEGETABLES, SWEET CORN, MELONS, etc., harvested FOR SALE from this place in 1978?

- 003
- 1 ☐ YES — Complete this section
- 2 ☐ NO — Go to section 4

Acres				Acres irrigated			
Whole acres		Tenths		Whole acres		Tenths	
375				376			
		/10				/10	

1. Land from which vegetables were harvested in 1978.

2. From the list below, enter the crop name and code for each crop harvested in 1978.
If more than one vegetable crop was harvested from the same acres, report acres for each crop. Report crops grown under protection in section 5.

Crop name	Code	Acres harvested		Acres irrigated	
			1		
			/10		/10
			1		
			/10		/10
			1		
			/10		/10
			1		
			/10		/10
			1		
			/10		/10
			1		
			/10		/10

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

Crop name	Code	Crop name	Code	Crop name	Code
Beans, snap (bush and pole)	381	Cucumbers	411	Pumpkins	449
Broccoli	385	and pickles	412	Radishes	451
Cabbage, Chinese	389	Daiikon	413	Spinach	457
Cabbage, head	391	Eggplant	415	Squash	459
Cabbage, mustard	393	Lettuce	427	Sweet corn	461
Carrots	397	and romaine	427	Tomatoes	463
Cauliflower	399	Onions, dry	433	Watercress	471
Celery	401	Onions, green	435	Watermelons	473
Chinese peas	405	Parsley	439	Other vegetables —	
		Peppers, sweet	443	Specify	475

SECTION 4 Was there a COMBINED TOTAL of 20 or more nut trees, banana plants, coffee trees, or fruit trees including citrus on this place in 1978? (Do NOT include abandoned trees or plantings.)

004

1 ☐ YES - Complete this section2 ☐ NO - Go to section 5

Total acres		Acres irrigated	
Whole acres	Tenths	Whole acres	Tenths
121	10	122	10

1. Total acres in bearing and nonbearing fruit orchards, groves, coffee trees, nut trees, and banana plants

2. Report the following information for each crop even if not harvested because of low prices, or damage from weather. For interplanted trees, estimate the area covered by each kind of fruit.

Crop name	Code	NUMBER OF TREES OR PLANTS OF -		Acres all ages		Quantity harvested
		Nonbearing age	Bearing age	Whole acres	Tenths	
Avocados	135		1	2	/10	Pounds
Bananas	141		1	2	/10	Pounds
Coffee (1977-78 crop)	153		1	2	/10	Pounds (parchment)
						Pounds (cherry)
Guavas	183		1	2	/10	Pounds
Limes	285		1	2	/10	Pounds
Macadamia nuts	333		1	2	/10	Pounds (husked, unshelled)
						Pounds (shelled, nuts)
Mangoes	195		1	2	/10	Pounds
Oranges	297		1	2	/10	Pounds
Papayas	213		1	2	/10	Pounds
Passion fruit	219		1	2	/10	Pounds
Plums	243		1	2	/10	Pounds
Tangerines and mandarins	309		1	2	/10	Pounds
All other fruit and nuts - Specify	369		1	2	/10	Pounds
	369		1	2	/10	Pounds

SECTION 5

Were any NURSERY and GREENHOUSE PRODUCTS, sod, bulbs, flowers, flower seeds, vegetable seeds and plants, vegetables under glass or other protection, GROWN FOR SALE on this place in 1978?

005

1 ☐ YES - Complete this section2 ☐ NO - Go to section 6

1. Nursery and greenhouse products irrigated in 1978

None

Area irrigated		
Square feet	Whole acres	Tenths
477	478	10

2. Report the following information for each product grown.

Product name	Code	Square feet under glass or other protection in 1978	Acres in the open in 1978		Sales in 1978	
			Whole acres	Tenths	Dollars	Cents
Bedding plants (include vegetable plants)	479		1	10	\$	
Bulbs	482		1	10	\$	
Cut flowers and cut florist greens	485		1	10	\$	
Nursery products - environmental, lining-out stock, fruit and nut trees, and vines	488		1	10	\$	
Foliage and flowering plants	491		1	10	\$	
Sod harvested	497		1	10	\$	
Vegetable and flower seeds	500		1	10	\$	
Greenhouse vegetables	503		1		\$	
Other - Specify	506		1		\$	

SECTION 6

Other crops - Were any OTHER CROPS harvested from this place in 1978 - corn, sorghums, ginger root, lotus root, taro, potatoes, or other crops not previously listed?

006

1 ☐ YES - Complete this section2 ☐ NO - Go to section 9

Crop name	Code	Acres harvested	Quantity harvested	Acres irrigated
Ginger root	611	/10	Pounds	/10
Lotus root	641	/10	Pounds	/10
Irish potatoes	097	/10	Hundred-weight	/10
Sweetpotatoes	100	/10	Bushels	/10
Taro	743	/10	Hundred-weight	/10
Other crops - Enter name and code from list below.				

If more space is needed, use separate sheet of paper

Crop name	Code	Crop name	Code
Corn for grain or seed (bushels, shelled)	067	Sorghums for silage or green chop (tons, green)	085
Corn for silage or green chop (tons, green)	070	Crops cut and fed green (green chop), including hay crops (exclude pineapple plants and sugarcane tops) (tons, green)	118
Hay, alfalfa (tons, dry)	103		
Hay, other (tons, dry)	109		
Sorghums for grain or seed (bushels)	082	All other crops (pounds)	773

SECTIONS 7 and 8 NOT APPLICABLE TO THIS REPORT

SECTION 9 GROSS VALUE of CROPS SOLD from this place in 1978, BEFORE taxes and expenses (Refer to the INFORMATION SHEET, Section 9.)

Report your best estimate of the value for each of the following groups of crops sold from this place in 1978. Include the value of the landlord's and/or contractor's share, estimating if necessary.

	None	Dollars	Cents
1. Grain — corn and sorghums for grain or seed	☐	776	\$
2. Hay and silage	☐	781	\$
3. Vegetables, sweet corn, and melons — Do NOT include Irish potatoes or sweet potatoes, report them in item 6 below	☐	782	\$
4. Fruit and nuts — pineapples, bananas, coffee, Macadamia nuts, avocados, citrus, etc.	☐	783	\$
5. Nursery and greenhouse products — flowers, plants, etc.	☐	784	\$
6. Other crops — Sugarcane, ginger root, lotus root, taro, potatoes, etc.	☐	785	\$

SECTION 10 LAND USE IN 1978

1. Copy ACRES IN THIS PLACE from section 1, item 4, page 1 _____ Acres

NOTE — If the same land had more than one use in 1978, REPORT THAT LAND ONLY ONCE — in the use first listed below that applies. For example, cropland harvested and also pastured is to be reported only as "Cropland harvested."

	None	Number of acres
2. CROPLAND		787
a. Cropland harvested — Include all land from which crops were harvested or hay was cut, and all land in orchards, citrus groves, vineyards, and nursery and greenhouse products	☐	788
b. Cropland used only for pasture or grazing — Include rotation pasture and grazing land that could have been used for crops without additional improvements	☐	789
c. Cropland used for cover crops, legumes, and soil-improvement grasses, but NOT harvested and NOT pastured	☐	790
d. Cropland on which all crops failed (Exception: Do not report here land in orchards and vineyards on which the crop failed. Such acreage is to be reported in item 2a.)	☐	791
e. Cropland in cultivated summer fallow	☐	792
f. Cropland in pineapples or sugarcane not harvested in 1978	☐	793
g. Cropland idle	☐	794
3. Woodland — Include all woodlots and timber tracts and cutover and deforested land with young timber growth.		795
a. Woodland pastured	☐	796
b. Woodland not pastured	☐	797
4. Other pastureland and rangeland — Include any pastureland other than cropland and woodland pasture	☐	798
5. All other land — Land in house lots, ponds, roads, wasteland, etc. Include any land not reported in items 2 through 4 above	☐	799
6. TOTAL ACRES — Add the acres reported in items 2 through 5 (Should be the same as item 1 above.)		800

SECTION 11 Has any LAND in this place IRRIGATED at any time in 1978?

Irrigated land is all land watered by any artificial or controlled means — sprinklers, furrows or ditches, spreader dikes, etc. Include supplemental, partial, and preplant irrigation.

- 011 1 ☐ YES — Complete this section
2 ☐ NO — Go to section 12

	None	Number of acres irrigated
1. How many acres of each of the following classifications of land were irrigated in 1978?		799
a. HARVESTED LAND reported in section 10, item 2a — Include land from which hay was cut and land in bearing and nonbearing fruit and nut crops	☐	800
b. PASTURELAND or RANGELAND reported in section 10, items 2b and 4 — Include spring flooding if water diverted or spread by dams, spreader dikes, canals, ditches, pipes, or other works	☐	801
c. ANY OTHER LAND — Such as land not harvested due to complete failure, idle land, land in pineapples or sugarcane not harvested, or land in cover crops and soil-improvement grasses.	☐	802
d. TOTAL LAND IRRIGATED (Total of a, b, and c above.)		802

SECTION 12 Did you or anyone else have any CATTLE or CALVES on this place in 1978?

- 012 1 ☐ YES — Complete this section
2 ☐ NO — Go to section 13

DECEMBER 31, 1978 INVENTORY

	None	INVENTORY Number on this place Dec. 31, 1978
1. CATTLE AND CALVES of all ages (Total of a, b, c, and d below)	☐	803 Total all ages
a. BEEF COWS — Include beef heifers that had calved	☐	804 Beef cows
b. MILK COWS kept for production of milk or cream for sale or home use — Include dry milk cows and milk heifers that had calved	☐	805 Milk cows
c. HEIFERS AND HEIFER CALVES — Exclude heifers that had calved	☐	806 Heifers and heifer calves
d. STEERS, STEER CALVES, BULLS AND BULL CALVES	☐	807 Steers and bulls of all ages

CATTLE AND CALVES SOLD FROM THIS PLACE IN 1978

Include those fed on this place on a contract or custom basis. Also report as sold, cattle moved from this place to a feedlot for further feeding.

	None	Number sold in 1978	Gross value of sales
			Dollars Cents
2. Calves weighing less than 500 pounds	☐	808	809 \$
3. Cattle, including calves weighing 500 pounds or more	☐	810	811 \$
a. Of the total cattle sold, how many were FATTENED on this place on GRAIN or CONCENTRATES for 30 days or more and SOLD for SLAUGHTER?	☐	812	813 \$

DAIRY PRODUCTS SOLD FROM THIS PLACE IN 1978

	None	Gross value of sales
		Dollars Cents
4. Gross value of sales of DAIRY PRODUCTS from this place in 1978. Report goat dairy products in section 15	☐	814 \$

SECTION 13 Did you or anyone else have any HOGS or PIGS on this place in 1978?

- 013 1 ☐ YES — Complete this section
2 ☐ NO — Go to section 14

DECEMBER 31, 1978 INVENTORY

	None	INVENTORY Number on this place Dec. 31, 1978
1. HOGS and PIGS of all ages (Total of a and b below)	☐	815 Total
a. HOGS and PIGS used or to be used for BREEDING	☐	816 Breeding
b. OTHER HOGS and PIGS	☐	817 Other

LITTERS FARROWED

	None	Number of litters
2. LITTERS FARROWED on this place between —		818
a. December 1, 1977 and May 31, 1978	☐	819
b. June 1, 1978 and November 30, 1978	☐	

HOGS AND PIGS SOLD

	None	Number sold in 1978	Gross value of sales
			Dollars Cents
3. HOGS and PIGS SOLD from this place in 1978	☐	820	821 \$
4. Of the hogs and pigs sold, how many were sold as FEEDER PIGS for further feeding?	☐	822	823 \$

SECTION 14 Did you or anyone else have any SHEEP or LAMBS on this place in 1978?

- 014 1 ☐ YES — Complete this section
2 ☐ NO — Go to section 15

	None	INVENTORY Number on this place Dec. 31, 1978	SALES Number sold in 1978
1. SHEEP and LAMBS of all ages	☐	824	825
a. EWES 1 year old or older	☐	826	

	None	Number shorn	Pounds of wool shorn
2. SHEEP and LAMBS SHORN	☐	827	828

	None	Gross value of sales
		Dollars Cents
3. What was the gross value of sales of sheep, lambs, and wool from this place in 1978?	☐	829 \$

SECTION 15 Did you or anyone else have any HORSES, BEES, FISH, OTHER LIVESTOCK, or ANIMAL SPECIALTIES in 1978?

015 ☐ YES - Complete this section
☐ NO - Go to section 16

	INVENTORY Number on this place Dec. 31, 1978	Total number sold in 1978	Gross value of sales	
			Dollars	Cents
1. Horses and ponies of all ages	830	831	832	
2. Mules, burros, and donkeys	833	834	835	
3. Mink and their pelts	836	837	838	
a. Mink females used for breeding	863			
4. Other livestock or animal specialties in captivity (Enter name and code from "List A" below.)				
Name	Code			
5. Livestock or animal products (Enter name and code from "List B" below.)				
Name	Code			
6. Fish and other aquaculture products (Enter name and code from "List C" below.)				
Name	Code			

List A

Name	Code	Name	Code	Name	Code
Colonies of bees	839	Other goats	848	Worms	857
Angora goats	842	Rabbits and their pelts	851	All other livestock - Specify	860
Milk goats	845	Chinchillas and their pelts	854		

List B

Name	Code	Name	Code
Mohair sold	864	Catfish	872
Goats milk sold	866	Trout	876
Honey sold	868	Tropical and saltfish	880
Other livestock products - Specify	870	Other fish - Specify	884
		Other aquaculture products - Specify	888

List C

Name	Code	Name	Code
Goats milk sold	866	Catfish	872
Honey sold	868	Trout	876
Other livestock products - Specify	870	Tropical and saltfish	880
		Other fish - Specify	884
		Other aquaculture products - Specify	888

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

SECTION 16 Did you or anyone else have any POULTRY such as CHICKENS, TURKEYS, DUCKS, etc., on this place in 1978? (Include poultry grown for others on a contract basis.)

016 ☐ YES - Complete this section
☐ NO - Go to section 17

	INVENTORY Number on this place Dec. 31, 1978	Total number sold in 1978
1. HENS and PULLETS of laying age	892	893
2. PULLETS 3 months old or older not yet of laying age	894	895
3. PULLET CHICKS and PULLETS under 3 months old (Exclude commercial broilers.)	896	897
4. BROILERS, fryers, and other meat type chickens, including capons and roasters	898	899
5. TURKEYS	900	901
a. Turkeys for slaughter (Exclude breeders.)	902	903
b. Turkey HENS kept for breeding		
6. OTHER POULTRY raised in captivity - ducks, geese, pigeons or squab, pheasants, quail, etc. (Enter poultry name and code from the list below.)		
Poultry name	Code	
Poultry name	Code	
7. POULTRY HATCHED on this place in 1978 and placed or sold - chickens, turkeys, ducks, etc. - Specify kind of poultry		
8. Incubator egg capacity on December 31, 1978		
9. What was the gross value of sales of poultry and poultry products (eggs, etc.) from this place in 1978? Include estimated value of poultry and poultry products moved from this place by contractors and others.		

Gross value of sales

Dollars	Cents
918	

SECTION 17 Income from MACHINE WORK, CUSTOMWORK, and OTHER AGRICULTURAL SERVICES PROVIDED for others in 1978

Total amount received from machine work, customwork, and other agricultural services PROVIDED FOR OTHERS in 1978 - planting, plowing, spraying, harvesting, etc. ☐ None ☐ Dollars ☐ Cents

Specify kind of work done

SECTION 18 During 1978 did you SELL any crops, livestock, or livestock products DIRECTLY to individuals FOR HUMAN CONSUMPTION - roadside stands, farmers markets, pick your own, etc.?

018 ☐ YES - Complete this section
☐ NO - Go to section 19

Dollars	Cents
920	

1. What was the gross value of these direct sales?

Specify products sold - vegetables, eggs, etc.

SECTION 19 TYPE OF ORGANIZATION

Mark (X) the one item which best describes the type of organization for this place in 1978. Refer to the INFORMATION SHEET, Section 19.

• FAMILY or INDIVIDUAL operation (sole proprietorship), excluding partnership and corporation ☐ 921

• PARTNERSHIP operation. Include family partnerships ☐ 922 Total number of partners

• INCORPORATED UNDER STATE LAW

Answer BOTH a and b

a. Is this a family held corporation? ☐ Yes ☐ No

b. Are there more than 10 stockholders? ☐ Yes ☐ No

• OTHER, such as cooperative, estate or trust, prison farm, grazing association, Indian reservation, etc. ☐ 923 Specify

SECTION 20 CHARACTERISTICS AND OCCUPATION OF OPERATOR (Senior partner or person in charge) Refer to the INFORMATION SHEET, Section 20.

1. RESIDENCE - Does the operator (senior partner or person in charge) live on this place? ☐ Yes ☐ No

2. RACE of operator (senior partner or person in charge) ☐ 924

☐ White
☐ Negro or Black
☐ American Indian
☐ Hawaiian
☐ Japanese
☐ Chinese
☐ Filipino
☐ Korean
☐ Other - Specify

3. AGE of operator (senior partner or person in charge) ☐ 925 Years old

4. SEX of operator (senior partner or person in charge) ☐ 926 ☐ Male ☐ Female

5. SPANISH ORIGIN - Is the operator (senior partner or person in charge) of Spanish origin or descent (Mexican, Mexican American, Cuban, or other Spanish)? ☐ 927 ☐ Yes ☐ No

6. PRINCIPAL OCCUPATION - At which occupation did the operator spend the majority (50 percent or more) of his work time in 1978? For partnerships consider all members of the partnership together. ☐ 928 ☐ Farming ☐ Other

7. OFF FARM WORK - How many days did the operator (senior partner or person in charge) work at least 4 hours per day off this place in 1978? Include work at a nonfarm job, business, or on someone else's farm. (Exclude exchange farm work.) ☐ 929

☐ None
☐ 1-49 days
☐ 50-99 days
☐ 100-149 days
☐ 150-199 days
☐ 200 days or more

SECTION 21 Was any of the land in this place held under FOREIGN OWNERSHIP in 1978?

021 ☐ YES - Complete this section
☐ NO
☐ Don't know } Go to section 22

Of the total acres in this place, how many were owned by -

1. Individuals who are NOT citizens of the United States? ☐ None ☐ Acres

2. A foreign held corporation or unincorporated association, or a foreign government? ☐ 930 ☐ Acres

SECTION 22 Was any COMMERCIAL FERTILIZER , including ROCK PHOSPHATE , or LIME used on this place during 1978? 022 1 ☐ YES - Complete this section 2 ☐ NO - Go to section 23 1. Acres of cropland fertilized in 1978, other than cropland used only for pastures reported in section 10, item 2b ☐ None ☐ Acres fertilized 932 2. Acres of pastureland and rangeland fertilized in 1978 reported in section 10, items 2b and 4 ☐ 933 3. LIME - tons of lime used and acres on which applied (Do not include lime plaster or gypsum or lime for sanitation.) ☐ None ☐ Tons of lime 934 ☐ Acres limed 935	SECTION 25 EXPENDITURES FOR ENERGY and petroleum products for the farm business during 1978 Include expenditures paid by you and others for production of crops, livestock, and other agricultural products from this place in 1978. None <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2"></th> <th colspan="2">Expenditures</th> <th rowspan="2">Gallons purchased in 1978</th> <th rowspan="2">Storage capacity on this place (in gallons)</th> </tr> <tr> <th>Dollars</th> <th>Cents</th> </tr> </thead> <tbody> <tr><td>1. Gasoline for farm business</td><td>966</td><td></td><td>967</td><td>968</td></tr> <tr><td>2. Diesel fuel for the farm business</td><td>969</td><td></td><td>970</td><td>971</td></tr> <tr><td>3. LP gas, butane, propane for the farm business (4.5 lbs. = 1 gallon)</td><td>972</td><td></td><td>973</td><td>974</td></tr> <tr><td>4. Fuel oil for the farm business</td><td>975</td><td></td><td>976</td><td>977</td></tr> <tr><td>5. Natural gas for the farm business</td><td>978</td><td></td><td></td><td></td></tr> <tr><td>6. Kerosene, motor oil, grease, for the farm business</td><td>979</td><td></td><td></td><td></td></tr> <tr><td>7. Electricity for the farm business</td><td>980</td><td></td><td></td><td></td></tr> <tr><td>8. Other - coal, wood, coke, etc.</td><td>981</td><td></td><td></td><td></td></tr> </tbody> </table>		Expenditures		Gallons purchased in 1978	Storage capacity on this place (in gallons)	Dollars	Cents	1. Gasoline for farm business	966		967	968	2. Diesel fuel for the farm business	969		970	971	3. LP gas, butane, propane for the farm business (4.5 lbs. = 1 gallon)	972		973	974	4. Fuel oil for the farm business	975		976	977	5. Natural gas for the farm business	978				6. Kerosene, motor oil, grease, for the farm business	979				7. Electricity for the farm business	980				8. Other - coal, wood, coke, etc.	981								
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SECTION 23 Were any INSECTICIDES, HERBICIDES, FUNGICIDES, NEMATOCIDES, OTHER PESTICIDES, or OTHER CHEMICALS used on this place in 1978? 023 1 ☐ YES - Complete this section 2 ☐ NO - Go to section 24 Include any materials provided by you, your landlords, or contractors. For each item listed, report acres only once. If multipurpose chemicals were used, report acreage treated for each purpose. 1. Sprays, dusts, granules, fumigants, etc., (fungicide, herbicide, insecticide, nematocide) to control - None a. Insects on hay and other crops ☐ 936 b. Nematodes in crops ☐ 937 c. Diseases in crops and orchards (blights, smuts, rusts, etc.) ☐ 938 d. Weeds, grass, or brush in crops and pasture ☐ 939 2. Chemicals for defoliation or for growth control of crops or thinning of fruit ☐ 940 3. Were any chemicals used for - a. Insect control on livestock and poultry, including treatment of buildings? 941 ☐ Yes ☐ No b. Sanitation, rodent and bird control, etc.? (include time for sanitation) 942 ☐ Yes ☐ No	SECTION 26 SELECTED PRODUCTION EXPENSES paid by you and others for this place in 1978 Include your best estimates of expenses paid by you, your landlord, contractors, buyers, and others for production of crops, livestock, and other agricultural products in 1978. DO NOT INCLUDE expenses connected with performing customwork for others; operation of nonfarm activities, businesses, or services; the processing of sugarcane and pineapples; or household expenses not related to the farm business. <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2"></th> <th colspan="2">Selected expenditures</th> </tr> <tr> <th>Dollars</th> <th>Cents</th> </tr> </thead> <tbody> <tr><td>1. Livestock and poultry purchased - cattle, calves, hogs, pigs, sheep, lambs, goats, horses, chicks, poults, started pullets, etc.</td><td>982</td><td></td></tr> <tr><td>2. 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SECTION 24 MACHINERY AND EQUIPMENT on this place on December 31, 1978 (Include only equipment used for agricultural operations in 1977 or 1978.) • Value of ALL machinery and equipment on this place, December 31, 1978 1. What is the estimated market value of ALL machinery, equipment, and implements usually kept on this place and used for the farm or ranch business? Include cars, trucks, tractors, combines, plows, disks, harrows, dryers, pumps, motors, irrigation equipment, dairy equipment including milkers and bulk tanks, livestock feeders, grinding and mixing equipment, etc. <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2"></th> <th colspan="2">Estimated market value</th> </tr> <tr> <th>Dollars</th> <th>Cents</th> </tr> </thead> <tbody> <tr><td>943</td><td></td><td></td></tr> </tbody> </table> • SELECTED machinery and equipment on this place, December 31, 1978. (Report only if used in 1977 or 1978.) <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>Total number on this place on December 31, 1978</th> <th>Of the total, HOW MANY were manufactured in the last 5 years (1974-1978)? (Number)</th> </tr> </thead> <tbody> <tr><td>2. Automobiles</td><td>944</td><td>945</td></tr> <tr><td>3. Motor trucks - include pickups</td><td>946</td><td>947</td></tr> <tr><td>4. Wheel tractors other than garden tractors and motor tillers</td><td>948</td><td>949</td></tr> <tr><td>5. Grain and bean combines, self-propelled only</td><td>950</td><td>951</td></tr> <tr><td>6. Corn heads for combines</td><td>952</td><td>953</td></tr> <tr><td>7. Other corn pickers and picker-shellers</td><td>954</td><td>955</td></tr> <tr><td>8. Mower conditioners</td><td>958</td><td>959</td></tr> <tr><td>9. Pickup balers</td><td>960</td><td>961</td></tr> <tr><td>10. Field forage harvesters, shear bar or flywheel type</td><td>962</td><td>963</td></tr> </tbody> </table>		Estimated market value		Dollars	Cents	943				Total number on this place on December 31, 1978	Of the total, HOW MANY were manufactured in the last 5 years (1974-1978)? (Number)	2. Automobiles	944	945	3. Motor trucks - include pickups	946	947	4. Wheel tractors other than garden tractors and motor tillers	948	949	5. Grain and bean combines, self-propelled only	950	951	6. Corn heads for combines	952	953	7. Other corn pickers and picker-shellers	954	955	8. Mower conditioners	958	959	9. Pickup balers	960	961	10. Field forage harvesters, shear bar or flywheel type	962	963	SECTION 27 ESTIMATED MARKET VALUE OF LAND AND BUILDINGS Please give your best ESTIMATE of the CURRENT MARKET VALUE of land and buildings for the acres reported in section 1, items 1, 2, and 3, page 1. <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2"></th> <th colspan="2">Estimated current market value of land and buildings</th> </tr> <tr> <th>Dollars</th> <th>Cents</th> </tr> </thead> <tbody> <tr><td>1. All land owned</td><td>996</td><td></td></tr> <tr><td>2. All land rented or leased FROM OTHERS</td><td>997</td><td></td></tr> <tr><td>3. All land rented or leased TO OTHERS</td><td>998</td><td></td></tr> </tbody> </table>		Estimated current market value of land and buildings		Dollars	Cents	1. All land owned	996		2. All land rented or leased FROM OTHERS	997		3. All land rented or leased TO OTHERS	998	
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SECTION 28 PERSON COMPLETING THIS REPORT - Please print Name 999 Date Telephone Area code Number When the data have been tabulated, do you want a summary sheet showing major census results for your county? 029 ☐ YES ☐ NO																																																					

78-A1(L1)
(5-78)



UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Washington, D.C. 20233

OFFICE OF THE DIRECTOR

Reply to:
BUREAU OF THE CENSUS
1201 EAST TENTH STREET
JEFFERSONVILLE, INDIANA 47132

FROM THE DIRECTOR
BUREAU OF THE CENSUS

Your report form for the 1978 Census of Agriculture is enclosed.

Please fill it out and return it to us by February 15, 1979

Since the 1974 census, significant changes have occurred in agricultural prices and production patterns. It is essential that complete and timely data be available at the county level so that decisions directly affecting you, which are made by many users, both public and private, are based on the best possible information.

In planning this census, we have reduced the number of questions and made the report form easier to answer. Please read the enclosed Information Sheet. It provides definitions and guidelines which will help in completing the report form.

Many persons will complete and return the report form well ahead of the due date. We hope you can too. Early responses will help us to publish the findings at an early date, and will avoid additional requests. If book figures are not available, your best estimates will be acceptable. If filing by February 15 creates an undue burden, a request for extension may be sent to our Indiana office. Include the 11-digit Census File Number shown in your address label in all correspondence to us.

After the data have been tabulated, we can send you a summary sheet showing major census results for your county. If you would like to receive it, check the box in section 29 of the report form.

We will very much appreciate your quick response. It is vital to the accurate and timely publication of the 1978 Census of Agriculture.

Sincerely,

MANUEL D. PLOTKIN

Enclosure

NOTICE — Response to this inquiry is required by law (title 13, U.S. Code). By the same law YOUR REPORT TO THE CENSUS BUREAU IS CONFIDENTIAL. It may be seen only by sworn Census employees and may be used only for statistical purposes. Your report CANNOT be used for purposes of taxation, investigation, or regulation. The law also provides that copies retained in your files are immune from legal process.



1978
CENSUS OF
AGRICULTURE

78-A1-L1(S)
(3-79)



UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Data Preparation Division
Jeffersonville, Indiana 47132

**FROM THE AGRICULTURE DIVISION
BUREAU OF THE CENSUS**

Your report form for the 1978 Census of Agriculture is enclosed. The reason you are receiving this form at this time is:

- ☐ The form we originally mailed to you was returned by the Post Office as undeliverable.
- ☐ The list containing your name and address came to us too late to be included in the initial mailout at the beginning of the year.
- ☐ Your name was obtained from the person from whom you rented land in 1978.
- ☐ Your name was obtained from a previous owner of land you purchased.

Since the 1974 census, significant changes have occurred in agricultural prices and production patterns. It is essential that complete and timely data be available at the county level so that decisions directly affecting you, which are made by many users, both public and private, are based on the best possible information.

In planning this census, we have reduced the number of questions and made the report form easier to answer. Please read the enclosed Information Sheet. It provides definitions and guidelines which will help in completing the report form.

After the data have been tabulated, we can send you a summary sheet showing major census results for your county. If you would like to receive it, check the box in section 28 of the report form.

Each census form mailed has its own 11-digit Census File Number (CFN) located on the top line of the address label. If you have already completed and returned a 1978 Census of Agriculture report form, please copy that CFN number from your record copy to this form and return it to us in the envelope provided. We apologize for not being able to recognize that we had already sent a census form to you.

If you have not already reported, please complete the enclosed form in accordance with the Information Sheet and return your completed report form within 21 days. Also, return any extra report forms (with labels) in the same return envelope. This will insure that all forms will be accounted for and the census will be as complete as possible.

We will very much appreciate your quick response. It is vital to the accurate and timely publication of the 1978 Census of Agriculture.

Sincerely,

ORVIN L. WILHITE
Chief, Agriculture Division

Enclosures



**1978
CENSUS OF
AGRICULTURE**

78-A1(L2)
(9-78)



UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Data Preparation Division
Jeffersonville, Indiana 47132

**FROM THE AGRICULTURE DIVISION
BUREAU OF THE CENSUS**

Many farmers and ranchers across the Nation have already completed and returned their report forms for the 1978 Census of Agriculture. If you have done so, thank you for your promptness. You have helped us get an early start in tabulating the census results.

If you have not completed and returned your report form, this is to remind you that we would like to have it by February 15. For the census information to be complete for your county and State, we need a completed report form from everyone.

If you cannot complete your report form by February 15, please write us and request a time extension. Please write your request on the other side of this letter and send it to the address shown above.

If you did not conduct any agricultural operations in 1978, it is equally important for us to hear from you. Please complete the few items in section 1 of the report form so that we can clarify your status.

Thank you for your cooperation.

Sincerely,

ORVIN L. WILHITE
Chief, Agriculture Division

Notice — In compliance with The Privacy Act (P.L. 93579) of 1974, we are required to inform you that response to this inquiry is required by law (title 13, U.S. Code). By the same law YOUR REPORT TO THE CENSUS BUREAU IS CONFIDENTIAL. It may be seen only by sworn Census employees and may be used only for statistical purposes. Your report CANNOT be used for purposes of taxation, investigation, or regulation. The law also provides that copies retained in your files are immune from legal process.



**1978
CENSUS OF
AGRICULTURE**

78-A1 (L2A)
(12-78)



UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Washington, D.C. 20233

**FROM THE AGRICULTURE DIVISION
BUREAU OF THE CENSUS**

Many farmers and ranchers across the Nation have already completed and returned their report forms for the 1978 Census of Agriculture. If you have done so, thank you for your promptness. You have helped us get an early start in tabulating the census results. If you have not completed and returned your report form, this is to remind you that we would like to have it by February 15. For the census information to be complete for your county and State, we need a completed report form from everyone.

Everyone who receives a 1978 Census of Agriculture report form should answer all of the items that apply to them. If you did not conduct any agricultural operations in 1978, it is equally important for us to hear from you. Please complete the few items in section 1 of the report form so that we can clarify your status and avoid costly followups.

Some of you may have received more than one 1978 census report form. If so, we would like to apologize for the inconvenience it may have caused. However, the census mailing list is made up of individuals, partnerships, companies, and corporations associated with agriculture. In our efforts to make the 1978 census data for your county (and each county) as complete as possible, we obtained lists from many sources. When possible we sent only one report for a partnership, and removed all duplicate and alternate addresses that could be identified. A different Census File Number (CFN) was assigned to each remaining address for recordkeeping purposes. It was not possible to identify every duplicate and extra address and therefore you may have received more than one report form.

If you received more than one report form please follow this procedure to avoid receiving additional followup requests:

1. Complete the report form containing the name and address you prefer to use.
2. On the copy "FOR YOUR RECORDS" enter the 11-digit Census File Number(s) (CFN) that is shown in the label of all forms you received.
3. Write "Extra" in the top margin of all the extra forms you received.
4. Return the completed form together with the extra form(s) in the same return envelope.



**1978
CENSUS OF
AGRICULTURE**

With this help from you we will be able to identify extra addresses and immediately remove them from our mail list, thus saving the expense and inconvenience to you of additional mailings.

For more detailed information, see the Information Sheet provided with each report form.

Thank you for your help, understanding, and prompt response.

Sincerely,



ORVIN L. WILHITE
Chief, Agriculture Division

NOTICE — Response to this inquiry is required by law (title 13, U.S. Code). By the same law **YOUR REPORT TO THE CENSUS BUREAU IS CONFIDENTIAL**. It may be seen only by sworn Census employees and may be used only for statistical purposes. Your report **CANNOT** be used for purposes of taxation, investigation, or regulation. The law also provides that copies retained in your files are immune from legal process.

78-A1-L3
(12-78)



UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Washington, D.C. 20233

SECOND REQUEST

FROM THE CHIEF, AGRICULTURE DIVISION
BUREAU OF THE CENSUS

We have not as yet received your completed report form for the 1978 Census of Agriculture, which was mailed to you earlier this year. If you mailed your report form within the last several days, it has probably crossed in the mails and we thank you for it.

If you have not completed and returned your report form, please do so immediately. We must have your report if the census results for your county and State are to be accurate and complete.

Your answers are **COMPLETELY CONFIDENTIAL** by law (title 13, U.S. Code). If you have any questions on how to fill out the report form, please write to us on the reverse side of this letter.

Sincerely,

ORVIN L. WILHITE

NOTICE — To be sure we included every agricultural operation in the Census, we obtained addresses of persons associated with agricultural activity from many different sources. Your name and address may have been in several of these sources. We have done our best to unduplicate them, but know it was not possible to recognize and remove all extra addresses before mailing. All forms mailed are on our control file — each with its separate Census File Number (CFN) — and each has to be accounted for. Therefore, if you received several questionnaires with different CFN numbers for the same farming operation, mark the extra forms "Extra" and return them with your completed report. We then won't unknowingly continue to request reports from you after you already have completed and returned a form covering your agricultural operation.



1978
CENSUS OF
AGRICULTURE

78-A1 (L4)

March 6, 1979



UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Washington, D.C. 20233

THIRD REQUEST

FROM THE CHIEF, AGRICULTURE DIVISION
BUREAU OF THE CENSUS

Your completed report form for the 1978 Census of Agriculture, due by February 15, has not been received. We are anxious to begin processing and publishing the data for all farms in your county and therefore need your report at this time.

It is possible that your report form has been mislaid. We are therefore enclosing another copy of the report form and Information Sheet. **If you have not returned your completed report, please complete and return it to us right away** in the preaddressed envelope provided. Filing of this report form is required by law (title 13, United States Code).

Let me assure you again that your individual answers will be held COMPLETELY CONFIDENTIAL. Your answers will be used only to produce county, State, and National totals.

Each address in our mailing list has a different Census File Number (CFN) and each has to be accounted for. If you received several forms with different CFN numbers for the same farming operation, mark the extra forms "Duplicate" and return them with your completed report.

If you are not engaged in any agricultural activity, please complete the appropriate items on the report form and return it to us so that further followup letters need not be sent.

Sincerely,

A handwritten signature in cursive script, reading "Orvin L. Wilhite".

ORVIN L. WILHITE

Enclosure

IMPORTANT — In all correspondence, please include the Census File Number shown in the address label of your report form.



1978
CENSUS OF
AGRICULTURE

78-A1-L4(S)
(3-79)



UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Data Preparation Division
Jeffersonville, Indiana 47132

FROM THE AGRICULTURE DIVISION
BUREAU OF THE CENSUS

We are concerned that we have not received your completed report form for the 1978 Census of Agriculture.

Please take time to fill it out and mail it to us immediately if you have not already done so. If figures are not readily available from your records, your best estimates are acceptable.

Complete, accurate, and timely census results are needed by county, State, and Federal Government agencies; your farmer organizations, marketing associations, and co-ops; agricultural experiment stations; land grant colleges; and the businesses on which you depend for services, supplies, and equipment.

If you wish to receive a copy of the major results of the census for your county, just check the "Yes" box in section 28 of the report form.

Please, if your report form is not in the mail, complete and return it to us immediately. Thank you very much.

Sincerely,

ORVIN L. WILHITE
Chief, Agriculture Division

IMPORTANT — In all correspondence, please include the Census File Number shown in the address label of your report form.



1978
CENSUS OF
AGRICULTURE

78-A1-L5
(3-79)



UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census

Data Preparation Division
Jeffersonville, Indiana 47132

FOURTH REQUEST

FROM THE AGRICULTURE DIVISION
BUREAU OF THE CENSUS

We are very much concerned that we have not received your completed report form for the 1978 Census of Agriculture which was due February 15.

Please take time to fill it out and mail it to us immediately if you have not already done so. If figures are not readily available from your records, your best estimates are acceptable.

The filing of this report is required by law (title 13, United States Code) and no exceptions can be made. Applicable provisions of the law are shown on the reverse side of this letter.

Practically all farm and ranch operators in your county have responded, and we must have your report so that we can process the results for your county. Complete, accurate, and timely census results are needed by county, State, and Federal government agencies; your farmer organizations, marketing associations and co-ops; agricultural experiment stations; land grant colleges; and the businesses on which you depend for services, supplies, and equipment.

I should also like to remind you that the results of the census for your county are directly available to you. To receive a copy of the results, just check the "Yes" box in section 28 of the report form. You will be able to review the major census results for your county and compare them with your own farming activities.

Please, if your report form is not in the mail, complete and return it to us immediately. Thank you very much.

Sincerely,

ORVIN L. WILHITE
Chief, Agriculture Division

IMPORTANT — In all correspondence, please include the Census File Number shown in the address label of your report form.



1978
CENSUS OF
AGRICULTURE

**EXCERPTS FROM TITLE 13, UNITED STATES CODE WHICH
RELATE TO THE CENSUS OF AGRICULTURE**

AUTHORITY TO CONDUCT CENSUS — Section 142

- (a) The Secretary shall in 1979, in 1983, and in every fifth year beginning after 1983, take a census of agriculture.
- (c) The data collected in each of the censuses taken under this section shall relate to the year immediately preceding the year in which such census is taken.

AUTHORITY TO COLLECT PRELIMINARY AND SUPPLEMENTAL STATISTICS — Section 193

In advance of, in conjunction with, or after the taking of each census provided for by this chapter, the Secretary may make surveys and collect such preliminary and supplementary statistics related to the main topic of the census as are necessary to the initiation, taking, or completion thereof.

MANDATORY PROVISIONS OF LAW

Section 221

- (a) Whoever, being over eighteen years of age, refuses or willfully neglects, when requested by the Secretary, or by any other authorized officer or employee of the Department of Commerce or bureau or agency thereof acting under the instructions of the Secretary or authorized officer, to answer, to the best of his knowledge, any of the questions on any schedule submitted to him in connection with any census or survey provided for by subchapters I, II, IV, and V of chapter 5 of this title, applying to himself or to the family to which he belongs or is related, or to the farm or farms of which he or his family is the occupant, shall be fined not more than \$100.
- (b) Whoever, when answering questions described in subsection (a) of this section, and under the conditions or circumstances described in such subsection, willfully gives any answer that is false, shall be fined not more than \$500.

Section 224

Whoever, being the owner, official, agent, person in charge, or assistant to the person in charge, of any company, business, institution, establishment, religious body, or organization of any nature whatsoever, neglects or refuses, when requested by the Secretary or other authorized officer or employee of the Department of Commerce or bureau or agency thereof, to answer completely and correctly to the best of his knowledge all questions relating to his company, business, institution, establishment, religious body, or other organization, or to records or statistics in his official custody, contained on any census or other schedule or questionnaire prepared and submitted to him under the authority of this title, shall be fined not more than \$500; and if he willfully gives a false answer to any such questions, he shall be fined not more than \$10,000.

CONFIDENTIALITY OF INFORMATION

Section 9

Neither the Secretary, nor any other officer or employee of the Department of Commerce or bureau or agency thereof, may, except as provided in section 8 of this title [which permits only the release of identifiable personal information to a respondent or the heir, successor or agent of such respondent] —

- (1) use the information furnished under the provisions of this title for any purpose other than the statistical purposes for which it is supplied; or
- (2) make any publication whereby the data furnished by any particular establishment or individual under this title can be identified; or
- (3) permit anyone other than the sworn officers and employees of the Department or bureau or agency thereof to examine the individual reports.

No department, bureau, agency, officer, or employee of the Government, except the Secretary in carrying out the purposes of this title, shall require, for any reason, copies of census reports which have been retained by any such establishment or individual. Copies of census reports which have been so retained shall be immune from legal process, and shall not, without the consent of the individual or establishment concerned, be admitted as evidence or used for any purpose in any action, suit, or other judicial or administrative proceeding.

Section 214

Whoever, being or having been an employee or staff member referred to in subchapter II of chapter I of this title, having taken and subscribed the oath of office, or having sworn to observe the limitations imposed by section 9 of this title, publishes or communicates any information, the disclosure of which is prohibited under the provisions of section 9 of this title, and which comes into his possession by reason of his being employed (or otherwise providing services) under the provisions of this title, shall be fined not more than \$5,000 or imprisoned not more than 5 years, or both.

78-A1-L6
(4-79)



UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Data Preparation Division
Jeffersonville, Indiana 47132

FIFTH REQUEST

**FROM THE AGRICULTURE DIVISION
BUREAU OF THE CENSUS**

A report form for the 1978 Census of Agriculture was sent to you the first of the year and was due February 15. You are one of only a few who have not yet sent in the completed form. **We must have your report** to insure that the census is complete and accurate down to the county level.

Perhaps you have misplaced the report form sent to you earlier. If so, use the additional copy which we have enclosed along with another Information Sheet and preaddressed envelope.

Remember, your report is required by law (title 13, United States Code) and can be used only to produce statistical totals. Your report will be held in strictest confidence. It cannot be seen by **anyone** outside the Census Bureau. Applicable sections of the law are printed on the reverse side of this letter.

We are depending upon you to join us in the cooperative effort so that the Census Bureau can publish information that represents a true and accurate picture of the status of the American farmer today.

Sincerely,

ORVIN L. WILHITE
Chief, Agriculture Division

Enclosures

IMPORTANT — In all correspondence, please include the Census File Number shown in the address label of your report form.



**1978
CENSUS OF
AGRICULTURE**

**EXCERPTS FROM TITLE 13, UNITED STATES CODE WHICH
RELATE TO THE CENSUS OF AGRICULTURE**

AUTHORITY TO CONDUCT CENSUS – Section 142

- (a) The Secretary shall in 1979, in 1983, and in every fifth year beginning after 1983, take a census of agriculture.
- (c) The data collected in each of the censuses taken under this section shall relate to the year immediately preceding the year in which such census is taken.

AUTHORITY TO COLLECT PRELIMINARY AND SUPPLEMENTAL STATISTICS – Section 193

In advance of, in conjunction with, or after the taking of each census provided for by this chapter, the Secretary may make surveys and collect such preliminary and supplementary statistics related to the main topic of the census as are necessary to the initiation, taking, or completion thereof.

MANDATORY PROVISIONS OF LAW

Section 221

- (a) Whoever, being over eighteen years of age, refuses or willfully neglects, when requested by the Secretary, or by any other authorized officer or employee of the Department of Commerce or bureau or agency thereof acting under the instructions of the Secretary or authorized officer, to answer, to the best of his knowledge, any of the questions on any schedule submitted to him in connection with any census or survey provided for by subchapters I, II, IV, and V of chapter 5 of this title, applying to himself or to the family to which he belongs or is related, or to the farm or farms of which he or his family is the occupant, shall be fined not more than \$100.
- (b) Whoever, when answering questions described in subsection (a) of this section, and under the conditions or circumstances described in such subsection, willfully gives any answer that is false, shall be fined not more than \$500.

Section 224

Whoever, being the owner, official, agent, person in charge, or assistant to the person in charge, of any company, business, institution, establishment, religious body, or organization of any nature whatsoever, neglects or refuses, when requested by the Secretary or other authorized officer or employee of the Department of Commerce or bureau or agency thereof, to answer completely and correctly to the best of his knowledge all questions relating to his company, business, institution, establishment, religious body, or other organization, or to records or statistics in his official custody, contained on any census or other schedule or questionnaire prepared and submitted to him under the authority of this title, shall be fined not more than \$500; and if he willfully gives a false answer to any such questions, he shall be fined not more than \$10,000.

CONFIDENTIALITY OF INFORMATION

Section 9

Neither the Secretary, nor any other officer or employee of the Department of Commerce or bureau or agency thereof, may, except as provided in section 8 of this title [which permits only the release of identifiable personal information to a respondent or the heir, successor or agent of such respondent] –

- (1) use the information furnished under the provisions of this title for any purpose other than the statistical purposes for which it is supplied; or
- (2) make any publication whereby the data furnished by any particular establishment or individual under this title can be identified; or
- (3) permit anyone other than the sworn officers and employees of the Department or bureau or agency thereof to examine the individual reports.

No department, bureau, agency, officer, or employee of the Government, except the Secretary in carrying out the purposes of this title, shall require, for any reason, copies of census reports which have been retained by any such establishment or individual. Copies of census reports which have been so retained shall be immune from legal process, and shall not, without the consent of the individual or establishment concerned, be admitted as evidence or used for any purpose in any action, suit, or other judicial or administrative proceeding.

Section 214

Whoever, being or having been an employee or staff member referred to in subchapter II of chapter I of this title, having taken and subscribed the oath of office, or having sworn to observe the limitations imposed by section 9 of this title, publishes or communicates any information, the disclosure of which is prohibited under the provisions of section 9 of this title, and which comes into his possession by reason of his being employed (or otherwise providing services) under the provisions of this title, shall be fined not more than \$5,000 or imprisoned not more than 5 years, or both.

78-A1-L6(S)
(3-79)



UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Data Preparation Division
Jeffersonville, Indiana 47132

FROM THE AGRICULTURE DIVISION
BUREAU OF THE CENSUS

We are very much concerned that we have not received your completed report form for the 1978 Census of Agriculture.

Please take time to fill it out and mail it to us immediately if you have not already done so. If figures are not readily available from your records, your best estimates are acceptable.

The filing of this report is required by law (title 13, United States Code) and no exceptions can be made. Applicable provisions of the law are shown on the reverse side of this letter.

Practically all farm and ranch operators in your county have responded, and we must have your report so that we can process the results for your county. Complete, accurate, and timely census results are needed by county, State, and Federal Government agencies; your farmer organizations, marketing associations, and co-ops; agricultural experiment stations; land grant colleges; and the businesses on which you depend for services, supplies, and equipment.

I should also like to remind you that the results of the census for your county are directly available to you. To receive a copy of the results, just check the "Yes" box in section 28 of the report form. You will be able to review the major census results for your county and compare them with your own farming activities.

Please, if your report form is not in the mail, complete and return it to us immediately. Thank you very much.

Sincerely,

ORVIN L. WILHITE
Chief, Agriculture Division

IMPORTANT -- In all correspondence, please include the Census File Number shown in the address label of your report form.



1978
CENSUS OF
AGRICULTURE

**EXCERPTS FROM TITLE 13, UNITED STATES CODE WHICH
RELATE TO THE CENSUS OF AGRICULTURE**

AUTHORITY TO CONDUCT CENSUS — Section 142

- (a) The Secretary shall in 1979, in 1983, and in every fifth year beginning after 1983, take a census of agriculture.
- (c) The data collected in each of the censuses taken under this section shall relate to the year immediately preceding the year in which such census is taken.

AUTHORITY TO COLLECT PRELIMINARY AND SUPPLEMENTAL STATISTICS — Section 193

In advance of, in conjunction with, or after the taking of each census provided for by this chapter, the Secretary may make surveys and collect such preliminary and supplementary statistics related to the main topic of the census as are necessary to the initiation, taking, or completion thereof.

MANDATORY PROVISIONS OF LAW

Section 221

- (a) Whoever, being over eighteen years of age, refuses or willfully neglects, when requested by the Secretary, or by any other authorized officer or employee of the Department of Commerce or bureau or agency thereof acting under the instructions of the Secretary or authorized officer, to answer, to the best of his knowledge, any of the questions on any schedule submitted to him in connection with any census or survey provided for by subchapters I, II, IV, and V of chapter 5 of this title, applying to himself or to the family to which he belongs or is related, or to the farm or farms of which he or his family is the occupant, shall be fined not more than \$100.
- (b) Whoever, when answering questions described in subsection (a) of this section, and under the conditions or circumstances described in such subsection, willfully gives any answer that is false, shall be fined not more than \$500.

Section 224

Whoever, being the owner, official, agent, person in charge, or assistant to the person in charge, of any company, business, institution, establishment, religious body, or organization of any nature whatsoever, neglects or refuses, when requested by the Secretary or other authorized officer or employee of the Department of Commerce or bureau or agency thereof, to answer completely and correctly to the best of his knowledge all questions relating to his company, business, institution, establishment, religious body, or other organization, or to records or statistics in his official custody, contained on any census or other schedule or questionnaire prepared and submitted to him under the authority of this title, shall be fined not more than \$500; and if he willfully gives a false answer to any such questions, he shall be fined not more than \$10,000.

CONFIDENTIALITY OF INFORMATION

Section 9

Neither the Secretary, nor any other officer or employee of the Department of Commerce or bureau or agency thereof, may, except as provided in section 8 of this title [which permits only the release of identifiable personal information to a respondent or the heir, successor or agent of such respondent] —

- (1) use the information furnished under the provisions of this title for any purpose other than the statistical purposes for which it is supplied; or
- (2) make any publication whereby the data furnished by any particular establishment or individual under this title can be identified; or
- (3) permit anyone other than the sworn officers and employees of the Department or bureau or agency thereof to examine the individual reports.

No department, bureau, agency, officer, or employee of the Government, except the Secretary in carrying out the purposes of this title, shall require, for any reason, copies of census reports which have been retained by any such establishment or individual. Copies of census reports which have been so retained shall be immune from legal process, and shall not, without the consent of the individual or establishment concerned, be admitted as evidence or used for any purpose in any action, suit, or other judicial or administrative proceeding.

Section 214

Whoever, being or having been an employee or staff member referred to in subchapter II of chapter I of this title, having taken and subscribed the oath of office, or having sworn to observe the limitations imposed by section 9 of this title, publishes or communicates any information, the disclosure of which is prohibited under the provisions of section 9 of this title, and which comes into his possession by reason of his being employed (or otherwise providing services) under the provisions of this title, shall be fined not more than \$5,000 or imprisoned not more than 5 years, or both.

78-A1-L7
(3-79)



UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Washington, D.C. 20233

OFFICE OF THE DIRECTOR

In reply refer to:
BUREAU OF THE CENSUS
1201 EAST TENTH STREET
JEFFERSONVILLE, INDIANA 47132

FROM THE ASSOCIATE DIRECTOR
BUREAU OF THE CENSUS

Our records show that you have not yet filed your report for the 1978 Census of Agriculture. A report form was sent to you earlier this year and since then we have sent you several letters informing you that this report is required by law and that there are penalties for failure to report. Pertinent sections of the census law are reproduced on the other side of this letter for your information.

If we do not receive your completed report form or a satisfactory explanation within 2 weeks, your case may be referred to the General Counsel of the Department of Commerce for appropriate legal action.

But we would much rather have your report. The Census Bureau's responsibility is to collect and publish reliable county statistics needed about farming operations in this Nation and we only wish to make certain that the census data for your county are as complete and accurate as possible.

Your cooperation in this matter is essential and please remember -- accurate figures for your county depend upon you.

Sincerely,

SHIRLEY KALLEK

NOTE — If you correspond with us regarding your report, please include the 11-digit Census File Number (number following "CFN") shown in the address label.



1978
CENSUS OF
AGRICULTURE

**EXCERPTS FROM TITLE 13, UNITED STATES CODE WHICH
RELATE TO THE CENSUS OF AGRICULTURE**

AUTHORITY TO CONDUCT CENSUS — Section 142

- (a) The Secretary shall in 1979, in 1983, and in every fifth year beginning after 1983, take a census of agriculture.
- (c) The data collected in each of the censuses taken under this section shall relate to the year immediately preceding the year in which such census is taken.

AUTHORITY TO COLLECT PRELIMINARY AND SUPPLEMENTAL STATISTICS — Section 193

In advance of, in conjunction with, or after the taking of each census provided for by this chapter, the Secretary may make surveys and collect such preliminary and supplementary statistics related to the main topic of the census as are necessary to the initiation, taking, or completion thereof.

MANDATORY PROVISIONS OF LAW

Section 221

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- (b) Whoever, when answering questions described in subsection (a) of this section, and under the conditions or circumstances described in such subsection, willfully gives any answer that is false, shall be fined not more than \$500.

Section 224

Whoever, being the owner, official, agent, person in charge, or assistant to the person in charge, of any company, business, institution, establishment, religious body, or organization of any nature whatsoever, neglects or refuses, when requested by the Secretary or other authorized officer or employee of the Department of Commerce or bureau or agency thereof, to answer completely and correctly to the best of his knowledge all questions relating to his company, business, institution, establishment, religious body, or other organization, or to records or statistics in his official custody, contained on any census or other schedule or questionnaire prepared and submitted to him under the authority of this title, shall be fined not more than \$500; and if he willfully gives a false answer to any such questions, he shall be fined not more than \$10,000.

CONFIDENTIALITY OF INFORMATION

Section 9

Neither the Secretary, nor any other officer or employee of the Department of Commerce or bureau or agency thereof, may, except as provided in section 8 of this title [which permits only the release of identifiable personal information to a respondent or the heir, successor or agent of such respondent] —

- (1) use the information furnished under the provisions of this title for any purpose other than the statistical purposes for which it is supplied; or
- (2) make any publication whereby the data furnished by any particular establishment or individual under this title can be identified; or
- (3) permit anyone other than the sworn officers and employees of the Department or bureau or agency thereof to examine the individual reports.

No department, bureau, agency, officer, or employee of the Government, except the Secretary in carrying out the purposes of this title, shall require, for any reason, copies of census reports which have been retained by any such establishment or individual. Copies of census reports which have been so retained shall be immune from legal process, and shall not, without the consent of the individual or establishment concerned, be admitted as evidence or used for any purpose in any action, suit, or other judicial or administrative proceeding.

Section 214

Whoever, being or having been an employee or staff member referred to in subchapter II of chapter I of this title, having taken and subscribed the oath of office, or having sworn to observe the limitations imposed by section 9 of this title, publishes or communicates any information, the disclosure of which is prohibited under the provisions of section 9 of this title, and which comes into his possession by reason of his being employed (or otherwise providing services) under the provisions of this title, shall be fined not more than \$5,000 or imprisoned not more than 5 years, or both.

78-A1-L7(S)
(3-79)



UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Data Preparation Division
Jeffersonville, Indiana 47132

FROM THE AGRICULTURE DIVISION
BUREAU OF THE CENSUS

A report form for the 1978 Census of Agriculture was sent to you earlier this year. You are one of only a few who have not yet sent in the completed form. **We must have your report** to insure that the census for your county is complete and accurate.

Perhaps you have misplaced the report form sent to you earlier. If so, use the additional copy which we have enclosed along with another Information Sheet and preaddressed envelope.

Your report, which is required by law (title 13, United States Code), can be used only to produce statistical totals. Your report will be completely confidential. It cannot be seen by anyone except sworn Census employees. Applicable sections of the law are printed on the reverse side of this letter.

We are depending upon you to join us in the cooperative effort so that the Census Bureau can publish true and accurate totals for your county. The periodic censuses are the farmers' opportunity to report the actual situation in agriculture in 1978.

Sincerely,

ORVIN L. WILHITE
Chief, Agriculture Division

Enclosures

IMPORTANT — In all correspondence, please include the Census File Number shown in the address label of your report form.



1978
CENSUS OF
AGRICULTURE

**EXCERPTS FROM TITLE 13, UNITED STATES CODE WHICH
RELATE TO THE CENSUS OF AGRICULTURE**

AUTHORITY TO CONDUCT CENSUS – Section 142

- (a) The Secretary shall in 1979, in 1983, and in every fifth year beginning after 1983, take a census of agriculture.
- (c) The data collected in each of the censuses taken under this section shall relate to the year immediately preceding the year in which such census is taken.

AUTHORITY TO COLLECT PRELIMINARY AND SUPPLEMENTAL STATISTICS – Section 193

In advance of, in conjunction with, or after the taking of each census provided for by this chapter, the Secretary may make surveys and collect such preliminary and supplementary statistics related to the main topic of the census as are necessary to the initiation, taking, or completion thereof.

MANDATORY PROVISIONS OF LAW

Section 221

- (a) Whoever, being over eighteen years of age, refuses or willfully neglects, when requested by the Secretary, or by any other authorized officer or employee of the Department of Commerce or bureau or agency thereof acting under the instructions of the Secretary or authorized officer, to answer, to the best of his knowledge, any of the questions on any schedule submitted to him in connection with any census or survey provided for by subchapters I, II, IV, and V of chapter 5 of this title, applying to himself or to the family to which he belongs or is related, or to the farm or farms of which he or his family is the occupant, shall be fined not more than \$100.
- (b) Whoever, when answering questions described in subsection (a) of this section, and under the conditions or circumstances described in such subsection, willfully gives any answer that is false, shall be fined not more than \$500.

Section 224

Whoever, being the owner, official, agent, person in charge, or assistant to the person in charge, of any company, business, institution, establishment, religious body, or organization of any nature whatsoever, neglects or refuses, when requested by the Secretary or other authorized officer or employee of the Department of Commerce or bureau or agency thereof, to answer completely and correctly to the best of his knowledge all questions relating to his company, business, institution, establishment, religious body, or other organization, or to records or statistics in his official custody, contained on any census or other schedule or questionnaire prepared and submitted to him under the authority of this title, shall be fined not more than \$500; and if he willfully gives a false answer to any such questions, he shall be fined not more than \$10,000.

CONFIDENTIALITY OF INFORMATION

Section 9

Neither the Secretary, nor any other officer or employee of the Department of Commerce or bureau or agency thereof, may, except as provided in section 8 of this title [which permits only the release of identifiable personal information to a respondent or the heir, successor or agent of such respondent] –

- (1) use the information furnished under the provisions of this title for any purpose other than the statistical purposes for which it is supplied; or
- (2) make any publication whereby the data furnished by any particular establishment or individual under this title can be identified; or
- (3) permit anyone other than the sworn officers and employees of the Department or bureau or agency thereof to examine the individual reports.

No department, bureau, agency, officer, or employee of the Government, except the Secretary in carrying out the purposes of this title, shall require, for any reason, copies of census reports which have been retained by any such establishment or individual. Copies of census reports which have been so retained shall be immune from legal process, and shall not, without the consent of the individual or establishment concerned, be admitted as evidence or used for any purpose in any action, suit, or other judicial or administrative proceeding.

Section 214

Whoever, being or having been an employee or staff member referred to in subchapter II of chapter I of this title, having taken and subscribed the oath of office, or having sworn to observe the limitations imposed by section 9 of this title, publishes or communicates any information, the disclosure of which is prohibited under the provisions of section 9 of this title, and which comes into his possession by reason of his being employed (or otherwise providing services) under the provisions of this title, shall be fined not more than \$5,000 or imprisoned not more than 5 years, or both.

78-A1-L8
(3-79)



UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Data Preparation Division
Jeffersonville, Indiana 47132

Do you need help in completing your 1978 Census of Agriculture report?

If so, you can get help.

You can take your Census report to your county ASCS office or Extension service office, and they will be glad to help you.

Vocational agriculture teachers and students have learned how to fill the Census report and may be willing to help you.

Or, you can call the Census Bureau, free. Just tell the telephone operator to place a collect call to the Census Bureau, area code 812-335-1271. When your call is connected to one of us, say that you want to complete your agriculture census report.

Your census report is important to your county. Please send us your completed form or call us within the next week.

Sincerely,

ORVIN L. WILHITE
Chief, Agriculture Division
Bureau of the Census



1978
CENSUS OF
AGRICULTURE

78-A1-L9

May 7, 1979



UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Washington, D.C. 20233

**FROM THE AGRICULTURE DIVISION
BUREAU OF THE CENSUS**

Your completed report form for the 1978 Census of Agriculture, due by February 15, has not been received. We are anxious to begin processing and publishing the data for all farms in your county and therefore need your report at this time.

If you mailed your report within the last several days, it probably has crossed this request in the mail. If for some reason you received and completed a form with a different address, please return this report with the CFN (11 digit file number) and name and address used for the completed report, or a copy of your completed file copy. This will enable us to locate the completed report for your operation.

Again, if you have not yet returned your completed report form, please do so within 7 days. We must have your report if the census results for your county and State are to be accurate and complete. Filing of this report form is required by law (title 13, United States Code).

If you have any questions or need assistance, please call collect at (301) 763-5888 and ask for Brian Ingram. Thank you again for your help in the 1978 Census of Agriculture.

Sincerely,

ORVIN L. WILHITE
Chief, Agriculture Division



**1978
CENSUS OF
AGRICULTURE**

78-A1-L10
(5-79)



UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Washington, D.C. 20233

OFFICE OF THE DIRECTOR

In reply refer to:
BUREAU OF THE CENSUS
1201 EAST TENTH STREET
JEFFERSONVILLE, INDIANA 47132

**A MESSAGE FROM THE DEPUTY DIRECTOR
BUREAU OF THE CENSUS**

We have been writing to you since January asking you to complete your report form for the 1978 Census of Agriculture. Most recently we called your attention to your legal responsibility to respond.

Before we decide whether to refer your case to the General Counsel of the Department of Commerce for possible legal action, let me try one more time to explain why we are so persistent.

We need your filled out report to help us complete the 1978 Census of Agriculture. Without it the figures for your county are incomplete. Census data are used by many organizations — farmer, public, and private — when making decisions which directly affect you. These are organizations on which you depend for information, supplies, and equipment.

National and local farmer organizations (perhaps you belong to one or more) have urged their members to send in their filled out forms; they know the importance of using complete and accurate county-by-county information, which only the census of agriculture can provide.

Perhaps you feel that your operation, if you do operate a farm, is too small to be reported, or maybe you are one of the few on our list who is not involved in farming and who, by error, got on our list. If you are in either group, we need to clear our records; so please take a few minutes to answer those questions which apply to your situation, and **return the report form to us.**

For your convenience we are enclosing another report form and preaddressed envelope.

Sincerely,

Daniel A. Levine

Enclosures

We need one completed 1978 census report for every agricultural operating unit in the United States — but only one. If you receive more than one report form **with different CFN numbers**, it is because our mailing list contains more than one address that delivers mail to you and we do not have enough information to know that the addresses are "duplicates."

If you have already mailed your completed report, but have received this request from us, please write across the top of the enclosed form "Extra — See CFN _____" and return the form to us in the enclosed envelope. (If possible, enter the CFN number of the completed 1978 agriculture census report from your record copy; otherwise, describe the name and address under which your agriculture census report was filed.)



**1978
CENSUS OF
AGRICULTURE**

Forma Aprobada, Número del O.M.B. 41-578018

FORMA 78-A1(PR)SP (3-17-78) A1 CENSO DE AGRICULTURA - 1978 PUERTO RICO AVISO - La contestación a esta encuesta es requerida por ley del Congreso de los Estados Unidos (U.S.C., título 13). Por la misma ley, su informe al Negociado del Censo es confidencial. Solamente puede ser visto por empleados juramentados del Censo y puede ser usado solamente para propósitos estadísticos. Este informe censal no puede ser usado para propósitos de impuestos, investigación o reglamentación.	A. Identificación del Cuestionario				
	Número del municipio	Número del DE	USO DEL CENSO	Número de serie de la finca	USO DEL CENSO
	Municipio				
	Barrio				
	B. Nombre y Dirección de Correos del Operador				
	Nombre	Initial o segundo nombre	Apellidos		
	Apartado postal, ruta y apartado rural, calle y número				
	Barrio (si es necesario)				
	Ciudad o pueblo				Clave ZIP
	USO DEL CENSO SOLAMENTE				
035	036	037	038	039	

Sección 1 CUERDAS EN LOS ULTIMOS 12 MESES

(ENTREVISTADOR: Cuando sea necesario informar parte de una cuerda, hágalo en números enteros bajo centésimos y no en fracciones o decimales. Ejemplo: Centésimos 05, 10, 25, 75, 95.)

1. TOTAL DE TIERRA DE SU PROPIEDAD

(ENTREVISTADOR: Si el operador es un administrador asalariado, anote toda la tierra administrada en la partida 1 - "Tierra de su propiedad" y anote esta cantidad en la partida 4 - "Total de cuerdas en este lugar.")

2. TIERRA RENTADA (ARRENDADA) DE OTROS**3. TIERRA RENTADA (ARRENDADA) A OTROS. (No incluya las cuerdas trabajadas por medianeros y agregados.)****4. TOTAL DE CUERDAS EN ESTE LUGAR**

(ENTREVISTADOR: Sume la tierra de su propiedad (partida 1) a tierra arrendada de otros (partida 2) y réstele la cantidad de tierra arrendada a otros (partida 3) y anote el total aquí.)
(Para tierra administrada anote la cantidad de la partida 1.)

5. TIERRA RENTADA DE OTROS (Dé la siguiente información para cada uno de los dueños de tierra.)

Nombre	Dirección	Cuerdas	Cent.
		047	
		048	
		049	

6. TIERRA RENTADA A OTROS (Dé la siguiente información para cada uno de los arrendatarios.)

Nombre	Dirección	Cuerdas	Cent.
		050	
		051	
		052	

7. TIERRA ADMINISTRADA COMO ADMINISTRADOR ASALARIADO (Dé la siguiente información concerniente a su patrón.)

Nombre	Dirección	Cuerdas	Cent.
		053	

Sección 2 LOCALIZACION DE LOS TERRENOS AGRICOLAS QUE OPERABA EN LOS ULTIMOS 12 MESES**1. ¿Estaban todos los terrenos agrícolas situados en el municipio**

y barrio indicado en la esquina superior derecha de esta página? 2 ☐ No - Llene esta sección ☐ Sí - Pase a la sección 3

Anote en la primera línea el barrio y el municipio donde mantenía las operaciones principales; anote luego los barrios y municipios adicionales en los espacios provistos. Si es necesario, continúe en "OBSERVACIONES" en la última página.

Barrio y municipio principal	Nombre del barrio	Municipio	Cuerdas	Cent.
			054	
Otros barrios y municipios			055	
			056	
			057	

TOTAL DE CUERDAS - Debe ser igual al número de cuerdas en la partida 4, sección 1.

058

Sección 3 CAÑA DE AZÚCAR																																																																																																											
1. ¿Se produjo alguna CAÑA DE AZÚCAR en este lugar en los últimos 12 meses? 003 1 ☐ Sí - Llene esta sección 2 ☐ No - Pase a la sección 4		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2" style="text-align: center;">Cuerdas cosechadas</th> <th colspan="2" style="text-align: center;">Toneladas cosechadas</th> </tr> <tr> <th colspan="2" style="text-align: center;">(1)</th> <th colspan="2" style="text-align: center;">(2)</th> </tr> <tr> <th style="text-align: center;">Cuerdas</th> <th style="text-align: center;">Cent.</th> <th style="text-align: center;">Cuerdas</th> <th style="text-align: center;">Cent.</th> </tr> <tr> <td style="text-align: center;">060</td> <td></td> <td style="text-align: center;">061</td> <td></td> </tr> <tr> <td style="text-align: center;">062</td> <td></td> <td style="text-align: center;">063</td> <td></td> </tr> <tr> <td style="text-align: center;">064</td> <td></td> <td style="text-align: center;">065</td> <td></td> </tr> <tr> <td style="text-align: center;">066</td> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">068</td> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">070</td> <td></td> <td style="text-align: center;">071</td> <td></td> </tr> </table>		Cuerdas cosechadas		Toneladas cosechadas		(1)		(2)		Cuerdas	Cent.	Cuerdas	Cent.	060		061		062		063		064		065		066				068				070		071																																																																					
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Sección 4 CAFE, TABACO, o PIÑAS																																																																																																											
1. ¿COSECHO usted algún CAFE, TABACO, o PIÑAS en este lugar en los últimos 12 meses? 004 1 ☐ Sí - Llene esta sección 2 ☐ No - Pase a la sección 5		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2" style="text-align: center;">Cuerdas cosechadas</th> <th colspan="2" style="text-align: center;">Cantidad cosechada</th> <th colspan="2" style="text-align: center;">Cantidad vendida</th> </tr> <tr> <th colspan="2" style="text-align: center;">(1)</th> <th colspan="2" style="text-align: center;">(2)</th> <th colspan="2" style="text-align: center;">(3)</th> </tr> <tr> <th style="text-align: center;">Cuerdas</th> <th style="text-align: center;">Cent.</th> <th style="text-align: center;">Cuerdas</th> <th style="text-align: center;">Cent.</th> <th style="text-align: center;">Qq.</th> <th style="text-align: center;">Qq.</th> </tr> <tr> <td style="text-align: center;">073</td> <td></td> <td style="text-align: center;">074</td> <td></td> <td style="text-align: center;">075</td> <td></td> </tr> <tr> <td style="text-align: center;">076</td> <td></td> <td style="text-align: center;">077</td> <td></td> <td style="text-align: center;">078</td> <td></td> </tr> <tr> <td style="text-align: center;">079</td> <td></td> <td style="text-align: center;">080</td> <td></td> <td style="text-align: center;">081</td> <td></td> </tr> <tr> <td style="text-align: center;">082</td> <td></td> <td style="text-align: center;">083</td> <td></td> <td style="text-align: center;">084</td> <td></td> </tr> </table>		Cuerdas cosechadas		Cantidad cosechada		Cantidad vendida		(1)		(2)		(3)		Cuerdas	Cent.	Cuerdas	Cent.	Qq.	Qq.	073		074		075		076		077		078		079		080		081		082		083		084																																																															
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a. Gandures ☐ b. Habichuelas secas ☐ c. Habichuelas verdes ☐ d. Maíz ☐ e. Malangos ☐ f. Yucas ☐ g. Apio ☐ h. Batatas ☐ i. Ñames ☐ j. Yautías ☐ k. Arroz ☐																																																																																																											
Sección 6 FRUTAS																																																																																																											
1. ¿Hay árboles frutales, guineas, plátanos, o palmas de cocos en este lugar? 006 1 ☐ Sí - Llene esta sección 2 ☐ No - Pase a la sección 7		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2" style="text-align: center;">No en producción</th> <th colspan="2" style="text-align: center;">En producción</th> <th colspan="2" style="text-align: center;">Cantidad cosechada</th> <th colspan="2" style="text-align: center;">Cantidad vendida</th> </tr> <tr> <th colspan="2" style="text-align: center;">(1)</th> <th colspan="2" style="text-align: center;">(2)</th> <th colspan="2" style="text-align: center;">(3)</th> <th colspan="2" style="text-align: center;">(4)</th> </tr> <tr> <th colspan="2" style="text-align: center;">Número de árboles o matas</th> <th colspan="2" style="text-align: center;">Número de árboles o matas</th> <th colspan="2" style="text-align: center;">Cuerdas</th> <th colspan="2" style="text-align: center;">Cuerdas</th> </tr> <tr> <td style="text-align: center;">118</td> <td></td> <td style="text-align: center;">119</td> <td></td> <td style="text-align: center;">120</td> <td></td> <td style="text-align: center;">121</td> <td></td> </tr> <tr> <td style="text-align: center;">122</td> <td></td> <td style="text-align: center;">123</td> <td></td> <td style="text-align: center;">124</td> <td></td> <td style="text-align: center;">125</td> <td></td> </tr> <tr> <td style="text-align: center;">126</td> <td></td> <td style="text-align: center;">127</td> <td></td> <td style="text-align: center;">128</td> <td></td> <td style="text-align: center;">129</td> <td></td> </tr> <tr> <td style="text-align: center;">130</td> <td></td> <td style="text-align: center;">131</td> <td></td> <td style="text-align: center;">132</td> <td></td> <td style="text-align: center;">133</td> <td></td> </tr> <tr> <td style="text-align: center;">134</td> <td></td> <td style="text-align: center;">135</td> <td></td> <td style="text-align: center;">136</td> <td></td> <td style="text-align: center;">137</td> <td></td> </tr> <tr> <td style="text-align: center;">138</td> <td></td> <td style="text-align: center;">139</td> <td></td> <td style="text-align: center;">140</td> <td></td> <td style="text-align: center;">141</td> <td></td> </tr> <tr> <td style="text-align: center;">142</td> <td></td> <td style="text-align: center;">143</td> <td></td> <td style="text-align: center;">144</td> <td></td> <td style="text-align: center;">145</td> <td></td> </tr> <tr> <td style="text-align: center;">146</td> <td></td> <td style="text-align: center;">147</td> <td></td> <td style="text-align: center;">148</td> <td></td> <td style="text-align: center;">149</td> <td></td> </tr> <tr> <td style="text-align: center;">150</td> <td></td> <td style="text-align: center;">151</td> <td></td> <td style="text-align: center;">152</td> <td></td> <td style="text-align: center;">153</td> <td></td> </tr> <tr> <td style="text-align: center;">154</td> <td></td> <td style="text-align: center;">155</td> <td></td> <td style="text-align: center;">156</td> <td></td> <td style="text-align: center;">157</td> <td></td> </tr> </table>		No en producción		En producción		Cantidad cosechada		Cantidad vendida		(1)		(2)		(3)		(4)		Número de árboles o matas		Número de árboles o matas		Cuerdas		Cuerdas		118		119		120		121		122		123		124		125		126		127		128		129		130		131		132		133		134		135		136		137		138		139		140		141		142		143		144		145		146		147		148		149		150		151		152		153		154		155		156		157	
No en producción		En producción		Cantidad cosechada		Cantidad vendida																																																																																																					
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122		123		124		125																																																																																																					
126		127		128		129																																																																																																					
130		131		132		133																																																																																																					
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146		147		148		149																																																																																																					
150		151		152		153																																																																																																					
154		155		156		157																																																																																																					
2. ¿Cuáles de estas frutas tiene sembradas o cosechó en esta finca en los últimos 12 meses? 007 Ninguna																																																																																																											
a. Cocos ☐ b. Toronjas ☐ c. Chinas ☐ d. Aguacates ☐ e. Chironjas ☐ f. Plátanos ☐ g. Guineas ☐ h. Cidra ☐ i. Mangos ☐ j. Papayas ☐																																																																																																											

Sección 7 VEGETALES									
1. ¿Cultivó usted algunos vegetales (hortalizas) para la venta en los últimos 12 meses?									
⁰⁰⁷ 1 ☐ Sí - Llene esta sección 2 ☐ No - Pase a la sección 8 Ninguno									
2. ¿Cuáles de los siguientes vegetales (hortalizas) cosechó usted en este lugar en los últimos 12 meses?									
a. Tomates ☐				158		159		.00	
b. Pepinillos ☐				160		161		.00	
c. Habichuelas tiernas ☐				162		163		.00	
d. Lechugas ☐				164		165		.00	
e. Pimientos ☐				166		167		.00	
f. Repollos ☐				168		169		.00	
g. Berenjenas ☐				170		171		.00	
h. Calabazas ☐				172		173		.00	
i. Ají dulce ☐				174		175		.00	
j. Otros vegetales ☐				176		177		.00	

Sección 8 PASTOS CULTIVADOS Y/O MEJORADOS									
1. ¿Tuvo usted algún terreno en PASTOS CULTIVADOS y/o MEJORADOS en este lugar en los últimos 12 meses?									
⁰⁰⁸ 1 ☐ Sí - Llene esta sección 2 ☐ No - Pase a la sección 9 Ninguno									
a. Malojillo ☐				178		179			
b. Guinea ☐				180		181			
c. Merker ☐				182		183			
d. Pangola ☐				184		185			
e. Yaragudá ☐				186		187			
f. Millo (sorghums) ☐				188		189			
g. Yerba elefante ☐				190		191			
h. Estrella ☐				192		193			
i. Otras yerbas cultivables ☐				194		195			

Sección 9 PLANTAS ORNAMENTALES Y DE FLORES, GRAMA PARA CESPED									
1. ¿Tenía usted sembradas para la venta PLANTAS ORNAMENTALES o DE FLORES, o GRAMA PARA CESPED en este lugar en los últimos 12 meses?									
⁰⁰⁹ 1 ☐ Sí - Llene esta sección 2 ☐ No - Pase a la sección 10 Ninguna									
a. Grama para césped ☐				197		198		.00	
b. Plantas ornamentales ☐				199		200		.00	
c. Plantas de flores ☐				202		203		.00	

Sección 10 OTROS PRODUCTOS AGRICOLAS									
1. ¿Se cosechó algún otro producto agrícola en este lugar en los últimos 12 meses?									
⁰¹⁰ 1 ☐ Sí - Llene esta sección 2 ☐ No - Pase a la sección 11									
a. Nombre del producto agrícola cosechado _____				205		206		207	
b. Nombre del producto agrícola cosechado _____				208		209		210	

Sección 11 PRODUCTOS INTERCALADOS									
1. ¿Tenía usted terrenos sembrados con dos o más productos? (Incluya aquí todo terreno cultivado con productos intercalados tales como: café, chinós, y toronjas; café, guineos, chinós, y malangos; maíz, habichuelas, y yautías; etc.)									
⁰¹¹ 1 ☐ Sí - Llene esta sección 2 ☐ No - Pase a la sección 12									
Nombre de los productos intercalados									
(1) Principal		(2) Otros		(3) Principal		(4) Otros		(5) Principal	
211		212		216		217		221	
		213				218		223	
		214				219		224	
		215				220		225	

Sección 12 COSECHAS PRINCIPALES BAJO CULTIVO

1. ¿Había en este lugar para el 1 de julio de 1978 alguna de las siguientes cosechas en crecimiento?

Ninguna

- a. Caña de azúcar ☐
- b. Café ☐
- c. Piños ☐
- d. Arroz ☐
- e. Frutas ☐

Cuerdas	Cent.
226	
227	
228	
229	
230	

Sección 13 USO DEL TERRENO EN LOS ÚLTIMOS 12 MESES

RECORDATORIO:

Si el mismo terreno se utilizó para dos o más propósitos, informe ese terreno sólo una vez — en la primera partida que se aplique.

El propósito de esta sección es el de distribuir toda la tierra en este lugar entre las partidas 2 a la 4 a continuación, de acuerdo al uso que se le dió en los últimos 12 meses.

1. "TOTAL DE CUERDAS EN ESTE LUGAR" — Viene de la sección 1, partida 4, página 1. . .

Cuerdas	Cent.

Ninguna

2. TERRENO CULTIVADO (Incluya el terreno cosechado, terreno donde los cultivos se perdieron, terreno bajo cultivo, haya sido o no cosechado, etc.) ☐

3. TERRENO EN PASTO —

- a. Pastos cultivados y/o mejorados ☐
- b. Pastos naturales ☐
- c. Pastos naturales enmalezados ☐

4. OTROS TERRENOS —

- a. Montes, bosques y malezas que no se pueden utilizar para cultivos o pastos ☐
- b. Lagos, charcas, edificaciones, caminos, cercas o terrenos baldíos ☐

5. TOTAL DE CUERDAS (Suma las cuerdas informadas en las partidas 2 a la 4 y anote el total aquí. El total debe ser igual a la partida 1 de esta sección.)

Cuerdas	Cent.
231	
232	
233	
234	
235	
236	
237	

Sección 14 RIEGO

1. ¿REGO usted algún terreno en este lugar durante los últimos 12 meses?

- 014 1 ☐ Sí — Llène esta sección
2 ☐ No — Pase a la sección 15

2. Cuerdas que se regaron utilizando SISTEMAS DE RIEGO PÚBLICO ☐

Método usado para regar:

- a. Por gravedad (surco, canal, o por inundación) ☐
- b. Por aspersión o aéreo ☐
- c. Por goteo ☐

3. Cuerdas que se regaron utilizando SISTEMAS DE RIEGO PRIVADO (de pozos profundos, ríos, riachuelos, etc.) ☐

Método usado para regar:

- a. Por gravedad (surco, canal, o por inundación) ☐
- b. Por aspersión o aéreo ☐
- c. Por goteo ☐

4. Fuente principal de abasto de agua para regar

- 246 1 ☐ Pozo o cisterna
2 ☐ Río o quebrada
3 ☐ Lago o charca
4 ☐ Estanques
5 ☐ Otro — Especifique

Ninguna

Cuerdas	Cent.
238	
239	
240	
241	
242	
243	
244	
245	

Sección 15 CERDOS

1. ¿Tiene usted o cualquiera otra persona CERDOS o CERDITOS en este lugar, o se vendió alguno en los últimos 12 meses?

- 015 1 ☐ Sí — Llène esta sección
2 ☐ No — Pase a la sección 16

2. Cerdos y cerditos de todas las edades y sexos ☐
(La suma de los totales en las partidas 2 "a" y "b" debe ser igual a la partida 2.)

- a. Menores de seis meses de edad ☐
- b. De seis meses o más de edad ☐

3. Cerdos paridoras y cerditos retenidos para la crianza ☐

4. Padrotes de todas las edades retenidos para la crianza ☐

Ninguno

Había en este lugar el 1 de julio de 1978 (1)	Fueron vendidos en los últimos 12 meses (2)
247	248
249	250
251	252
253	
255	

Sección 16 GANADO VACUNO																					
1. ¿Tiene usted o cualquiera otra persona algún GANADO VACUNO en este lugar, o se vendió alguno de este lugar en los últimos 12 meses? 016 1 ☐ Sí - Llame esta sección 2 ☐ No - Pase a la sección 17																					
2. Ganado y novillos de todas las edades: (Si "Ninguno," marque (X) y pase a la partida 3 de esta sección.)	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: center;">Número en este lugar el 1 de julio de 1978</th> </tr> <tr> <th style="text-align: center;">Ganado para leche (1)</th> <th style="text-align: center;">Ganado para carne y otro ganado (2)</th> </tr> </thead> <tbody> <tr><td>257</td><td>258</td></tr> <tr><td>259</td><td>260</td></tr> <tr><td>261</td><td>262</td></tr> <tr><td>263</td><td>264</td></tr> <tr><td>265</td><td>266</td></tr> <tr><td>267</td><td>268</td></tr> </tbody> </table>	Número en este lugar el 1 de julio de 1978		Ganado para leche (1)	Ganado para carne y otro ganado (2)	257	258	259	260	261	262	263	264	265	266	267	268				
Número en este lugar el 1 de julio de 1978																					
Ganado para leche (1)	Ganado para carne y otro ganado (2)																				
257	258																				
259	260																				
261	262																				
263	264																				
265	266																				
267	268																				
a. Vacas ☐ Ninguno b. Novillas de 6 meses o más de edad ☐ c. Becerras de menos de 6 meses de edad ☐ d. Becerras de menos de 6 meses de edad ☐ e. Novillos y toros ☐ (ENTREVISTADOR: La suma de las preguntas "a" a la "e" debe ser igual al total en la partida 2.)																					
3. Cuartillos de leche vendidos durante los últimos 12 meses ☐ Ninguno 269 Cuartillos vendidos																					
4. ¿Es esta una vaquería de primera clase? ☐ Sí ☐ No																					
5. Ganado vacuno de este lugar vendido en los últimos 12 meses (Incluya aquéllos que fueron alimentados por contrato y se los llevaron de este lugar en los últimos 12 meses.)	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Ganado lechero vendido</th> <th style="text-align: center;">Ganado para carne y otros vendidos</th> </tr> </thead> <tbody> <tr><td>271</td><td>272</td></tr> <tr><td>273</td><td>274</td></tr> </tbody> </table>	Ganado lechero vendido	Ganado para carne y otros vendidos	271	272	273	274														
Ganado lechero vendido	Ganado para carne y otros vendidos																				
271	272																				
273	274																				
a. Becerras y becerras ☐ b. Todo otro ganado excluyendo becerros y becerras ☐																					
Sección 17 OTROS ANIMALES DE LA FINCA																					
1. ¿Tiene usted o alguna persona alguna OTRA CLASE de GANADO en este lugar, o se vendió alguno en los últimos 12 meses? (Incluya todas las edades y sexos.) 017 1 ☐ Sí - Llame esta sección 2 ☐ No - Pase a la sección 18																					
2. ¿Otra clase de ganado -	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Había en este lugar el 1 de julio de 1978 (1)</th> <th style="text-align: center;">Fueron vendidos en los últimos 12 meses (2)</th> </tr> </thead> <tbody> <tr><td>275</td><td>276</td></tr> <tr><td>277</td><td>278</td></tr> <tr><td>279</td><td>280</td></tr> <tr><td>281</td><td>282</td></tr> <tr><td>283</td><td>284</td></tr> <tr><td>285</td><td>286</td></tr> <tr><td>287</td><td>288</td></tr> <tr><td>289</td><td>290</td></tr> <tr><td>291</td><td>292</td></tr> </tbody> </table>	Había en este lugar el 1 de julio de 1978 (1)	Fueron vendidos en los últimos 12 meses (2)	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292
Había en este lugar el 1 de julio de 1978 (1)	Fueron vendidos en los últimos 12 meses (2)																				
275	276																				
277	278																				
279	280																				
281	282																				
283	284																				
285	286																				
287	288																				
289	290																				
291	292																				
a. Caballos carrera y paso fino? ☐ b. Otros caballos? ☐ c. Mulas y burros? ☐ d. Ovejas de ambos sexos? ☐ e. Cabros de ambos sexos? ☐ f. Colmenas de abejas y miel de abejas vendida? ☐ g. Conejos? ☐ h. Bueyes de trabajo? ☐ i. Otros? - Especifique _____																					
Sección 18 AVES																					
1. ¿Tiene usted o cualquiera otra persona GALLINAS, POLLONAS, GALLOS, POLLOS, o cualquiera otra ave en este lugar, o se vendió alguna de este lugar en los últimos 12 meses? 018 1 ☐ Sí - Llame esta sección 2 ☐ No - Pase a la sección 19																					
2. ¿Cuántas -	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Había en este lugar el 1 de julio de 1978 (1)</th> <th style="text-align: center;">Fueron vendidas en los últimos 12 meses (Incluya las aves que fueron alimentadas a base de contrato y se llevaron de este lugar en los últimos 12 meses) (2)</th> </tr> </thead> <tbody> <tr><td>293</td><td>294</td></tr> <tr><td>295</td><td>296</td></tr> <tr><td>297</td><td>298</td></tr> <tr><td>299</td><td>300</td></tr> <tr><td>301</td><td>302</td></tr> <tr><td>303</td><td>304</td></tr> <tr><td>305</td><td>306</td></tr> <tr><td>307</td><td>308</td></tr> <tr><td></td><td>310</td></tr> </tbody> </table>	Había en este lugar el 1 de julio de 1978 (1)	Fueron vendidas en los últimos 12 meses (Incluya las aves que fueron alimentadas a base de contrato y se llevaron de este lugar en los últimos 12 meses) (2)	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308		310
Había en este lugar el 1 de julio de 1978 (1)	Fueron vendidas en los últimos 12 meses (Incluya las aves que fueron alimentadas a base de contrato y se llevaron de este lugar en los últimos 12 meses) (2)																				
293	294																				
295	296																				
297	298																				
299	300																				
301	302																				
303	304																				
305	306																				
307	308																				
	310																				
a. Gallinas ponedoras (No incluya pollonas criadas para la venta.) (1) Menores de un año de edad? ☐ (2) De un año de edad o más? ☐ b. Pollonas? (Incluya las que se crían para la venta solamente.) ☐ c. Gallos de pelea? ☐ d. Otros gallos? ☐ e. Pollos? ☐ f. Guineas? ☐ g. Otras aves (pavos, palomas, etc.)? ☐ h. Huevos de gallina? ☐																					
Sección 19 PRODUCTOS PARA EL CONSUMO DEL HOGAR (Incluya todo animal o sus productos consumidos o regalados durante los últimos 12 meses.)																					
¿Consumió usted o regaló algunos de los siguientes durante los últimos 12 meses?																					
1. ¿Cuántos -	<table border="1" style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td style="text-align: center;">311</td> <td style="text-align: center;">Cuartillos</td> </tr> <tr> <td style="text-align: center;">312</td> <td style="text-align: center;">Docenas</td> </tr> </tbody> </table>	311	Cuartillos	312	Docenas																
311	Cuartillos																				
312	Docenas																				
a. Cuartillos de leche? ☐ Ninguno b. Huevos de gallina? ☐																					
2. ¿Ganado o aves que fueron sacrificados o regalados -																					
a. Ganado adulto o novillos? ☐ b. Cerdos y cerditos? ☐ c. Pollos, gallinas, pavos, palomas, guineas o cualquier otra ave? ☐ d. Ovejas? ☐ e. Cabros? ☐ f. Conejos? ☐	<table border="1" style="width: 100%; border-collapse: collapse;"> <tbody> <tr><td style="text-align: center;">313</td><td style="text-align: center;">Número</td></tr> <tr><td style="text-align: center;">314</td><td style="text-align: center;">Número</td></tr> <tr><td style="text-align: center;">315</td><td style="text-align: center;">Número</td></tr> <tr><td style="text-align: center;">316</td><td style="text-align: center;">Número</td></tr> <tr><td style="text-align: center;">317</td><td style="text-align: center;">Número</td></tr> <tr><td style="text-align: center;">318</td><td style="text-align: center;">Número</td></tr> </tbody> </table>	313	Número	314	Número	315	Número	316	Número	317	Número	318	Número								
313	Número																				
314	Número																				
315	Número																				
316	Número																				
317	Número																				
318	Número																				

Sección 20 MAQUINARIAS AGRICOLAS, EQUIPO, EDIFICIOS Y OTRAS FACILIDADES EN ESTE LUGAR JULIO 1, 1978

1. ¿Cuántos de los siguientes se encontraban en este lugar el 1 de julio de 1978? (Incluya toda maquinaria, equipo, edificios y facilidades en este lugar, sea o no de su propiedad, con tal que funcione bien.)

A. Maquinaria y Equipo Seleccionado

Ninguno	Número
	319
	320
	321
	322
	323
	324
	325
	326
	327
	328
	329
	330
	331
	332
	333
	334
	335

1. Automóviles, jeeps, camionetas
camiones
2. Tractores de rueda de goma
3. Tractores de oruga
4. Carretanes (Tirados por bueyes
o tractor)
5. Llenadoras de caña (No incluya
las grúas)
6. Cortadoras de caña
7. Grúas para la caña
8. Despulpadoras de café
9. Secadoras mecánicas de café
10. Lavadoras mecánicas para café
11. Ordeñadoras mecánicas
12. Tanques para enfriar leche
13. Plantas auxiliares de energía eléctrica
14. Cortadoras de pasto (Tipo de barra
o de volanta)
15. Asperjadoras de productos químicos
mecanizadas
 - a. Tiradas por tractor
 - b. Otros
16. Otros equipos tirados por tractor
(Incluya arados, discos, rastrillos, etc.)

B. Edificios y Facilidades Seleccionadas

Ninguno	Número
	336
	337
	338
	339
	340
	341
	342
	343
	344
	345
	346
	347
	348
	349

1. Salas de ordeño
2. Ranchos para aves (gallineros)
3. Establos para ganada
4. Parquerizas
5. Silos
6. Ranchos para tabaco
7. Edificios para almacenar
cultivos
8. Edificios para maquinaria
9. Casas para agregados y otros
empleados de la finca
10. Tanques de alimento para el ganado
11. Area bajo sombra para plantas
ornamentales y de flores
12. Cepos para el ganado
13. Charcas de oxidación
14. Secadoras de café al sol
o aire libre

2. ¿Cuál es el valor estimado en el mercado de TODA la maquinaria y el equipo, usualmente mantenido en este lugar y que se utilizan para operar la finca? (Incluya corras, camiones, tractores, arados, discos, rastrillos, secadoras, bombas, motres, equipo de regar, equipo de vaquerías incluyendo ordeñadoras y tanques de enfriamiento para leche, comederos para el ganado, molidoras y equipo de mezclar, etc.)

Valor estimado en el mercado
(Dólares únicamente)

\$ 350 .00

Sección 21 OBREROS AGRICOLAS, AGREGADOS Y MEDIANEROS

1. ¿Empleó en los últimos 12 meses algún obrero agrícola para hacer trabajo en este lugar (no incluya a empleados contratados por otros los cuales le hicieron trabajo a usted), a vivía alguna familia de agregado o medianero en este lugar para el 1 de julio de 1978?

- 021
- 1 ☐ Sí - Llene esta sección
 - 2 ☐ No - Pase a la sección 22

2. ¿Entre los obreros agrícolas empleados, cuántos trabajaron en este lugar -

- a. 5 meses o más?
- b. Menos de 5 meses?

Ninguno	Número
	351
	352
	353

3. ¿Cuántas familias de agregados y medianeros vivían en este lugar el 1 de julio de 1978?

Sección 22 INSECTICIDAS, YERBICIDAS, FUNGICIDAS, OTROS PESTICIDAS, CAL Y OTROS PRODUCTOS QUIMICOS

Incluya los comprados por usted, el dueño del terreno, o por otras personas si se ha contratado la aplicación. Por cada renglón enumerado, informe el número de cuerdas sólo una vez, pero informe el costo de todos los productos usados en estas cuerdas durante los últimos 12 meses.

¿Usó usted algunos de los siguientes productos químicos en este lugar en los últimos 12 meses?

1. Cal (No incluya yesa o cal usada para saneamiento)
2. Productos químicos que se usan para asperjar, rociar, fumigar, etc. (en polvo, líquido o en estado gaseoso) para controlar -
 - a. Los insectos en pastos cultivados y mejorados
 - b. Los insectos en cosechas como caña de azúcar, café, tabaco, piña, vegetales, árboles frutales, etc.
 - c. Los nemátodos en las cosechas
 - d. Las enfermedades de las cosechas y de los huertos (añublo, tizón, manchas, moho, etc.)
 - e. La maleza y las malas yerbas en los cultivos
 - f. La maleza o matorrales en el pasto
3. Productos químicos usados para deshojar, o para controlar el crecimiento de cultivos o la producción de frutas
4. Productos químicos para el control de insectos y parásitos que afectan al ganado y a las aves

Toneladas usadas (1)	Cuerdas en las cuales fueron usados (2)		Costo estimado (No incluya el costo de aplicarse) (3)	
	Cuerdas	Cent.	Dólares únicamente	
354	355	356	\$	.00
	357	358		
	359	360	\$	.00
	361	362	\$	.00
	363	364	\$	.00
	365	366	\$	.00
	367	368	\$	.00
	369	370	\$	.00
		371	\$	.00
		372	\$	.00

5. COSTO TOTAL EN ESTOS PRODUCTOS QUIMICOS

(Suma los dólares anotados en las partidas 1 a la 4 y anote aquí el total.)

Sección 23 GASTOS		
Incluya el estimado de gastos costeados por el agricultor como también por otros (propietario, contratista, comprador, etc.) en cosechas, ganado o productos de ganado que se produjeron en este lugar.	¿Cuántos dólares gastó en los últimos 12 meses en lo siguiente?	
	1. En comprar ganado y aves — ganado vacuno, cerdos, cerditos, cabros, caballos, gallinas, pollitos, pollonas, etc.	Dólares únicamente 373 \$.00
	2. En alimentos para ganado y aves — granos, heno, ensilaje, alimentos mezclados, concentrados, etc.	374 \$.00
	3. Medicamentos o drogas compradas para el ganado y aves	375 \$.00
	4. En comprar semillas, bulbos, plantas y arbolitos	376 \$.00
	5. En comprar abonos comerciales	377 \$.00
	6. En gasolina y otros productos de petróleo comprados para el uso del negocio de la finca — Aceite Diesel, LP gas, butano, propano, gas kerosina, aceite combustible, aceite de motor, graso, etc. (No incluya los gastos en estos productos para el uso de la vivienda o el automóvil de la familia.)	378 \$.00
	7. En jornales y salarios a empleados y obreros de la finca. (Incluya todo el dinero que pagó en efectivo por trabajo en la finca, incluyendo pagos a miembros de la familia, y pagos por Seguro Social. No incluya trabajo doméstico, ni trabajo por contrato.)	379 \$.00
	8. En trabajo por contrato. (Incluya gastos relacionados principalmente por labores agrícolas a base de contratos hechos con un contratista, corporación, cooperativa, etc.)	380 \$.00
	9. En alquiler de maquinaria y en trabajo hecho según pedido (customwork) tales como arado, sembrado, cosechado, preparación de silos, rociado y pulverizado de productos químicos, etc.	381 \$.00
	10. En productos químicos agrícolas (Copie de la partida 5, sección 22.)	382 \$.00
Sección 24 VENTAS		
¿Cuál fué el valor total en el mercado de los productos agrícolas vendidos de este lugar en los últimos 12 meses, antes de descontar los impuestos y gastos?		
1. Caño de azúcar	Dólares únicamente 383 \$.00	
2. Tabaco	384 \$.00	
3. Café	385 \$.00	
4. Piña	386 \$.00	
5. Granos y productos farináceos (No incluya plátanos ni guineos; se incluyen en la partida 7.)	387 \$.00	
6. Vegetales (hortalizas) (Total debe ser igual a dólares informados en la col. 2, sección 7.)	388 \$.00	
7. Frutas — cocos, chinós, toranjas, plátanos, guineos, papayas, cidras, aguacates, acerolas, etc.	389 \$.00	
8. Aves y productos derivados — pollos para carne, gallinas, huevos, pavos, etc.	390 \$.00	
9. Productos derivados del ganado vacuno — leche, queso, etc. (No informe la leche de cabra aquí; se incluye en la partida 13.)	391 \$.00	
10. Ganado vacuno de raza de leche	392 \$.00	
11. Ganado vacuno para carne y cualquier otro ganado vacuno	393 \$.00	
12. Cerdos, ovejas, y cabros	394 \$.00	
13. Otros animales y sus productos — caballos, mulas, abejas, miel, leche de cabra, etc. — Especifique	395 \$.00	
14. Plantas ornamentales y de flores o grama para césped	396 \$.00	
15. Otros productos agrícolas vendidos — modera, heno, forraje, ensilaje, mieles, etc. — Especifique	397 \$.00	
16. TOTAL DEL VALOR EN EL MERCADO de todos los productos agrícolas vendidos antes de descontar los impuestos y gastos. (Sume los dólares informados para las partidas "1" a la "15" y anote aquí el total.)	398 \$.00	
Sección 25 OTROS INGRESOS RELACIONADOS CON LA FINCA		
¿Cuánto recibió usted en los últimos 12 meses de lo siguiente?		
1. Por servicios agrícolas provistos a otros, tales como: arando, sembrando, fumigando, cosechando, preparación de productos para venderse en el mercado, etc.	Dólares únicamente 399 \$.00	
2. Por servicios recreativos, tales como: proveyendo facilidades de caza, pesca, jiras, campamento, caso de huéspedes, posados u otras actividades recreativas que se ofrecen en el lugar	400 \$.00	
3. Por rentar terrenos agrícolas a otros. (Incluya pagos recibidos por el alquiler de terrenos para pastar ganado, ya sea a base de cabeza de ganado, pagos mensuales, o de cualquier otro acuerdo.)	401 \$.00	
4. Por participar en los programas agrícolas auspiciados por el gobierno (Incluya sólo los pagos recibidos del Gobierno de Puerto Rico o Federal.)	402 \$.00	
Sección 26 TIPO DE ORGANIZACION DE LA FINCA		
¿Cuál de estas declaraciones describe mejor el tipo de organización de su finca?		
403 Finca individual o de familia	Corporación	Otros
1 ☐ Privada	6 ☐ Corporación de familia (menos de 10 personas)	9 ☐ Sucesión, cooperativa, fideicomiso, otro tipo — Especifique
2 ☐ Título IV	7 ☐ Corporación privada (10 o más personas)	
3 ☐ Título V		
4 ☐ Título VI		
5 ☐ Sociedad — (incluya las sociedades de familia)	8 ☐ Corporación o agencia del gobierno	

Sección 27 CARACTERÍSTICAS DEL OPERADOR DE LA FINCA

Todas estas preguntas se relacionan a la persona que opera esta finca.

1. ¿En qué año empezó usted a operar estos terrenos? 404 _____ Año
2. ¿Dónde vive usted (el operador de estos terrenos) 405
- 1 ☐ En estos terrenos?
 2 ☐ En otra finca?
 3 ☐ En la zona rural, pero no en una finca?
 4 ☐ En la ciudad o pueblo?
 5 ☐ Fuera de Puerto Rico?
3. ¿Qué edad tiene usted (el operador) ahora? 406 _____ Años de edad
4. Grado o año escolar más alto que completó (Marque un encasillado) 407
- ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 Escuela elemental
☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 Escuela secundaria
☐ 13 ☐ 14 ☐ 15 ☐ 16 ☐ 17 o más. Años de colegio o universidad
5. ¿Cuántos días el operador o socio mayor trabajó fuera de este lugar por lo menos 4 horas diarias en los últimos 12 meses? (Incluya trabajos en tareas no agrícolas, negocio, o trabajo en otra finca. No incluya trabajo de ayuda mutua.) 408
- 1 ☐ Ninguno 5 ☐ 75-99
 2 ☐ 1-24 6 ☐ 100-149
 3 ☐ 25-49 7 ☐ 150-199
 4 ☐ 50-74 8 ☐ 200 días o más
6. ¿De qué partida procedió la mayor parte de los ingresos totales recibidos por usted (el operador) en los últimos 12 meses? 409
- 1 ☐ De ventas de productos agrícolas (cosechas, ganado, aves, leche, etc.)
 2 ☐ De otros ingresos relacionados con la finca
 3 ☐ De ingresos no relacionados con la finca
7. ¿Qué por ciento de los ingresos totales (bruto) recibidos por usted (el operador) en los últimos 12 meses fueron derivados de la agricultura? 410
- 1 ☐ Menos de 25% 3 ☐ 50% a 74%
 2 ☐ 25% a 49% 4 ☐ 75% o más
8. ¿Cuál es su (el operador) ocupación principal? 411
- 1 ☐ Agrícola 2 ☐ No agrícola - Especifique _____

Sección 28 OBSERVACIONES Y CERTIFICACION - Haga cualquier observación que sea necesaria en relación a esta finca, o sobre el dueño u operador; sobre cosechas, rendimiento por cuerda, tamaño de la finca, nombre y dirección del dueño de los terrenos si ésta es administrada o arrendada, etc.

PERSONA COMPLETANDO ESTE INFORME

POR FAVOR USE LETRA DE MOLDE	Nombre	412 Fecha (Día y mes)	Teléfono
			413 Número
Certificado por enumerador		414 Fecha (Día y mes)	Año
			1978
Certificado por Jefe de Grupo		415 Fecha (Día y mes)	Año
			1978

Form Approved: O.M.B. No. 41-578018

FORM 78-A1(PR) (3-1-78) U.S. DEPARTMENT OF COMMERCE BUREAU OF THE CENSUS A1 CENSUS OF AGRICULTURE - 1978 PUERTO RICO NOTICE - Response to this inquiry is required by law (title 13, U.S. Code). By the same law your report to the Census Bureau is confidential. It may be seen only by sworn Census employees and may be used only for statistical purposes. This census report cannot be used for purposes of taxation, investigation, or regulation.	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="5" style="text-align: center;">A. Questionnaire Identification</th> </tr> <tr> <td style="width: 20%;">Municipio No.</td> <td style="width: 20%;">ED No.</td> <td style="width: 20%; text-align: center;">CENSUS USE ONLY</td> <td style="width: 20%;">Farm serial number</td> <td style="width: 20%; text-align: center;">CENSUS USE ONLY</td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td colspan="2">Municipio</td> <td colspan="3"> </td> </tr> <tr> <td colspan="2">Barrio</td> <td colspan="3"> </td> </tr> <tr> <th colspan="5" style="text-align: center;">B. Operator's Name and Mailing Address</th> </tr> <tr> <td colspan="2">Name</td> <td colspan="2">Middle name or initial</td> <td>Surnames</td> </tr> <tr> <td colspan="2"> </td> <td colspan="2"> </td> <td> </td> </tr> <tr> <td colspan="5">P.O. Box, R.F.D. and box number, number and street</td> </tr> <tr> <td colspan="5"> </td> </tr> <tr> <td colspan="5">Barrio (if needed)</td> </tr> <tr> <td colspan="5"> </td> </tr> <tr> <td colspan="4">City or town</td> <td>ZIP code</td> </tr> <tr> <td colspan="4"> </td> <td> </td> </tr> <tr> <th colspan="5" style="text-align: center;">CENSUS USE ONLY</th> </tr> <tr> <td>035</td> <td>036</td> <td>037</td> <td>038</td> <td>039</td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>	A. Questionnaire Identification					Municipio No.	ED No.	CENSUS USE ONLY	Farm serial number	CENSUS USE ONLY						Municipio					Barrio					B. Operator's Name and Mailing Address					Name		Middle name or initial		Surnames						P.O. Box, R.F.D. and box number, number and street										Barrio (if needed)										City or town				ZIP code						CENSUS USE ONLY					035	036	037	038	039					
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Section 1 CUERDAS IN THE LAST 12 MONTHS

(INTERVIEWER: When you need to report part of a cuerda, write in whole numbers under "centésimos," never in fractions or decimals. Example: Centésimos 05, 10, 25, 75, 95.)

None	Cuerdas	Centésimos
1. All land owned	043	
(Interviewer: If operator is a salaried manager, enter all land managed in "item 1 - All land owned" and enter this figure in "item 4 - Total cuerdas in this place.")		
2. Land rented (or leased) from others	044	
3. Land rented (or leased) to others (Do not include cuerdas worked by sharecroppers and "agregados.")	045	
4. TOTAL CUERDAS IN THIS PLACE	046	
(Interviewer: Add land owned (item 1) to land rented from others (item 2) then subtract land rented to others (item 3) and enter your answer here. For managed land enter figure from item 1.)		

5. Land rented from others (Give the following information for each of the landlords.)

Name	Address	Cuerdas	Cent.
		047	
		048	
		049	

6. Land rented to others (Give the following information for each of the tenants.)

Name	Address	Cuerdas	Cent.
		050	
		051	
		052	

7. Land managed as a salaried manager (Give the following information concerning your employer.)

Name	Address	Cuerdas	Cent.
		053	

Section 2 LOCATION OF AGRICULTURAL LAND OPERATED BY YOU IN THE LAST 12 MONTHS

1. Are all of your agricultural operations located in the municipio and barrio shown in the upper right corner of this page? 002 ☐ No - Complete this section ☐ Yes - Go to section 3

Write name and cuerdas for principal barrio and municipio on the first line; write names and cuerdas for additional barrios and municipios in spaces provided. If necessary, continue in "Remarks" on the last page.

Principal barrio and municipio	Name of barrio	Municipio	Cuerdas	Cent.
			054	
Other barrios and municipios			055	
			056	
			057	
TOTAL CUERDAS (Must equal cuerdas in item 4, section 1)			058	

Section 3 SUGARCANE		Cuerdas harvested (1)		Tons harvested (2)	
		Cuerdas	Cent.	Cuerdas	Tons
1. Was any sugarcane grown on this place during the last 12 months? 003 ☐ 1 Yes - Complete this section ☐ 2 No - Go to section 4		None			
a. Fall cane	☐	060		061	
b. Spring cane	☐	062		063	
c. Ratoon cane	☐	064		065	
d. Sojourn cane for seed	☐	066			
e. Sojourn cane cut for feed	☐	068			
f. TOTAL CANE (Add the figures entered in items "a" through "e" and enter the total in this space.)		070		071	

Section 4 COFFEE, TOBACCO, OR PINEAPPLES		Cuerdas harvested (1)		Amount harvested (2)		Amount sold (3)	
		Cuerdas	Cent.	Cwt.	Cwt.	Lbs.	Lbs.
1. Did you harvest any COFFEE, TOBACCO, OR PINEAPPLES from this place in the last 12 months? 004 ☐ 1 Yes - Complete this section ☐ 2 No - Go to section 5		None					
a. Coffee grown in the shade	☐	073		074		075	
b. Coffee grown in the open	☐	076		077		078	
c. Tobacco	☐	079		080		081	
d. Pineapples	☐	082		083		084	

Section 5 GRAINS AND FARINACEOUS CROPS		Cuerdas harvested (1)		Amount harvested (2)		Amount sold (3)	
		Cuerdas	Cent.	Cwt.	Cwt.	Cwt.	Cwt.
a. Pigeon peas	☐	085		086		087	
b. Dry beans	☐	088		089		090	
c. Green beans	☐	091		092		093	
d. Corn	☐	094		095		096	
e. Dasheens	☐	097		098		099	
f. Cassava	☐	100		101		102	
g. Celeriac	☐	103		104		105	
h. Sweetpotatoes	☐	106		107		108	
i. Yams	☐	109		110		111	
j. Taniers	☐	112		113		114	
k. Rice	☐	115		116		117	

Section 6 FRUITS		Not of bearing age (1)		Bearing age (2)		Amount harvested (3)		Amount sold (4)	
		Number of trees or plants	Number of trees or plants	Hds.	Hds.	Thds.	Thds.	Cwt.	Cwt.
1. Are there any fruit trees or coconut palms on this place? 006 ☐ 1 Yes - Complete this section ☐ 2 No - Go to section 7		None							
2. Which of these fruits are now planted or were harvested in the last 12 months?									
a. Coconuts'	☐	118	119	120		121			
b. Grapefruits	☐	122	123	124		125			
c. Oranges	☐	126	127	128		129			
d. Avocados	☐	130	131	132		133			
e. Chironjas	☐	134	135	136		137			
f. Plantains	☐	138	139	140		141			
g. Bananas	☐	142	143	144		145			
h. Citron	☐	146	147	148		149			
i. Mongoes	☐	150	151	152		153			
j. Papayas	☐	154	155	156		157			

Section 7 VEGETABLES

1. Did you cultivate for sale any vegetables in the last 12 months?

1 ☐ Yes - Complete this section2 ☐ No - Go to section 8

2. Which of the following vegetables did you harvest from this place for sale in the last 12 months?

- a. Tomatoes
- b. Cucumbers
- c. String beans
- d. Lettuce
- e. Peppers
- f. Cabbage
- g. Eggplant
- h. Pumpkins
- i. Sweet cooking peppers
- j. Other vegetables

None

Cuerdas harvested for sale		Value of sales	
Cuerdas	Cent.	Dollars only	
158		159	
		\$	.00
160		161	
		\$	.00
162		163	
		\$	.00
164		165	
		\$	.00
166		167	
		\$	.00
168		169	
		\$	.00
170		171	
		\$	.00
172		173	
		\$	.00
174		175	
		\$	.00
176		177	
		\$	.00

Section 8 CULTIVATED AND/OR IMPROVED PASTURE

1. Did you have any CULTIVATED AND/OR IMPROVED PASTURE on this place in the last 12 months?

1 ☐ Yes - Complete this section2 ☐ No - Go to section 9

- a. Paragrass
- b. Guinea grass
- c. Merker grass
- d. Pangola grass
- e. Molasses grass
- f. Milo (sorghums)
- g. Elephant grass
- h. Star grass
- i. Other cultivable grasses

None

Cuerdas for grazing only		Cuerdas cut for roughage	
(1)		(2)	
Cuerdas	Cent.	Cuerdas	Cent.
178		179	
180		181	
182		183	
184		185	
186		187	
188		189	
190		191	
192		193	
194		195	

Section 9 ORNAMENTAL AND FLOWERING PLANTS, LAWN GRASS

1. Did you grow any ORNAMENTAL or FLOWERING PLANTS or LAWN GRASS for sale on this place in the last 12 months?

1 ☐ Yes - Complete this section2 ☐ No - Go to section 10

- a. Lawn grass (sod)
- b. Ornamental plants
- c. Flowering plants

None

Area used in last 12 months			Value of sales	
Square feet under shade	Cuerdas	Cent.	(Dollars only)	
(1)	(2)		(3)	
197			198	
			\$	.00
199	200		201	
			\$	.00
202	203		204	
			\$	.00

Section 10 OTHER CROPS

1. Were any other crops or agricultural products grown on this place in the last 12 months?

1 ☐ Yes - Complete this section2 ☐ No - Go to section 11

- a. Crop name
- b. Crop name

Cuerdas harvested		Pounds harvested	Pounds sold
(1)		(2)	(3)
Cuerdas	Cent.		
205		206	207
208		209	210

Section 11 INTERPLANTING OF CROPS

1. Did you have any land planted in two or more crops? (Include land planted in crop mixtures such as: coffee, oranges, and grapefruit; coffee, bananas, oranges, and dasheens; corn, beans, and taniers; etc.)

1 ☐ Yes - Complete this section2 ☐ No - Go to section 12

Name of crops interplanted

(1) Principal	(2) Others	(3) Principal	(4) Others	(5) Principal	(6) Others
211	212	216	217	221	222
	213		218		223
	214		219		224
	215		220		225

Section 12 SELECTED CROPS UNDER CULTIVATION

1. Were any of the following crops growing on this place, July 1, 1978?

	None	Cuerdas	Cent.
a. Sugarcane	☐	226	
b. Coffee	☐	227	
c. Pineapple	☐	228	
d. Rice	☐	229	
e. All fruits	☐	230	

Section 13 LAND USE IN THE LAST 12 MONTHS

REMINDER:

If the same land was used for two or more purposes, report that land only once - in the first item that applies.

The purpose of this section is to distribute all land on this place among items 2 through 4 below according to the way it was used in the last 12 months.

1. "TOTAL CUERDAS IN THIS PLACE" from section 1, item 4, on page 1 →

Cuerdas	Cent.

2. CULTIVATED CROPLAND (Include land harvested, land on which crops failed, land under cultivation whether harvested or not, etc.) ☐

3. LAND IN PASTURES -

a. Cultivated and/or improved pastures ☐b. Natural pastures ☐c. Pastures overgrown with brush ☐

4. OTHER LANDS -

a. Woodland, forests, and underbrush that cannot be utilized for cultivation or pastures ☐b. Lakes, ponds, buildings, roads, fences, or wasteland ☐

5. TOTAL CUERDAS (Add the cuerdas reported in items 2 through 4 and enter the total in this space. Total should be the same as item 1 above.) →

None	Cuerdas	Cent.
☐	231	
☐	232	
☐	233	
☐	234	
☐	235	
☐	236	
☐	237	

Section 14 IRRIGATION

1. Did you irrigate any land on this place at any time during the last 12 months?

014 1 ☐ Yes - Complete this section2 ☐ No - Go to section 152. Cuerdas irrigated from a PUBLIC SYSTEM ☐

Method of irrigation:

a. Gravity (furrows, ditches, or flooding) ☐b. Sprinklers ☐c. Drip ☐3. Cuerdas irrigated from a PRIVATE SYSTEM (wells, rivers, brooks, etc.) ☐

Method of irrigation:

a. Gravity (furrows, ditches, or flooding) ☐b. Sprinklers ☐c. Drip ☐4. Major source of water used for irrigation ☐

- 246 1 ☐ Well or cistern
2 ☐ River or stream
3 ☐ Lake or pond
4 ☐ Constructed reservoirs
5 ☐ Other - Specify

None	Cuerdas	Cent.
☐	238	
☐	239	
☐	240	
☐	241	
☐	242	
☐	243	
☐	244	
☐	245	

Section 15 HOGS

1. Do you or anyone else have any HOGS or PIGS on this place, or were any sold in the last 12 months?

015 1 ☐ Yes - Complete this section2 ☐ No - Go to section 16

2. Hogs and piglets of all ages and sexes

(The total of items 2a and 2b should be the same as that in item 2.) ☐a. Less than 6 months of age ☐b. 6 months of age and older ☐3. Sows and gilts kept for breeding purposes. ☐4. Boars of all ages kept for breeding purposes. ☐

None

Number on this place July 1, 1978 (1)	Number sold in the last 12 months (2)
247	248
249	250
251	252
253	
255	

Section 16 CATTLE

1. Do you or anyone else have any CATTLE on this place, or were any sold from this place in the last 12 months?

- 016 1 ☐ Yes - Complete this section
2 ☐ No - Go to section 17

2. Cattle and calves of all ages: (If "None," mark X and go to item 3)

- a. Cows
b. Heifers 6 months of age and older
c. Heifer calves less than 6 months of age
d. Bull calves less than 6 months of age
e. Steers and bulls

(INTERVIEWER: The sum of questions "2a" through "2e" should be the same as item 2 above.)

3. Quarts of milk sold in the last 12 months

None 269 Quarts sold

4. Is this a first-class dairy?

270 1 ☐ Yes 2 ☐ No

5. Cattle sold from this place in the last 12 months (Include those fed by contract and taken from this place in the last 12 months.)

- a. Bull calves and heifer calves
b. All other cattle except calves

Number on this place, July 1, 1978	
Dairy cattle (1)	Beef and other cattle (2)
257	258
259	260
261	262
263	264
265	266
267	268

Number sold in the last 12 months	
Dairy cattle sold (1)	Beef and other cattle sold (2)
271	272
273	274

Section 17 OTHER LIVESTOCK

1. Do you or anyone else have any OTHER LIVESTOCK on this place or were any sold in the last 12 months? (Include all ages and sexes)

- 017 1 ☐ Yes - Complete this section
2 ☐ No - Go to section 18

2. Other livestock -

- a. Race and show horses?
b. Other horses?
c. Mules and donkeys?
d. Sheep of both sexes?
e. Goats of both sexes?
f. Hives of bees and honey sold?
g. Rabbits?
h. Working oxen?
i. Others? - Specify

None

Number on this place on July 1, 1978		Number sold in the last 12 months	
(1)	(2)	(3)	(4)
275	276	277	278
279	280	281	282
283	284	285	286
287	288	289	290
291	292	293	294

Section 18 POULTRY

1. Do you or anyone else have any CHICKEN HENS, PULLETS, ROOSTERS, BROILERS, or other poultry on this place or were any sold from this place in the last 12 months?

- 018 1 ☐ Yes - Complete this section
2 ☐ No - Go to section 19

2. How many -

- a. Layers (Do not include started pullets raised for sale.)
(1) Less than 1 year old?
(2) 1 year old or older?
b. Started pullets? (Include those raised for sale only.)
c. Fighting cocks?
d. Other roosters?
e. Broilers?
f. Guineas?
g. Other fowl? (Turkeys, pigeons, etc.)
h. Chicken eggs?

None

Number on this place on July 1, 1978		Total sold in the last 12 months. (Include poultry fed on a contract basis and taken from this place in the last 12 months)	
(1)	(2)	(3)	(4)
293	294	295	296
297	298	299	300
301	302	303	304
305	306	307	308
		309	310

Section 19 PRODUCTS FOR HOME CONSUMPTION (Include all animals and products consumed or given away during the last 12 months.)

Did you consume or give away any of the following during the last 12 months?

1. How many -

- a. Quarts of milk?
b. Chicken eggs?

None

311	Quarts
312	Dozens

2. Livestock or poultry slaughtered or given away

- a. Cattle and calves?
b. Hogs and pigs?
c. Chickens, turkeys, pigeons, guineas, or other poultry?
d. Sheep?
e. Goats?
f. Rabbits?

313	Number
314	Number
315	Number
316	Number
317	Number
318	Number

Section 20 MACHINERY, EQUIPMENT, BUILDINGS, AND FACILITIES ON THIS PLACE JULY 1, 1978																																																																																																							
1. How many of the following were on this place July 1, 1978? (Include all machinery, equipment, buildings, and facilities on the place, regardless of ownership, provided it was in working order.)																																																																																																							
A. Selected Machinery and Equipment <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 80%;"></th> <th style="width: 20%; text-align: center;">None</th> <th style="width: 20%; text-align: center;">Number</th> </tr> </thead> <tbody> <tr><td>1. Automobiles, jeeps, pick-up and motor trucks</td><td style="text-align: center;">☐</td><td style="text-align: center;">319</td></tr> <tr><td>2. Rubber tired wheel tractors</td><td style="text-align: center;">☐</td><td style="text-align: center;">320</td></tr> <tr><td>3. Crawler tractors</td><td style="text-align: center;">☐</td><td style="text-align: center;">321</td></tr> <tr><td>4. Carts (oxen or tractor drawn)</td><td style="text-align: center;">☐</td><td style="text-align: center;">322</td></tr> <tr><td>5. Sugarcane loaders (do not include cranes)</td><td style="text-align: center;">☐</td><td style="text-align: center;">323</td></tr> <tr><td>6. 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Forage harvester (shear bar or flywheel type)</td><td style="text-align: center;">☐</td><td style="text-align: center;">332</td></tr> <tr><td>15. Power chemical sprayers</td><td></td><td></td></tr> <tr><td style="padding-left: 20px;">a. Tractor drawn</td><td style="text-align: center;">☐</td><td style="text-align: center;">333</td></tr> <tr><td style="padding-left: 20px;">b. Other</td><td style="text-align: center;">☐</td><td style="text-align: center;">334</td></tr> <tr><td>16. Other tractor drawn equipment (include plows, disks, harrows, etc.)</td><td style="text-align: center;">☐</td><td style="text-align: center;">335</td></tr> </tbody> </table>		None	Number	1. Automobiles, jeeps, pick-up and motor trucks	☐	319	2. Rubber tired wheel tractors	☐	320	3. Crawler tractors	☐	321	4. Carts (oxen or tractor drawn)	☐	322	5. Sugarcane loaders (do not include cranes)	☐	323	6. Sugarcane harvesters	☐	324	7. Sugarcane cranes	☐	325	8. Coffee depulpers	☐	326	9. Mechanical coffee dryers	☐	327	10. 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2. What is the estimated market value of ALL machinery and equipment, usually kept on this place and used for the farm business? (Include cars, trucks, tractors, plows, disks, harrows, dryers, pumps, motors, irrigation equipment, dairy equipment including milkers and milk coolers, livestock feeders, grinding and mixing equipment, etc.)																																																																																																							
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Section 21 HIRED WORKERS, AGREGADOS, AND SHARECROPPERS																																																																																																							
1. In the last 12 months, did you hire any workers to do farm work on this place (do not include employees of labor contractors who did work for you), or was any agregado family or sharecropper living on this place, July 1, 1978?																																																																																																							
021 1 ☐ Yes - Complete this section 2 ☐ No - Go to section 22 <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 80%;"></th> <th style="width: 20%; text-align: center;">None</th> <th style="width: 20%; text-align: center;">Number</th> </tr> </thead> <tbody> <tr><td>a. 5 months or more?</td><td style="text-align: center;">☐</td><td style="text-align: center;">351</td></tr> <tr><td>b. Less than 5 months?</td><td style="text-align: center;">☐</td><td style="text-align: center;">352</td></tr> <tr><td></td><td></td><td style="text-align: center;">353</td></tr> </tbody> </table>					None	Number	a. 5 months or more?	☐	351	b. Less than 5 months?	☐	352			353																																																																																								
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2. Of the hired workers, how many worked on this place -																																																																																																							
3. How many agregado or sharecropper families were living on this place, July 1, 1978?																																																																																																							
Section 22 INSECTICIDES, HERBICIDES, FUNGICIDES, OTHER PESTICIDES, LIME, AND OTHER CHEMICALS																																																																																																							
Include the materials bought by you, the landlord, or any other person, if it was applied by contract. For each item listed, report the cuerdas only once, but report the total cost of all such materials used on these cuerdas in the last 12 months.	Did you use any of these chemical products on this place in the last 12 months?	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 20%;">Tons used</th> <th style="width: 20%;">Cuerdas on which used</th> <th style="width: 20%;">Estimated cost (Do not include the cost of applying.)</th> </tr> <tr> <th style="text-align: center;">(1)</th> <th style="text-align: center;">(2)</th> <th style="text-align: center;">(3)</th> </tr> <tr> <th></th> <th style="text-align: center;">Cuerdas</th> <th style="text-align: center;">Cent. Dollars only</th> </tr> </thead> <tbody> <tr><td>354</td><td>355</td><td>356</td></tr> <tr><td></td><td></td><td>\$.00</td></tr> <tr><td></td><td>357</td><td>358</td></tr> <tr><td></td><td></td><td>\$.00</td></tr> <tr><td></td><td>359</td><td>360</td></tr> <tr><td></td><td></td><td>\$.00</td></tr> <tr><td></td><td>361</td><td>362</td></tr> <tr><td></td><td></td><td>\$.00</td></tr> <tr><td></td><td>363</td><td>364</td></tr> <tr><td></td><td></td><td>\$.00</td></tr> <tr><td></td><td>365</td><td>366</td></tr> <tr><td></td><td></td><td>\$.00</td></tr> <tr><td></td><td>367</td><td>368</td></tr> <tr><td></td><td></td><td>\$.00</td></tr> <tr><td></td><td>369</td><td>370</td></tr> <tr><td></td><td></td><td>\$.00</td></tr> <tr><td></td><td></td><td>371</td></tr> <tr><td></td><td></td><td>\$.00</td></tr> <tr><td></td><td></td><td>372</td></tr> <tr><td></td><td></td><td>\$.00</td></tr> </tbody> </table>		Tons used	Cuerdas on which used	Estimated cost (Do not include the cost of applying.)	(1)	(2)	(3)		Cuerdas	Cent. Dollars only	354	355	356			\$.00		357	358			\$.00		359	360			\$.00		361	362			\$.00		363	364			\$.00		365	366			\$.00		367	368			\$.00		369	370			\$.00			371			\$.00			372			\$.00																															
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1. Lime (Do not include gypsum or lime used for sanitation)																																																																																																							
2. Chemical products used for spraying, dusting, fumigants, etc. (in the form of powder, liquid, or gas), to control -																																																																																																							
a. Insects on cultivated and improved pastures																																																																																																							
b. Insects on crops such as sugarcane, coffee, tobacco, pineapples, vegetables, fruit trees, etc.																																																																																																							
c. Nematodes in crops																																																																																																							
d. Diseases in crops and orchards (blights, smuts, rusts, etc.)																																																																																																							
e. Weeds or grass in crops																																																																																																							
f. Weeds or brush in pastures																																																																																																							
3. Chemical products used for defoliation or growth control of crops or thinning of fruit																																																																																																							
4. Chemical products used to control insects and parasites on livestock and poultry																																																																																																							
5. TOTAL COST OF THESE CHEMICAL PRODUCTS - (Add dollars reported in items 1 through 4 and enter total here.)																																																																																																							

Section 23 EXPENSES

Include your estimate of expenses paid by you as well as others (landlord, contractors, buyers, etc.) for crops, livestock, or livestock products produced on this place.

How much did you spend in the last 12 months for the following?

	Dollars only
1. Livestock and poultry purchased — cattle, calves, hogs, pigs, sheep, lambs, goats, horses, baby chicks, started pullets, etc.	\$.00
2. Feed purchased for livestock and poultry — grain, hay, silage, mixed feeds, concentrates, etc.	\$.00
3. Medicines and drugs purchased for livestock and poultry	\$.00
4. Seeds, bulbs, plants, and trees purchased	\$.00
5. Commercial fertilizers	\$.00
6. Gasoline and other fuel and oil products purchased for the farm business — Diesel oil, LP gas, butane, propane, piped gas, kerosene, fuel oil, motor oil, grease, etc. (Do not include costs for items used in the family home or automobile.)	\$.00
7. Wages and salaries paid to employees or hired farm workers. (Include money paid in cash for farm labor including payments to family members and for Social Security taxes. Do not include housework or contract work.)	\$.00
8. Contract labor (Include expenditures primarily for farm labor performed on a contract basis by a contractor, corporation or cooperative, etc.)	\$.00
9. Machine hire and customwork such as plowing, planting, harvesting, silo filling, spraying and dusting chemical products, etc.	\$.00
10. Agricultural chemicals purchased (Copy from section 22, item 5.)	\$.00

Section 24 SALES

What was the total market value of agricultural products sold from this place in the last 12 months, before taxes and expenses?

	Dollars only
1. Sugarcane	\$.00
2. Tobacco	\$.00
3. Coffee	\$.00
4. Pineapples	\$.00
5. Grains and farinaceous crops (Do not include plantains or bananas, they are included in item 7.)	\$.00
6. Vegetables (Total should be equal to dollars reported in section 7, column 2.)	\$.00
7. Fruits — coconuts, oranges, grapefruits, plantains, bananas, papayas, citrons, avocados, West Indies cherries, etc.	\$.00
8. Poultry and poultry products — broilers, other chickens, eggs, turkeys, etc.	\$.00
9. Dairy products — milk, cheese, etc. (Do not include goat milk here, it should be included in item 13.)	\$.00
10. Dairy cattle	\$.00
11. Beef cattle and any other cattle	\$.00
12. Hogs, sheep, and goats	\$.00
13. Other livestock and livestock products — horses, mules, bees, honey, goat milk, etc. — Specify	\$.00
14. Ornamental and flowering plants or lawn grass	\$.00
15. Any other agricultural products sold — wood, hay, forage, silage, molasses, etc. — Specify	\$.00
16. TOTAL MARKET VALUE of all agricultural products sold before taxes and expenses (Add dollars reported for items 1 through 15 and enter total here.)	\$.00

Section 25 OTHER FARM RELATED INCOME

How much did you receive in the last 12 months from the following?

	Dollars only
1. Custom farm work done for others such as: plowing, planting, spraying, harvesting, preparation of products for market, etc.	\$.00
2. Recreational services, such as: providing hunting, fishing, picnicking, camping, boarding and lodging, or other recreational facilities on this place	\$.00
3. For renting out farm land (Include payments for livestock pastured on a per-head basis, monthly payments, or through any other arrangement.)	\$.00
4. For participation in Government farm programs (Include only payments received from the Federal or Puerto Rican government.)	\$.00

Section 26 TYPE OF FARM ORGANIZATION

Which of the following best describes the type of your farm organization?

Individual or family farm

- 403
- 1 ☐ Private
 2 ☐ Title IV
 3 ☐ Title V
 4 ☐ Title VI
 5 ☐ Partnership (Include family partnerships.)

Corporation

- 6 ☐ Family corporation (less than 10 persons)
 7 ☐ Private corporation (10 persons or more)
 8 ☐ Government corporation or agency

Other

- 9 ☐ Estate, cooperative, other type — Specify

Section 27 FARM OPERATOR CHARACTERISTICS

All these questions refer to the person who operates this farm.

1. In what year did you start operating this land? ⁴⁰⁴ _____ Year
2. Do you (the farm operator) live- ⁴⁰⁵
- 1 ☐ On this place?
 2 ☐ On another farm?
 3 ☐ In a rural area but not on a farm?
 4 ☐ In a city or town?
 5 ☐ Outside of Puerto Rico?
3. How old are you (the operator) now? ⁴⁰⁶ _____ Years old
4. Highest grade or years of school completed—Mark (X) one box ⁴⁰⁷
- ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 Elementary school
☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 Secondary schools
☐ 13 ☐ 14 ☐ 15 ☐ 16 ☐ 17 and over College or University years
5. How many days did the operator or senior partner work off this place at least 4 hours per day in the last 12 months? ⁴⁰⁸
- (Include work at nonfarm job, business, or on someone else's farm. Exclude exchange farm work.)
- 1 ☐ None 5 ☐ 75-99
 2 ☐ 1-24 6 ☐ 100-149
 3 ☐ 25-49 7 ☐ 150-199
 4 ☐ 50-74 8 ☐ 200 days or more
6. What did the largest part of your (the operator) total income come from in the last 12 months? ⁴⁰⁹
- 1 ☐ The sale of agricultural products (crops, livestock, poultry, milk, etc.)
 2 ☐ Other farm-related income
 3 ☐ Nonfarm related income
7. What percent of your (the operator's) gross income received in the last 12 months came from farming? ⁴¹⁰
- 1 ☐ Less than 25% 3 ☐ 50% to 74%
 2 ☐ 25% to 49% 4 ☐ 75% or more
8. What is your (the operator's) main occupation? ⁴¹¹
- 1 ☐ Agricultural 2 ☐ Nonagricultural — Specify _____

Section 28 REMARKS AND CERTIFICATION — Make any remarks you feel necessary concerning this farm; the owner or manager; the crops, output per cuerda, size of farm; and name and address of the owner if the land is managed or leased; etc.

PERSON COMPLETING THIS REPORT

Please print	Name	⁴¹² Date (Month and day)	Telephone
			⁴¹³ Number
Certified by Enumerator		⁴¹⁴ Date (Month and day)	Year
			1978
Certified by Crew Leader		⁴¹⁵ Date (Month and day)	Year
			1978

FORMA 78-A30(PR)SP
(3-7-78)

DEPARTAMENTO DE COMERCIO DE LOS EE. UU.
NEGOCIADO DEL CENSO

ENCUESTA PARA IDENTIFICAR A LAS FINCAS

CENSO DE AGRICULTURA DE 1978
PUERTO RICO

AVISO - La contestación a esta encuesta es requerida por ley del Congreso de los Estados Unidos (U.S.C., título 13). Por la misma ley, su informe al Negociado del Censo es confidencial. Solamente puede ser visto por empleados juramentados del Censo y puede ser usado solamente para propósitos estadísticos. Este informe censal no puede ser usado para propósitos de impuestos, investigación o reglamentación.

(Haga el favor de corregir cualquier error en el nombre y la dirección, incluyendo el ZIP)

COMPLETE Y
DEVUELVALO A

BUREAU OF THE CENSUS
ATTN: Agriculture Division
Washington, D.C. 20233

Partida 1 - ¿Durante alguna parte del año en el 1977, crió, produjo, o vendió usted alguno de los productos que se listan a continuación? (No incluya actividades agrícolas que se llevaron a cabo en terrenos que usted tenía arrendados a otros.)

Sí No

a. Cosechas - caña de azúcar, café, tabaco, piñas, vegetales, árboles frutales y palmas de coco, granos y farináceos, pastos cultivados y/o mejorados, etc. ☐ ☐

b. Ganado - ganado vacuno, cerdos, caballos, conejos, etc. y sus productos (Incluya las vaquerías y los corrales de ceba.) ☐ ☐

c. Aves - pollos, guineas, otras aves de corral, y huevos de gallinas ☐ ☐

d. Plantas ornamentales y de flores, o grama para césped ☐ ☐

e. Otras actividades agrícolas - colmenas de abejas, miel de abejas, etc. Especifique ☐ ☐

Si contesta "Sí" a cualquiera de las preguntas anteriores, pase a la partida 3

Partida 2 - Si contestó "No" a todas las preguntas de la partida 1, anote una "X" en la casilla que indica el por qué de sus respuestas, y devuelva esta forma lo antes posible.

- ☐ Se vendieron todos los terrenos. } Anote abajo el nombre y la dirección del nuevo dueño o arrendatarios
☐ Se arrendaron todos los terrenos a otros . . . }

Nombre del nuevo dueño o arrendatarios	Dirección postal (incluya el ZIP)

☐ Todos los terrenos están baldíos, o se han retenido para usos no agrícolas

☐ Otra razón - Especifique _____

Partida 3 - ¿Durante el 1977, operó usted esta finca bajo un nombre que no es el que se encuentra en la etiqueta de la dirección?

☐ Sí - Anote el nombre(s) y la dirección(es) _____

☐ No - Pase a la partida 4 _____

Partida 4 – Tenga la bondad de indicarnos cómo llegar al centro principal de operaciones de su finca.
EJEMPLO: Tome la carretera #26 Norte, hacia Arecibo; recorra 3 kilómetros hasta llegar a la tienda El Coquí; vire a la derecha y recorra 1-1/2 kilómetros hasta llegar a la segunda casa a su izquierda.

Partida 5 – Escriba la localización del terreno que usted operaba en el 1977.

Municipio	Barrio	Cuerdas

Comentarios

Partida 6 – Persona que prepara este informe

Nombre	Fecha	Teléfono	
		Código de área	Número

78-A30(PR)SP-L1
(4-78)



UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Washington, D.C. 20233

OFFICE OF THE DIRECTOR

DEL DIRECTOR
NEGOCIADO DEL CENSO

El Censo de Agricultura de 1978 para Puerto Rico será tomado en julio de 1978 por correo y por medio de entrevistas personales. Se necesita su ayuda para identificar sus actividades agrícolas, verificar su dirección, y obtener la ubicación del centro principal de sus operaciones.

Tenga la bondad de llenar el cuestionario adjunto y devolverlo lo antes posible en el sobre libre de franqueo que incluimos.

La Encuesta Para Identificar a las Fincas es parte del Censo de Agricultura de 1978. La ley (título 13, Código de los Estados Unidos) requiere su respuesta. La misma ley provee que la información que usted suministra al Negociado del Censo es confidencial y sólo puede ser vista por empleados juramentados del Censo.

Muchas gracias por su cooperación.

Sinceramente,

MANUEL D. PLOTKIN

Adjunto

Form Approved: O.M.B. No. 41-578014

FORM 78-A1(G) (1-26-78)	U.S. DEPARTMENT OF COMMERCE BUREAU OF THE CENSUS A1 1978 CENSUS OF AGRICULTURE G U A M	NOTICE — Response to this inquiry is required by law (title 13, U.S. Code). By the same law your report to the Census Bureau is confidential. It may be seen only by sworn Census employees and may be used only for statistical purposes. Your report cannot be used for purposes of taxation, investigation, or regulation.									
1978 CENSUS OF AGRICULTURE G U A M		FARM SERIAL NUMBER ➔ From A2, column (6)									
IMPORTANT: Fill this questionnaire if any member of the household harvested (or gathered) any crops or vegetables during 1978, or has any livestock or 15 or more poultry.		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="3" style="text-align: center;">CENSUS USE ONLY</th> </tr> <tr> <td style="width: 33.33%;">035</td> <td style="width: 33.33%;">036</td> <td style="width: 33.33%;">037</td> </tr> <tr> <td>038</td> <td>039</td> <td>040</td> </tr> </table>	CENSUS USE ONLY			035	036	037	038	039	040
CENSUS USE ONLY											
035	036	037									
038	039	040									

Section 1 OPERATOR

1. What is your (the operator's) name?

2. What is your (the operator's) mailing address? (Give address where correspondence is received.)

Full name (First name, middle initial, last name)

Complete mailing address

Section 2 LAND IN AGRICULTURE

	None	Hectares	Ares
1. How many hectares do you own?	☐	041	
2. How many hectares do you rent from others?	☐	042	
3. For how many hectares do you have a government land permit?	☐	043	
4. How many hectares do you occupy without a land permit?	☐	044	
5. How many hectares are furnished to you, in connection with your living quarters, by the government?	☐	045	
6. How many hectares do you rent to others? (Do not include land used by U.S. military services.)	☐	046	
7. TOTAL AREA IN THIS PLACE (ADD the entries in items 1, 2, 3, 4, and 5, then SUBTRACT the entry in item 6.) ➔		047	

8. Is the farm located on a hard surface (all weather) road?

1 ☐ Yes

2 ☐ No — About how many miles is it to the nearest hard surface (all weather) road?

Miles	Tenths
049	/10

9. What percent of the farm operation is financed by each of the following sources? ...

a. Operator

b. Private

c. Commercial

d. Government

e. Other — Specify

None	Percent
☐	050
☐	051
☐	052
☐	053
☐	054

10. How many unpaid and paid farm hands (including the operator and his family) worked on this place in 1977?

a. Of the unpaid farm hands (including the operator and unpaid family workers), how many worked —

b. Of the paid farm hands (hired workers and paid members of operator's family), how many worked —

150 days or more?	25 to 149 days?	Less than 25 days?
056	057	058
059	060	061

11. Is this holding producing mainly for home consumption or sale?

1 ☐ Home consumption — Go to section 3

2 ☐ Sale — Ask item 12

12. If producing mainly for sale, is it one of the following?

1 ☐ Vegetable holding

2 ☐ Field crop holding

3 ☐ Fruit and nut holding

4 ☐ Dairy holding

5 ☐ Livestock holding

6 ☐ Poultry holding

7 ☐ Mixed holding

8 ☐ Other — Specify

FORM 7A-A1(G) (1-28-78)

Section 4 LAND USE

Of the total hectares on this place
(Section 2, item 7) —

- None
1. How many hectares of land are in crops? ☐
2. How much cropland is used for pasture? ☐
3. How much cropland is not used for crops or pasture? ☐
4. How much pastureland is used for pasture or grazing? ☐
5. How much pastureland is not used for pasture or grazing? ☐
6. How many hectares are in other land? ☐
7. TOTAL LAND (Add entries in items 1 through 6.
The total in col. (a) should be equal
to the entry in section 2, item 7.) 

Number of hectares		On how much of this land are crops or livestock being raised for sale?	
(a)		(b)	
Hectares	Ares	Hectares	Ares
236		237	
238		239	
240		241	
242		243	
244		245	
246		247	
248		249	

Section 5 LIVESTOCK AND POULTRY

Do you or anyone else have any of the following
livestock and poultry on this place or were any
sold from this place in 1977?

- None
1. Carabaos of all ages ☐
2. Total cattle and calves of all ages ☐
(Must equal sum of a and b below.)
- a. Milk cows ☐
- b. All other cattle and calves ☐
3. Hogs and pigs of all ages ☐
4. Goats and kids of all ages ☐
5. Horses and colts of all ages ☐
6. Chicken hens 4 months old and over ☐
(Must equal sum of a and b below.)
- a. Commercial layers ☐
- b. Other chicken hens ☐
7. Chickens less than 4 months old ☐
8. Roosters and pullets ☐
9. Other poultry
- a. Ducks ☐
- b. Geese ☐
- c. Guineas ☐
- d. Pigeons ☐
- e. Other — Specify ☐

How many are on this place today? (a)	How many were sold in 1977? (b)	What was the value of sales in 1977? (c)
250	251	252
253	254	255
256	257	258
259	260	261
262	263	264
265	266	267
268	269	270
271	272	273
274	275	276
277	278	279
280	281	282
283	284	285
286	287	288
289	290	291
292	293	294
295	296	297
298	299	300

10. How many dozens of chicken eggs were sold during 1977? ☐

11. How many quarts of milk were sold during 1977? ☐

Number sold in 1977 (a)	What was the value of sales in 1977? (b)
301	302
303	304

Section 6 FISHERY

- None
1. What was the total pounds of fish harvested during 1977? ☐
2. How many pounds were sold in 1977? ☐

Pounds sold (a)	What was the value of sales in 1977? (b)
305	306
307	308

Section 7 SELECTED EXPENDITURES IN 1977			
How much did you spend for each of the following in 1977?		None	Dollars only
1. Machine hire and customwork	☐	309	
2. Wages and salaries paid to employees or hired farm workers (Do not include housework or contract construction work. Include cash payments only.)	☐	310	
3. Feed purchased for livestock and poultry (Include cost of grain, feed, concentrates, and roughages; also amount paid for grinding and mixing feed.)	☐	311	
4. Insecticides, fungicides, and herbicides	☐	312	
5. Fertilizers and manure purchased	☐	313	
6. Livestock and poultry purchased	☐	314	
Section 8 EQUIPMENT AND FACILITIES USED ON THE PLACE IN 1977			
1. How many of the following are on this place? (Include all specified equipment on this place today, regardless of ownership, provided it is in operating condition.)		None	Number
a. Tractor (of all kinds)	☐	315	
b. Motortrucks	☐	316	
c. Automobiles	☐	317	
2. Do you have the following on this place?			
a. Electricity	318	1 ☐ Yes	2 ☐ No
b. Piped running water	319	1 ☐ Yes	2 ☐ No
Section 9 OPERATOR CHARACTERISTICS			
The following questions are about the FARM OPERATOR.			
1. Do you live on this place?	320	1 ☐ Yes	2 ☐ No
2. In what year did you begin to operate this place?	321	_____ Year	
3. How old were you on your last birthday?	322	_____ Years old	
4. What is your main occupation?	323	1 ☐ Agricultural	2 ☐ Non-agricultural
5. OFF FARM WORK - How many days did the operator work 4 hours or more off this place in 1977? Include work at a nonfarm job, business, or on someone else's farm. Exclude exchange farm work	324	1 ☐ None	4 ☐ 100-149 days
		2 ☐ 1-49 days	5 ☐ 150-199 days
		3 ☐ 50-99 days	6 ☐ 200 days or more
Section 10 ENUMERATOR'S RECORD (To be filled by the Census enumerator)			
1. Who furnished the information in this report?		325	
1 ☐ Operator	4 ☐ Wife or member of the operator's family		
2 ☐ Landlord			
3 ☐ Hired laborer	5 ☐ Other - Specify _____		
2. Remarks (Make any remarks needed in regard to the place, the owner or operator, the crops cultivated, or the livestock on this place.)			
3. Residence of operator	a. Election District	b. Village	
4. Location of land	a. Election District	b. ED number	
5. Certified by	Enumerator's signature		Date
6. Checked by	Supervisor's signature		Date

Form Approved: O.M.B. No. 41-578019

FORM 78-A1(VI)
(2-15-78)

U.S. DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS

1978 CENSUS OF AGRICULTURE
VIRGIN ISLANDS

NOTICE - Response to this Inquiry is required by law (title 13, U.S. Code). By the same law your report to the Census Bureau is confidential. It may be seen only by sworn Census employees and may be used only for statistical purposes. Your report cannot be used for purposes of taxation, investigation, or regulation.

FARM SERIAL NUMBER
From A2 column (8)

CENSUS USE ONLY

035	036	037	038	039	040

Section 1 OPERATOR

1. What is your (the operator's) name? Full name (First name, middle initials, last name)

2. What is your (the operator's) mailing address? Complete mailing address
(Give address where correspondence is received.)

Section 2 LAND IN AGRICULTURE

Report only in whole acres

1. How many acres do you own? (If you own more than one tract of land, include all land in the Virgin Islands.) None Acres

2. How many acres do you rent from others? (Include acres worked on shares.) None Acres

3. How many acres do you operate for others as a hired or salaried manager? None Acres

4. How many acres do you rent to others? None Acres

5. TOTAL ACRES IN THIS PLACE (Add items 1 and 2, subtract item 4; if managed, enter data from item 3 here.) Acres

6. Is the farm located on a hard surface (all weather) road? 046 1 ☐ Yes
2 ☐ No - About how many miles is it to the nearest hard surface (all weather) road? Miles Tenth

7. What percent of the farm operation is financed by each of the following sources? None Percent

a. Operator 048

b. Private 049

c. Commercial 050

d. Government 051

e. Other - Specify 052

8. How many unpaid and paid farm hands (including the operator and his family) worked on this place the last 12 months? 053 Total farm hands

150 days or more?	25 to 149 days?	Less than 25 days?
054	055	056
057	058	059

a. Of the unpaid farm hands (including the operator and unpaid family workers), how many worked - ...

b. Of the paid farm hands (hired workers and paid members of operator's family), how many worked - ...

9. What type of operating organization does this place have? 060 1 ☐ Individual
2 ☐ Partnership
3 ☐ Corporation (Do not include cooperatives)
4 ☐ Other (Cooperative, estate, trust, etc.)

10. Is this holding producing mainly for home consumption or sale? 061 1 ☐ Home consumption - Go to section 3
2 ☐ Sale - Ask item 11

11. If producing mainly for sale, which of the following is it? 062 1 ☐ Vegetable holding 6 ☐ Poultry holding
2 ☐ Field and forage crop holding 7 ☐ Nursery holding
3 ☐ Fruit and nut holding 8 ☐ Mixed holding
4 ☐ Dairy holding 9 ☐ Other - Specify
5 ☐ Livestock holding

Section 3 CROPS HARVESTED IN THE LAST 12 MONTHS

Include all crops harvested from July 1, 1977 to June 30, 1978 from the land reported in section 2, item 5, whether harvested by you or by someone else. Be sure to include the landlord's share. Do not include crops which were a complete failure or which were not harvested because of drought, labor shortage, low prices, or destruction from any cause. Report tenths of an acre, such as 1/10, 3/10, 1-5/10, etc.

Were any of these FORAGE crops cultivated on this place in the last 12 months?

None	How many acres were planted?	How many acres were for cutting?	How many acres were for grazing?	How many acres were used for both purposes?	What was the value of sales in the last 12 months?
(a)	(b)	(c)	(d)	(e)	
1. Sugarcane	063	064	065	066	067
2. Sorghum	068	069	070	071	072
3. TOTAL	073	074	075	076	077

Section 3 CROPS HARVESTED IN THE LAST 12 MONTHS - Continued

• Were any of these **FIELD CROPS** harvested in the last 12 months?

	None	How many ACRES were harvested in the last 12 months? (a)	How many POUNDS were harvested in the last 12 months? (b)	How many POUNDS were sold in the last 12 months? (c)	What was the VALUE of sales in the last 12 months? (d)
4. Cassava	☐	078 /10	079	080	081
5. Dry beans	☐	082 /10	083	084	085
6. Dry corn	☐	086 /10	087	088	089
7. Sorghums for grain	☐	090 /10	091	092	093
8. Sweetpotatoes	☐	094 /10	095	096	097
9. Taniers	☐	098 /10	099	100	101
10. Yams	☐	102 /10	103	104	105
11. Other field crops - Specify	☐	106 /10	107	108	109

• Were any of these **VEGETABLE CROPS** harvested in the last 12 months?

	None	How many ACRES were harvested in the last 12 months? (a)	What was the VALUE of sales in the last 12 months? (b)
12. Cabbage	☐	110 /10	111
13. Carrots	☐	112 /10	113
14. Celery	☐	114 /10	115
15. Cucumbers	☐	116 /10	117
16. Eggplant	☐	118 /10	119
17. Green beans	☐	120 /10	121
18. Lettuce	☐	122 /10	123
19. Okra	☐	124 /10	125
20. Onions	☐	126 /10	127
21. Peppers	☐	128 /10	129
22. Spinach	☐	130 /10	131
23. Squash	☐	132 /10	133
24. Tomatoes	☐	134 /10	135
25. Other vegetables - Specify	☐	136 /10	137

• **FRUITS AND NUTS**

26. Are there any fruit and nut trees or plants on this place today or were any harvested in the last 12 months? ¹³⁸ ☐ Yes ☐ No - Skip to section 4

27. How much land is in bearing and nonbearing fruit trees and plants today? ¹³⁹ ☐ Less than 5/10 acres OR

Acres	Tenths
140	/10

• Are any of the following kinds of **FRUIT TREES, NUT TREES, OR PLANTS** on this place?

	None	How many trees or plants are not of bearing age? (a)	How many trees or plants are of bearing age? (b)	How much was harvested in the last 12 months? (c)	How many were sold in the last 12 months? (d)	What was the value of sales in the last 12 months? (e)
28. Avocados	☐	141 Number	142 Number	143 Fruits	144 Fruits	145
29. Bananas	☐	146 Hills	147 Hills	148 Bunches	149 Bunches	150
30. Coconuts	☐	151 Number	152 Number	153 Nuts	154 Nuts	155
31. Grapefruits	☐	156 Number	157 Number	158 Lbs.	159 Lbs.	160
32. Limes and lemons	☐	161 Number	162 Number	163 Lbs.	164 Lbs.	165
33. Mangoes	☐	166 Number	167 Number	168 Fruits	169 Fruits	170
34. Oranges	☐	171 Number	172 Number	173 Lbs.	174 Lbs.	175
35. Papayas	☐	176 Number	177 Number	178 Lbs.	179 Lbs.	180
36. Pineapples	☐	181 Number	182 Number	183 Boxes	184 Boxes	185
37. Plantains	☐	186 Hills	187 Hills	188 Bunches	189 Bunches	190
38. Other fruits, nuts, and tree crops - Specify	☐	191	192	193	194	195

39. How many square feet under cover and/or acres did you have planted in **ORNAMENTAL PLANTS** or in any other **NURSERY CROPS**?

Square feet under cover	Acres	Tenths	What was the value of sales in the last 12 months?
196	197	/10	198

Section 4 LAND USE IN THE LAST 12 MONTHS

Land is to be reported in **ONLY ONE CATEGORY**. If two or more uses were made of the same land, report in the **FIRST** category that applies.

1. How many acres were in crops harvested in the last 12 months? (Can be obtained by adding the acres of the various crops reported in section 3, items 1 through 38. However, if more than one crop was harvested from the same land, count this land only once for this item.) ☐ None ☐ 199 Acres
2. How many acres were in other cropland? (Include cropland pasture, crop failure, idle and fallow cropland, and cropland used for soil improvement crops.) ☐ 200
3. How many acres were in other pasture or grazing land? (Include woodland pasture; do not include cropland pasture.) ☐ 201
4. How many acres were in woodland? (Do not include woodland pasture.) ☐ 202
5. How many acres were in other uses? (Include house lots, barn lots, lanes, roads, ditches, ponds, and wasteland.) ☐ 203
6. **TOTAL LAND** (Add entries in items 1 through 5. This total should equal the entry in section 2, item 5.) ☐ 204
7. How many wells are on this place? ☐ None ☐ 205 Number

Section 5 LIVESTOCK AND POULTRY ON THIS PLACE NOW AND NUMBER SOLD IN THE LAST 12 MONTHS

• Do you or anyone else have any of the following livestock, regardless of ownership, on this place or were any sold from this place in the last 12 months?

	How many are on this place now? (a)	How many were sold in the last 12 months? (b)	What was the value of sales in the last 12 months? (c)
1. Horses and colts, including ponies	206	207	208
2. Mules, asses, and burros of all ages	209	210	211
3. Sheep and lambs of all ages	212	213	214
4. Goats and kids of all ages	215	216	217
5. Hogs and pigs of all ages, including sows and boars (Must equal sum of a and b below.)	218	219	220
a. Pigs less than 8 months old	221	222	223
b. Hogs and pigs 8 months old or older	224	225	226
6. Cattle and calves of all ages (Must equal sum of a, b, c, and d below.)	227	228	229
a. Cows, including heifers that have calved	230	231	232
b. Heifers and heifer calves 1 year old and over (Do not include heifers that have calved.)	233	234	235
c. Bulls, bull calves, steers, and steer calves 1 year old and older	236	237	238
d. Calves less than 1 year old	239	240	241

• Do you or anyone else have any of the following poultry, regardless of ownership, on this place or were any sold from this place in the last 12 months?

	How many are on this place now? (a)	How many were sold in the last 12 months? (b)	What was the value of sales in the last 12 months? (c)
7. Chickens (hens, pullets, roosters, broilers, etc.)	242	243	244
a. How many are 5 months old or older?	245		
8. Turkeys, ducks, geese, and other poultry	248	249	250

	Number sold (a)	What was the value of sales in the last 12 months? (b)
9. How many dozens of chicken eggs were sold from this place in the last 12 months?	251 Dozens	252
10. How many quarts of milk were sold from this place in the last 12 months?	253 Quarts	254

Section 6 SELECTED EXPENDITURES IN THE LAST 12 MONTHS

• How much did you spend for each of the following in the last 12 months?

	None	Dollars only
1. Machine hire and customwork	☐	255
2. Wages and salaries paid to employees or hired farm workers. (Do not include housework or contract construction work. Include cash payments only.)	☐	256
3. Feed purchased for livestock and poultry (Include cost of grain, feed, concentrates, and roughages; also amount paid for grinding and mixing feed.)	☐	257
4. Insecticides, fungicides, and herbicides	☐	258
5. Fertilizers and manure purchased	☐	259
6. Livestock and poultry purchased	☐	260

Section 7 EQUIPMENT AND FACILITIES USED ON THIS PLACE IN THE LAST 12 MONTHS

1. How many of the following are on this place? (Include all specified equipment on this place today, regardless of ownership, provided it is in operating condition.)
- | | None | Number |
|--------------------------|--------------------------|--------|
| a. Tractors of all kinds | ☐ | 261 |
| b. Motortrucks | ☐ | 262 |
| c. Automobiles | ☐ | 263 |
2. Do you have the following on this place?
- | | |
|------------------------|--|
| a. Electricity | 264 ☐ Yes ☐ No |
| b. Piped running water | 265 ☐ Yes ☐ No |

Section 8 OPERATOR CHARACTERISTICS

The following questions are about the FARM OPERATOR.

1. Do you live on this place (the acres entered in section 2, item 5)? ... 266 1 ☐ Yes 2 ☐ No
2. In what year did you begin to operate this place? ... 267 _____ Year
3. Where were you born? ... 268 1 ☐ Virgin Islands 3 ☐ Elsewhere - Specify
2 ☐ Puerto Rico
4. How old were you on your last birthday? ... 269 _____ Years old
5. Is your main occupation agricultural or non-agricultural? ... 270 1 ☐ Agricultural 2 ☐ Non-agricultural
6. OFF FARM WORK - How many days did the operator work 4 hours or more off this place in the last 12 months? Include work at a nonfarm job, business, or on someone else's farm. (Exclude exchange farm work.) ... 271 1 ☐ None 4 ☐ 100-149 days
2 ☐ 1-49 days 5 ☐ 150-199 days
3 ☐ 50-99 days 6 ☐ 200 days or more

Section 9 ENUMERATOR'S RECORD

1. Who furnished the information in this report? ... 272 1 ☐ Operator 4 ☐ Hired laborer
2 ☐ Landlord 5 ☐ Neighbor
3 ☐ Wife or a member of the operator's family 6 ☐ Other - Specify
2. Remarks (Make any remarks needed in regard to this place, the owner or operator, the crops cultivated, or the livestock on this place.)

3. Location of land	a. Island	b. Quarter or city	c. ED number
4. Certified by	Enumerator's signature		Date
5. Checked by	Supervisor's signature		Date

Form Approved: O.M.B. No. 41-S79062

NOTICE - Response to this inquiry is required by law (title 13, U.S. Code). By the same law your report to the Census Bureau is confidential. It may be seen only by sworn Census employees and may be used only for statistical purposes. U.S. DEPARTMENT OF COMMERCE BUREAU OF THE CENSUS FORM 80-A1(NM) (11-30-79) A1 1980 CENSUS OF AGRICULTURE NORTHERN MARIANA ISLANDS		Port A QUESTIONNAIRE IDENTIFICATION <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">Island number</td> <td style="width: 15%;">ED number</td> <td style="width: 15%;">CENSUS USE ONLY</td> <td style="width: 25%;">Farm serial number</td> <td style="width: 20%;">CENSUS USE ONLY</td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table> Name of island _____ Municipality _____ Port B OPERATOR'S NAME AND MAILING ADDRESS Full name - First name, middle initial, last name _____ Address - Complete mailing address _____		Island number	ED number	CENSUS USE ONLY	Farm serial number	CENSUS USE ONLY																	
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CENSUS USE ONLY <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">035</td> <td style="width: 15%;">036</td> <td style="width: 15%;">037</td> <td style="width: 15%;">038</td> <td style="width: 15%;">039</td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>		035	036	037	038	039						INSTRUCTIONS A farm is defined as "any place that has 15 or more poultry (chickens, ducks, guineas, etc.); 5 or more livestock (cattle, hogs, goats, etc.); a combined total of 10 or more fruit or nut trees or plants; or any place of 100 square meters or more on which roots or field crops or vegetables were harvested for sale during 1979." Reporting Land in Section 1 This section is for recording information on all agricultural land the operator is associated with and for reporting the names of all landlords. Question 1 - Acres owned - Report all land owned whether held under title, purchase contract or mortgage, or as heir or trustee of an undivided estate, by you and/or your spouse, or by the partnership, corporation, or organization for which you are reporting. Question 2 - Acres rented or leased FROM OTHERS - Report all land rented, even though the landlord may have supplied equipment, fertilizer, or other materials and/or some supervision of the work. Question 3 - Acres rented TO OTHERS - Include land rented to others for cash or a share of the crops or livestock or rent-free. Question 4 - Total Acres in this Place - The entry is the sum of the acres owned, plus acres rented FROM OTHERS, minus the acres rented TO OTHERS. This entry represents all tracts of land regardless of where located in the Northern Mariana Islands that is operated by the person in charge.													
035	036	037	038	039																					
Section 1 LAND IN AGRICULTURE		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2" style="text-align: center;">Acres</th> </tr> <tr> <th style="width: 60%;">None</th> <th style="width: 40%;">Whole acres Tenths</th> </tr> <tr> <td>1. How many acres do you own? 040</td> <td style="text-align: center;">/10</td> </tr> <tr> <td>2. How many acres do you rent FROM OTHERS? Include land used rent-free 042</td> <td style="text-align: center;">/10</td> </tr> <tr> <td colspan="2">What is the FULL NAME of the owner of this land? 044</td> </tr> <tr> <td>3. How many acres do you rent TO OTHERS? Include land for which no rent is received 045</td> <td style="text-align: center;">/10</td> </tr> <tr> <td>4. TOTAL ACRES IN THIS PLACE - ADD acres owned (question 1) and acres rented (question 2), then SUBTRACT acres rented TO OTHERS (question 3), and enter the result in this space. 046</td> <td style="text-align: center;">/10</td> </tr> <tr> <td colspan="2">5. How many separate TRACTS or PIECES of land or plantations are represented in the "Total acres in this place?" 047</td> </tr> <tr> <td colspan="2">6. Is this holding producing mainly for home consumption or sale? - Mark (X) one 048</td> </tr> <tr> <td colspan="2">7. What kind of a holding is it? - Mark (X) one 049</td> </tr> <tr> <td colspan="2">8. What percent of the farm operation is financed by each of the following sources? 050</td> </tr> </table>		Acres		None	Whole acres Tenths	1. How many acres do you own? 040	/10	2. How many acres do you rent FROM OTHERS? Include land used rent-free 042	/10	What is the FULL NAME of the owner of this land? 044		3. How many acres do you rent TO OTHERS? Include land for which no rent is received 045	/10	4. TOTAL ACRES IN THIS PLACE - ADD acres owned (question 1) and acres rented (question 2), then SUBTRACT acres rented TO OTHERS (question 3), and enter the result in this space. 046	/10	5. How many separate TRACTS or PIECES of land or plantations are represented in the "Total acres in this place?" 047		6. Is this holding producing mainly for home consumption or sale? - Mark (X) one 048		7. What kind of a holding is it? - Mark (X) one 049		8. What percent of the farm operation is financed by each of the following sources? 050	
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Section 2 VEGETABLES AND FIELD CROPS											
Did you harvest any VEGETABLES or FIELD CROPS last year – such as yams, sweetpotatoes, melons, taro, etc.?		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2" style="text-align: center;">How many acres were harvested in 1979?</th> <th rowspan="3" style="text-align: center;">How many pounds were harvested in 1979?</th> </tr> <tr> <th colspan="2" style="text-align: center;">(a)</th> </tr> <tr> <th style="text-align: center;">Whole acres</th> <th style="text-align: center;">Tenths</th> </tr> </table>		How many acres were harvested in 1979?		How many pounds were harvested in 1979?	(a)		Whole acres	Tenths	
How many acres were harvested in 1979?		How many pounds were harvested in 1979?									
(a)											
Whole acres	Tenths										
002 ☐ 1 Yes – Complete this section ☐ 2 No – Go to section 3		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;"></td> <td style="width: 50%;"></td> <td style="width: 50%;"></td> <td style="width: 50%;"></td> </tr> <tr> <td style="text-align: center;">None</td> <td></td> <td style="text-align: center;">(b)</td> <td></td> </tr> </table>						None		(b)	
None		(b)									
1. Cassava	☐	062	/10								
2. Chinese cabbage	☐	064	/10								
3. Corn	☐	066	/10								
4. Cucumbers	☐	068	/10								
5. Eggplant	☐	080	/10								
6. Honeydews	☐	082	/10								
7. Melons	☐	084	/10								
8. Muskmelons	☐	086	/10								
9. Sweetpotatoes	☐	088	/10								
10. Taro	☐	090	/10								
11. Watermelons	☐	092	/10								
12. Yams	☐	094	/10								
13. Other crops – Specify <u>✓</u>	☐	096	/10								
		063	/10								
		065	/10								
		067	/10								
		069	/10								
		081	/10								
		083	/10								
		085	/10								
		087	/10								
		089	/10								
		091	/10								
		093	/10								
		095	/10								
		097	/10								

Section 3 FRUIT, NUT, AND TREE CROPS											
Do you have any FRUIT, NUT, or TREE crops on this place – such as coconuts, bananas, mangoes, etc.? (Quantity harvested in 1979 and number of trees and plants on enumeration day.)		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2" style="text-align: center;">How many trees or plants are on this place?</th> <th rowspan="3" style="text-align: center;">How much was harvested in 1979?</th> </tr> <tr> <th colspan="2" style="text-align: center;">(a)</th> </tr> <tr> <th style="text-align: center;">Whole acres</th> <th style="text-align: center;">Tenths</th> </tr> </table>		How many trees or plants are on this place?		How much was harvested in 1979?	(a)		Whole acres	Tenths	
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None		(b)									
1. Avocados	☐	120	121 Pounds								
2. Bananas	☐	122	Clusters Pounds								
3. Betelnuts	☐	124	125 Pounds								
4. Breadfruits	☐	126	127 Pounds								
5. Coconuts	☐	130	131 Pounds								
6. Coffee	☐	134	135 Pounds								
7. Green oranges	☐	136	137 Pounds								
8. Guavas	☐	138	139 Pounds								
9. Lemons	☐	140	141 Pounds								
10. Limes	☐	142	143 Pounds								
11. Mangoes	☐	144	145 Pounds								
12. Papayas	☐	148	149 Pounds								
13. Pineapples	☐	150	151 Fruits								
14. Star fruits	☐	152	153 Pounds								
15. Tangerines	☐	154	155 Pounds								
16. Other fruits, nuts, or tree crops – Specify <u>✓</u>	☐	158	159 Pounds								
			Pounds								

Section 4 LAND USE							
Of the total acres in this place (Section 1, question 4) –		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2" style="text-align: center;">Acres</th> </tr> <tr> <th style="text-align: center;">Whole acres</th> <th style="text-align: center;">Tenths</th> </tr> </table>		Acres		Whole acres	Tenths
Acres							
Whole acres	Tenths						
1. How many acres are in crops?	☐	201	/10				
2. How many acres are in other cropland (cropland pasture, crop failure, idle cropland, and cropland used for soil improvement)?	☐	202	/10				
3. How many acres are in other pasture or grazing land? (Include woodland pastured. Do not include cropland pasture.)	☐	203	/10				
4. How many acres are in other lands? (Include houselots, roads, woodland not pastured, wasteland, etc.)	☐	204	/10				
5. TOTAL LAND – Add entries in questions 1 through 4. Total should be equal to entry in section 1, question 4. ➔	☐	205	/10				

Section 5 LIVESTOCK AND POULTRY

How many of the following livestock and/or poultry are on this place?

	None	Number
1. Carabaos	☐	250
2. Total cattle and calves (Must equal sum of "a" and "b" below.)	☐	251
Of this total, how many are -		252
a. Milk cows	☐	253
b. All other cattle and calves	☐	254
3. Hogs and pigs	☐	255
4. Goats and kids	☐	256
5. Horses, mules, and colts	☐	259
6. Other livestock - Specify ☒	☐	266
7. Chickens	☐	267
8. Other poultry (ducks, pigeons, guineas, geese, turkeys, etc.) - Specify ☒	☐	

	None	Quantity sold in 1979
9. How many chickens were sold during last year?	☐	275
10. How many dozens of chicken eggs were sold during last year?	☐	276

Section 6 FISHERY

	None	Total pounds caught (a)	Total pounds sold (b)	Value of sales (dollars) (c)
1. How many pounds of fish were caught during 1979?	☐	277	278	279

Section 7 SELECTED EQUIPMENT AND FACILITIES USED ON THIS PLACE

	None	Number
1. How many of the following are on this place? - Include all specified equipment on this place today, regardless of ownership, provided it is in operating condition and used in the farm business.		280
a. Tractors (of all kinds) other than garden tractors and motor tillers	☐	281
b. Motortrucks	☐	282
c. Automobiles	☐	
2. Do you have the following on this place?		
a. Electricity	1 ☐ Yes	2 ☐ No
b. Piped running water	1 ☐ Yes	2 ☐ No

Section 8 OPERATOR CHARACTERISTICS

The following questions are about the FARM OPERATOR

1. Do you live on this place?	1 ☐ Yes	2 ☐ No
2. In what year did you begin to operate this place?	291 _____ Year	
3. Age of operator. (Copy from Population and Housing questionnaire.)	292 _____ Years old	
4. What is your principal occupation?	1 ☐ Farming	2 ☐ Other than farming
5. OFF-FARM WORK - How many days did the operator work at least 4 hours per day off this place in 1979? - Include work at a nonfarm job, business, or on someone else's farm. Exclude exchange farm work	1 ☐ None	4 ☐ 100-149 days
	2 ☐ 1-49 days	5 ☐ 150-199 days
	3 ☐ 50-99 days	6 ☐ 200 days or more

Section 9 ENUMERATOR'S RECORD (To be filled by the Census enumerator)	
1. Who furnished the information in this report? ²⁹⁵ 1 ☐ Operator 2 ☐ Landlord 3 ☐ Wife or a member of the operator's family 4 ☐ Hired laborer 5 ☐ Other — Specify <u>✓</u>	
2. Remarks (Make any remarks needed in regard to the place, the owner or operator, such as crop failure, low yields, droughts, floods, insects, etc.)	
Enumerator: Ask, at the completion of this questionnaire — "Besides you, (the operator) does any other person living in this household produce or sell any crops, livestock, or poultry?" ²⁹⁶ 2 ☐ No — END INTERVIEW 1 ☐ Yes — Ask the following questions A. Does . . . have 15 or more poultry (chickens, ducks, guineas, etc.)? ²⁹⁷ 2 ☐ No 1 ☐ Yes B. Does . . . have 5 or more livestock (cattle, hogs, goats, etc.)? ²⁹⁸ 2 ☐ No 1 ☐ Yes C. Does . . . have a combined total of 10 or more fruit, nut, or tree crops on the place? ²⁹⁹ 2 ☐ No 1 ☐ Yes D. Does . . . have 100 square meters or more on which root or field crops or vegetables were harvested for sale during 1979? ³⁰⁰ 2 ☐ No 1 ☐ Yes If "Yes" to A, B, C, or D — enter note in "Remarks" column (Col. 11) of Address Register and complete another Agriculture questionnaire for the other person.	
3. Certified by Enumerator	³⁰¹ Date
4. Checked by Crew Leader	³⁰² Date

None		Whole acres	Tenths
040			/10
042			/10
044			/10
045			/10

1. How many acres do you own or use in ownerlike possession? ☐
041
 Are these Matai lands? ☐ 2 ☐ No ☐ 1 ☐ Yes

2. How many acres do you rent FROM OTHERS? Include land used rent free. ☐
 a. What is the FULL NAME of the owner of this land?

043
 b. Are these Matai lands? ☐ 2 ☐ No ☐ 1 ☐ Yes

3. How many acres do you rent TO OTHERS? Include land for which no rent is received ☐
 4. TOTAL ACRES IN THIS PLACE — ADD acres owned (question 1) and acres rented (question 2), then SUBTRACT acres rented TO OTHERS (question 3), and enter the result in this space. 

5. How many separate TRACTS or PIECES of land or plantations are represented in the "Total acres in this place"? ☐
046 _____ Number of pieces

6. Is this holding producing mainly for home consumption or sale? —
 Mark (X) one. ☐
047
☐ 1 ☐ Home consumption — SKIP to question 8.
☐ 2 ☐ Sale — If for sale, go to question 7.

7. What kind of a holding is it? — Mark (X) one ☐
048
☐ 1 ☐ Crop holding ☐ 3 ☐ Mixed holding
☐ 2 ☐ Livestock and/or poultry holding ☐ 4 ☐ Other

8. What percent of the farm operation is financed by each of the following sources?
 a. Operator ☐
 b. Private ☐
 c. Commercial ☐
 d. Government ☐
 e. Other — Specify _____ ☐

None	Percent
049	
050	
051	
052	
053	

Section 2 VEGETABLES AND FIELD CROPS			
Did you harvest any VEGETABLES or FIELD CROPS last year – such as cabbage, cassava, toro, yams, etc.?			
002 1 ☐ Yes – Complete this section 2 ☐ No – Go to section 3			
1. Cabbage. ☐ 2. Cassava. ☐ 3. Corn. ☐ 4. Cucumber. ☐ 5. Giant Toro. ☐ 6. Green peas. ☐ 7. Green peppers. ☐ 8. Sugarcane. ☐ 9. Toro. ☐ 10. Yams. ☐ 11. Other crops (Kava, sweetpotatoes, tobacco, etc.) – Specify ☐ _____ _____	None	How many acres were harvested in 1979? (a) Whole acres Tenths	How much was harvested in 1979? (b) Pounds Roots Pounds Pounds Pounds Roots Pounds Pounds Pounds Roots Roots Pounds Pounds
060 /10 061 062 /10 063 066 /10 067 068 /10 069 070 /10 071 072 /10 073 074 /10 075 076 /10 077 090 /10 091 094 /10 095 096 /10 097 098 /10 099			
Section 3 FRUITS, NUTS, AND TREE CROPS			
Do you have any FRUIT, NUT, or TREE CROPS on this place – such as bananas, coconuts, mangoes, pineapples, etc.? (Quantity harvested in 1979 and number of trees or plants on enumeration day.)			
003 1 ☐ Yes – Complete this section 2 ☐ No – Go to section 4			
1. Avocados. ☐ 2. Bananas. ☐ 3. Breadfruits. ☐ 4. Cocoa. ☐ 5. Coconuts. ☐ 6. Grapefruits. ☐ 7. Lemons. ☐ 8. Limes. ☐ 9. Mangoes. ☐ 10. Oranges. ☐ 11. Papayas. ☐ 12. Pineapples. ☐ 13. Other fruits, nuts, or tree crops (pandanus, kopok, citrons, coffee) – Specify ☐ _____ _____	None	How many trees or plants are on this place? (a) Clusters	How much was harvested in 1979? (b) Pounds Pounds Pounds Pounds Pounds Pounds Pounds Pounds Pounds Pounds Fruits Pounds Pounds Pounds
120 121 122 Clusters 123 126 127 128 129 130 131 132 133 140 141 142 143 144 145 146 147 148 149 150 151 158 159 160 161 162 163			
Section 4 LAND USE			
Of the total acres in this place (Section 1, question 4) –			
1. How many acres are in crops? ☐			
2. How many acres are in other cropland (cropland pasture, crop failure, idle cropland, and cropland used for soil improvement)? ☐			
3. How many acres are in other pasture or grazing land? Include woodland pastured. Do not include cropland pasture. ☐			
4. How many acres are in other lands? Include houselots, roads, woodland not pastured, wasteland, etc. ☐			
5. TOTAL LAND (Add entries in questions 1 through 4. Total should be equal to entry in section 1, question 4.) ➔			
		Acres Whole acres Tenths	201 /10 202 /10 203 10 204 /10 205 /10

Page 4

PENALTY FOR FAILURE TO REPORT
DUE DATE: February 15, 1979

Form Approved: O.M.B. No. 41-578030

NOTICE - Response to this inquiry is required by law (Title 13, U.S. Code). By the same law YOUR REPORT TO THE CENSUS BUREAU IS CONFIDENTIAL. It may be seen only by sworn Census employees and may be used only for statistical purposes. Your report CANNOT be used for purposes of taxation, investigation, or regulation. The law also provides that copies retained in your files are immune from legal process.

In correspondence pertaining to this report, please refer to the 11-digit Census File Number.

FORM 78-A40A
(9-26-78)

U.S. DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS



1978 CENSUS OF SOIL PREPARATION SERVICES, CROP SERVICES, AND COTTON GINNING

Important - Please read

- Please answer the questions on the form and return it by February 15, 1979.
- This report should cover the calendar year 1978. If book figures are not available, carefully prepared estimates are acceptable.
- If you correspond with us regarding your report, please use the Census File Number shown in the address box.
- CENTS ARE NOT REQUIRED, however, please use the space provided if you wish to enter them.

(Please correct any error in name and address including ZIP code)

CENSUS USE ONLY	010	011	012	013	014	015	COMPLETE AND RETURN TO	BUREAU OF THE CENSUS 1201 East Tenth Street Jeffersonville, Indiana 47132

Section 1 - BUSINESS OR ACTIVITY

Mark (X) the ONE box which best describes your principal activity and list your principal products or services

1 ☐ Soil preparation services (plowing, fertilizing, or weed control prior to planting, etc.)	4 ☐ Animal services, except veterinary (artificial insemination; boarding, showing, training, or grooming of animals; etc.)	6 ☐ Landscape and horticultural services (planting, planting, or caring of lawns, gardens, shrubs, trees, etc.)
2 ☐ Crop services (planting; cultivating; disease, insect, or weed control; harvesting; cotton ginning; preparation of crops for market; etc.)	5 ☐ Farm labor and management services (labor contractors, crew leaders, managers, citrus caretakers, etc.)	7 ☐ Other - Specify activity
3 ☐ Veterinary services by licensed practitioners		

Description of major activity or principal products or services:

_____ _____ _____	_____ _____ _____

Section 2 - EMPLOYER IDENTIFICATION NUMBER

Is the Employer Identification (EI) Number printed in the upper right of the address box the SAME as that used by this establishment on your latest 1978 Employer's Quarterly Federal Tax Return, Treasury Form 941?

016
1 ☐ YES

2 ☐ NO - Enter current EI number →

017									

Section 3 - TYPE OF ORGANIZATION

018 Mark (X) the box which best describes the way the business was operated during 1978.

1 ☐ Individual	2 ☐ Partnership	3 ☐ Corporation	4 ☐ Other - Describe _____

Section 4 - PERIOD OPERATED DURING 1978

a. Was this establishment in business at the end of 1978?

■ If establishment was inactive during December 1978 due to seasonal or part-time operations, answer "Yes" unless it was not owned at the end of the year.

019
1 ☐ YES
2 ☐ NO

b. How many months during 1978 did you own this establishment?

Number of
months
021

Section 5 - DOLLAR VOLUME OF BUSINESS

- INCLUDE only receipts from customers, excise taxes and sales taxes, total charges for services or for the use of facilities, and merchandise sold, whether or not payment was received in 1978.
- DO NOT INCLUDE commissions from vending machine operations, real estate rental, interest, sale of real estate, and other non-operating income.

Receipts from services and sale of merchandise in 1978

Dollars	Cents
031	
\$	

Section 6 - PAYROLL

Lines a and b - Report the gross earnings paid in calendar year to employees prior to such deductions as employee's Social Security contributions, withholding taxes, group insurance premiums, union dues, and savings bonds. Include in gross earnings all wages, salaries, commissions, dismissal pay, paid bonuses, vacation and sick-leave pay, and the cash equivalent of compensation paid-in-kind. If a corporation, include salaries of officers; if an unincorporated concern, exclude payments to proprietors or partners.

a. Total ANNUAL payroll in 1978 before deductions

b. Payroll for the FIRST QUARTER of 1978

Dollars	Cents
041	
\$	
042	
\$	

Section 7 - SUPPLEMENTAL LABOR COSTS NOT INCLUDED IN PAYROLL DURING 1978

- a. Legally Required Labor Expenditures During 1978 - Report payments for all programs required under Federal and State legislation such as: Federal Old Age Survivors Insurance, unemployment compensation, workmen's compensation, and State temporary disability payments. Include employer payments only.
- b. Voluntary Labor Expenditures During 1978 - Report the cost of all programs not specifically required by Federal or State legislation. For programs financed jointly by employer and employee contributions, include only the employer payments. Include employer payments for: insurance premiums on hospital and medical plans, life insurance premiums; and premiums on supplementary accident and sickness insurance. In reporting payments for insurance, report net payments, i.e., gross payments less any offsetting dividends, refunds, or other reductions in premiums.
- Also include payments or allocations for all pension plans regardless of method of administration, supplemental unemployment compensation plans, welfare plans, stock purchase plans in which the employer payment is not subject to withholding tax, and deferred profit sharing plans.

a. Legally required labor expenditures during 1978

b. Voluntary labor expenditures during 1978

c. TOTAL supplemental labor costs not included in payroll during 1978 (Sum of lines a and b) →

Dollars	Cents
051	
\$	
052	
\$	
053	
\$	

Section 8 - GROSS RECEIPTS FOR SERVICES PERFORMED				Gross receipts for services performed during 1978	
Report value of receipts for all services performed during 1978 in "a" through "c" below. Report value of receipts from the sale of any materials or products used in connection with the services performed in section 11. Report all other sales in section 12.				Dollars	Cents
a. SOIL PREPARATION SERVICES - If none, skip to b.			Number of acres		
Report value of receipts for chemicals, fertilizer, or lime applied in section 11.	07110	Plowing or land breaking	110	111	
	07111	Harrowing or seed bed preparation	112	113	
	07112	Fertilizer and lime spreading before planting	114	115	
	07113	Weed control before planting	116	117	
	07118		118	119	
	07119	Other - Specify _____			
b. CROP SERVICES - If none, skip to c.					
(1) Planting, Cultivating, and Protection					
Report value of receipts for chemicals, fertilizer, or lime applied in section 11.					
07210	Planting with or without fertilizer	200	201		
07211	Fertilizer spreading (only) after planting	202	203		
07212	Aerial dusting and spraying for disease and insect control with or without fertilizer (includes seeding)	204	205		
07213	On-ground dusting and spraying for disease and insect control with or without fertilizer	206	207		
07214	Weed control after planting	208	209		
07215	Citrus grove cultivation or maintenance	210	211		
07216	Cultivation, mechanical and flame, other than citrus grove	212	213		
07217	Pruning of orchards or vineyards	214	215		
07218	Irrigation services, custom	216	217		
07219	Other - Specify _____	218	219		
(2) Harvesting, Primarily by Machine					
07220	Corn for all purposes	220	221		
07221	Wheat or other small grains (combining)	222	223		
07222	Cotton	224	225		
07223	Fruits or berries	226	227		
07224	Vegetables	228	229		
07225	Soybeans, other beans, peas, or peanuts	230	231		
07226	Hay (mowing, raking, baling, or chopping)	232	233		
07229	Other - Specify _____	234	235		
(3) Preparation for Market					
07230	Corn shelling or drying	236	237		
07231	Crop drying other than corn	238	239		
07232	Grain grinding and mixing	240	241		
07233	Bean or grain cleaning	242	243		
07234	Cotton seed delinting	244	245		
07235	Packaging fresh or farm-dried fruits or vegetables	246	247		
07236	Sorting, grading, or packing of fruits or berries	248	249		
07237	Sorting, grading, or packing of vegetables	250			
07239	Other - Specify _____				
(4) Cotton Ginning			Number of bales		
Report value of receipts for bagging and ties in section 11. Report sales of cottonseed and bales of cotton in section 12.			245	246	
07240	Cotton ginning	247	248		
07241	Cotton pickery	249	250		
07249	Other - Specify _____				
c. OTHER AGRICULTURAL SERVICES EXCLUDING SOIL PREPARATION AND CROP SERVICES (Veterinary, Farm Management, Landscape and Horticultural) - Specify _____				832	
d. TOTAL gross receipts for all services performed (Sum of all dollar entries in section 8)				849	

Section 9 - LOCATION OF SERVICES PERFORMED DURING 1978

List below all counties in which you or your establishment performed the activities reported in section 8 above. The principal county is the one from which the major part of the receipts from those activities was received. Receipts may be reported in either the dollar column (column c) or in column d as a percent of the total. Continue in "Remarks" section if necessary.

	County name (a)	State (b)	Gross receipts for services (Report dollars OR percent)		
			Dollars (c)	Cents	Percent (d)
Principal county			851		852
			\$		
Other counties			853		854
			\$		
			855		856
			\$		

Section 10 - LABOR AND PAYROLL FOR SERVICES PERFORMED DURING 1978

If you reported any activities in section 8, complete this section. Report yourself as unpaid if you are the sole proprietor or a partner of this establishment. If it is a corporation and you are on the payroll, report yourself as a paid employee.

- a. Soil preparation services
- b. Crop services

Number of unpaid workers (including unpaid family members) working -		Number of paid employees (including paid family members) working -		Payroll before deductions	
150 days or more	Less than 150 days	150 days or more	Less than 150 days	Dollars	Cents
857	858	859	860	861	
				\$	
862	863	864	865	866	
				\$	

- c. SEASONAL VARIATION - For all of the workers included above (paid and unpaid), report the number working during the pay period which includes the 12th day of each month shown.

(1) Paid

(2) Unpaid

Number of workers			
March	June	September	December
887	888	889	890
891	892	893	894

Section 11 - GROSS RECEIPTS FROM PRODUCTS PROVIDED IN CONNECTION WITH SERVICES PERFORMED DURING 1978

Report product sales in section 12.

- a. Fertilizer or lime spread
- b. Insecticides, pesticides, or herbicides applied
- c. Bagging and ties for cotton ginned
- d. TOTAL gross receipts (Sum of dollars entered in "a" through "c")

Dollars	Cents
895	
\$	
896	
\$	
897	
\$	
901	
\$	

Section 12 - OTHER OPERATIONS PERFORMED DURING 1978

List all operations, other than those reported in section 8 performed during 1978 by the individual or establishment identified in the address box. Include any business activities, farming, nonagricultural operations, sales of merchandise, etc., NOT in connection with services performed in section 8. Report the number of paid employees and the gross receipts from such other operations.

NOTE: If no other operations were performed, mark (X) this box and go to section 13.



List other operations	Number of paid employees working -		Gross receipts for 1978	
	150 days or more	Less than 150 days	Dollars	Cents
	902	903	904	
			\$	
	905	906	907	
			\$	
	908	909	910	
			\$	

If this establishment is a corporation or more than \$50,000 was reported in section 5, answer sections 13, 14, and 15. If not, SKIP to section 16.

Section 13 - CAPITAL EXPENDITURES FOR THIS ESTABLISHMENT DURING 1978 (EXCLUDING LAND AND MINERAL RIGHTS)

- Report all capital expenditures actually made during 1978 for this establishment, including major alterations, capitalized repairs, and improvements. "Capital expenditures" refer to all costs that are chargeable to property accounts for which depreciation or amortization accounts are ordinarily maintained.
- Include the cost of all improvements and new construction at this establishment which were in progress but had not been completed at the end of 1978. (For example, cost for animal hospitals, packing sheds, cotton gins, warehouses, etc., and improvements to establishment sites such as fences, storage facilities, etc.) Include expenditures made by your company (or any of its subsidiaries) for structures which, upon completion, were or are to be sold and leased back to this establishment.
- Include expenditures for new machinery and equipment such as forklifts, conveyors, tractors, mechanical planters, harvesters, sprayers, dusters (including airplane dusters), fruit packing equipment, automobiles, etc., primarily used in performing services.
- Include transfers of used plant and equipment to your establishment from other establishments of your company.
- Exclude the cost of land and mineral rights. Exclude the cost of maintenance and repairs charged as current operating expense. Exclude capital expenditures made by outside owners of property rented or leased to this establishment. Exclude capital expenditures made by this establishment for other locations of your company.

Type of capital expenditures:

- a. New structures and additions to your service establishments

- b. New machinery and new equipment

- c. Used plant and used equipment acquired from others (including transfers from other establishments of your company)

- d. TOTAL CAPITAL EXPENDITURES DURING 1978 (Sum of lines a, b, and c)

Dollars	Cents
911	
\$	
912	
\$	
913	
\$	
914	
\$	

Section 14 – CHANGES IN GROSS VALUE OF DEPRECIABLE ASSETS OF THIS ESTABLISHMENT DURING 1978 ■ Report the changes in gross value of depreciable assets of this establishment for which depreciation or amortization accounts are ordinarily maintained. "Gross value" represents the acquisition cost (original cost or other basis) to your company of such depreciable assets. Include all depreciable assets (buildings, structures, machinery, equipment, etc.), and all amortizable fixed assets. Include all improvements and new construction "in progress" during 1978 but not yet completed at the end of 1978. Also include the value of depreciable assets owned by this establishment but leased or rented to other companies. Include the value of depreciable assets owned by your company or any of its subsidiaries but "leased" to this establishment. ■ Exclude the value of depreciable assets at other locations of your company (or any of its subsidiaries) for which this establishment maintains records.		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 80%;"></th> <th style="width: 10%; text-align: center;">Dollars</th> <th style="width: 10%; text-align: center;">Cents</th> </tr> <tr> <td>a. Gross value of depreciable assets at BEGINNING of 1978</td> <td style="text-align: center;">915</td> <td style="text-align: center;">\$</td> </tr> <tr> <td>b. Total capital expenditures during 1978 (Copy figure from section 13, item d)</td> <td style="text-align: center;">916</td> <td style="text-align: center;">\$</td> </tr> <tr> <td>c. Gross value of depreciable assets sold, retired, transferred, scrapped, or destroyed during 1978</td> <td style="text-align: center;">917</td> <td style="text-align: center;">\$</td> </tr> <tr> <td>d. Gross value of depreciable assets at END of 1978 (Should equal lines a + b - c. If not, please explain in "Remarks.")</td> <td style="text-align: center;">918</td> <td style="text-align: center;">\$</td> </tr> </table>		Dollars	Cents	a. Gross value of depreciable assets at BEGINNING of 1978	915	\$	b. Total capital expenditures during 1978 (Copy figure from section 13, item d)	916	\$	c. Gross value of depreciable assets sold, retired, transferred, scrapped, or destroyed during 1978	917	\$	d. Gross value of depreciable assets at END of 1978 (Should equal lines a + b - c. If not, please explain in "Remarks.")	918	\$
	Dollars	Cents															
a. Gross value of depreciable assets at BEGINNING of 1978	915	\$															
b. Total capital expenditures during 1978 (Copy figure from section 13, item d)	916	\$															
c. Gross value of depreciable assets sold, retired, transferred, scrapped, or destroyed during 1978	917	\$															
d. Gross value of depreciable assets at END of 1978 (Should equal lines a + b - c. If not, please explain in "Remarks.")	918	\$															

Section 15 – EXPENDITURES FOR ELECTRICITY, GASOLINE, PETROLEUM, AND OTHER FUELS PURCHASED DURING 1978 a. Gasoline b. Diesel fuel c. LP gas, butane, propane d. Motor oil, grease, piped gas, kerosene, and fuel oil e. Electricity purchased		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2" style="text-align: center;">Estimated expenditures for 1978</th> </tr> <tr> <th style="width: 80%;"></th> <th style="width: 20%; text-align: center;">Dollars Cents</th> </tr> <tr> <td>919</td> <td style="text-align: center;">\$</td> </tr> <tr> <td>920</td> <td style="text-align: center;">\$</td> </tr> <tr> <td>921</td> <td style="text-align: center;">\$</td> </tr> <tr> <td>922</td> <td style="text-align: center;">\$</td> </tr> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 60%;"></th> <th style="width: 20%; text-align: center;">Kilowatt hours</th> <th style="width: 20%; text-align: center;">Dollars</th> <th style="width: 20%; text-align: center;">Cents</th> </tr> <tr> <td>923</td> <td style="text-align: center;">\$</td> <td style="text-align: center;">924</td> <td style="text-align: center;">\$</td> </tr> </table>	Estimated expenditures for 1978			Dollars Cents	919	\$	920	\$	921	\$	922	\$		Kilowatt hours	Dollars	Cents	923	\$	924	\$
Estimated expenditures for 1978																						
	Dollars Cents																					
919	\$																					
920	\$																					
921	\$																					
922	\$																					
	Kilowatt hours	Dollars	Cents																			
923	\$	924	\$																			

Section 16 – CHECKS to assure a complete and accurate report The Bureau of the Census reviews your report for omissions, inconsistencies, and unusual ratios. To reduce the possibility of correspondence about some problem, please make the following checks before returning your report.		(1) Review the report carefully to see that no items are omitted for the year being covered. (2) Calculate and enter figures for the consistency checks below, and review the results. (3) Correct your report for any errors you find and explain unusual figures in "Remarks." For most establishments, the figures computed usually fall within the ranges indicated.

Consistency checks	Calculation required for each check	Figures for 1978	Usual range
Dollars per acre	Section 8a – Gross receipts for Soil Preparation ÷ Number of acres	\$	\$2–\$10
Dollars per acre	Section 8b(1) – Gross receipts for Planting, Cultivating, and Protection ÷ Number of acres	\$	\$2–\$8
Dollars per acre	Section 8b(2) – Gross receipts for Harvesting, Primarily by Machine ÷ Number of acres	\$	\$2–\$67
Dollars per bale	Section 8b(4) – Gross receipts for Cotton Ginning ÷ Number of bales	\$	\$25–\$45
Section 5	If section 5 is completed, have sections 8 and 11 been completed? ☐ Yes ☐ No – Please complete		
Total for section 5	Does the sum of the totals in sections 8, 11, and 12 equal the total for section 5? ☐ Yes ☐ No – Please refigure		
Payroll	Does the entry for section 6a equal the sum of section 10a and b? ☐ Yes ☐ No – Please explain in "Remarks" section		
Total for section 8	Do all dollar entries in section 8 add to total entered in section 8d? ☐ Yes ☐ No – Please refigure		

Section 17 – SIGNATURE (Please check your answers, then sign below.) Signature _____	Date _____	Telephone Area code _____ Number _____

Remarks – Attach a separate sheet if needed.

PENALTY FOR FAILURE TO REPORT
DUE DATE: February 15, 1979

Form Approved: O.M.B. No. 41-578030

NOTICE - Response to this inquiry is required by law (title 13, U.S. Code). By the same law YOUR REPORT TO THE CENSUS BUREAU IS CONFIDENTIAL. It may be seen only by sworn Census employees and may be used only for statistical purposes. Your report CANNOT be used for purposes of taxation, investigation, or regulation. The law also provides that copies retained in your files are immune from legal process.

FORM 78-A40B
(5-25-78)

U.S. DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS



1978 CENSUS OF VETERINARY AND ANIMAL SERVICES

Important - Please read

- Please answer the questions on the form and return it by February 15, 1979.
- This report should cover the calendar year 1978. If book figures are not available, carefully prepared estimates are acceptable.
- If you correspond with us regarding your report, please use the Census File Number shown in the address box.
- CENTS ARE NOT REQUIRED, however, please use the space provided if you wish to enter them.

(Please correct any error in name and address including ZIP code)

CENSUS USE ONLY	010	011	012	013	014	015	COMPLETE AND RETURN TO	BUREAU OF THE CENSUS 1201 East Tenth Street Jeffersonville, Indiana 47132

Section 1 - BUSINESS OR ACTIVITY

Mark (X) the ONE box which best describes your principal activity and list your principal products or services

1 ☐ Veterinary services by licensed practitioners	4 ☐ Crop services (planting; cultivating; disease, insect, or weed control; harvesting; cotton ginning preparation of crops for market; etc.)	6 ☐ Landscape and horticultural services (planting, planting, or caring of lawns, gardens, shrubs, trees, etc.)
2 ☐ Animal services, except veterinary (artificial insemination; boarding, showing, training, or grooming of animals; etc.)	5 ☐ Farm labor and management services (labor contractors, crew leaders, managers, citrus caretakers, etc.)	7 ☐ Other - Specify activity
3 ☐ Soil preparation services (plowing, fertilizing, or weed control prior to planting, etc.)		

Description of major activity or principal products or services

Section 2 - EMPLOYER IDENTIFICATION NUMBER

Is the Employer Identification (EI) Number printed in the upper right of the address box the SAME as that used by this establishment on your latest 1978 Employer's Quarterly Federal Tax Return, Treasury Form 941?

016
1 ☐ YES

2 ☐ NO - Enter current EI number

017

Section 3 - TYPE OF ORGANIZATION

018 Mark (X) the box which best describes the way the business was operated during 1978

- 1 ☐ Individual 2 ☐ Partnership 3 ☐ Corporation 4 ☐ Other - Describe

Section 4 - PERIOD OPERATED DURING 1978

a. Was this establishment in business at the end of 1978?

019
1 ☐ YES
2 ☐ NO

■ If establishment was inactive during December 1978 due to seasonal or part-time operations, answer "Yes" unless it was not owned at the end of the year.

b. How many months during 1978 did you own this establishment?

Number of
months
021

Section 5 - DOLLAR VOLUME OF BUSINESS

- INCLUDE only receipts from customers, excise taxes and sales taxes, total charges for services or for the use of facilities, and merchandise sold, whether or not payment was received in 1978.
- DO NOT INCLUDE commissions from vending machine operations, real estate rental, interest, sale of real estate, and other non-operating income.

Receipts from services and sale of merchandise in 1978

Dollars	Cents
031	
\$	

Section 6 - PAYROLL

Lines a and b - Report the gross earnings paid in calendar year to employees prior to such deductions as employee's Social Security contributions, withholding taxes, group insurance premiums, union dues, and savings bonds. Include in gross earnings all wages, salaries, commissions, dismissal pay, paid bonuses, vacation and sick-leave pay, and the cash equivalent of compensation paid-in-kind. If a corporation, include salaries of officers; if an unincorporated concern, exclude payments to proprietors or partners.

a. Total ANNUAL payroll in 1978 before deductions

b. Payroll for the FIRST QUARTER of 1978

Dollars	Cents
041	
\$	
042	
\$	

Section 7 - SUPPLEMENTAL LABOR COSTS NOT INCLUDED IN PAYROLL DURING 1978

- a. **Legally Required Labor Expenditures During 1978** - Report payments for all programs required under Federal and State legislation such as: Federal Old Age Survivors Insurance, unemployment compensation, workmen's compensation, and State temporary disability payments. Include employer payments only.
- b. **Voluntary Labor Expenditures During 1978** - Report the cost of all programs not specifically required by Federal or State legislation. For programs financed jointly by employer and employee contributions, include only the employer payments. Include employer payments for: insurance premiums on hospital and medical plans; life insurance premiums; and premiums on supplementary accident and sickness insurance. In reporting payments for insurance, report net payments, i.e., gross payments less any offsetting dividends, refunds, or other reductions in premiums.
- Also include payments or allocations for all pension plans regardless of method of administration, supplemental unemployment compensation plans, welfare plans, stock purchase plans in which the employer payment is not subject to withholding tax, and deferred profit sharing plans.

a. Legally required labor expenditures during 1978

b. Voluntary labor expenditures during 1978

c. TOTAL supplemental labor costs not included in payroll during 1978 (Sum of lines a and b)

Dollars	Cents
051	
\$	
052	
\$	
053	
\$	

Section 8 - GROSS RECEIPTS FOR SERVICES PERFORMED			Gross receipts for services performed during 1978				
Report value of receipts for all services performed during 1978 in "a" through "c" below. Report value of receipts from the sale of any materials or products used in connection with the services performed in section 11. Report all other sales in section 12.			Dollars	Cents			
a. VETERINARY SERVICES - If none, skip to b.							
(1) Veterinary Services for Cattle, Hogs, Sheep, Goats, and Poultry Report value of receipts for drugs and medicines prescribed and semen in section 11.	07410	Professional services	410				
	07411	Hospital care	411				
	07412	Artificial insemination	412				
	07419	Other - Specify	419				
(2) Veterinary Services for Dogs, Cats, Horses, Bees, Fish, Rabbits, Other Fur-Bearing Animals, Birds (Except Poultry) and Other Pets Report value of receipts for drugs and medicines prescribed and semen in section 11.	07420	Professional services	420				
	07421	Hospital care	421				
	07422	Artificial insemination	422				
	07429	Other - Specify	429				
b. ANIMAL SERVICES, EXCEPT VETERINARY - If none, skip to c							
(1) Animal Services for Cattle, Hogs, Sheep, Goats, and Poultry Report value of receipts for semen in section 11.	07510	Artificial insemination and breeding, except by veterinarians	510				
	07511	Dairy herd improvement associations	511				
	07512	Pedigree record services	512				
	07513	Slaughtering for individuals	513				
	07514	Sheep dipping and shearing	514				
	07515	Livestock vaccinating, except by veterinarians	515				
	07516	Poultry services - poultry catching or cleaning coops	516				
	07519	Other - Specify	519				
(2) Animal Services for Dogs, Cats, Horses, Bees, Fish, Rabbits, Other Fur-Bearing Animals, Birds (Except Poultry), and Other Pets Report value of receipts for semen in section 11.	07520	Artificial insemination and breeding, except by veterinarians	520				
	07521	Boarding, showing, or training of horses, including race horses	521				
	07522	Boarding, showing, training, or grooming of dogs and cats	522				
	07523	Pedigree record services	523				
	07529	Other - Specify	529				
c. OTHER AGRICULTURAL SERVICES EXCLUDING VETERINARY AND ANIMAL SERVICES (Soil Preparation, Crop, Farm Management, Landscape and Horticultural) - Specify			532				
d. TOTAL gross receipts for all services performed (Sum of all dollar entries in section 8)			549				
Section 9 - LOCATION OF SERVICES PERFORMED DURING 1978 List below all counties in which you or your establishment performed the activities reported in section 8 above. The principal county is the one from which the major part of the receipts from those activities was received. Receipts may be reported in either the dollar column (column c) or in column d as a percent of the total. Continue in "Remarks" section if necessary.							
County name		State	Gross receipts for services (Report dollars OR percent)				
(a)		(b)	Dollars (c)	Cents Percent (d)			
Principal county			551	552			
Other counties			553	554			
			555	556			
Section 10 - LABOR AND PAYROLL FOR SERVICES PERFORMED DURING 1978 If you reported any activities in section 8, complete this section. Report yourself as unpaid if you are the sole proprietor or a partner of this establishment. If it is a corporation and you are on the payroll, report yourself as a paid employee.							
a. Veterinary services		Number of unpaid workers (including unpaid family members) working -		Number of paid employees (including paid family members) working -		Payroll before deductions	
		150 days or more	Less than 150 days	150 days or more	Less than 150 days	Dollars	Cents
		867	868	869	870	871	
b. Animal services, except veterinary		872	873	874	875	876	
c. SEASONAL VARIATION - For all of the workers included above (paid and unpaid), report the number working during the pay period which includes the 12th day of each month shown.							
		Number of workers					
		March	June	September	December		
(1) Paid		887	888	889	890		
(2) Unpaid		891	892	893	894		
Section 11 - GROSS RECEIPTS FROM PRODUCTS PROVIDED IN CONNECTION WITH SERVICES PERFORMED DURING 1978 Report product sales in section 12					Dollars Cents		
a. Drugs and medicines prescribed					898		
b. Semen					899		
c. TOTAL gross receipts (Sum of dollars entered in "a" and "b")					901		

PENALTY FOR FAILURE TO REPORT
DUE DATE: February 15, 1979

Form Approved: O.M.B. No. 41-S78030

NOTICE - Response to this inquiry is required by law (title 13, U.S. Code). By the same law YOUR REPORT TO THE CENSUS BUREAU IS CONFIDENTIAL. It may be seen only by sworn Census employees and may be used only for statistical purposes. Your report CANNOT be used for purposes of taxation, investigation, or regulation. The law also provides that copies retained in your files are immune from legal process.

FORM 78-A40C
(2-28-78)U.S. DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS**1978 CENSUS OF LANDSCAPE
AND HORTICULTURAL SERVICES*****Important - Please read***

- Please answer the questions on the form and return it by February 15, 1979.
- This report should cover the calendar year 1978. If book figures are not available, carefully prepared estimates are acceptable.
- If you correspond with us regarding your report, please use the Census File Number shown in the address box.
- CENTS ARE NOT REQUIRED, however, please use the space provided if you wish to enter them.

(Please correct any error in name and address including ZIP code)

CENSUS USE ONLY	010	011	012	013	014	015	COMPLETE AND RETURN TO	BUREAU OF THE CENSUS 1201 East Tenth Street Jeffersonville, Indiana 47132

Section 1 - BUSINESS OR ACTIVITY

Mark (X) the ONE box which best describes your principal activity and list your principal products or services

- 1 ☐ Landscape and horticultural services (planting, planting, or caring of lawns, gardens, shrubs, trees, etc.)
- 2 ☐ Soil preparation services (plowing, fertilizing, or weed control prior to planting, etc.)
- 3 ☐ Crop services (planting; cultivating; disease, insect, or weed control; harvesting; cotton ginning; preparation of crops for market; etc.)

- 4 ☐ Veterinary services by licensed practitioners
- 5 ☐ Animal services, except veterinary (artificial insemination; boarding, showing, training, or grooming of animals; etc.)
- 6 ☐ Farm labor and management services (labor contractors, crew leaders, managers, citrus caretakers, etc.)

7 ☐ Other - Specify activity: _____

Description of major activity or principal products or services

Section 2 - EMPLOYER IDENTIFICATION NUMBER

Is the Employer Identification (EI) Number printed in the upper right of the address box the SAME as that used by this establishment on your latest 1978 Employer's Quarterly Federal Tax Return, Treasury Form 941?

016

1 ☐ YES2 ☐ NO - Enter current EI number →

017

Section 3 - TYPE OF ORGANIZATION

018 Mark (X) the box which best describes the way the business was operated during 1978

1 ☐ Individual2 ☐ Partnership3 ☐ Corporation4 ☐ Other - Describe _____**Section 4 - PERIOD OPERATED DURING 1978**

a. Was this establishment in business at the end of 1978?

019

1 ☐ YES2 ☐ NO

■ If establishment was inactive during December 1978 due to seasonal or part-time operations, answer "Yes" unless it was not owned at the end of the year.

b. How many months during 1978 did you own this establishment?

Number of
months

021

Section 5 - DOLLAR VOLUME OF BUSINESS

■ INCLUDE only receipts from customers, excise taxes and sales taxes, total charges for services or for the use of facilities, and merchandise sold, whether or not payment was received in 1978.

■ DO NOT INCLUDE commissions from vending machine operations, real estate rental, interest, sale of real estate, and other non-operating income.

	Dollars	Cents
Receipts from services and sale of merchandise in 1978	031	
\$		

Section 6 - PAYROLL

Lines a and b - Report the gross earnings paid in calendar year to employees prior to such deductions as employee's Social Security contributions, withholding taxes, group insurance premiums, union dues, and savings bonds. Include in gross earnings all wages, salaries, commissions, dismissal pay, paid bonuses, vacation and sick-leave pay, and the cash equivalent of compensation paid-in-kind. If a corporation, include salaries of officers; if an unincorporated concern, exclude payments to proprietors or partners.

	Dollars	Cents
a. Total ANNUAL payroll in 1978 before deductions	041	
\$		
b. Payroll for the FIRST QUARTER of 1978	042	
\$		

Section 7 - SUPPLEMENTAL LABOR COSTS NOT INCLUDED IN PAYROLL DURING 1978

a. Legally Required Labor Expenditures During 1978 - Report payments for all programs required under Federal and State legislation such as: Federal Old Age Survivors Insurance, unemployment compensation, workmen's compensation, and State temporary disability payments. Include employer payments only.

b. Voluntary Labor Expenditures During 1978 - Report the cost of all programs not specifically required by Federal or State legislation. For programs financed jointly by employer and employee contributions, include only the employer's payments. Include employer payments for: insurance premiums on hospital and medical plans; life insurance premiums; and premiums on supplementary accident and sickness insurance. In reporting payments for insurance, report net payments, i.e., gross payments less any offsetting dividends, refunds, or other reductions in premiums.

Also include payments or allocations for all pension plans regardless of method of administration, supplemental unemployment compensation plans, welfare plans, stock purchase plans in which the employer payment is not subject to withholding tax, and deferred profit sharing plans.

	Dollars	Cents
a. Legally required labor expenditures during 1978	051	
\$		
b. Voluntary labor expenditures during 1978	052	
\$		
c. TOTAL supplemental labor costs not included in payroll during 1978 (Sum of lines a and b)	053	
\$		

Section 8 - GROSS RECEIPTS FOR SERVICES PERFORMED Report value of receipts for all services performed during 1978 in "a" and "b" below. Report value of receipts from the sale of any materials or products used in connection with the services performed in section 11. Report all other sales in section 12.				Gross receipts for services performed during 1978			
				Dollars	Cents		
a. LANDSCAPE AND HORTICULTURAL SERVICES - If none, skip to c.							
(1) Landscape Counseling and Planning				810			
	07810	Landscape architects	\$				
	07811	Landscape counseling or planning		811			
(2) Lawn and Garden Services Report total receipts for service fee charged during 1978. Report total receipts in section 11 for the cost of seeds planted, chemicals or fertilizer applied in connection with the services performed during 1978.				820			
	07820	Lawn or garden services including planting, mowing, spraying, fertilizing, etc.	\$				
	07821	Cemetery upkeep or mowing highway center strips and edges, independent		821			
(3) Ornamental Shrub and Tree Services Report total receipts for service fee charged during 1978. Report total receipts in section 11 for the cost of ornamental shrubs or trees planted and chemicals or fertilizer applied in connection with the services performed during 1978. If separate records are not kept for service fee charged and for the cost of material (seed, chemical and fertilizer) carefully prepared estimates will be acceptable.				830			
	07830	Shrub and tree services, including planting, fertilizing, spraying, trimming, and surgery, except for public utility lines	\$				
	07831	Tree trimming for public utility lines, independent		831			
b. OTHER AGRICULTURAL SERVICES EXCLUDING LANDSCAPE AND HORTICULTURAL SERVICES (Soil Preparation, Crop, Veterinary and Animal, Farm Management) - Specify _____				832			
c. TOTAL gross receipts for all services performed (Sum of all dollar entries in section 8) →				\$			
Section 9 - LOCATION OF SERVICES PERFORMED DURING 1978 List below all counties in which you or your establishment performed the activities reported in section 8 above. The principal county is the one from which the major part of the receipts from those activities was received. Receipts may be reported in either the dollar column (column c) or in column d as a percent of the total. Continue in "Remarks" section if necessary.							
County name		State	Gross receipts for services (Report dollars OR percent)				
(a)		(b)	Dollars (c)	Cents	Percent (d)		
Principal county			851		852		
			\$				
Other counties			853		854		
			\$				
			855		856		
			\$				
Section 10 - LABOR AND PAYROLL FOR SERVICES PERFORMED DURING 1978 If you reported any activities in section 8, complete this section. Report yourself as unpaid if you are the sole proprietor or a partner of this establishment. If it is a corporation and you are on the payroll, report yourself as a paid employee.							
		Number of unpaid workers (including unpaid family members) working -		Number of paid employees (including paid family members) working -		Payroll before deductions	
		150 days or more	Less than 150 days	150 days or more	Less than 150 days	Dollars	Cents
a. Landscape and horticultural services		882	883	884	885	\$	
b. SEASONAL VARIATION - For all of the workers included above (paid and unpaid), report the number working during the pay period which includes the 12th day of each month shown.		Number of workers					
		March	June	September	December		
(1) Paid		887	888	889	890		
(2) Unpaid		891	892	893	894		
Section 11 - GROSS RECEIPTS FROM PRODUCTS PROVIDED IN CONNECTION WITH SERVICES PERFORMED DURING 1978 Report product sales in section 12.						Dollars	Cents
a. Fertilizer or lime spread						895	
						\$	
b. Insecticides, pesticides, or herbicides applied						896	
						\$	
c. Seeds, ornamental shrubs, or trees planted						900	
						\$	
d. TOTAL gross receipts (Sum of dollars entered in "a" through "c") →						901	
						\$	

Section 12 – OTHER OPERATIONS PERFORMED DURING 1978

List all operations, other than those reported in section 8 performed during 1978 by the individual or establishment identified in the address box. Include any business activities, farming, nonagricultural operations, sales of merchandise, etc., NOT in connection with services performed in section 8. Report the number of paid employees and the gross receipts from such other operations.

NOTE: If no other operations were performed, mark (X) this box and go to section 13.

☐

List of operations	Number of paid employees working –		Gross receipts for 1978	
	150 days or more	Less than 150 days	Dollars	Cents
	902	903	904	
			\$	
	905	906	907	
			\$	
	908	909	910	
			\$	

If this establishment is a corporation or more than \$50,000 was reported in section 5, answer sections 13, 14, and 15. If not, SKIP to section 16.

Section 13 – CAPITAL EXPENDITURES FOR THIS ESTABLISHMENT DURING 1978 (EXCLUDING LAND AND MINERAL RIGHTS)

- Report all capital expenditures actually made during 1978 for this establishment, including major alterations, capitalized repairs, and improvements. "Capital expenditures" refer to all costs that are chargeable to property accounts for which depreciation or amortization accounts are ordinarily maintained.
- Include the cost of all improvements and new construction at this establishment which were in progress but had not been completed at the end of 1978. (For example, cost for animal hospitals, packing sheds, cotton gins, warehouses, etc., and improvements to establishment sites such as fences, storage facilities, etc.) Include expenditures made by your company (or any of its subsidiaries) for structures which, upon completion, were or are to be sold and leased back to this establishment.
- Include expenditures for new machinery and equipment such as forklifts, conveyors, tractors, mechanical planters, harvesters, sprayers, dusters (including airplane dusters), fruit packing equipment, automobiles, etc., primarily used in performing services.
- Include transfers of used plant and equipment to your establishment from other establishments of your company.
- Exclude the cost of land and mineral rights. Exclude the cost of maintenance and repairs charged as current operating expense. Exclude capital expenditures made by outside owners of property rented or leased to this establishment. Exclude capital expenditures made by this establishment for other locations of your company.

Type of capital expenditures:	Dollars	Cents
a. New structures and additions to your service establishments	911	
	\$	
b. New machinery and new equipment	912	
	\$	
c. Used plant and used equipment acquired from others (including transfers from other establishments of your company)	913	
	\$	
d. TOTAL CAPITAL EXPENDITURES DURING 1978 (Sum of lines a, b, and c) →	914	
	\$	

Section 14 – CHANGES IN GROSS VALUE OF DEPRECIABLE ASSETS OF THIS ESTABLISHMENT DURING 1978

- Report the changes in gross value of depreciable assets of this establishment for which depreciation or amortization accounts are ordinarily maintained. "Gross value" represents the acquisition cost (original cost or other basis) to your company of such depreciable assets. Include all depreciable assets (buildings, structures, machinery, equipment, etc.), and all amortizable fixed assets. Include all improvements and new construction "in progress" during 1978 but not yet completed at the end of 1978. Also include the value of depreciable assets owned by this establishment but leased or rented to other companies. Include the value of depreciable assets owned by your company or any of its subsidiaries but "leased" to this establishment.
- Exclude the value of depreciable assets at other locations of your company (or any of its subsidiaries) for which this establishment maintains records.

	Dollars	Cents
a. Gross value of depreciable assets at BEGINNING of 1978	915	
	\$	
b. Total capital expenditures during 1978 (Copy figure from section 13, item d)	916	
	\$	
c. Gross value of depreciable assets sold, retired, transferred, scrapped, or destroyed during 1978	917	
	\$	
d. Gross value of depreciable assets at END of 1978. (Should equal lines a+b-c. If not, please explain in "Remarks.") →	918	
	\$	

Section 15 – EXPENDITURES FOR ELECTRICITY, GASOLINE, PETROLEUM, AND OTHER FUELS PURCHASED DURING 1978

- a. Gasoline
- b. Diesel fuel
- c. LP gas, butane, propane
- d. Motor oil, grease, piped gas, kerosene, and fuel oil

Estimated expenditures for 1978	
Dollars	Cents
919	
\$	
920	
\$	
921	
\$	
922	
\$	

- e. Electricity purchased

Kilowatt hours	Dollars	Cents
923	924	
	\$	

Section 16 – CHECKS to assure a complete and accurate report

The Bureau of the Census reviews your report for omissions, inconsistencies, and unusual ratios. To reduce the possibility of correspondence about some problem, please make the following checks before returning your report.

- (1) Review the report carefully to see that no items are omitted for the year being covered.
- (2) Correct your report for any errors you find and explain unusual figures in "Remarks."

Consistency checks	Calculation required for each check	Answer
Section 5	If section 5 is completed, have sections 8 and 11 been completed?	☐ YES ☐ NO – Please complete
Total for section 5	Does the sum of the totals in sections 8, 11, and 12 equal the total for section 5?	☐ YES ☐ NO – Please refigure
Payroll	Does the entry for section 6a equal the total of section 10a?	☐ YES ☐ NO – Please explain in "Remarks" section.
Total for section 8	Do all dollar entries in section 8 add to total entered in section 8c?	☐ YES ☐ NO – Please refigure

Section 17 – SIGNATURE (Please check your answers, then sign below.)

Date

Area code

Telephone Number

Signature

PENALTY FOR FAILURE TO REPORT
DUE DATE: February 15, 1979

Form Approved: O.M.B. No. 41-578030

NOTICE - Response to this inquiry is required by law (title 13, U.S. Code). By the same law YOUR REPORT TO THE CENSUS BUREAU IS CONFIDENTIAL. It may be seen only by sworn Census employees and may be used only for statistical purposes. Your report CANNOT be used for purposes of taxation, investigation, or regulation. The law also provides that copies retained in your files are immune from legal process.

FORM 78-A40D
(5-26-78)

U.S. DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS



CENSUS OF SOIL PREPARATION AND CROP SERVICES, VETERINARY AND ANIMAL SERVICES, FARM LABOR AND MANAGEMENT SERVICES, LANDSCAPE AND HORTICULTURAL SERVICES
Agricultural Services

Important - Please read

- Please answer the questions on the form and return it by February 15, 1979.
- This report should cover the calendar year 1978. If book figures are not available, carefully prepared estimates are acceptable.
- If you correspond with us regarding your report, please use the Census File Number shown in the address box.
- CENTS ARE NOT REQUIRED, however, please use the space provided if you wish to enter them.

(Please correct any error in name and address including ZIP code)

CENSUS USE ONLY	010	011	012	013	014	015	COMPLETE AND RETURN TO	BUREAU OF THE CENSUS 1201 East Tenth Street Jeffersonville, Indiana 47132

Section 1 - BUSINESS OR ACTIVITY

Mark (X) the ONE box which best describes your principal activity and list your principal products or services

- 1 ☐ Soil preparation services (plowing, fertilizing, or weed control prior to planting, etc.)
- 2 ☐ Crop services (planting; cultivating; disease, insect, or weed control; harvesting; cotton ginning; preparation of crops for market; etc.)
- 3 ☐ Veterinary services by licensed practitioners

- 4 ☐ Animal services, except veterinary (artificial insemination; boarding, showing, training, or grooming of animals; etc.)
- 5 ☐ Farm labor and management services (labor contractors, crew leaders, managers, citrus caretakers, etc.)

- 6 ☐ Landscape and horticultural services (planting, planning, or caring of lawns, gardens, shrubs, trees, etc.)
- 7 ☐ Other - Specify activity _____

Description of major activity or principal products or services

Description of major activity or principal products or services	

Section 2 - EMPLOYER IDENTIFICATION NUMBER

Is the Employer Identification (EI) Number printed in the upper right of the address box the SAME as that used by this establishment on your latest 1978 Employer's Quarterly Federal Tax Return, Treasury Form 941?

016

1 ☐ YES2 ☐ NO - Enter current EI number

017

Section 3 - TYPE OF ORGANIZATION

018

Mark (X) the box which best describes the way the business was operated during 1978

1 ☐ Individual2 ☐ Partnership3 ☐ Corporation4 ☐ Other - Describe _____

Section 4 - PERIOD OPERATED DURING 1978

a. Was this establishment in business at the end of 1978?

019

1 ☐ YES2 ☐ NO

■ If establishment was inactive during December 1978 due to seasonal or part-time operations, answer "Yes" unless it was not owned at the end of the year.

b. How many months during 1978 did you own this establishment?

Number of months

021

Section 5 - DOLLAR VOLUME OF BUSINESS

- INCLUDE only receipts from customers, excise taxes and sales taxes, total charges for services or for the use of facilities, and merchandise sold, whether or not payment was received in 1978.
- DO NOT INCLUDE commissions from vending machine operations, real estate rental, interest, sale of real estate, and other non-operating income.

	Dollars	Cents
Receipts from services and sale of merchandise in 1978	031	
\$		

Section 6 - PAYROLL

Lines a and b - Report the gross earnings paid in calendar year to employees prior to such deductions as employee's Social Security contributions, withholding taxes, group insurance premiums, union dues, and savings bonds. Include in gross earnings all wages, salaries, commissions, dismissal pay, paid bonuses, vacation and sick-leave pay, and the cash equivalent of compensation paid-in-kind. If a corporation, include salaries of officers; if an unincorporated concern, exclude payments to proprietors or partners.

	Dollars	Cents
a. Total ANNUAL payroll in 1978 before deductions	041	
\$		
b. Payroll for the FIRST QUARTER of 1978	042	
\$		

Section 7 - SUPPLEMENTAL LABOR COSTS NOT INCLUDED IN PAYROLL DURING 1978

- a. **Legally Required Labor Expenditures During 1978** - Report payments for all programs required under Federal and State legislation such as: Federal Old Age Survivors Insurance, unemployment compensation, workmen's compensation, and State temporary disability payments. Include employer payments only.
- b. **Voluntary Labor Expenditures During 1978** - Report the cost of all programs not specifically required by Federal or State legislation. For programs financed jointly by employer and employee contributions, include only the employer payments. Include employer payments for: insurance premiums on hospital and medical plans; life insurance premiums; and premiums on supplementary accident and sickness insurance. In reporting payments for insurance, report net payments, i.e., gross payments less any offsetting dividends, refunds, or other reductions in premiums.
- Also include payments or allocations for all pension plans regardless of method of administration, supplemental unemployment compensation plans, welfare plans, stock purchase plans in which the employer payment is not subject to withholding tax, and deferred profit sharing plans.

	Dollars	Cents
a. Legally required labor expenditures during 1978	051	
\$		
b. Voluntary labor expenditures during 1978	052	
\$		
c. TOTAL supplemental labor costs not included in payroll during 1978 (Sum of lines a and b)	053	
\$		

Section 8 - GROSS RECEIPTS FOR SERVICES PERFORMED				Gross receipts for services performed during 1978	
Report value of receipts for all services performed during 1978 in "a" through "f" below. Report value of receipts from the sale of any materials or products used in connection with the services performed in section 11. Report all other sales in section 12.				Dollars	Cents
a. SOIL PREPARATION SERVICES - If none, skip to b.			Number of acres		
Report value of receipts for chemicals, fertilizer, or lime applied in section 11.	07110	Plowing or land breaking	110	111	
	07111	Harrowing or seed bed preparation	112	113	
	07112	Fertilizer and lime spreading before planting	114	115	
	07113	Weed control before planting	116	117	
	07119	Other - Specify	118	119	
	b. CROP SERVICES - If none, skip to c.				
(1) Planting, Cultivating, and Protection Report value of receipts for chemicals, fertilizer, or lime applied in section 11.	07210	Planting with or without fertilizer	200	201	
	07211	Fertilizer spreading (only) after planting	202	203	
	07212	Aerial dusting and spraying for disease and insect control with or without fertilizer (includes seeding)	204	205	
	07213	On-ground dusting and spraying for disease and insect control with or without fertilizer	206	207	
	07214	Weed control after planting	208	209	
	07215	Citrus grove cultivation or maintenance	210	211	
	07216	Cultivation, mechanical and flame, other than citrus grove	212	213	
	07217	Pruning of orchards or vineyards	214	215	
	07218	Irrigation services, custom	216	217	
	07219	Other - Specify	218	219	
(2) Harvesting, Primarily by Machine	07220	Corn for all purposes	220	221	
	07221	Wheat or other small grains (combining)	222	223	
	07222	Cotton	224	225	
	07223	Fruits or berries	226	227	
	07224	Vegetables	228	229	
	07225	Soybeans, other beans, peas, or peanuts	230	231	
	07226	Hay (mowing, raking, baling, or chopping)	232	233	
	07229	Other - Specify	234	235	
	(3) Preparation for Market	07230	Corn shelling or drying		236
07231		Crop drying other than corn		237	
07232		Grain grinding and mixing		238	
07233		Bean or grain cleaning		239	
07234		Cotton seed delinting		240	
07235		Packaging fresh or farm-dried fruits or vegetables		241	
07236		Sorting, grading, or packing of fruits or berries		242	
07237		Sorting, grading, or packing of vegetables		243	
07239		Other - Specify		244	
(4) Cotton Ginning Report value of receipts for bagging and ties in section 11. Report sales of cottonseed and bales of cotton in section 12.			Number of bales		
	07240	Cotton ginning	245	246	
	07241	Cotton pickery	247	248	
	07249	Other - Specify	249	250	
c. VETERINARY SERVICES - If none, skip to d.					
(1) Veterinary Services for Cattle, Hogs, Sheep, Goats, and Poultry Report value of receipts for drugs and medicines prescribed and semen in section 11.	07410	Professional services		410	
	07411	Hospital care		411	
	07412	Artificial insemination		412	
	07419	Other - Specify		419	
(2) Veterinary Services for Dogs, Cats, Horses, Bees, Fish, Rabbits, Other Fur-Bearing Animals, Birds (Except Poultry) and Other Pets Report value of receipts for drugs and medicines prescribed and semen in section 11.	07420	Professional services		420	
	07421	Hospital care		421	
	07422	Artificial insemination		422	
	07429	Other - Specify		429	

Section 8 – GROSS RECEIPTS FOR SERVICES PERFORMED – Continued				Gross receipts for services performed during 1978	
Report value of receipts for all services performed during 1978 in "a" through "f" below. Report value of receipts from the sale of any materials or products used in connection with the services performed in section 11. Report all other sales in section 12.				Dollars	Cents
d. ANIMAL SERVICES, EXCEPT VETERINARY – If none, skip to e.					
(1) Animal Services for Cattle, Hogs, Sheep, Goats, and Poultry <i>Report value of receipts for semen in section 11.</i>	07510	Artificial insemination and breeding, except by veterinarians	\$ 510		
	07511	Dairy herd improvement associations	\$ 511		
	07512	Pedigree record services	\$ 512		
	07513	Slaughtering for individuals	\$ 513		
	07514	Sheep dipping and shearing	\$ 514		
	07515	Livestock vaccinating, except by veterinarians	\$ 515		
	07516	Poultry services – poultry catching or cleaning coops	\$ 516		
	07519	Other – Specify _____	\$ 519		
(2) Animal Services For Dogs, Cats, Horses, Bees, Fish, Rabbits, Other Fur-Bearing Animals, Birds (Except Poultry), and Other Pets <i>Report value of receipts for semen in section 11.</i>	07520	Artificial insemination and breeding, except by veterinarians	\$ 520		
	07521	Boarding, showing, or training of horses, including race horses	\$ 521		
	07522	Boarding, showing, training, or grooming of dogs and cats	\$ 522		
	07523	Pedigree record services	\$ 523		
	07529	Other – Specify _____	\$ 529		
e. FARM LABOR AND MANAGEMENT SERVICES – If none, skip to f.					
(1) Farm Labor Contractors and Crew Leaders	07610	Farm labor contractors	\$ 610		
	07611	Crew leaders	\$ 611		
(2) Farm Management Services (Complete maintenance and management)	07620	Citrus grove	\$ 620		
	07621	Orchard or vineyard	\$ 621		
	07629	Other – Specify _____	\$ 629		
f. LANDSCAPE AND HORTICULTURAL SERVICES – If none, skip to g.					
(1) Landscape Counseling and Planning	07810	Landscape architects	\$ 810		
	07811	Landscape counseling or planning	\$ 811		
(2) Lawn and Garden Services <i>Report value of receipts for seeds planted and chemicals or fertilizer applied in section 11.</i>	07820	Lawn or garden services including planting, mowing, spraying, fertilizing, etc.	\$ 820		
	07821	Cemetery upkeep or mowing highway center strips and edges, independent	\$ 821		
(3) Ornamental Shrub and Tree Services <i>Report value of receipts for ornamental shrubs or trees planted and chemicals or fertilizer applied in section 11.</i>	07830	Shrub and tree services, including planting, fertilizing, spraying, trimming, and surgery, except for public utility lines	\$ 830		
	07831	Tree trimming for public utility lines, independent	\$ 831		
g. TOTAL gross receipts for all services performed (Sum of all dollar entries in section 8)			\$ 849		
Section 9 – LOCATION OF SERVICES PERFORMED DURING 1978					
List below the counties in which you or your establishment performed the activities reported in section 8 above. Receipts may be reported in either the dollar column (column c) or in column d as a percent of the total. Continue in "Remarks" section if necessary.					
County name (a)	State (b)	Gross receipts for services (Report dollars OR percent)			
		Dollars (c)	Cents	Percent (d)	
Principal county		\$ 851		\$ 852	
Other counties		\$ 853		\$ 854	
		\$ 855		\$ 856	
Section 10 – LABOR AND PAYROLL FOR SERVICES PERFORMED DURING 1978					
If you reported any activities in section 8, complete this section. Report yourself as unpaid if you are the sole proprietor or a partner of this establishment. If it is a corporation and you are on the payroll, report yourself as a paid employee.					
a. Soil preparation services	Number of unpaid workers (including unpaid family members) working –		Number of paid employees (including paid family members) working –		Payroll before deductions
	150 days or more	Less than 150 days	150 days or more	Less than 150 days	Dollars Cents
b. Crop services	857	858	859	860	\$ 861
c. Veterinary services	862	863	864	865	\$ 866
d. Animal services, except veterinary	867	868	869	870	\$ 871
e. Farm labor and management services	872	873	874	875	\$ 876
f. Landscape and horticultural services	877	878	879	880	\$ 881
	882	883	884	885	\$ 886
g. SEASONAL VARIATION – For all of the workers included above (paid and unpaid), report the number working during the pay period which includes the 12th day of each month shown.					
		Number of workers			
		March	June	September	December
(1) Paid	887	888	889	890	
(2) Unpaid	891	892	893	894	
Section 11 – GROSS RECEIPTS FROM PRODUCTS PROVIDED IN CONNECTION WITH SERVICES PERFORMED DURING 1978					
Report product sales in section 12					
a. Fertilizer or lime spread			Dollars	Cents	
b. Insecticides, pesticides, or herbicides applied			\$ 895		
c. Bagging and ties for cotton ginned			\$ 896		
d. Drugs and medicines prescribed			\$ 897		
e. Semen			\$ 898		
f. Seeds, ornamental shrubs, or trees planted			\$ 899		
			\$ 900		
			\$ 901		
g. TOTAL gross receipts (Sum of dollars entered in "a" through "f")					

Section 12 – OTHER OPERATIONS PERFORMED DURING 1978

List all operations, other than those reported in section 8 performed during 1978 by the individual or establishment identified in the address box. Include any business activities, farming, nonagricultural operations, sales of merchandise, etc., NOT in connection with services performed in section 8. Report the number of paid employees and the gross receipts from such other operations.

NOTE: If no other operations were performed, mark (X) this box and go to section 13.



List other operations	Number of paid employees working –		Gross receipts for 1978	
	150 days or more	Less than 150 days	Dollars	Cents
	902	903	904	
			\$	
	905	906	907	
			\$	
	908	909	910	
			\$	

If this establishment is a corporation or more than \$50,000 was reported in section 5, answer sections 13, 14, and 15. If not, SKIP to section 16.

Section 13 – CAPITAL EXPENDITURES FOR THIS ESTABLISHMENT DURING 1978 (EXCLUDING LAND AND MINERAL RIGHTS)

- Report all capital expenditures actually made during 1978 for this establishment, including major alterations, capitalized repairs, and improvements. "Capital expenditures" refer to all costs that are chargeable to property accounts for which depreciation or amortization accounts are ordinarily maintained.
- Include the cost of all improvements and new construction at this establishment which were in progress but had not been completed at the end of 1978. (For example, cost for animal hospitals, packing sheds, cotton gins, warehouses, etc., and improvements to establishment sites such as fences, storage facilities, etc.) Include expenditures made by your company (or any of its subsidiaries) for structures which, upon completion, were or are to be sold and leased back to this establishment.
- Include expenditures for new machinery and equipment such as forklifts, conveyors, tractors, mechanical planters, harvesters, sprayers, dusters (including airplane dusters), fruit packing equipment, automobiles, etc., primarily used in performing services.
- Include transfers of used plant and equipment to your establishment from other establishments of your company.
- Exclude the cost of land and mineral rights. Exclude the cost of maintenance and repairs charged as current operating expense. Exclude capital expenditures made by outside owners of property rented or leased to this establishment. Exclude capital expenditures made by this establishment for other locations of your company.

Type of capital expenditures:	Dollars	Cents
a. New structures and additions to your service establishments	911	
	\$	
b. New machinery and new equipment	912	
c. Used plant and used equipment acquired from others (including transfers from other establishments of your company)	913	
d. TOTAL CAPITAL EXPENDITURES DURING 1978 (Sum of lines a, b, and c) →	914	
	\$	

Section 14 – CHANGES IN GROSS VALUE OF DEPRECIABLE ASSETS OF THIS ESTABLISHMENT DURING 1978

- Report the changes in gross value of depreciable assets of this establishment for which depreciation or amortization accounts are ordinarily maintained. "Gross value" represents the acquisition cost (original cost or other basis) to your company of such depreciable assets. Include all depreciable assets (buildings, structures, machinery, equipment, etc.), and all amortizable fixed assets. Include all improvements and new construction "in progress" during 1978 but not yet completed at the end of 1978. Also include the value of depreciable assets owned by this establishment but leased or rented to other companies. Include the value of depreciable assets owned by your company or any of its subsidiaries but "leased" to this establishment.
- Exclude the value of depreciable assets at other locations of your company (or any of its subsidiaries) for which this establishment maintains records.

	Dollars	Cents
a. Gross value of depreciable assets at BEGINNING of 1978	915	
	\$	
b. Total capital expenditures during 1978 (Copy figure from section 13, item d)	916	
c. Gross value of depreciable assets sold, retired, transferred, scrapped, or destroyed during 1978	917	
d. Gross value of depreciable assets at END of 1978 (Should equal lines a+b-c. If not, please explain in "Remarks.") →	918	
	\$	

Section 15 – EXPENDITURES FOR ELECTRICITY, GASOLINE, PETROLEUM, AND OTHER FUELS PURCHASED DURING 1978

- Gasoline
- Diesel fuel
- LP gas, butane, propane
- Motor oil, grease, piped gas, kerosene, and fuel oil
- Electricity purchased

Estimated expenditures for 1978	
Dollars	Cents
919	
\$	
920	
\$	
921	
\$	
922	
\$	
923	
\$	

Section 16 – CHECKS to assure a complete and accurate report

The Bureau of the Census reviews your report for omissions, inconsistencies, and unusual ratios. To reduce the possibility of correspondence about some problem, please make the following checks before returning your report.

- (1) Review the report carefully to see that no items are omitted for the year being covered.
(2) Correct your report for any errors you find and explain unusual figures in "Remarks."

Consistency checks	Calculation required for each check	Answer
Section 5	If section 5 is completed, have sections 8 and 11 been completed?	☐ YES ☐ NO – Please complete
Total for section 5	Does the sum of the totals in sections 8, 11, and 12 equal the total for section 5?	☐ YES ☐ NO – Please refigure
Payroll	Does the entry for section 6a equal the sum of section 10 "a" through "f"?	☐ YES ☐ NO – Please explain in "Remarks" section
Total for section 8	Do all dollar entries in section 8 add to total entered in section 8g?	☐ YES ☐ NO – Please refigure

Remarks – Attach a separate sheet if necessary.

Section 17 – SIGNATURE (Please check your answers, then sign below.)

Signature _____

Date _____

Telephone _____

Area code _____

Number _____

78-A40A-L1
(6-78)



UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Washington, D.C. 20233

OFFICE OF THE DIRECTOR

Reply to:

BUREAU OF THE CENSUS
1201 EAST TENTH STREET
JEFFERSONVILLE, INDIANA 47132

**FROM THE DIRECTOR
BUREAU OF THE CENSUS**

Information on soil preparation services, crop services, cotton ginning, and other agricultural services is collected once every 5 years by the Bureau of the Census. Since services of this type are rapidly increasing, complete and timely data are essential for evaluating their influence on the Nation's economy.

The enclosed report form is sent to you under authority of an Act of Congress (title 13, U.S. Code), which requires filing of the report with the Bureau of the Census. The same law specifies that your report is confidential, will be seen only by sworn Census employees, and will be used solely for statistical purposes.

Before completing the report, please read all instructions. If book figures are not available, reasonable estimates may be used. Your completing and returning the report form by February 15, 1979, will help us to publish the statistical information at an early date. If filing by this date creates an undue burden, a request for an extension may be sent to the address shown above. Include the 11-digit Census File Number (CFN) as shown in your address label in all correspondence to us.

Your cooperation in filing your report promptly will be greatly appreciated and will avoid additional requests and make possible more accurate and timely publication of the 1978 Census of Agricultural Services.

Sincerely,

MANUEL D. PLOTKIN

Enclosures



**1978
CENSUS OF
AGRICULTURE**

78-A40(B)-L2

January 23, 1979



UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Washington, D.C. 20233

**FROM THE AGRICULTURE DIVISION
BUREAU OF THE CENSUS**

Many Veterinarians and Animal Specialists across the Nation have already completed and returned their report forms for the 1978 Census of establishments performing Veterinary, Other Animal and Animal Specialty Services. If you have done so, thank you for your promptness. You have helped us get an early start in tabulating the census results.

If you have not completed and returned your report form, this is to remind you that we would like to have it by February 15. For the census information to be complete for your county and State, we need a completed report form from everyone.

If you cannot complete your report form by February 15, please write us and request a time extension. Please write your request on the other side of this letter and send it to the address shown above.

If you did not perform any veterinary, other animal or animal specialty services in 1978, it is equally important for us to hear from you. Please complete the few items in section 1 of the report form so that we can clarify your status.

Thank you for your cooperation.

Sincerely,

ORVIN L. WILHITE
Chief, Agriculture Division

NOTE — If you should write us about your report, please enclose this letter or be sure to include in your letter the Census File Number which appears on the address label.



**1978
CENSUS OF
AGRICULTURE**

78-A40C-L3

February 13, 1979



UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Data Preparation Division
Jeffersonville, Indiana 47132

FROM THE AGRICULTURE DIVISION
BUREAU OF THE CENSUS

Have you mailed the completed 1978 census report form covering establishments performing Landscape Counseling and Planning, Lawn and Garden, and Ornamental Shrub and Tree Services?

Maybe your report has crossed this reminder in the mail. We hope so for we want it as soon as possible so that we can get on with the job of preparing and publishing county and State totals.

Let me explain why it is so vital that this census be complete and accurate. We know you have lots of problems these days — rising costs, fluctuating prices, shortages, etc. — and only a census can provide, county by county for the U.S., the information about these services that is so greatly needed.

Needed by whom? You may not know anyone who makes direct use of census information, but it is used extensively by many people and organizations who serve you.

Who are they? Among others, private industry, farmer organizations, Congress, government agencies, agricultural experiment stations and colleges, and all the businesses on whom you depend for the information, services, materials, and equipment you use.

Your answers, although COMPLETELY CONFIDENTIAL on an individual basis are needed to have accurate totals for your county. Please, if your report isn't in the mail, fill it out and send it back right away. Thank you very much.

Sincerely,

ORVIN L. WILHITE
Chief, Agriculture Division

If you should write us about your report, please enclose this letter or be sure to include in your letter the Census File Number (CFN) which appears on the address label.



1978
CENSUS OF
AGRICULTURE

78-A40D-L4

March 6, 1979



UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Data Preparation Division
Jeffersonville, Indiana 47132

**FROM THE AGRICULTURE DIVISION
BUREAU OF THE CENSUS**

Here is a **SECOND COPY** of the report form for the 1978 Census of establishments performing Agricultural Services.

If you have filled out and recently mailed back the copy you received earlier, we thank you. We haven't received it as of today — perhaps it has crossed in the mail.

If you haven't returned your completed report, please fill out either one of the copies we have sent you, and mail it to us right away.

To make this important census complete and accurate we must have your response.

Your individual answers will be held **COMPLETELY CONFIDENTIAL**. They will be used only to produce county and State totals.

Please mail your report back to us just as soon as you can. We'll appreciate it very much.

Sincerely,

ORVIN L. WILHITE
Chief, Agriculture Division

Enclosure

NOTE — If you should write us about your report, please enclose this letter or be sure to include in your letter the Census File Number which appears on the address label.



**1978
CENSUS OF
AGRICULTURE**

78-A40A-L5

March 27, 1979



UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Data Preparation Division
Jeffersonville, Indiana 47132

FROM THE AGRICULTURE DIVISION
BUREAU OF THE CENSUS

We've written you several times about the report for the 1978 census of establishments performing soil preparation, crop, and cotton ginning services. As I said in an earlier letter, to make this a complete census, we must have your filled-out report.

Let me assure you again; the same law (title 13, United States Code) that requires you to respond, also requires us to keep your individual information **CONFIDENTIAL**. Your report cannot be used, or even seen, by anyone but sworn Census employees.

Your report, along with those of your neighbors, will be used only to provide totals for your county and State, and for the United States.

Please send your completed report to us so we can get on with the big job of producing as quickly as possible the information that is needed from this census. We'll appreciate it, and those who need and use the figures to serve you will appreciate it even more.

Sincerely,

ORVIN L. WILHITE
Chief, Agriculture Division

NOTE — If you should write us about your report, please enclose this letter or be sure to include in your letter the Census File Number which appears on the address label.



1978
CENSUS OF
AGRICULTURE

78-A40B-L6

April 17, 1979



UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Data Preparation Division
Jeffersonville, Indiana 47132

FROM THE AGRICULTURE DIVISION
BUREAU OF THE CENSUS

We have not received your report form for the 1978 census of establishments performing veterinary, other animal, and animal specialty services. I must now ask you to complete the form and mail it back to us within the next fifteen days.

You are one of the few who has not sent in the completed form. We must hear from you.

Remember, your report is required by law and will be used only to produce needed totals. Please read the Notice on the front of the report form.

Maybe you've misplaced the report forms sent you earlier. If so, here is another copy. Please fill it out and return it.

Thanks for your help in making this census what it must be — complete!

Sincerely,

ORVIN L. WILHITE
Chief, Agriculture Division

Enclosures

NOTE — If you should write us about your report, please enclose this letter or be sure to include in your letter the Census File Number which appears on the address label.



1978
CENSUS OF
AGRICULTURE

78-A40C-L7

May 8, 1979



UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Data Preparation Division
Jeffersonville, Indiana 47132

**FROM THE AGRICULTURE DIVISION
BUREAU OF THE CENSUS**

Our records show that you have not yet complied with your legal obligation to file your report for the 1978 census of establishments performing landscape counseling and planning, lawn and garden, and ornamental shrub and tree services. This is the fifth followup letter that we have sent requesting your assistance.

The report is required by law and there are penalties for failure to report. Pertinent sections of the law are reproduced on the other side of this letter.

As stated in the instructions accompanying the form you received, estimates are acceptable if exact figures are not readily available.

Almost all establishments have responded. We will very much appreciate having your answers mailed back to us within five days so the census can be completed and the needed information published at an early date.

Sincerely,

ORVIN L. WILHITE
Chief, Agriculture Division

NOTE — If you should write us about your report, please enclose this letter or be sure to include in your letter the Census File Number which appears on the address label.



**1978
CENSUS OF
AGRICULTURE**

**EXCERPTS FROM TITLE 13, UNITED STATES CODE WHICH
RELATE TO THE CENSUS OF AGRICULTURE**

AUTHORITY TO CONDUCT CENSUS -- Section 142

- (a) The Secretary shall in 1979, in 1983, and in every fifth year beginning after 1983, take a census of agriculture.
- (c) The data collected in each of the censuses taken under this section shall relate to the year immediately preceding the year in which such census is taken.

AUTHORITY TO COLLECT PRELIMINARY AND SUPPLEMENTAL STATISTICS -- Section 193

In advance of, in conjunction with, or after the taking of each census provided for by this chapter, the Secretary may make surveys and collect such preliminary and supplementary statistics related to the main topic of the census as are necessary to the initiation, taking, or completion thereof.

MANDATORY PROVISIONS OF LAW

Section 221

- (a) Whoever, being over eighteen years of age, refuses or willfully neglects, when requested by the Secretary, or by any other authorized officer or employee of the Department of Commerce or bureau or agency thereof acting under the instructions of the Secretary or authorized officer, to answer, to the best of his knowledge, any of the questions on any schedule submitted to him in connection with any census or survey provided for by subchapters I, II, IV, and V of chapter 5 of this title, applying to himself or to the family to which he belongs or is related, or to the farm or farms of which he or his family is the occupant, shall be fined not more than \$100.
- (b) Whoever, when answering questions described in subsection (a) of this section, and under the conditions or circumstances described in such subsection, willfully gives any answer that is false, shall be fined not more than \$500.

Section 224

Whoever, being the owner, official, agent, person in charge, or assistant to the person in charge, of any company, business, institution, establishment, religious body, or organization of any nature whatsoever, neglects or refuses, when requested by the Secretary or other authorized officer or employee of the Department of Commerce or bureau or agency thereof, to answer completely and correctly to the best of his knowledge all questions relating to his company, business, institution, establishment, religious body, or other organization, or to records or statistics in his official custody, contained on any census or other schedule or questionnaire prepared and submitted to him under the authority of this title, shall be fined not more than \$500; and if he willfully gives a false answer to any such questions, he shall be fined not more than \$10,000.

CONFIDENTIALITY OF INFORMATION

Section 9

Neither the Secretary, nor any other officer or employee of the Department of Commerce or bureau or agency thereof, may, except as provided in section 8 of this title [which permits only the release of identifiable personal information to a respondent or the heir, successor or agent of such respondent] --

- (1) use the information furnished under the provisions of this title for any purpose other than the statistical purposes for which it is supplied; or
- (2) make any publication whereby the data furnished by any particular establishment or individual under this title can be identified; or
- (3) permit anyone other than the sworn officers and employees of the Department or bureau or agency thereof to examine the individual reports.

No department, bureau, agency, officer, or employee of the Government, except the Secretary in carrying out the purposes of this title, shall require, for any reason, copies of census reports which have been retained by any such establishment or individual. Copies of census reports which have been so retained shall be immune from legal process, and shall not, without the consent of the individual or establishment concerned, be admitted as evidence or used for any purpose in any action, suit, or other judicial or administrative proceeding.

Section 214

Whoever, being or having been an employee or staff member referred to in subchapter II of chapter I of this title, having taken and subscribed the oath of office, or having sworn to observe the limitations imposed by section 9 of this title, publishes or communicates any information, the disclosure of which is prohibited under the provisions of section 9 of this title, and which comes into his possession by reason of his being employed (or otherwise providing services) under the provisions of this title, shall be fined not more than \$5,000 or imprisoned not more than 5 years, or both.

DUE BY FEBRUARY 15, 1979

Form Approved: O.M.B. No. 41-578052

Form 78-A60
(8-21-78)U.S. DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS

CENSUS OF IRRIGATION SINGLE-BASIN ORGANIZATIONS

COMPLETE AND
RETURN TOBUREAU OF THE CENSUS
ATTN: Agriculture Division
Washington, D.C. 20233

AN IRRIGATION ORGANIZATION IS . . .

A group of individuals, a company, a governmental district or agency, or an individual that operates facilities to supply irrigation water to two or more farms or ranches, or store irrigation water. It may be either a formal, legal organization, or an informal or cooperative arrangement.

Section I - TYPE OF ORGANIZATION

1. During 1978 did this organization: (a) supply irrigation water to two or more users, (b) supply water to another irrigation organization, or (c) operate irrigation water storage facilities? (See "Who Should Fill Out This Form" in reference guide.)

☐ YES - Complete this report

☐ NO - Go to "Remarks" on last page, explain what connection, if any, the organization has with irrigation water, sign section XIII, and return this report to the Bureau of the Census.

2. Type of organization - Mark (X) the one box which best describes this organization

☐ Two or more neighbors or associates, a partnership, or unincorporated mutual or cooperative operating irrigation facilities

☐ Incorporated mutual or cooperative - a legally constituted corporation owned by the users, supplying water at cost

☐ District - irrigation, drainage, or other which provides irrigation service

☐ Commercial company which provides irrigation services

☐ Project operated by the U.S. Bureau of Reclamation

☐ Project operated by the U.S. Bureau of Indian Affairs

☐ City or town municipal system

☐ Other - Specify _____

Section II - SOURCE OF WATER IN 1978

3. Direct source(s) of water received by this irrigation system in 1978 - Mark (X) all boxes which apply. (See section II in reference guide.)

a. Directly from a supplier

☐ Another irrigation organization

☐ Municipal water system

☐ Other supplier

b. Directly from surface source

☐ Natural stream - Give name(s) _____

☐ Natural lake or pond - Give name(s) _____

☐ Reservoir - Give name(s) _____

☐ Drainage water (not drainage resulting from this organization's operation)

c. Directly from ground sources

☐ Pumped wells

☐ Springs

☐ Flowing wells

GO TO SECTION III

NOTICE - Response to this inquiry is required by law (title 13, U.S. Code). By the same law your report to the Census Bureau is confidential. It may be seen only by sworn Census employees and may be used only for statistical purposes. The law also provides that copies retained in your files are immune from legal process.

Please mention this Census File Number (the eleven digit number in the upper left hand corner of the address label) if you write to us about this report.

PLEASE RETURN THIS COPY AND ANY DUPLICATES WITH THE ENCLOSED MAP
(Please correct any error in name and address including ZIP code.)

CENSUS USE ONLY	S	C	R	SR	AU	USBR	USBA	RD
	033	034	035	036	037	038	039	040

Section III - EXCHANGE OF WATER WITH OTHER ORGANIZATIONS IN 1978

4. Was any water received from another organization? - Report water received directly from a canal, pipeline, or reservoir operated by another organization. Include water received via a natural channel from a storage reservoir with which this organization has a contract or agreement.

☐ YES - Give the following information

☐ NO - Go to item 5

Name and address of organization supplying water	Acre-feet obtained
a.	046
b.	047
CENSUS USE ONLY	048
	049

If more space is needed, continue in "Remarks" on page 4.

5. Was any water delivered by this organization into the system of another separately operated organization which assesses or collects water charges? - Include water delivered via a natural channel to another organization with which this organization has a contract or agreement.

☐ YES - Give the following information

☐ NO - Go to section IV

Name and address of organization receiving water	Acre-feet delivered
a.	050
b.	051
CENSUS USE ONLY	052
	053

If more space is needed, continue in "Remarks" on page 4.

Section IV - WATER USERS AND ACRES SERVED BY THIS ORGANIZATION IN 1978 (Excluding those served by organizations reported in item 5)

6. Water users served directly by this organization - Do not duplicate. Report users only once in the FIRST appropriate category.

a. Farms and ranches receiving water for irrigation ☐ None

b. Residential and domestic users - Report users, including farms and ranches using water ONLY for household use, lawns and gardens, or for livestock water ☐

c. Other users - municipal water systems, recreational organizations, public installations, industrial plants, etc. ☐

7. Land in farms and ranches served directly by this organization -

a. Acres irrigated in 1978 ☐ None

b. Acres developed for irrigation - Include land that could be irrigated with this organization's existing facilities if water were available. (See item 7b reference guide.) ☐

8. How did the acres irrigated in 1978 compare with the average acres irrigated during the 3-year period, 1975-1977? - Mark (X) one

☐ Much above average (50% or more)

☐ Above average (20% to 49%)

☐ Near average (within 20%)

☐ Below average (20% to 49%)

☐ Much below average (50% or more)

9. Estimate what percent of the acres irrigated in 1978 (acres reported in item 7a) were irrigated by each of the following methods:

a. Furrow or ditches ☐ None

b. Flooding ☐

c. Sprinkler system ☐

d. All other methods - Specify _____ ☐

Number of users
054
055
056

Acres
057
058

Percent of acres
060
061
062
063

CENSUS USE ONLY	064	065	066	067	068	069	070

Section IV - WATER USERS AND ACRES SERVED BY THIS ORGANIZATION IN 1978 - Continued									
10. Acres of land taken out of production from this organization's service area since January 1970 due to -									
a. Salinity or alkalinity	☐	None	<table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 50%; text-align: left;">Acres</th></tr></thead><tbody><tr><td style="text-align: center; padding: 2px;">071</td></tr><tr><td style="text-align: center; padding: 2px;">072</td></tr><tr><td style="text-align: center; padding: 2px;">073</td></tr><tr><td style="text-align: center; padding: 2px;">074</td></tr></tbody></table>		Acres	071	072	073	074
Acres									
071									
072									
073									
074									
b. Urbanization - residential, commercial, industrial, highways, rights-of-way, etc.	☐								
c. Poor drainage	☐								
d. Other - Specify	☐								
11. Did any of the farms and ranches served by this organization obtain additional irrigation water -									
a. From their own well(s) or private surface source(s)?									
☐ YES - Estimated number of farms and ranches	075	☐ NO - Go to b							
b. From any other organizations (district, company, community ditch, etc.)?									
☐ YES - Estimated number of farms and ranches	076	☐ NO - Go to item 12							
If "Yes" give name(s) and address(es), of other organization(s) below.									
Name	Address - Number and street	City and State	ZIP code						
12. Estimate the amount of irrigation water applied from all sources, on land served by this organization. Report either a OR b.									
a. Average quantity applied per acre - report to nearest tenth acre-foot									
b. Average depth applied in inches									
077 /10 Acre-feet									
078 Inches									
Section V - SUPPLY AND DISPOSITION OF WATER IN 1978									
NOTE: Give your best estimate if measurements are not available.									
13. Supply of water received by this organization - (Report water from the point it came under the control of this organization.)									
a. From another organization's canal, pipe, or reservoir. Include water received via a natural channel from a storage reservoir with which this organization has a contract or agreement. (Total reported in item 4)									
b. From surface sources (streams, lakes, reservoir, drainage ways)									
c. From ground sources (pumped wells, flowing wells, and springs)									
d. TOTAL WATER SUPPLY RECEIVED from all sources by this organization (ADD acre-feet for lines a, b, and c)									
14. Disposition or use of water by this organization through - (Report water to the point it left the control of this organization)									
a. Delivery directly to farms and ranches reported in item 6a for irrigating land - If you do not measure deliveries, deduct an estimate for conveyance loss									
b. Delivery directly to individual users solely for residential or domestic use (Water users reported in item 6b)									
c. Delivery to works of other irrigation organizations. Include water delivered via a natural channel to other organizations with which this organization has a contract or agreement. (Total of amount reported in item 5)									
d. Delivery directly to industrial plants, municipal water systems, recreational organizations, public installations, etc. (Water users reported in item 6c)									
e. All other releases from the irrigation conveyance system, including spillage of excess									
f. Conveyance loss (estimated) due to evaporation and seepage. If none, please explain in "Remarks"									
g. TOTAL WATER DELIVERED to users, released, or lost by this organization (Add acre-feet for lines a through f. This total should be the same as item 13d.)									
15. Was the amount of water delivered to farms and ranches in 1978 - Mark (X) one.									
090 { ☐ 1 Much above normal (50% or more)?									
☐ 2 Above normal (20% to 49%)?									
☐ 3 Near normal (within 20%)?									
☐ 4 Below normal (20% to 49%)?									
☐ 5 Much below normal (50% or more)?									
Section VI - IRRIGATION FACILITIES OF THIS ORGANIZATION IN 1978									
16. Diversion dams operated - not storage reservoirs									
17. Flowing wells which require no pumping									
18. Pumped wells									
a. Average depth to water at beginning of irrigation season									
19. Were any pumps used in this irrigation system?									
☐ YES - Complete this item									
☐ NO - Go to item 20									
a. Pumps used on wells									
b. Pumps on streams, reservoirs, lakes, or ponds (pumps used to divert water from surface source)									
c. Other pumps (pumps used to relift water within system; pumps used for drainage)									
Total pumping capacity (discharge) of all pumps Use either column (2) or (3)									
Average vertical lift to discharge Feet									
Total number (1)									
Gallons per minute (2)									
Cubic feet per second (3)									
Average vertical lift to discharge Feet (4)									
095 096 097 098									
099 100 101 102									
103 104 105 106									

Section VI – IRRIGATION FACILITIES OF THIS ORGANIZATION IN 1978 – Continued

	None	Length of all facilities		Length of larger facilities – 50 or more cubic feet per second (22,500 gallons per minute or more)	
		Miles	Tenths	Miles	Tenths
20. Length of conveyance facilities –					
a. Unlined canals, laterals, or ditches.	☐	107		108	
b. Lined canals, laterals, or ditches, including flumes and siphons (Include concrete, asphalt, compacted earth, etc.)	☐	109		110	
c. Pipelines.	☐	111		112	
d. Drains maintained.	☐	113			
e. Tunnels.	☐	114			
			Feet		

Section VII – IRRIGATION WATER STORAGE RESERVOIRS OF THIS ORGANIZATION IN 1978

21. Did this organization have any water storage reservoirs in 1978? (Include shared reservoirs and reservoirs which are dry due to drought conditions; exclude dams solely for diversion.)
☐ YES – Complete this section ☐ NO – Go to section VIII

22. Did this organization have any ON or OFF-STREAM reservoirs with a capacity UNDER 1,000 ACRE-FEET?
☐ YES – Complete items a and b ☐ NO – Go to item 23

a. Number of reservoirs _____ Number

b. Total filled capacity of these reservoirs _____ Acre-feet

23. Did this organization have any ON-STREAM reservoirs with a capacity of 1,000 ACRE-FEET OR MORE (reservoirs filled chiefly by the stream across which the dam is built)? – Do not include simple diversion dams.
☐ YES – List each reservoir and fill columns (2) through (4) for each ☐ NO – Go to item 24

Name of reservoir (1)	Name of stream intersected (2)	Total filled capacity (exclude dead or unusable capacity) Acre-feet (3)	Stored water withdrawn or released from each reservoir in 1978 for irrigation use Acre-feet (4)
a.		118	119
b.		120	121
c.		122	123

If more space is needed, use the "Remarks" space or attach a separate sheet of paper.

24. Did this organization have any OFF-STREAM reservoirs with a capacity of 1,000 ACRE-FEET OR MORE (reservoirs filled chiefly by water conveyed through canals or pipes)?
☐ YES – List each reservoir and fill columns (2) through (6) for each ☐ NO – Go to section VIII

Name of reservoir (1)	Total filled capacity (exclude dead or unusable capacity) Acre-feet (2)	Water diverted into each reservoir in 1978 Acre-feet (3)	Stored water withdrawn or released from each reservoir in 1978 for irrigation use Acre-feet (4)	Amount of water in each reservoir as of –	
				Oct. 1, 1977 Acre-feet (5)	Oct. 1, 1978 Acre-feet (6)
a.	138	139	140	141	142
b.	143	144	145	146	147
c.	148	149	150	151	152

If more space is needed, use the "Remarks" space or attach a separate sheet of paper.

Section VIII – MEASUREMENT OF WATER IN 1978

25. Did this organization measure any of the water it received or delivered in 1978?
 188 ☐ YES – Complete this section ☐ NO – Go to section IX

26. What types of flow measuring devices were used? – Mark (X) all boxes which apply
 189 ☐ Weir or Parshall flume ☐ Propeller, cup or disk meter ☐ Orifice, venturi, or pitot tube ☐ Other – Specify _____

27. How often was measurement taken? – Mark (X) all boxes which apply
 190 ☐ Continuous recorder ☐ Random measurement

Periodic measurement – How often?
☐ Daily
☐ Weekly
☐ Monthly
☐ Other – Specify _____

28. What portion of water flowing at the following points was measured (approximate)?

	None	Percent
a. At entry into this system.	☐	191 %
b. At delivery.	☐	192 %
c. At release into natural channels.	☐	193 %

Section IX – COST OF OPERATION AND MAINTENANCE IN 1978

29. Amount spent by this organization in 1978 for the operation, maintenance, and repair of irrigation equipment and facilities (excluding water purchased) – Include fuel, power, maintenance, ordinary repairs and replacements, and hired labor. Exclude improvements, additions, and the value of labor and materials furnished by owners or operators.
 CENTS NOT REQUIRED
 Dollars Cents
 194 \$

a. Fuel and Energy Expenditures – Of the amount reported in item 29 how much was spent for each of the following types of fuel to pump (lift) and deliver water to farms and ranches in 1978? Include fuel adjustment costs.

1. Natural gas.	☐	195 \$
2. Electricity	☐	196 \$
3. LP gas, butane, and propane	☐	197 \$
4. Diesel oil	☐	198 \$
5. Gasoline	☐	199 \$
6. TOTAL FUEL AND ENERGY COSTS (Add dollars in items 1 through 5 and enter total here.)		200 \$

Section X - NEW CAPITAL INVESTMENT, 1970 THROUGH 1978 AND INDEBTEDNESS

Improvements to existing facilities, buildings, and equipment - Report only the amount you spent during calendar years 1970 through 1978 over and above what it would cost to replace the original with similar facilities or equipment.

New construction and added equipment - Report only additional facilities, buildings, or equipment.

Include only those facilities chargeable to irrigation and only the cost to this organization of works built jointly with another organization; include expenditures made by this organization with loans or funds obtained from the Bureau of Reclamation.

For construction in progress, include only that part performed during calendar years 1970 through 1978.

Exclude cost of ordinary repairs and replacements; expenditures for land, rights-of-way, and water rights; payments to the Bureau of Reclamation or other organizations for facilities already constructed.

Projects constructed by the Bureau of Reclamation and now operated by users should not report expenditures made directly by the Bureau. These expenditures will be obtained from that agency.

30. Were there any expenditures by this organization for construction of additional facilities, purchase of added equipment, or improvements to facilities or equipment for irrigation and drainage, between January 1, 1970 and December 31, 1978?

☐ YES - Complete this item

☐ NO - Go to item 31

Expenditures 1970 through 1978 CENTS NOT REQUIRED		
	Dollars	Cents
None		
a. Improvements to existing facilities, buildings, and equipment	\$	
b. New construction and added equipment	\$	
c. TOTAL COST of improvements and additions	\$	

31. Total indebtedness of this organization

a. Total indebtedness of this organization chargeable to irrigation and drainage as of December 31, 1978 - Include outstanding bonds, notes, repayment contracts, drought emergency loans, and construction obligations. Exclude current liabilities

CENTS NOT REQUIRED		
	Dollars	Cents
None		
204	\$	
205	\$	

b. Amount obligated to the U.S. Bureau of Reclamation (part of item (a) above)

Section XI - REVENUE OF THIS ORGANIZATION IN 1978 FROM WATER USERS AND OTHER ORGANIZATIONS

32. Money received by this organization in 1978 from water users or other irrigation organizations for operation and maintenance, or for repayment of construction cost on the irrigation system - Include collections made directly from other organizations for water purchased or stored and from users on the basis of charges, or assessments per acre, per share, per acre-foot, or on the basis of assessed valuation.

a. From farms and ranches

b. From residential and domestic water users

c. From other irrigation organizations

d. From other users - Specify

e. TOTAL RECEIVED FROM ALL USERS OF WATER (Add dollars in items a through d and enter total here.)

CENTS NOT REQUIRED		
	Dollars	Cents
None		
206	\$	
207	\$	
208	\$	
209	\$	
210	\$	

Section XII - LOCATION OF DIVERSION POINTS AND DELIVERY POINTS IN 1978

33. On the enclosed map locate the following features of your organization's operation. Please use the symbols indicated - red pencil preferred. BE SURE TO RETURN THE MAP WITH THIS QUESTIONNAIRE.

a. Diversion or pumping points from surface or ground sources or points where water from another organization enters works operated by this organization

b. Points where water is delivered to works operated by other irrigation organizations

c. Off-stream reservoirs (1,000 acre-feet or more capacity)

d. On-stream reservoirs (1,000 acre-feet or more capacity)

e. Land served directly by this organization

Symbols	CENSUS USE ONLY	
	State	Drainage Basin No.
△		
○		
Write name on map		
Write name on map		
Sketch in outline of area		

Remarks - Identify remarks by item number. (If more space is needed, attach a separate sheet of paper.)

Section XIII - CERTIFICATION

34. Person supplying information	Name	Title	Telephone	
	Mailing address - Number and street, city, and State		Area code	Number
			ZIP code	

DUE BY FEBRUARY 15, 1979

Form 78-A61
(8-31-78)U.S. DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS

CENSUS OF IRRIGATION **MULTI-BASIN ORGANIZATIONS**

(Only sections that differ from single-basin organizations are shown)

Section III - EXCHANGE OF WATER WITH OTHER ORGANIZATIONS IN 1978													
4. Was any water received from another organization? - Report water received directly from a canal, pipeline, or reservoir operated by another organization. Include water received via a natural channel from a storage reservoir with which this organization has a contract or agreement. ☐ YES - Give the following information ☐ NO - Go to item 5 Enter drainage basin number from map → <table border="1"> <thead> <tr> <th>Name and address of organization supplying water</th> <th>Acre-feet obtained</th> <th>Drainage Basin No.</th> </tr> </thead> <tbody> <tr> <td>a.</td> <td></td> <td></td> </tr> <tr> <td>b.</td> <td></td> <td></td> </tr> </tbody> </table> If more space is needed continue in "Remarks" on page 4.					Name and address of organization supplying water	Acre-feet obtained	Drainage Basin No.	a.			b.		
Name and address of organization supplying water	Acre-feet obtained	Drainage Basin No.											
a.													
b.													
5. Was any water delivered by this organization into the system of another separately operated organization which assesses or collects water charges? Include water delivered via a natural channel to another organization with which this organization has a contract or agreement. ☐ YES - Give the following information ☐ NO - Go to section IV Enter drainage basin number from map → <table border="1"> <thead> <tr> <th>Name and address of organization receiving water</th> <th>Acre-feet delivered</th> <th>Drainage Basin No.</th> </tr> </thead> <tbody> <tr> <td>a.</td> <td></td> <td></td> </tr> <tr> <td>b.</td> <td></td> <td></td> </tr> </tbody> </table> If more space is needed continue in "Remarks" on page 4.					Name and address of organization receiving water	Acre-feet delivered	Drainage Basin No.	a.			b.		
Name and address of organization receiving water	Acre-feet delivered	Drainage Basin No.											
a.													
b.													
Section IV - WATER USERS AND ACRES SERVED BY THIS ORGANIZATION IN 1978 (Excluding those served by organizations reported in item 5) Report by drainage basin number.													
6. Water users served directly by this organization - Do not duplicate. Report users, only once, in the FIRST appropriate category. a. Farms and ranches receiving water for irrigation. ☐ b. Residential and domestic users - Report users, including farms and ranches using water ONLY for household use, lawns and gardens, or for livestock water. ☐ c. Other users - municipal water systems, recreational organizations, public installations, industrial plants, etc. ☐	Enter drainage basin number from map →	D.B. No.	D.B. No.	D.B. No.	Total all basins								
	Number of users												
7. Land in farms and ranches served directly by this organization a. Acres irrigated in 1978. ☐ b. Acres developed for irrigation - Include land that could be irrigated with this organization's existing facilities if water were available. ☐	None	Acres											
		Percent of acres irrigated											
8. Estimate what percent of the acres irrigated in 1978 (acres reported in item 7a) were irrigated by each of the following methods: a. Furrow or ditches. ☐ b. Flooding. ☐ c. Sprinkler system. ☐ d. All other methods - Specify. ☐		%	%	%	%								
		Acres taken out of production											
9. Acres of land taken out of production from this organization's service area since January 1970 due to - a. Salinity or alkalinity. ☐ b. Urbanization - residential, commercial, industrial, highways, rights-of-way, etc. ☐ c. Poor drainage. ☐ d. Other - Specify. ☐													

Section V – SUPPLY AND DISPOSITION OF WATER 1978
 NOTE: Give your best estimate if measurements are not available.

If your organization operates in more than one State, the spaces provided for entry of drainage basin numbers may also be used for entry of State names.

13. Supply of water received by this organization –
 (Report water from the point it came under the control of this organization.)

Enter drainage basin numbers from map →

	Report quantity of water by drainage basin Acre-feet			Total all basins Acre-feet
	D.B. number	D.B. number	D.B. number	
a. From another organization's canal, pipe, or reservoir (total reported in item 4) – Include water received via a natural channel from a storage reservoir with which this organization has a contract or agreement				
b. From surface sources (streams, lakes, on-stream reservoirs, drainage ways)				
c. From ground sources (pumped wells, flowing wells, and springs)				
d. TOTAL WATER SUPPLY RECEIVED from all sources by this organization (Add acre-feet for lines a, b, and c)				
e. Quantity of water imported into basin identified in column heading	+	+	+	+
From drainage basin number	(No.)	(No.)	(No.)	
f. Quantity of water exported out of basin identified in column heading	-	-	-	-
To drainage basin number	(No.)	(No.)	(No.)	
g. TOTAL WATER SUPPLY for storage or disposition in each drainage basin (Lines d plus e minus f.)				

14. Disposition or use of water by this organization through
 (Report water to the point it left the control of this organization)

a. Delivery directly to farms and ranches reported in item 6a for irrigating land –
 If you do not measure deliveries, deduct an estimate for conveyance loss

b. Delivery directly to individual users solely for residential or domestic use
 (Water users reported in item 6d)

c. Delivery to works of other irrigation organizations (Total of amounts reported
 in item 5) – Include water delivered via a natural channel to other organizations
 with which this organization has a contract or agreement

d. Delivery directly to industrial plants, municipal water systems, recreational
 organizations, public installations, etc. (Water users reported in item 6c)

e. All other releases from the irrigation conveyance system,
 including spillage of excess

f. Conveyance loss (estimated) due to evaporation and seepage –
 If none, please explain in "Remarks"

g. TOTAL WATER DELIVERED to users, released, or lost by this
 organization (Add acre-feet for lines a through f.
 This total should be the same as item 13g.)

Page 2

23. Did this organization have any ON-STREAM reservoirs with a capacity of 1,000 ACRE-FEET OR MORE (reservoirs filled chiefly by the stream across which the dam is built)? – Do not include simple diversion dams.

☐ YES – List each reservoir and fill columns (2) through (5) for each ☐ NO – Go to item 24

Enter drainage basin number from map →

Name of reservoir (1)	Name of stream intersected (2)	Total filled capacity (exclude dead or unusable capacity) Acre-feet (3)	Stored water withdrawn or released from each reservoir in 1978 for irrigation use Acre-feet (4)	Drainage Basin No. (5)
a.				
b.				
c.				

If more space is needed, use the "Remarks" space or attach a separate sheet of paper.

24. Did this organization have any OFF-STREAM reservoirs with a capacity of 1,000 ACRE-FEET OR MORE (reservoirs filled chiefly by water conveyed through canals or pipes)?

☐ YES – List each reservoir and fill columns (2) through (7) for each ☐ NO – Go to section VIII

Enter drainage basin number from map →

Name of reservoir (1)	Total filled capacity (exclude dead or unusable capacity) Acre-feet (2)	Water diverted into each reservoir in 1978 Acre-feet (3)	Stored water withdrawn or released from each reservoir in 1978 for irrigation use Acre-feet (4)	Amount of water in each reservoir as of –		Drainage Basin No. (7)
				Oct. 1, 1977 Acre-feet (5)	Oct. 1, 1978 Acre-feet (6)	
a.						
b.						
c.						

If more space is needed, use the "Remarks" space or attach a separate sheet of paper.

Page 3

78-A70-L1

January 23, 1979



UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Washington, D.C. 20233

**FROM THE CHIEF, AGRICULTURE DIVISION
BUREAU OF THE CENSUS**

Many irrigation organizations have already completed and returned their report forms for the 1978 Census of Irrigation. If you are among this group, we thank you for your promptness.

If you have not completed your report form, please note that the due date is February 15, 1979. If filing by that date creates an undue burden, a request for extension may be sent to our office in Washington, D.C. In all correspondence to us, be sure to include the 11-digit Census File Number shown in your address label.

Sincerely,

ORVIN L. WILHITE



**1978
CENSUS OF
AGRICULTURE**

78-A61-L1A
(1-79)



UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Washington, D.C. 20233

FROM THE AGRICULTURE DIVISION
BUREAU OF THE CENSUS

Included in the materials that were mailed to you for the 1978 Census of Irrigation was an extra, pink questionnaire (form 78-A61), labeled "This Form is FOR YOUR RECORDS." Through a printing error, not discovered until after your forms were mailed, page 2 was repeated in place of page 4.

The enclosed copy of page 4 will make it possible for you to keep a complete record of your census report in your files.

If you have any questions about your report, please call collect (301) 763-2300 or 763-2676.

We apologize for any inconvenience this error has caused you.

Sincerely,

ORVIN L. WILHITE
Chief, Agriculture Division

Enclosure



1978
CENSUS OF
AGRICULTURE

78-A63-L1
(8-78)



UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Washington, D.C. 20233

OFFICE OF THE DIRECTOR

**FROM THE DIRECTOR
BUREAU OF THE CENSUS**

A census of irrigation is conducted each 10 years to provide current and anticipated needs for information about this important sector of our nation's economy.

Nationally, more water is consumed for irrigation than any other use. Sales from irrigated farms account for over one-quarter of all agricultural sales in the United States, yet only about ten percent of all farms are irrigated. Farmers, businesses associated with agriculture, and government agencies need information on the rapid changes occurring in irrigation. Major areas of interest are land irrigated, water users served, facilities operated, quantities of water used, energy requirements, and investment in facilities. This information may be used in making decisions which affect efficiency of water management, improvement of irrigation equipment, allocation of energy needs, or providing finances for new projects.

Please fill out the enclosed form and mail it back to us in the envelope provided by February 15th.

The enclosed Reference Guide provides definitions and guidelines which will help in completing the report form. If you have any further questions about your report and want to write us about it, complete as much of the census form as possible, enter your questions in the remarks space, and return the form to us.

We will appreciate your early response. It is vital to the accurate and timely publication of the 1978 Census of Irrigation.

Sincerely,

MANUEL D. PLOTKIN

Enclosures

NOTICE — Response to this inquiry is required by law (title 13, United States Code). By the same law YOUR REPORT TO THE CENSUS BUREAU IS CONFIDENTIAL. It may be seen only by sworn Census employees and may be used only for statistical purposes. Your report cannot be used for purposes of taxation, investigation, or regulation. The law also provides that copies retained in your files are immune from legal process.



**1978
CENSUS OF
AGRICULTURE**

78-A63-L2

February 15, 1979



UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Washington, D.C. 20233

SECOND REQUEST

FROM THE CHIEF, AGRICULTURE DIVISION
BUREAU OF THE CENSUS

We have not as yet received your completed report form for the 1978 Census of Irrigation, which was mailed to you about 6 weeks ago. If it has been completed and returned to us, please accept our thanks for your important contribution to the success of this census.

If you have not already done so, please complete the questionnaire and mail it to us immediately. We must have replies from everyone who received an irrigation form if the census results are to be accurate and complete.

Your answers are COMPLETELY CONFIDENTIAL by law (title 13, U.S. Code). Your report can be seen only by Census employees and may be used only for statistical purposes.

If you have any questions about your report, complete as much of the census form as possible, enter your questions in the "Remarks" space and return the form to us.

Sincerely,

ORVIN L. WILHITE

IMPORTANT: In all correspondence, please include the Census File Number shown in the address label of your report form.



1978
CENSUS OF
AGRICULTURE

78-A63-L3

March 6, 1979



UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Washington, D.C. 20233

THIRD REQUEST

FROM THE CHIEF, AGRICULTURE DIVISION
BUREAU OF THE CENSUS

Your response to the 1978 Census of Irrigation questionnaire mailed to you about 9 weeks ago is required by law (title 13, United States Code).

The same law assures that your individual report can be used only to produce statistical totals. It will be held in strictest confidence and cannot be shown to or used by anyone outside the Bureau of the Census for any purpose whatsoever.

Our records indicate that as of the above date we have not received your report. If you have mailed it in the last few days, it may have crossed in the mails and we thank you for your response.

If you have not yet mailed your report, please complete it and mail it to us right away. Your completed report is needed now to avoid delay in processing the census statistics on irrigation for your State.

Your cooperation is essential.

Sincerely,

ORVIN L. WILHITE

IMPORTANT: In all correspondence, please include the Census File Number shown in the address label of your report form.



1978
CENSUS OF
AGRICULTURE

78-A63-L4

March 27, 1979



UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Washington, D.C. 20233

FOURTH REQUEST

FROM THE CHIEF, AGRICULTURE DIVISION
BUREAU OF THE CENSUS

We are very much concerned that we have not received your completed report for the 1978 Census of Irrigation. It is long overdue.

Practically all irrigation organizations have already returned their completed report. **Please take time to fill out your report and mail it to us immediately if you have not already done so.** This is essential so that we may soon publish complete results of the census.

Since your report form may have been lost, we are enclosing another copy for your use. A preaddressed envelope is also enclosed for your convenience.

The filing of this report is required by law (title 13, United States Code) and no exceptions can be made. Pertinent sections of the law are shown on the reverse side of this letter.

Sincerely,

A handwritten signature in cursive script, reading "Orvin L. Wilhite".

ORVIN L. WILHITE

Enclosures

IMPORTANT: In all correspondence, please include the Census File Number shown in the address label of your report form.



1978
CENSUS OF
AGRICULTURE

**EXCERPTS FROM TITLE 13, UNITED STATES CODE WHICH
RELATE TO THE CENSUS OF AGRICULTURE**

AUTHORITY TO CONDUCT CENSUS — Section 142

- (a) The Secretary shall in 1979, in 1983, and in every fifth year beginning after 1983, take a census of agriculture.
- (b) In conjunction with the census to be taken under subsection (a) of this section in 1979, in 1988, and every tenth year beginning after 1988, the Secretary shall take a census of irrigation and drainage.
- (c) The data collected in each of the censuses taken under this section shall relate to the year immediately preceding the year in which such census is taken.

AUTHORITY TO COLLECT PRELIMINARY AND SUPPLEMENTAL STATISTICS — Section 193

In advance of, in conjunction with, or after the taking of each census provided for by this chapter, the Secretary may make surveys and collect such preliminary and supplementary statistics related to the main topic of the census as are necessary to the initiation, taking, or completion thereof.

MANDATORY PROVISIONS OF LAW

Section 221

- (a) Whoever, being over eighteen years of age, refuses or willfully neglects, when requested by the Secretary, or by any other authorized officer or employee of the Department of Commerce or bureau or agency thereof acting under the instructions of the Secretary or authorized officer, to answer, to the best of his knowledge, any of the questions on any schedule submitted to him in connection with any census or survey provided for by subchapters I, II, IV, and V of chapter 5 of this title, applying to himself or to the family to which he belongs or is related, or to the farm or farms of which he or his family is the occupant, shall be fined not more than \$100.
- (b) Whoever, when answering questions described in subsection (a) of this section, and under the conditions or circumstances described in such subsection, willfully gives any answer that is false, shall be fined not more than \$500.

Section 224

Whoever, being the owner, official, agent, person in charge, or assistant to the person in charge, of any company, business, institution, establishment, religious body, or organization of any nature whatsoever, neglects or refuses, when requested by the Secretary or other authorized officer or employee of the Department of Commerce or bureau or agency thereof, to answer completely and correctly to the best of his knowledge all questions relating to his company, business, institution, establishment, religious body, or other organization, or to records or statistics in his official custody, contained on any census or other schedule or questionnaire prepared and submitted to him under the authority of this title, shall be fined not more than \$500; and if he willfully gives a false answer to any such questions, he shall be fined not more than \$10,000.

CONFIDENTIALITY OF INFORMATION

Section 9

Neither the Secretary, nor any other officer or employee of the Department of Commerce or bureau or agency thereof, may, except as provided in section 8 of this title [which permits only the release of identifiable personal information to a respondent or the heir, successor or agent of such respondent] —

- (1) use the information furnished under the provisions of this title for any purpose other than the statistical purposes for which it is supplied; or
- (2) make any publication whereby the data furnished by any particular establishment or individual under this title can be identified; or
- (3) permit anyone other than the sworn officers and employees of the Department or bureau or agency thereof to examine the individual reports.

No department, bureau, agency, officer, or employee of the Government, except the Secretary in carrying out the purposes of this title, shall require, for any reason, copies of census reports which have been retained by any such establishment or individual. Copies of census reports which have been so retained shall be immune from legal process, and shall not, without the consent of the individual or establishment concerned, be admitted as evidence or used for any purpose in any action, suit, or other judicial or administrative proceeding.

Section 214

Whoever, being or having been an employee or staff member referred to in subchapter II of chapter I of this title, having taken and subscribed the oath of office, or having sworn to observe the limitations imposed by section 9 of this title, publishes or communicates any information, the disclosure of which is prohibited under the provisions of section 9 of this title, and which comes into his possession by reason of his being employed (or otherwise providing services) under the provisions of this title, shall be fined not more than \$5,000 or imprisoned not more than 5 years, or both.

78-A63-L5
(3-79)



UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Washington, D.C. 20233

FIFTH REQUEST

**FROM THE AGRICULTURE DIVISION
BUREAU OF THE CENSUS**

A report form for the 1978 Census of Irrigation was sent to you the first of the year and a second form was sent about three weeks ago. Your irrigation organization is one of the few which have not yet sent in the completed form. We must have your report to insure that the census of irrigation is complete and accurate.

Please take time to fill it out and mail it to us immediately if you have not already done so. If figures are not readily available from your records, your best estimates are acceptable.

Your report, which is required by law (title 13, United States Code), can be used only to produce statistical totals. Your report will be completely confidential. It cannot be seen by anyone except sworn Census employees.

Each address in our mailing list has a different Census File Number (CFN) and each has to be accounted for. By completing and returning the form you will save the government the cost of any further contacts necessary to obtain your report.

If you are no longer associated with irrigation or have been mistakenly included on our mailing list it is equally important for us to hear from you. Please complete the few items in section 1 of the report so that we can clarify your status.

Sincerely,

ORVIN L. WILHITE
Chief, Agriculture Division

IMPORTANT: In all correspondence, please include the Census File Number shown in the address label of your form.



**1978
CENSUS OF
AGRICULTURE**

2. Purpose — Indicate the main function(s) of this unit, by marking the appropriate box(es). If two or more functions are performed, enter numbers 1, 2, 3, etc. to indicate size ranking.				Form Approved: O.M.B. No. 41-575071 U.S. DEPARTMENT OF COMMERCE BUREAU OF THE CENSUS	
08 ☐ Soil conservation 51 ☐ Drainage of agricultural lands 64 ☐ Irrigation, water conservation 63 ☐ Flood control 91 ☐ Domestic water supply 80 ☐ Sewerage 02 ☐ Cemetery 24 ☐ Fire protection 40 ☐ Hospital 50 ☐ Housing 52 ☐ Library 61 ☐ Parks, recreation 44 ☐ Roads, bridges 09 ☐ School buildings ☐ Other — Specify _____				FORM G-29 (1-23-76) 1977 CENSUS OF GOVERNMENTS LOCAL GOVERNMENTS DIRECTORY CARD (Special Districts)	
3. Employment — Number of paid employees of your government and their payroll for the one pay period which included October 15, 1976.				1. Address (Please correct any error in name and address including ZIP code)	
Type of employment	Number of employees	Payroll amount (Omit cents)	Length of pay period*	CENSUS USE ONLY	
Full-time		\$			
Part-time		\$			
*Indicate whether pay period reported is for a one-week, two-week, bi-monthly, or monthly period.				RETURN TO	
Please complete form on reverse side				Bureau of the Census 1201 East Tenth Street Jeffersonville, Indiana 47130	

4. Debt a. Amount of long-term debt your district had outstanding at end of fiscal year b. Enter the ending date of the fiscal year for which the above debt information is reported		Amount (Omit cents) _____ Month/day/year _____	7. District area (rough estimate will suffice) a. Report the amount of territory covered by this unit, if possible to the nearest tenth of a square mile b. Mark (X) the particular item which describes the area covered by this unit, and supply the related facts requested. (1) ☐ An area with exactly the same boundaries as one particular county, city, village, borough, town, or township. <i>Specify that unit by its full name.</i> _____ (2) ☐ An area consisting of two or more entire counties. <i>Specify county names.</i> _____ (3) ☐ An area that includes some territory in two or more counties, but not all of the area in each of them. <i>Specify county names.</i> _____ (4) ☐ None of the three preceding descriptions is applicable _____		Square miles _____
5. District officials a. Governing body (board of trustees, directors, etc.) (1) Number of popularly elected members (2) Number of members, if any, selected by elected members, appointed, ex officio, etc. b. Does the district have any other POPULARLY ELECTED officials? 1 ☐ No 2 ☐ Yes — <i>Specify official titles</i>		Number _____	c. Does this district cover all or part of any city or cities of 25,000 or more population? ☐ Yes — <i>List city or cities</i> → _____ ☐ No		
6. Revenue powers — Mark (X) the appropriate box(es) to indicate the means of financing which are legally available to this unit (whether now used or not). 1 ☐ District-wide property taxes (levied upon assessed valuations) 2 ☐ Special assessments based on area, front footage, or value of properties benefited by particular improvements 3 ☐ Charges for services or sales 4 ☐ Grants from other governments		INFORMATION SUPPLIED BY _____ Name and title _____			

2. Purpose — Indicate the main function(s) of this unit by marking the appropriate box(es). If two or more functions are performed, enter numbers — 1, 2, 3, etc., to indicate size ranking. 80 ☐ Soil conservation 81 ☐ Drainage of agricultural lands 64 ☐ Irrigation, water conservation 63 ☐ Flood control 91 ☐ Domestic water supply 60 ☐ Sewage 02 ☐ Cemetery 24 ☐ Fire protection 40 ☐ Hospital 50 ☐ Housing 52 ☐ Library 61 ☐ Parks, recreation 44 ☐ Roads, bridges 09 ☐ School buildings Other — Specify ☐			
3. Employment — Number of paid employees of your government and their payroll for the one pay period which included October 15, 1976			
Type of employment	Number of employees	Payroll amount (Omit cents)	Length of pay period
Full-time		\$	
Part-time		\$	
* Indicate whether pay period reported is for a one-week, two-week, bimonthly, or monthly period.			
Please complete form on reverse side			
1. Address (Please correct any error in name and address including ZIP code) 1977 CENSUS OF GOVERNMENTS LOCAL GOVERNMENT DIRECTORY CARD (Special Districts)			
RETURN TO Bureau of the Census 1201 East Tenth Street Jeffersonville, Indiana 47130			

4. Annual finances — Enter the amounts requested below for the latest fiscal year for which information is available.	Amount (Omit cents)
a. Revenue Property taxes	\$
Charges	
State government grants or aid	
All other revenue (exclude borrowings)	
b. Expenditure Current operations	
Construction and improvements	
c. Amount of long-term debt your district had outstanding at the end of the fiscal year	\$
5. Fiscal year — Enter the ending date of the fiscal year for which the above financial data are reported.	Month, day, year
6. District officials a. Governing body (board of trustees, directors, etc.) 1. Number of popularly elected members	Number
2. Number of members, if any, selected by elected members, appointed, ex officio, etc.	Number
b. Does the district have any other popularly elected officials? 1 ☐ No 2 ☐ Yes — Specify official titles _____	
7. Revenue powers — Mark as many of the following means of financing as legally available to this unit (whether now used or not). 1 ☐ District-wide property taxes levied upon assessed valuations 2 ☐ Special assessments based on area, front footage, or value of properties benefited by particular improvements 3 ☐ Charges for services or sales 4 ☐ Grants from other governments	
8. District area (rough estimate will suffice) a. Amount of territory covered by this unit, if possible to the nearest tenth of a square mile.	Square miles
b. Mark the particular item which describes the area covered by this unit, and supply the related facts requested. 1 ☐ An area with exactly the same boundaries as one particular county, city, village, borough, town, or township — Specify that unit by its full name, _____ 2 ☐ An area consisting of two or more entire counties. Specify county names, _____ 3 ☐ An area that includes some territory in two or more counties, but not all of the area in each of them. Specify county names, _____ 4 ☐ None of the three preceding descriptions is applicable	
c. Does this district cover all or part of any city or cities of 25,000 or more population? Yes — List city or cities → _____ No	
INFORMATION SUPPLIED BY	Name and title

FORM G-30
(11-22-76)

Form Approved: O.M.B. No. 41-575071

U.S. DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS

DUE DATE: 20 DAYS AFTER RECEIPT OF FORM

Form Approved: O.M.B. No. 41-579033

NOTICE - Response to this inquiry is required by law (title 13, U.S. Code). By the same law YOUR REPORT TO THE CENSUS BUREAU IS CONFIDENTIAL. It may be seen only by sworn Census employees and may be used only for statistical purposes. Your report CANNOT be used for purposes of taxation, investigation, or regulation. The law also provides that copies retained in your files are immune from legal process.

Please mention the Census File Number (the eleven-digit number in the upper left corner of the address label) if you write to us about this report.

FORM 79-A62
(9-7-79)U.S. DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS

1979 FARM AND RANCH IRRIGATION SURVEY

COMPLETE AND
RETURN TOBureau of the Census
1201 East Tenth Street
Jeffersonville, Indiana 47132

NOTE

Consider as irrigated all land watered by any artificial or controlled means - sprinklers, furrows or ditches, spreader dikes, etc. Include preplant, partial, supplemental, or semi-irrigation. Include irrigation of pastureland, hayland, non-bearing orchardland, and cropland from which no crops were harvested in 1979. See additional instructions on page 4 for selected items.

(Please correct any error in name and address including ZIP code)

CENSUS USE ONLY	010	S	012	C	014	R	016	ASR	018	SR	020	021	022

Item 1 - Was any land on the farm or ranch you operated in 1978 irrigated at any time in 1979?

- 1 ☐ YES - Complete items 2 through 14 and 16
2 ☐ NO - Go to item 15

Item 2 - ACREAGE IN 1979

	None	Number of acres
a. All land owned	☐	024
b. All land rented or leased from others, including land worked on shares, used rent-free, in exchange for services, payments of taxes, etc. Include leased Federal, State, and railroad land. (Do not include land used on a per-head basis under a grazing permit).	☐	026
c. All land rented or leased to others, including land worked on shares by others and land subleased	☐	028
d. TOTAL ACRES IN THIS PLACE - ADD acres owned (item a) and acres rented (item b), then SUBTRACT acres rented to others (item c), and enter your answer in this space.		030

Item 3 - LAND USE IN 1979

Distribute all acres in this place in column (1) and all irrigated land in this place in column (2) among items a through d. If the same land had more than one use in 1979, report that land only once in the first use listed below that applies. (See page 4 for additional instructions.)

a. Cropland

- (1) Cropland harvested - Include all land from which crops were harvested or hay was cut, and all land in orchards, citrus groves, vineyards, and nursery and greenhouse products . . .
(2) Cropland used only for pasture or grazing - Include rotation pasture and grazing land that could have been used for crops without additional improvements . . .
(3) Other cropland - Include cropland used for cover crops, cropland on which all crops failed, cropland in cultivated summer fallow, and cropland idle . . .

b. Woodland - Include woodland pastured and woodland not pastured . . .

c. Other pastureland and rangeland - Include any pastureland other than cropland and woodland pasture . . .

d. All other land - Include here any land not reported above. Include land in house lots, barn lots, corrals, ponds, roads, wasteland, etc. . .

e. TOTAL ACRES - Please add the acres reported in items a through d and enter total in this space. (Should be the same as item 2d above.)

None	Number of acres (1)	None	Number of acres Irrigated in 1979 (See "Note" above) (2)
☐	032	☐	033
☐	034	☐	035
☐	036	☐	037
☐	038	☐	
☐	039	☐	040
☐	041	☐	
	"IN THIS PLACE" 042		IRRIGATED 043

Item 4 - How did the number of acres irrigated in 1979 compare with the average number of acres irrigated during the 3-year period, 1976-1978?

- 044 1 ☐ Much above average (50% or more) 4 ☐ Below average (20% to 49%)
2 ☐ Above average (20% to 49%) 5 ☐ Much below average (50% or more)
3 ☐ Near average (within 20%)

Item 5 - IRRIGATED AND NON-IRRIGATED YIELDS
FROM SELECTED CROPS HARVESTED
FROM THIS PLACE IN 1979

(See page 4 for additional instructions.)

	None	Irrigated crop Include preplant and supplemental or semi-irrigation (See page 4 for additional instructions.)				Non-irrigated crop	
		Irrigated acres harvested	Average yield per acre harvested	Number of times irrigation water was applied by -		Non-irrigated acres harvested	Average yield per acre harvested
				Sprinklers	Gravity		
a. Field corn for grain or seed	☐	045	1 Bushels, shelled	2	3	4	5 Bushels, shelled
b. Field corn for silage or green chop	☐	051	1 Tons, green	2	3	4	5 Tons, green
c. Sorghums or milo for grain or seed	☐	057	1 Bushels	2	3	4	5 Bushels
d. Wheat for grain	☐	063	1 Bushels	2	3	4	5 Bushels
e. Barley for grain	☐	069	1 Bushels	2	3	4	5 Bushels
f. Soybeans for beans	☐	075	1 Bushels	2	3	4	5 Bushels
g. Dry field and seed beans	☐	081	1 100-lb. bags	2	3	4	5 100-lb. bags
h. Rice	☐	087	1 100-lb. bags	2	3	4	5 100-lb. bags
i. Other small grains (oats, rye, etc.)	☐	093		1	2	3	
j. Alfalfa and alfalfa mixtures for hay or dehydrating	☐	097	1 Tons, /10 dry	2	3	4	5 Tons, /10 dry
k. Wild or native hay	☐	103	1 Tons, /10 dry	2	3	4	5 Tons, /10 dry
l. Cotton	☐	109	1 Lbs. lint	2	3	4	5 Lbs. lint
m. Tobacco, all types	☐	115	1 Pounds	2	3	4	5 Pounds
n. Sugar beets for sugar	☐	121	1 Tons	2	3	4	5 Tons
o. Irish potatoes	☐	127	1 Cwt.	2	3	4	5 Cwt.
p. Land from which vegetables were harvested	☐	133		1	2	3	
q. Land in bearing and nonbearing fruit orchards, citrus or other groves, vineyards, and nut trees	☐	137		1	2	3	
r. All other crops	☐	141		1	2	3	

Item 6 — Did you have to discontinue irrigation in 1979 long enough to AFFECT crop yields for any of the following reasons?

	Yes	No
a. Shortage of surface water (water from reservoirs, lakes, streams, water supply organizations, etc.)	147 ☐	☐
b. Shortage of ground water (lowering water level of wells or depletion of ground water)	1 ☐	☐
c. Irrigation equipment failure	2 ☐	☐
d. Energy shortage		
(1) Diesel	3 ☐	☐
(2) Gasoline	4 ☐	☐
(3) Electricity	5 ☐	☐
(4) LP gas, butane, and propane	6 ☐	☐
(5) Natural gas	7 ☐	☐
e. Poor water quality	8 ☐	☐
f. Loss of water rights	9 ☐	☐
g. Other — Specify _____		

CENSUS USE ONLY
 148

Item 7 — METHOD OF WATER DISTRIBUTION IN 1979 — Report acres irrigated by each type of FIELD distribution system listed below. If same land was irrigated by more than one method, report acres irrigated by each method used. (See page 4 for additional instructions.)

	None	Acres irrigated
a. Sprinkler irrigation		
(1) Center pivot	☐	150
(2) Mechanical-move — Include both continuous or self-propelled and intermittent mechanical move systems such as sideroll, wheel move, end-tow, carriage with trailer lines, rotating boom, and big gun traveler	☐	151
(3) Hand move	☐	152
(4) Solid set and permanent system	☐	153
b. Gravity irrigation		
(1) Gated pipe	☐	154
(2) Open ditch, siphon tubes	☐	155
(3) Flooding from underground pipe with valves	☐	156
(4) Flooding from ditches, canals, dikes, and any other gravity method (excluding methods reported above)	☐	157
c. Drip or trickle irrigation	☐	158
d. Subirrigation (water applied beneath the ground; maintenance of water table at a predetermined depth)	☐	159

Item 8 — ESTIMATED QUANTITY OF WATER USED IN 1979 BY SOURCE

 NOTE — Give your best estimate if measurements are not available.
 (See page 4 for additional instructions.)

- a. From a well or wells located on operated land.
- b. From an on-farm surface supply not controlled by a water supply organization (stream, drainage ditch, lake, pond, spring, or reservoir on or adjacent to operated land).
- c. From off-farm water suppliers (U.S. Bureau of Reclamation; irrigation district; mutual, private, cooperative, or neighborhood ditches; commercial company or municipal or community water system).

 Quantity of water used for irrigation in 1979
 Report in the unit or units of measure most convenient for you. If average acre-feet cannot be estimated in column (1), give combined pumping capacity and duration in columns (2) and (3), or total depth of water applied, in inches, in column (4).

Average acre-feet per acre irrigated One acre-foot covers one acre one foot deep (1)	Gallons of water applied		Total inches applied Include all applications (4)
	Total gallons per minute (2)	No. of days water was applied (3)	
161	/10	162	163
165	/10	166	167
169	/10		170

Item 9 — SELECTED IRRIGATION FACILITIES ON THIS PLACE IN 1979

- a. How many irrigation wells were on this place in 1979, including those capable of use, but not used? (Exclude abandoned wells.)
- b. Of the number reported in item 9a, how many wells were used in 1979?

 Report the following information for each well which was used on this place in 1979 (wells reported in 9b).
 If there are more than nine wells, report information for nine of the wells, then report the average for the remaining wells.

	Depth of well Feet	Depth to water (At start of irrigation season) Feet	Pumping depth (Depth to bowls or impellers) Feet	Pump capacity (Discharge from well) GPM
(1) Well number 1	174	175	176	177
(2) Well number 2	178	179	180	181
(3) Well number 3	182	183	184	185
(4) Well number 4	186	187	188	189
(5) Well number 5	190	191	192	193
(6) Well number 6	194	195	196	197
(7) Well number 7	198	199	200	201
(8) Well number 8	202	203	204	205
(9) Well number 9	206	207	208	209
(10) All other wells	210	211	212	213
	Average	Average	Average	Average

Item 9 - SELECTED IRRIGATION FACILITIES ON THIS PLACE IN 1979 - Continued

c. Irrigation pumps (other than well pumps) used for -
(Report all pumps on this place whether they are in service or not.)

None

Number of pumps	Average discharge capacity GPM
216	217
218	219
220	

(1) Tailwater pits

☐

(2) Ponds, lakes, reservoirs, rivers, etc.

☐

(3) To relift or boost water within system

☐

d. Constructed reservoirs or ponds for storing irrigation water
on this place (Do not include tailwater pits.)

222

Number

(1) Area covered when filled to capacity

223

/10 Acres

Item 10 - EXPENDITURES IN 1979 FOR IRRIGATION WELLS, PUMPS, EQUIPMENT, AND OTHER IRRIGATION FACILITIES ON THIS PLACE

Report expenditures in 1979 for irrigation facilities on this place whether made by you or someone else. Include landlord's share - Give estimates if actual figures are unavailable.
(See page 4 for additional instructions.)

None

Total expenditures CENTS NOT REQUIRED	
Dollars	Cents
226	
227	
228	
229	

a. Purchase of irrigation equipment and machinery - Include sprinklers, pipes, siphons, nozzles, pumps, motors, and engines at net cost

☐

b. New well construction or deepening of existing wells - Include drilling costs, cost of casing, and any costs to prepare well for installation of pump. (Do not include cost of pumps and motors.)

☐

c. Construction or improvement of permanent storage and distribution systems (dams, ponds, reservoirs, permanent ditches, canals, flumes, etc.)

☐

d. Land clearing and leveling for irrigation purposes

☐**Item 11 - MAINTENANCE AND REPAIR COSTS FOR IRRIGATION EQUIPMENT AND FACILITIES ON THIS PLACE IN 1979**

(See page 4 for additional instructions.)

None

CENTS NOT REQUIRED	
Dollars	Cents
231	

a. Amount spent for maintenance and repairs of irrigation equipment and facilities in 1979 including maintenance of on-farm ditches. Include landlord's share - Give estimate if actual figures are unavailable.

☐**Item 12 - ENERGY USE ON THIS PLACE IN 1979 FOR PUMPING IRRIGATION WATER BY POWER SOURCE - Include fuel adjustment cost.**

(See page 4 for additional instructions.)

None	Number of wells or pumps powered by type of energy used	Total cost of fuel used CENTS NOT REQUIRED		Amount of energy used by type of fuel	Acres irrigated by type of energy used
		Dollars	Cents		
	234	235		236	237
a. Electricity		\$		Kilowatt-hours	
	238	239		240	241
b. Natural gas		\$		Thousand cubic feet	
	242	243		244	245
c. LP gas, propane, or butane		\$		Gallons	
	246	247		248	249
d. Diesel fuel		\$		Gallons	
	250	251		252	253
e. Gasoline		\$		Gallons	

Item 13 - WATER RECEIVED FROM OFF-FARM IRRIGATION WATER SUPPLIERS IN 1979

(U.S. Bureau of Reclamation; irrigation districts; mutual, private, cooperative or neighborhood ditches; commercial company, municipal, or community water system)

a. How much water was received? 256 Acre-feet

b. Total cost of water received - Include all assessments, fees, or charges paid to water suppliers 257 \$ Dollars only

c. Number of acres irrigated with water received 258 Acres

Item 14 - OTHER IRRIGATION USES ON THIS PLACE IN 1979

Was irrigation used for any of the following secondary purposes?

None

Acres on which applied
261
262
263
264
265
266
267

a. Application of commercial fertilizer materials

☐

b. Application of chemicals to control insects or nematodes

☐

c. Application of chemicals to control weeds, grasses, or brush

☐

d. Application of chemicals to control diseases in crops and orchards

☐

e. Prevent freeze damage

☐

f. Crop cooling to delay early budding or blooming

☐

g. Other - land disposal of liquid livestock waste, leaching, etc. - Specify

☐

Item 15 - Was any land irrigated on this place in 1978? Do not answer this item if you irrigated any land in 1979.

268

1 ☐ YES - Answer a and b below2 ☐ NO - Go to item 16

a. Reason for discontinuing irrigation in 1979 - Mark (X) any of the following that apply.

270

1 ☐ Sufficient soil moisture - no irrigation needed2 ☐ Shortage of surface water (water from reservoirs, lakes, streams, water supply organizations, etc.)3 ☐ Shortage of ground water (lowering water level of wells or depletion of ground water)4 ☐ Irrigation uneconomical due to high fuel and power costs and/or low commodity prices5 ☐ Irrigation equipment failure6 ☐ Loss of water rights7 ☐ Other - Specify _____

b. Do you consider your discontinuance of irrigation to be permanent?

271

1 ☐ YES2 ☐ NO

Item 16 - PERSON COMPLETING THIS FORM - Please print

Name	Date	Telephone	
		Area code	Number

ADDITIONAL INSTRUCTIONS

NOTE: In completing this form, if exact figures are not available, give your best estimate. An estimate is more useful than an omitted answer.

Item 3 - Land Use and Irrigated Land Uses in 1979

All acres "In This Place" must be distributed among the land use categories in item 3. Each acre "In This Place" should be reported only once, in the first category that applies.

Similarly, for each category of **Land Use**, report the acres irrigated in 1979, in the appropriate category.

Report all cropland, pastureland, and rangeland watered by artificial means at any time during 1979. In addition to fully irrigated land, report as irrigated any lands to which supplemental water was applied. This may be considered as partial, supplemental, or semi-irrigation. Also include any acreage which received only preplant irrigation (watered before planting). Haylands, pastureland, or rangeland should be reported as irrigated if spring flood water is spread by canals, ditches, spreader dikes, pipes, or other works.

Item 5 - Irrigated and Non-Irrigated Crop Yields

For each crop harvested, report separately the acres and average yield from irrigated land and non-irrigated land.

Report harvested crops as irrigated if any water was artificially applied either before planting or during the crop growing season in 1979. Report the crop as irrigated if water was applied to supplement rainfall even if the amount of water applied was not sufficient to obtain maximum yields.

Item 7 - Method of Water Distribution

This item refers to the method used to spread the water over the land. Report the acres of land irrigated by each type of field distribution system listed. Do not confuse the delivery system used to convey water from the source to the field with the field distribution system.

Item 8 - Quantity of Water Used

Three methods of reporting estimated quantity of water used have been provided on the report form. Use any one of the methods shown. Remember, if actual measurements are unavailable, give your best estimate.

Average acre-feet - This method is often used by operators who get water from irrigation districts or other irrigation organizations. The acre-feet used may be shown on the water bill.

Gallons pumped and duration - This method is often used by operators who pump their water from wells. By reporting the combined discharge capacity of all the well pumps and the duration of the pumping season we can compute the total quantities of water applied.

Total depth in inches - This method is often preferred by operators using sprinkler systems. Sum the inches applied in each irrigation to a total. If inches applied for each irrigation are unknown, use an average.

Item 10 - Irrigation Expenditures

Report expenditures made in 1979 for the construction of irrigation facilities and purchase of irrigation equipment and machinery on this place. Include estimates of expenditures made by or shared with others (landlords, government agencies, etc.). Report cost of maintenance and repairs in item 11.

Item 11 - Maintenance and Repair Cost

Report all expenses in 1979 for keeping irrigation equipment and facilities in working order. Include expenses for tune-ups, oil changes, and repairs to pumps, motors, pipe, canals, sprinkler systems, etc. Also include expenses for ditch and canal cleanout.

Item 12 - Energy Use for Irrigation Pumping

Report both the expenditure for fuel and power and the amount used in 1979 for irrigation pumping on this place. Include in the cost figures any additional charges by the power of fuel suppliers such as the "fuel adjustment charge" or any other type of additional charge which is based on the amount of power or fuel purchased. Again, give best estimates if actual figures are not available.

Remarks

79-A62-L1
(9-79)



UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Washington, D.C. 20233

OFFICE OF THE DIRECTOR

Reply to:

BUREAU OF THE CENSUS
1201 EAST TENTH STREET
JEFFERSONVILLE, INDIANA 47132

FROM THE DIRECTOR
BUREAU OF THE CENSUS

You and others receiving this form have been selected to participate in a nationwide farm and ranch irrigation survey that is a part of the 1978 Census of Agriculture. A statistical sample of farms is being used in order to save money and reduce the reporting burden on the farmer.

The information furnished will provide current data about irrigation not presently available from other sources. Special problems currently encountered in farm and ranch irrigation in the form of rising fuel and power expenses and, in some areas dwindling ground water reserves, will make the information obtained from this survey more important than ever before.

Some of the questions asked may not apply to you and can be skipped by following the instructions printed on the form. IF EXACT FIGURES ARE NOT AVAILABLE, PLEASE GIVE YOUR BEST ESTIMATES.

Your response to this inquiry is required by law (title 13, United States Code). By the same law, your report to the Bureau of the Census is confidential. It may be seen only by sworn Census employees and may be used only for statistical purposes.

It is necessary to receive a form from you. The sample has been drawn by statistical sampling procedures and substitution cannot be made. PLEASE COMPLETE AND RETURN YOUR REPORT WITHIN 20 DAYS in the enclosed preaddressed envelope. However, if compliance within the time period would cause an undue burden, a request for extension may be sent to the above address. Include the 11-digit Census File Number (CFN) as shown in your address label on all correspondence to us.

Sincerely,

VINCENT P. BARABBA

Enclosures

79-A62-L2A
(1-80)



UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Data Preparation Division
Jeffersonville, Indiana 47132

FROM THE ASSISTANT DIRECTOR FOR
ECONOMIC AND AGRICULTURE CENSUSES
BUREAU OF THE CENSUS

Many farmers and ranchers across the Nation have already completed and returned their reports for the 1979 Farm and Ranch Irrigation Survey. If you have already done so, we appreciate your promptness and thank you for it.

If you have not completed and returned your report, please do so within the next couple of days. Since the farms in this survey were drawn by lot in a selected cross-section sample of all irrigated farms, the lack of data for any selected farm will be harmful to the accuracy of the results. It is highly important that we receive a report from everyone in the sample.

If you did not conduct any agricultural operations or did not irrigate in 1979, it is equally important for us to hear from you. Please complete the appropriate items in the first and last sections of the report and return it to us immediately so that further followups can be eliminated. In case your report has been lost or mislaid, we are enclosing another copy for your use. A preaddressed envelope is also enclosed for your convenience.

If you have any questions about this report, please write to us at the above address. On all correspondence to us, please include the Census File Number (CFN) appearing in the upper left-hand corner of the address label on your report form.

Thank you for your cooperation.

Sincerely,

RICHARD B. QUANRUD

Enclosures

79-A62-L3A
(4-80)



UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Data Preparation Division
Jeffersonville, Indiana 47132

FROM THE ASSISTANT DIRECTOR FOR
ECONOMIC AND AGRICULTURE CENSUSES
BUREAU OF THE CENSUS

We have not received your completed report form for the 1979 Farm and Ranch Irrigation Survey. If you mailed your report within the last several days, it has probably crossed this letter in the mail. Please disregard this reminder and accept our thanks for your cooperation.

If you have not completed and returned your report, please do so immediately. We must have your report if the survey results for your State and the Nation are to be accurate and complete.

Your response is COMPLETELY CONFIDENTIAL by law (title 13, United States Code).

If you have any questions on how to fill out the report form, please write to us at the above address using the reverse side of this letter.

Sincerely,

RICHARD B. QUANRUD

NOTICE — In compliance with the Privacy Act (P.L. 93579) of 1974, we are required to inform you that response to this inquiry is required by law (title 13, United States Code). By the same law YOUR REPORT TO THE CENSUS BUREAU IS CONFIDENTIAL. It may be seen only by sworn Census employees and may be used only for statistical purposes. Your report CANNOT be used for purposes of taxation, investigation, or regulation. The law also provides that copies retained in your files are immune from legal process.

79-A62-L4A
(4-80)



UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Data Preparation Division
Jeffersonville, Indiana 47132

FROM THE ASSISTANT DIRECTOR FOR
ECONOMIC AND AGRICULTURE CENSUSES
BUREAU OF THE CENSUS

Your completed report for the 1979 Farm and Ranch Irrigation Survey still has not been received. We are under a very tight schedule and need your report right away. If you have not returned your completed report, please complete and return it to us immediately in the preaddressed envelope provided. In case you mislaid the previous report form, we have enclosed another copy for your use.

Response to this inquiry is required by law (title 13, United States Code). Let me assure you once more that your individual response is COMPLETELY CONFIDENTIAL by law. Your answers will be combined with those of other respondents to produce State and national totals.

Each address in our mailing list has a different Census File Number (CFN) and each has to be accounted for. If you received several forms with different CFN numbers for the same farming operation, mark the extra forms "Duplicate" and return them with your completed report, or separately if your completed report has crossed with this request in the mail.

If you did not conduct any agricultural operations in 1979, it is equally important to hear from you. Please complete the first and last sections of the report form and return it to us immediately so that further followups will not be necessary.

Sincerely,

RICHARD B. QUANRUD

Enclosures

IMPORTANT — In all correspondence, please include the 11-digit Census File Number (CFN) shown in the address label of your report form.

79-A62-L5
(3-80)



UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Data Preparation Division
Jeffersonville, Indiana 47132

FROM THE ASSISTANT DIRECTOR FOR
ECONOMIC AND AGRICULTURE CENSUSES
BUREAU OF THE CENSUS

Many farmers and ranchers have already completed and returned their report form for the 1979 Farm and Ranch Irrigation Survey. If you have done so, please accept our thanks for your prompt cooperation.

If you have not completed your report form, please note that it is due 20 days from receipt. Your cooperation will help ensure that the urgently needed results from this survey will be available at the earliest possible date.

Sincerely,

RICHARD B. QUANRUD

79-A62-L6A
(7-80)



UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Data Preparation Division
Jeffersonville, Indiana 47132

FROM THE AGRICULTURE DIVISION
BUREAU OF THE CENSUS

At this time our records still indicate we have not received your completed report for the 1979 Farm and Ranch Irrigation Survey. We realize that this is an extremely busy time of year for you, but the importance of the information being collected and the need for early publication make it imperative that an immediate reply be received.

This survey is being conducted in order that farmer organizations, State and Federal agencies, and others will have more recent and comprehensive data for making decisions that will affect you and other farm operators. Without your report the results of this survey will not be as reliable as intended. It is to everyone's interest that decisions made in regard to land and water resources be based on the most reliable data available.

If you have not already done so, please take a few minutes and complete the report form you received several weeks ago, and mail it to us immediately. This will help assure reliable results from this survey and reduce the cost of further followups. To help save time, or if your records are not easily accessible, you may use estimates in completing this report. If you do not think the report form pertains to your operation, please complete as much of the report as possible and return it along with an explanation so that we will be able to process your return.

If you have questions on how to complete the report, please write to us at the above address using the reverse side of this letter.

Thank you for your cooperation.

Sincerely,

ARNOLD L. BOLLENBACHER
Chief, Agriculture Division

DUE DATE: 20 DAYS AFTER RECEIPT OF FORM

NOTICE - Response to this inquiry is required by law (title 13, U.S. Code). By the same law YOUR REPORT TO THE CENSUS BUREAU IS CONFIDENTIAL. It may be seen only by sworn Census employees and may be used only for statistical purposes. Your report CANNOT be used for purposes of taxation, investigation, or regulation. The law also provides that copies retained in your files are immune from legal process.

In correspondence pertaining to this report, please refer to the 11-digit Census File Number (CFN) in label below.

Form 79-A35
(12-7-79)U.S. DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS**1979 FARM ENERGY SURVEY**

COMPLETE AND RETURN TO

Bureau of the Census
1201 East Tenth Street
Jeffersonville, Indiana 47132**Note** Please read the instruction sheet before completing the form.

A RESPONSE IS NEEDED FROM YOU regardless of how small your farm or how little fuel was used. This survey will provide estimates of on-farm energy usage for the Department of Agriculture, the Department of Energy, other State and Federal agencies and farmer organizations. Only a small number of farms are included in the survey to represent gasoline, diesel fuel, electricity, and other energy consumption for all farmers in the United States. This information will help to ensure that more accurate, timely allocations of fuel are made available. If you no longer operate a farm, please complete section 1 and explain in REMARKS section, page 4, what has happened to the place you operated in 1978, and give the new operator's name, address, and telephone number.

CENSUS USE 035 036 037 038

(Please correct errors in name, address, and ZIP code.)

SECTION 1 ACREAGE IN 1979

If the acres you operated in 1979 changed during the year, refer to the INSTRUCTION SHEET, section 1.

Report land owned, rented, or used by you, your spouse, or by the partnership, corporation, or organization for which you are reporting. Include ALL LAND, REGARDLESS OF LOCATION OR USE - cropland, pastureland, rangeland, woodland, idle land, house lots, etc.

- None Number of acres
1. All land owned ☐ 043
2. All land rented or leased FROM OTHERS, including land worked by you on shares, used rent free, in exchange for services, payment of taxes, etc. Include leased Federal, State, and railroad land. (DO NOT include land used on a per-head basis under a grazing permit.) ☐ 044
3. All land rented or leased TO OTHERS, including land worked on shares by others and land subleased ☐ 045
4. ACRES IN THIS PLACE - ADD acres owned (item 1) and acres rented (item 2), then SUBTRACT acres rented TO OTHERS (item 3), and enter the result in this space. ☐ 046

For this census report these are the "ACRES IN THIS PLACE."

If the entry is zero, please refer to the INSTRUCTION SHEET, section 1.

SECTION 2

SINCE 1974, HAVE YOU STARTED USING ANY OF THE FOLLOWING PRACTICES IN ORDER TO CONSERVE ENERGY?

1. Reduced tillage practices
2. Reduced fertilizer use
3. Reduced irrigation
4. Reduced hot water temperature
5. Increased vehicle maintenance
6. Converted from gas to diesel tractor
7. Installed additional building insulation
8. Reduced cooling and heating in farm buildings
9. Installed solar energy equipment
10. Other practices - Specify

	YES	NO	DOES NOT APPLY
050	☐	☐	☐
051	☐	☐	☐
052	☐	☐	☐
053	☐	☐	☐
054	☐	☐	☐
055	☐	☐	☐
056	☐	☐	☐
057	☐	☐	☐
058	☐	☐	☐
059	☐	☐	☐

SECTION 3 ENERGY EXPENDITURES AND USAGE DURING 1979

Please enter total expenditures whether for farm business, household or personal use, or for work done for other farms.

	Expenditures during 1979		Amount purchased during 1979	Estimated percent of purchases for -			Estimated amount purchased in 1979 -			
	Dollars	Cents		Household and personal use	Work on this place	Work done on other farms	From January 1 to March 31	From April 1 to June 30	From July 1 to September 30	From October 1 to December 31
None										
1. Gasoline	060	061	Gal.	062	063	064	065	066	067	068
2. Gasohol	070	071	Gal.	072	073	074	075	076	077	078
3. Diesel	080	081	Gal.	082	083	084	085	086	087	088
4. L.P. gas, butane, and propane (LPG) (4.5 lbs. = 1 gallon)	090	091	Gal.	092	093	094	095	096	097	098
5. Fuel oil	100	101	Gal.	102	103	104	105	106	107	108
6. Natural gas	110	111	Thou. cu. ft.	112	113		115	116	117	118
7. Coal	120	121	Tons	122	123		125	126	127	128
8. Electricity	130	131	kWh	132	133					
9. Kerosene	140									
10. Motor oil and grease	150									
11. Other - wood, coke, etc.	160									

SECTION 4 CAPACITY OF FUEL STORAGE FACILITIES AND FUEL INVENTORIES ON THIS PLACE AS OF DECEMBER 31, 1979

Include above- and below-ground storage and portable tanks.

	Maximum storage capacity on this place on December 31, 1979		How full were these tanks on December 31, 1979?				
	None	Gallons	Less than 20%	20-39%	40-59%	60-79%	80-100%
1. Gasoline	165	166	167	168	169	170	171
2. Gasohol	170	171	172	173	174	175	176
3. Diesel fuel	175	176	177	178	179	180	181
4. LPG	180	181	182	183	184	185	186
5. Fuel oil	185	186	187	188	189	190	191

SECTION 5 SOURCE OF FUELS USED DURING 1979

Answer both questions for each of the following fuels

	During 1979 was your principal source of supply a farm Co-op?		During 1979 did you have fuel delivered to this place?	
	Yes	No	Yes	No
1. Gasoline	190	191	192	193
2. Gasohol	194	195	196	197
3. Diesel fuel	198	199	200	201
4. LPG	202	203	204	205
5. Fuel oil	206	207	208	209

SECTION 6 During 1979 was any CUSTOMWORK DONE BY OTHERS on the acres in this place for a fee or in exchange for other work? Customwork is a service such as plowing, planting, or harvesting for which both operator and machinery are provided. 006 1 ☐ YES - Complete this section 2 ☐ NO - Go to section 7 Enter the acres in this place on which the following services were performed by others during 1979 for a fee or in exchange for other work. <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <tr> <th colspan="2">Total acres for which -</th> </tr> <tr> <th>You provided fuel</th> <th>You did not provide fuel</th> </tr> <tr><td>200</td><td>201</td></tr> <tr><td>202</td><td>203</td></tr> <tr><td>204</td><td>205</td></tr> <tr><td>206</td><td>207</td></tr> <tr><td>208</td><td>209</td></tr> </table> 1. Soil preparation - plowing, disking, etc. 2. Planting 3. Cultivating, including summer fallow. 4. Pesticide, herbicide, and/or fertilizer application ... 5. Harvesting - Exclude silo filling	Total acres for which -		You provided fuel	You did not provide fuel	200	201	202	203	204	205	206	207	208	209	SECTION 7 During 1979 did you perform any CUSTOMWORK FOR OTHERS for a fee or in exchange for other work? Customwork is a service such as plowing, planting, or harvesting for which both operator and machinery are provided. 007 1 ☐ YES - Complete this section 2 ☐ NO - Go to section 8 Enter the acres for which you performed the following services for others during 1979 for a fee or in exchange for other work. <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <tr> <th colspan="2">Total acres for which -</th> </tr> <tr> <th>You provided fuel</th> <th>You did not provide fuel</th> </tr> <tr><td>210</td><td>211</td></tr> <tr><td>212</td><td>213</td></tr> <tr><td>214</td><td>215</td></tr> <tr><td>216</td><td>217</td></tr> <tr><td>218</td><td>219</td></tr> </table> 1. Soil preparation - plowing, disking, etc. 2. Planting 3. Cultivating, including summer fallow. 4. Pesticide, herbicide, and/or fertilizer application ... 5. Harvesting - Exclude silo filling	Total acres for which -		You provided fuel	You did not provide fuel	210	211	212	213	214	215	216	217	218	219
Total acres for which -																													
You provided fuel	You did not provide fuel																												
200	201																												
202	203																												
204	205																												
206	207																												
208	209																												
Total acres for which -																													
You provided fuel	You did not provide fuel																												
210	211																												
212	213																												
214	215																												
216	217																												
218	219																												

SECTION 8 Were any WHEEL TRACTORS used on this place during 1979? INCLUDE: Tractors which you owned, rented, leased, owned in partnership, or were provided by your landlord. EXCLUDE: Any tractors which were provided by a custom operator for activities covered in section 6 and all tractors not used during 1979, even though they were on this place. 008 1 ☐ YES - Complete this section 2 ☐ NO - Go to section 9 Enter the number of tractors used during 1979. 220 _____ Number Complete one line for each tractor. If you have more than 10, please use the REMARKS section, page 4. <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <tr> <th rowspan="2">Year of manufacture</th> <th colspan="3">Principal type of fuel used Mark (X) one</th> <th colspan="10">PTO horsepower range Mark (X) one</th> <th colspan="2">Estimated hours used during 1979</th> </tr> <tr> <th>Gasoline or gasohol</th> <th>Diesel</th> <th>LPG</th> <th>Less than 40</th> <th>40-59</th> <th>60-79</th> <th>80-99</th> <th>100-119</th> <th>120-159</th> <th>160-199</th> <th>200 and over</th> <th>On this place</th> <th>On other farms</th> </tr> <tr><td>225</td><td>226</td><td>1 ☐</td><td>2 ☐</td><td>3 ☐</td><td>227</td><td>1 ☐</td><td>2 ☐</td><td>3 ☐</td><td>4 ☐</td><td>5 ☐</td><td>6 ☐</td><td>7 ☐</td><td>8 ☐</td><td>228</td><td>229</td></tr> <tr><td>230</td><td>231</td><td>1 ☐</td><td>2 ☐</td><td>3 ☐</td><td>232</td><td>1 ☐</td><td>2 ☐</td><td>3 ☐</td><td>4 ☐</td><td>5 ☐</td><td>6 ☐</td><td>7 ☐</td><td>8 ☐</td><td>233</td><td>234</td></tr> <tr><td>235</td><td>236</td><td>1 ☐</td><td>2 ☐</td><td>3 ☐</td><td>237</td><td>1 ☐</td><td>2 ☐</td><td>3 ☐</td><td>4 ☐</td><td>5 ☐</td><td>6 ☐</td><td>7 ☐</td><td>8 ☐</td><td>238</td><td>239</td></tr> <tr><td>240</td><td>241</td><td>1 ☐</td><td>2 ☐</td><td>3 ☐</td><td>242</td><td>1 ☐</td><td>2 ☐</td><td>3 ☐</td><td>4 ☐</td><td>5 ☐</td><td>6 ☐</td><td>7 ☐</td><td>8 ☐</td><td>243</td><td>244</td></tr> <tr><td>245</td><td>246</td><td>1 ☐</td><td>2 ☐</td><td>3 ☐</td><td>247</td><td>1 ☐</td><td>2 ☐</td><td>3 ☐</td><td>4 ☐</td><td>5 ☐</td><td>6 ☐</td><td>7 ☐</td><td>8 ☐</td><td>248</td><td>249</td></tr> <tr><td>250</td><td>251</td><td>1 ☐</td><td>2 ☐</td><td>3 ☐</td><td>252</td><td>1 ☐</td><td>2 ☐</td><td>3 ☐</td><td>4 ☐</td><td>5 ☐</td><td>6 ☐</td><td>7 ☐</td><td>8 ☐</td><td>253</td><td>254</td></tr> <tr><td>255</td><td>256</td><td>1 ☐</td><td>2 ☐</td><td>3 ☐</td><td>257</td><td>1 ☐</td><td>2 ☐</td><td>3 ☐</td><td>4 ☐</td><td>5 ☐</td><td>6 ☐</td><td>7 ☐</td><td>8 ☐</td><td>258</td><td>259</td></tr> <tr><td>260</td><td>261</td><td>1 ☐</td><td>2 ☐</td><td>3 ☐</td><td>262</td><td>1 ☐</td><td>2 ☐</td><td>3 ☐</td><td>4 ☐</td><td>5 ☐</td><td>6 ☐</td><td>7 ☐</td><td>8 ☐</td><td>263</td><td>264</td></tr> <tr><td>265</td><td>266</td><td>1 ☐</td><td>2 ☐</td><td>3 ☐</td><td>267</td><td>1 ☐</td><td>2 ☐</td><td>3 ☐</td><td>4 ☐</td><td>5 ☐</td><td>6 ☐</td><td>7 ☐</td><td>8 ☐</td><td>268</td><td>269</td></tr> <tr><td>270</td><td>271</td><td>1 ☐</td><td>2 ☐</td><td>3 ☐</td><td>272</td><td>1 ☐</td><td>2 ☐</td><td>3 ☐</td><td>4 ☐</td><td>5 ☐</td><td>6 ☐</td><td>7 ☐</td><td>8 ☐</td><td>273</td><td>274</td></tr> </table>	Year of manufacture	Principal type of fuel used Mark (X) one			PTO horsepower range Mark (X) one										Estimated hours used during 1979		Gasoline or gasohol	Diesel	LPG	Less than 40	40-59	60-79	80-99	100-119	120-159	160-199	200 and over	On this place	On other farms	225	226	1 ☐	2 ☐	3 ☐	227	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐	8 ☐	228	229	230	231	1 ☐	2 ☐	3 ☐	232	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐	8 ☐	233	234	235	236	1 ☐	2 ☐	3 ☐	237	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐	8 ☐	238	239	240	241	1 ☐	2 ☐	3 ☐	242	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐	8 ☐	243	244	245	246	1 ☐	2 ☐	3 ☐	247	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐	8 ☐	248	249	250	251	1 ☐	2 ☐	3 ☐	252	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐	8 ☐	253	254	255	256	1 ☐	2 ☐	3 ☐	257	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐	8 ☐	258	259	260	261	1 ☐	2 ☐	3 ☐	262	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐	8 ☐	263	264	265	266	1 ☐	2 ☐	3 ☐	267	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐	8 ☐	268	269	270	271	1 ☐	2 ☐	3 ☐	272	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐	8 ☐	273	274	SECTION 9 Were any MOTOR TRUCKS, INCLUDING PICKUPS used on this place during 1979 for the farm business? INCLUDE: Trucks which you owned, rented, leased, owned in partnership, or were provided by your landlord. EXCLUDE: Any trucks which were provided by a custom operator for work covered in section 6. 009 1 ☐ YES - Complete this section 2 ☐ NO - Go to section 10 Enter the number of trucks used during 1979. 300 _____ Number Complete one line for each truck. 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Year of manufacture		Principal type of fuel used Mark (X) one			PTO horsepower range Mark (X) one										Estimated hours used during 1979																																																																																																																																																																																																																																																																																																																										
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SECTION 10 Were any SELF-PROPELLED GRAIN OR BEAN COMBINES used on this place during 1979? <i>INCLUDE: Self-propelled combines which you owned, rented, leased, owned in partnership, or were provided by your landlord.</i> <i>EXCLUDE: Any self-propelled combines provided by a custom operator for work covered in section 6.</i> 010 ☐ YES - Complete this section ☐ NO - Go to section 11 Enter the number of combines used 390 _____ Number Complete one line for each combine. If you have more than five, please use the REMARKS section, page 4. <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th rowspan="2">Year of manufacture</th> <th colspan="3">Type of fuel used Mark (X) one</th> <th colspan="3">Size</th> <th colspan="2">Estimated acres combined during 1979</th> </tr> <tr> <th>Gasoline or gasohol</th> <th>Diesel</th> <th>LPG</th> <th>Number of rows</th> <th>Or width of head (feet)</th> <th>On this place</th> <th>On other farms</th> </tr> </thead> <tbody> <tr><td>390</td><td>391</td><td>1 ☐ 2 ☐ 3 ☐</td><td>392</td><td>393</td><td>394</td><td>395</td></tr> <tr><td>400</td><td>401</td><td>1 ☐ 2 ☐ 3 ☐</td><td>402</td><td>403</td><td>404</td><td>405</td></tr> <tr><td>410</td><td>411</td><td>1 ☐ 2 ☐ 3 ☐</td><td>412</td><td>413</td><td>414</td><td>415</td></tr> <tr><td>420</td><td>421</td><td>1 ☐ 2 ☐ 3 ☐</td><td>422</td><td>423</td><td>424</td><td>425</td></tr> <tr><td>430</td><td>431</td><td>1 ☐ 2 ☐ 3 ☐</td><td>432</td><td>433</td><td>434</td><td>435</td></tr> </tbody> </table>	Year of manufacture	Type of fuel used Mark (X) one			Size			Estimated acres combined during 1979		Gasoline or gasohol	Diesel	LPG	Number of rows	Or width of head (feet)	On this place	On other farms	390	391	1 ☐ 2 ☐ 3 ☐	392	393	394	395	400	401	1 ☐ 2 ☐ 3 ☐	402	403	404	405	410	411	1 ☐ 2 ☐ 3 ☐	412	413	414	415	420	421	1 ☐ 2 ☐ 3 ☐	422	423	424	425	430	431	1 ☐ 2 ☐ 3 ☐	432	433	434	435	SECTION 13 Was any OTHER SELF-PROPELLED EQUIPMENT used on this place during 1979? <i>INCLUDE: Any self-propelled equipment which you owned, rented, leased, owned in partnership, or was provided by your landlord.</i> <i>EXCLUDE: Any self-propelled equipment which was provided by a custom operator and covered in section 6.</i> 013 ☐ YES - Complete this section ☐ NO - Go to section 14 Enter the number of other self-propelled machines used 510 _____ Number From the list below enter the type of self-propelled equipment, corresponding code, type of fuel used, model year, and acres covered. If you have more than 10, please use the REMARKS section, page 4. <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th rowspan="2">Type of machinery</th> <th rowspan="2">Code</th> <th colspan="3">Type of fuel used Mark (X) one</th> <th rowspan="2">Year of manufacture</th> <th colspan="2">Estimated acres on which used during 1979 if applicable</th> </tr> <tr> <th>Gasoline or gasohol</th> <th>Diesel</th> <th>LPG</th> <th>On this place</th> <th>On other farms</th> </tr> </thead> <tbody> <tr><td>515</td><td>516</td><td>1 ☐ 2 ☐ 3 ☐</td><td>517</td><td>518</td><td>519</td></tr> <tr><td>520</td><td>521</td><td>1 ☐ 2 ☐ 3 ☐</td><td>522</td><td>523</td><td>524</td></tr> <tr><td>525</td><td>526</td><td>1 ☐ 2 ☐ 3 ☐</td><td>527</td><td>528</td><td>529</td></tr> <tr><td>530</td><td>531</td><td>1 ☐ 2 ☐ 3 ☐</td><td>532</td><td>533</td><td>534</td></tr> <tr><td>535</td><td>536</td><td>1 ☐ 2 ☐ 3 ☐</td><td>537</td><td>538</td><td>539</td></tr> <tr><td>540</td><td>541</td><td>1 ☐ 2 ☐ 3 ☐</td><td>542</td><td>543</td><td>544</td></tr> <tr><td>545</td><td>546</td><td>1 ☐ 2 ☐ 3 ☐</td><td>547</td><td>548</td><td>549</td></tr> <tr><td>550</td><td>551</td><td>1 ☐ 2 ☐ 3 ☐</td><td>552</td><td>553</td><td>554</td></tr> <tr><td>555</td><td>556</td><td>1 ☐ 2 ☐ 3 ☐</td><td>557</td><td>558</td><td>559</td></tr> <tr><td>560</td><td>561</td><td>1 ☐ 2 ☐ 3 ☐</td><td>562</td><td>563</td><td>564</td></tr> </tbody> </table> <table style="width: 100%;"> <tr> <td style="width: 50%;"> Type of machinery Code Forage harvester 901 Windrower 902 Front end loader (excluding tractor attachments) 903 Cotton picker 904 </td> <td style="width: 50%;"> Type of machinery Code Cotton stripper 905 Self-propelled sprayer 906 Crawler tractor (including bulldozers) 907 Other - Specify above 908 </td> </tr> </table>	Type of machinery	Code	Type of fuel used Mark (X) one			Year of manufacture	Estimated acres on which used during 1979 if applicable		Gasoline or gasohol	Diesel	LPG	On this place	On other farms	515	516	1 ☐ 2 ☐ 3 ☐	517	518	519	520	521	1 ☐ 2 ☐ 3 ☐	522	523	524	525	526	1 ☐ 2 ☐ 3 ☐	527	528	529	530	531	1 ☐ 2 ☐ 3 ☐	532	533	534	535	536	1 ☐ 2 ☐ 3 ☐	537	538	539	540	541	1 ☐ 2 ☐ 3 ☐	542	543	544	545	546	1 ☐ 2 ☐ 3 ☐	547	548	549	550	551	1 ☐ 2 ☐ 3 ☐	552	553	554	555	556	1 ☐ 2 ☐ 3 ☐	557	558	559	560	561	1 ☐ 2 ☐ 3 ☐	562	563	564	Type of machinery Code Forage harvester 901 Windrower 902 Front end loader (excluding tractor attachments) 903 Cotton picker 904	Type of machinery Code Cotton stripper 905 Self-propelled sprayer 906 Crawler tractor (including bulldozers) 907 Other - Specify above 908
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SECTION 11 Were any AUTOMOBILES used in connection with the farm business during 1979? <i>INCLUDE: Any automobiles which you owned, rented, leased, owned in partnership, or were provided by your landlord.</i> 011 ☐ YES - Complete this section ☐ NO - Go to section 12 Enter the number of automobiles used 449 _____ Number Complete one line for each automobile. If you have more than five, please use the REMARKS section, page 4. <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th rowspan="2">Year of manufacture</th> <th colspan="2">Estimated mileage during 1979 for -</th> </tr> <tr> <th>The farm business</th> <th>Personal use</th> </tr> </thead> <tbody> <tr><td>450</td><td>451</td><td>452</td></tr> <tr><td>455</td><td>456</td><td>457</td></tr> <tr><td>460</td><td>461</td><td>462</td></tr> <tr><td>465</td><td>466</td><td>467</td></tr> <tr><td>470</td><td>471</td><td>472</td></tr> </tbody> </table>	Year of manufacture	Estimated mileage during 1979 for -		The farm business	Personal use	450	451	452	455	456	457	460	461	462	465	466	467	470	471	472	SECTION 14 Were any ELECTRIC MOTORS OVER ONE HORSEPOWER (EXCLUDING IRRIGATION PUMPS) used on this place during 1979? <i>INCLUDE: Motors used for ventilation fans, compressors, refrigeration, etc.</i> 014 ☐ YES - Complete this section ☐ NO - Go to section 15 Enter the total number of motors over 1 horsepower used on this place in 1979 590 _____ Number Of the motors used, how many were over 5 horsepower? ☐ 591 _____ Number																																																																																																										
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SECTION 12 Were any IRRIGATION PUMPS (INCLUDE WELL AND SURFACE PUMPS) used on this place during 1979? 012 ☐ YES - Complete this section ☐ NO - Go to section 13 How many irrigation pumps were used on this place that were operated by - <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th></th> <th>Number of well and surface pumps</th> <th>Acres irrigated</th> </tr> </thead> <tbody> <tr><td>1. Electricity</td><td>500</td><td>501</td></tr> <tr><td>2. Natural gas</td><td>502</td><td>503</td></tr> <tr><td>3. LPG</td><td>504</td><td>505</td></tr> <tr><td>4. Diesel</td><td>506</td><td>507</td></tr> <tr><td>5. Gasoline or gasohol</td><td>508</td><td>509</td></tr> </tbody> </table>		Number of well and surface pumps	Acres irrigated	1. Electricity	500	501	2. Natural gas	502	503	3. LPG	504	505	4. Diesel	506	507	5. Gasoline or gasohol	508	509	SECTION 15 Were any CROP DRYING OR TOBACCO CURING FACILITIES used on this place during 1979? <i>EXCLUDE: Air dried tobacco, crib dried corn, and other crops which were dried using no energy for heat or air circulation.</i> 015 ☐ YES - Complete this section ☐ NO - Go to section 16 1. For each type of crop dried, enter amount dried, and average points of moisture removed. <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th>Crops</th> <th>Amount dried</th> <th>Points of moisture removed</th> </tr> </thead> <tbody> <tr><td>Corn</td><td>592 Bu.</td><td>593 %</td></tr> <tr><td>Soybeans</td><td>594 Bu.</td><td>595 %</td></tr> <tr><td>Tobacco</td><td>596 Lb.</td><td>597 %</td></tr> <tr><td>Other - Specify</td><td></td><td>001 %</td></tr> <tr><td></td><td>Bu.</td><td>001 %</td></tr> <tr><td></td><td>Bu.</td><td>001 %</td></tr> <tr><td></td><td>Bu.</td><td>001 %</td></tr> </tbody> </table> 2. From the list below enter the type of system used, corresponding code, type of crop dried, and energy used as heat source. <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th rowspan="2">Type of system</th> <th rowspan="2">Code</th> <th colspan="4">Crop dried Mark (X) as many as apply</th> <th colspan="4">Type of energy used as heat source Mark (X) one</th> <th rowspan="2">Mark (X) if forced air only</th> </tr> <tr> <th>Corn</th> <th>Soybeans</th> <th>Tobacco</th> <th>Other Specify</th> <th>Fuel oil</th> <th>LPG</th> <th>Natural gas</th> <th>Solar heat</th> </tr> </thead> <tbody> <tr><td>615</td><td>616</td><td>1 ☐ 2 ☐ 3 ☐</td><td>617</td><td>618</td><td>619</td><td>620</td></tr> <tr><td>620</td><td>621</td><td>1 ☐ 2 ☐ 3 ☐</td><td>622</td><td>623</td><td>624</td><td>625</td></tr> <tr><td>625</td><td>626</td><td>1 ☐ 2 ☐ 3 ☐</td><td>627</td><td>628</td><td>629</td><td>630</td></tr> <tr><td>630</td><td>631</td><td>1 ☐ 2 ☐ 3 ☐</td><td>632</td><td>633</td><td>634</td><td>635</td></tr> </tbody> </table>	Crops	Amount dried	Points of moisture removed	Corn	592 Bu.	593 %	Soybeans	594 Bu.	595 %	Tobacco	596 Lb.	597 %	Other - Specify		001 %		Bu.	001 %		Bu.	001 %		Bu.	001 %	Type of system	Code	Crop dried Mark (X) as many as apply				Type of energy used as heat source Mark (X) one				Mark (X) if forced air only	Corn	Soybeans	Tobacco	Other Specify	Fuel oil	LPG	Natural gas	Solar heat	615	616	1 ☐ 2 ☐ 3 ☐	617	618	619	620	620	621	1 ☐ 2 ☐ 3 ☐	622	623	624	625	625	626	1 ☐ 2 ☐ 3 ☐	627	628	629	630	630	631	1 ☐ 2 ☐ 3 ☐	632	633	634	635																																					
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SECTION 16 Were any NON-RESIDENTIAL FARM BUILDINGS HEATED OR AIR CONDITIONED during 1979?
EXCLUDE: Buildings which were ventilated only.

016
1 ☐ YES - Complete this section
2 ☐ NO - Go to section 17

1. Enter type of building and code from list below, whether heated or air conditioned, and energy source for heating or air conditioning.

Type of building	Code	Was this building -		If "Yes," mark (X) principal energy source							
		Yes	No	LPG	Natural gas	Electricity	Fuel oil	Coal	Solar	Other	
635		Heated?	636 ☐	2 ☐	637 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
Beef cattle	915	Air conditioned?	638 ☐	2 ☐	639 ☐	2 ☐	3 ☐				
Dairy	916										
Swine	917	Heated?	641 ☐	2 ☐	642 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
Poultry	918	Air conditioned?	643 ☐	2 ☐	644 ☐	2 ☐	3 ☐				
Workshop	919										
Greenhouse	920	Heated?	646 ☐	2 ☐	647 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
Other—Specify at right	921	Air conditioned?	648 ☐	2 ☐	649 ☐	2 ☐	3 ☐				

SECTION 17 Were any HOT WATER FACILITIES USED in any farm buildings on this place during 1979 to provide water for sanitation (equipment sterilization, cleaning, etc.)?

017
1 ☐ YES - Mark (X) energy source 650 1 ☐ LPG 2 ☐ Natural gas 3 ☐ Electricity 4 ☐ Fuel oil 5 ☐ Coal 6 ☐ Solar 7 ☐ Other
2 ☐ NO - Go to section 18

SECTION 18 CROPS GROWN ON THIS PLACE DURING 1979
Refer to the INSTRUCTION SHEET, section 18.

Enter the number of acres planted, harvested, and irrigated, and indicate the estimated gross value of sales for each of the following crops.

	Number of acres planted in 1979	Number of acres harvested in 1979	Number of acres irrigated in 1979	Estimated gross value of sales during 1979 - Mark (X) one								
				Less than \$1,000	\$1,000-\$2,499	\$2,500-\$4,999	\$5,000-\$9,999	\$10,000-\$39,999	\$40,000-\$99,999	\$100,000-\$499,999	\$500,000 and over	
1. GRAINS - Include corn for grain, grain sorghums, rice, wheat and other small grains, soybeans, dry beans, dry peas and cowpeas, flaxseed, sunflower seed, popcorn, and safflower.	655	656	657	658	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐	8 ☐
2. COTTON	660	661	662	663	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐	8 ☐
3. TOBACCO	665	666	667	668	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐	8 ☐
4. FIELD SEEDS, GRASS SEEDS, HAY, FORAGE AND SILAGE	670	671	672	673	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐	8 ☐
5. VEGETABLES, SWEET CORN, AND MELONS FOR SALE. Do not include Irish potatoes, or sweet potatoes. Include them in item 7 below.	675	676	677	678	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐	8 ☐
6. FRUITS, NUTS, BERRIES - Apples, peaches, grapes, citrus, pecans, strawberries, etc.	681	682	683	684	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐	8 ☐
7. OTHER CROPS - Peanuts, Irish potatoes, sweet potatoes, sugarcane, sugar beets, mint for oil, hops, etc.	685	686	687	688	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐	8 ☐
8. NURSERY AND GREENHOUSE PRODUCTS { a. Acres in open b. Square feet under protection	691 696	692 697	693 698	694 699	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐	8 ☐

SECTION 19 LIVESTOCK, POULTRY, AND THEIR PRODUCTS SOLD DURING 1979
Refer to the INSTRUCTION SHEET, section 19.

Indicate estimated gross value of sales.

	Estimated gross value of sales during 1979 - Mark (X) one							
	Less than \$1,000	\$1,000-\$2,499	\$2,500-\$4,999	\$5,000-\$9,999	\$10,000-\$39,999	\$40,000-\$99,999	\$100,000-\$499,999	\$500,000 and over
1. Cattle and calves	700	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
2. Hogs and pigs	701	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
3. Dairy products	702	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
4. Poultry and poultry products	703	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
5. Other livestock and livestock products - Sheep, horses, bees, honey, fish in captivity, etc.	704	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐

SECTION 20 PERSON COMPLETING THIS REPORT

PLEASE PRINT	Name	705 Date	Telephone	
			706 Area code	Number

Remarks

79-A35-L1A
(12-79)



UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Washington, D.C. 20233

OFFICE OF THE DIRECTOR

Reply to:
BUREAU OF THE CENSUS
1201 EAST TENTH STREET
JEFFERSONVILLE, INDIANA 47132

FROM THE DIRECTOR
BUREAU OF THE CENSUS

As a result of the current concern about the supply of energy needs for the farming sector, the Bureau of the Census is conducting a farm energy survey covering the year 1979.

The information has been requested by the Departments of Agriculture and Energy, as well as many farm organizations. The data are needed to help assess the energy requirements by type of fuel and geographic area that are necessary to support our Nation's agricultural needs. While exact figures are most desirable, carefully prepared estimates are acceptable.

Response to this inquiry is required by law (title 13, United States Code). Under this legislation, your report is confidential and can be seen only by sworn Census employees. It cannot be used for investigation, regulation, or taxation. Only totals that do not reveal information about an individual respondent will be published or otherwise released by the Bureau of the Census.

We earnestly request your cooperation and urge you to return the completed report within 20 days in the enclosed preaddressed envelope. If filing within the requested time period causes an undue burden, a request for a filing extension may be sent to the above address. Please include the Census File Number (CFN) appearing in the upper left-hand corner of the address label on your correspondence.

Your cooperation will be greatly appreciated.

Sincerely,

VINCENT P. BARABBA

Enclosure

79-A35-L2A
(1-80)



UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Data Preparation Division
Jeffersonville, Indiana 47132

FROM THE ASSISTANT DIRECTOR FOR
ECONOMIC AND AGRICULTURE CENSUSES
BUREAU OF THE CENSUS

Many farmers and ranchers across the Nation have already completed and returned their reports for the 1979 Farm Energy Survey. If you have already done so, we appreciate your promptness and thank you for it.

If you have not completed and returned your report, please do so within the next couple of days. Since the farms in this survey were drawn by lot in a selected cross-section sample of all agricultural operations, the lack of data for any selected farm will be harmful to the accuracy of the results. Regardless of how large or small your operation, we need your completed report. Without your cooperation, the estimates of farm energy requirements which will be produced from this survey may be grossly in error for your State.

If you did not conduct any agricultural operations in 1979, it is equally important to hear from you. Please complete the first and last sections of the report form and return it to us immediately so that further followups will not be necessary for us to learn this information. In case your report has been lost or mislaid, we are enclosing another copy for your use. A preaddressed envelope is also enclosed for your convenience.

If you have any questions about this report please write to us at the above address. Please include the 11-digit Census File Number (CFN) appearing in the upper left-hand corner of the address label on your correspondence.

Thank you for your cooperation.

Sincerely,

RICHARD B. QUANRUD

Enclosures

79-A35-L3A
(3-80)



UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Data Preparation Division
Jeffersonville, Indiana 47132

FROM THE ASSISTANT DIRECTOR FOR
ECONOMIC AND AGRICULTURE CENSUSES
BUREAU OF THE CENSUS

We have not received the 1979 Farm Energy Survey report which was mailed to you in March. If you mailed your report within the last several days it has probably crossed this letter in the mail. If so, please disregard this reminder and accept our thanks for your cooperation.

If you have not completed and returned your report please do so immediately. With the ever-increasing problems in energy today, results of this survey are urgently needed; otherwise, out-dated information will have to be used to make State fuel allocations and other decisions which may affect your operation.

We need your response no matter how little energy you use in your farming operation. State-level estimates will be derived from this sample, and your response can have a direct effect on the quality of those estimates. Your response is **COMPLETELY CONFIDENTIAL** by law (title 13, United States Code).

If you have questions on how to complete the report, please write to us at the above address using the reverse side of this letter.

Sincerely,

RICHARD B. QUANRUD

NOTICE — In compliance with the Privacy Act (P.L. 93579) of 1974, we are required to inform you that response to this inquiry is required by law (title 13, United States Code). By the same law **YOUR REPORT TO THE CENSUS BUREAU IS CONFIDENTIAL**. It may be seen only by sworn Census employees and may be used only for statistical purposes. Your report **CANNOT** be used for purposes of taxation, investigation, or regulation. The law also provides that copies retained in your files are immune from legal process.

79-A35-L3A.1
(5-80)



UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Data Preparation Division
Jeffersonville, Indiana 47132

FROM THE ASSISTANT DIRECTOR FOR
ECONOMIC AND AGRICULTURE CENSUSES
BUREAU OF THE CENSUS

We have not received your completed report for the 1979 Farm Energy Survey. If you mailed your report within the last several days it has probably crossed this letter in the mail. If so, please disregard this reminder and accept our thanks for your cooperation.

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79-A35-L4A
(3-80)



UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Data Preparation Division
Jeffersonville, Indiana 47132

FROM THE ASSISTANT DIRECTOR FOR
ECONOMIC AND AGRICULTURE CENSUSES
BUREAU OF THE CENSUS

Your completed report for the 1979 Farm Energy Survey still has not been received. It was mailed to you in March and was due 20 days after you received it. We are under a very tight schedule and need your report right away. If you have not returned your completed report, please complete and return it to us immediately in the preaddressed envelope provided. In case you mislaid the previous report we have enclosed another copy for your use.

Response to this inquiry is required by law (title 13, United States Code). Let me assure you once more that your individual report is **COMPLETELY CONFIDENTIAL** by law. Your answers will be combined with those of other respondents to produce State and national totals.

Each address in our mailing list has a different Census File Number (CFN) and each has to be accounted for. If you received several forms with different CFN numbers for the same farming operation, mark the extra forms "Duplicate" and return them with your completed report, or separately if your completed report has crossed with this request in the mail.

If you did not conduct any agricultural operations in 1979, it is equally important to hear from you. Please complete the first and last sections of the report form and return it to us immediately so that further followups are not necessary.

Sincerely,

RICHARD B. QUANRUD

Enclosures

IMPORTANT — In all correspondence, please include the 11-digit Census File Number shown in the address label of your report form.

79-A35-L4A.1
(5-80)



UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Data Preparation Division
Jeffersonville, Indiana 47132

FROM THE ASSISTANT DIRECTOR FOR
ECONOMIC AND AGRICULTURE CENSUSES
BUREAU OF THE CENSUS

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Sincerely,

RICHARD B. QUANRUD

Enclosures

IMPORTANT — In all correspondence, please include the 11-digit Census File Number shown in the address label of your report form.

DUE DATE: 20 DAYS AFTER RECEIPT OF FORM

Form Approved: O.M.B. No. 41-579057

NOTICE Response to this inquiry is required by law (title 13, U.S. Code). By the same law your report to the Census Bureau is confidential. It may be seen only by sworn Census employees and may be used only for statistical purposes. The law also provides that copies retained in your files are immune from legal process.

FORM 79-A9A
(11-9-79)U.S. DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS

In correspondence pertaining to this report, please refer to the 11-digit Census File Number (CFN) in label below

**FARM FINANCE SURVEY — 1979
OPERATOR'S REPORT**

COMPLETE AND RETURN TO

Bureau of the Census
1201 East Tenth Street
Jeffersonville, Indiana 47132

The financial needs of the American farmers are changing.

It is important to know facts such as:

The relative debt burden of farmers

That sufficient loan funds are available from the different lenders

The capital investment, operating expenditures, and the amount and sources of income of farmers

These and many other financial problems can be examined only by obtaining information from you and the other survey respondents. Please give the best answers you can, making estimates when you do not have exact figures. Your answers will be combined with others so that confidentiality is maintained. Please answer each question that applies to you.

CENSUS
USE
ONLY

035

036

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041

042

(Please correct any error in name and address, including ZIP code.)

Section 1 ACREAGE in 1979 and CURRENT MARKET VALUE of land and buildings

(See instruction sheet.) Include all cropland, pastureland, rangeland, woodland, wasteland, idle land, house lots, etc.

Number
of acresEstimated current market value
of these acres including the
dwellings and other buildings
on them

Dollars Cents

043

044

\$

045

046

\$

047

048

\$

049

These are the ACRES in
"THIS PLACE"
for this Census report

1. All land owned ☐ None
2. All land rented or leased FROM OTHERS, including land worked on shares; leased Federal, State, and railroad land; and land used rent free. (Do NOT include land used on a per-head basis under a grazing permit.) Also complete item 5 below ☐
3. ALL land rented or leased TO OTHERS, including land worked on shares by others and land subleased ☐
4. TOTAL ACRES IN "THIS PLACE" (Please ADD acres owned (item 1) and acres rented (item 2), then SUBTRACT acres rented to others (item 3), and enter your answer in this space.)
- "THIS PLACE" means your farm or ranch, feedlots, poultry houses, greenhouses, and/or any other agricultural operations.

5. If you rented land FROM OTHERS (item 2 above), please enter the following information for each landlord.

Name of landlord	Mailing address of landlord	Number of acres rented	Rental arrangements in 1979 — Mark (X) all that apply			
			Share of crops	Share of livestock or products	Cash as rent	Other arrangements
First name, middle initial, last name	Number and street or rural route and box number	052	053			
	Post Office State ZIP code		1 ☐	2 ☐	3 ☐	4 ☐
First name, middle initial, last name	Number and street or rural route and box number	054	055			
	Post Office State ZIP code		1 ☐	2 ☐	3 ☐	4 ☐
First name, middle initial, last name	Number and street or rural route and box number	056	057			
	Post Office State ZIP code		1 ☐	2 ☐	3 ☐	4 ☐
First name, middle initial, last name	Number and street or rural route and box number	058	059			
	Post Office State ZIP code		1 ☐	2 ☐	3 ☐	4 ☐
First name, middle initial, last name	Number and street or rural route and box number	060	061			
	Post Office State ZIP code		1 ☐	2 ☐	3 ☐	4 ☐

List any additional landlords on continuation sheet.

6. Of the land you rented or leased to others (item 3 above), how many acres did you own? ☐ None

Number
of acres

Current market value

Dollars Cents

062

063

\$

PLEASE READ

You may be able to skip most of this form if

- a. All the land you owned or rented was worked on shares or rented to someone else.
b. There were no crops or livestock in 1979 on the acres in THIS PLACE (item 4).
c. The land you operated prior to 1979 has been sold to someone else.
If a, b, or c apply to your operation, please explain in section 14, complete section 15 and mail back the report form in the return envelope.

7. How many set aside acres did you have in the Federal Farm Program in 1979? ☐ None 064 Acres

8. Was any farm or ranch land sold by you in 1979 for —

None

Acres	Sales value	
	Dollars	Cents
065	066	
	\$	
067	068	
	\$	

- a. Farming or ranching purposes? ☐

- b. Other purposes? ☐

9. If you rented land from others (item 2), how much cash rent did you pay for the year 1979? ☐ None

Acres	Cash rent	
	Dollars	Cents
069	070	
	\$	

10. Is this farm or ranch operated by a hired manager? (See enclosed instruction sheet.) 071 1 ☐ YES 2 ☐ NO

Section 2 PURCHASES, EXPENDITURES AND CREDIT USED DURING 1979 FOR THE AGRICULTURAL OPERATION

These items concern the kinds of purchases and expenditures made and the amount of credit used during 1979 for agricultural operations on this place, section 1, item 4. In column 1, report the total cost of the purchases or expenditures. In column 2, report the amount of credit used, if any, for the purchases and expenditures. (See enclosed instruction sheet.)

NOTE — For each expense or purchase in column 1, complete column 2 either with the dollar amount or mark (X) in the "No credit used" box.

■ Agricultural capital purchases for this place during 1979

1. Purchases in 1979 of land, including buildings — Include only land in this place as reported in section 1, item 4.

2. Expenditures for land and irrigation improvements including land preparation, well drilling, ponds, drainage, roads, feedlots, fences, trench silos, lagoons, etc.

3. Expenditures for buildings and structures — Include new or additions to dwellings, barns, shelters, milking parlors, hog houses, poultry houses, crop storage, silos, and others. Exclude repairs.

4. Purchases of tractors and farm machinery at net cost — (Total cost minus trade-in values)

a. New
b. Used

5. Purchases of trucks and autos at net cost — (Total cost minus trade-in values)

a. New
b. Used

6. Purchases of breeding livestock and dairy cows and heifers

7. All other agricultural capital purchases — Include movable irrigation equipment and machinery such as pipes, siphons, nozzles, pumps and engines; other motor driven vehicles such as airplanes or other special use vehicles that were used on this place. Exclude capital purchases covered above

■ Agricultural operating expenses and other purchases for this place during 1979. Do not include here depreciation, income taxes, cash rent; expenditures for the purchase of land, buildings, or machinery; expenditures for the farm dwelling including repairs, taxes, insurance, and other items; also exclude expenses paid by landlords, and value of items furnished by contractors.

8. Expenditures for feed — grain, hay, silage, mixed feeds, concentrates, etc.

9. Purchases of livestock and poultry other than breeding stock and dairy cows and heifers

10. Purchases of fertilizer

11. Expenditures for hired wages and contract labor — Report gross cash payments to employees, including paid family members, before deductions for Social Security, taxes, insurance premiums, etc.

12. Purchases of gasoline, diesel fuel, LP gas, other fuel, motor oil, and grease for farm use only

13. All other agricultural operating expenditures such as machine hire, customwork, seeds, pesticides, real estate and personal property taxes, utilities; upkeep of farm buildings, machinery, fences, drains and irrigation systems; interest and other finance charges; storage charges; lime, soil conditioners, etc.

14. Funds borrowed during 1979 for any farm purpose other than listed above (such as replenishment of working capital or to increase your bank balance)

TOTAL COST AND CREDIT USED					
Total purchases or expenditures in 1979			Portion financed Exclude 30-day accounts		
None	(1)		No credit used	(2)	
	Dollars	Cents		Dollars	Cents
	072			073	
☐	\$		☐	\$	
	074			075	
☐	\$		☐	\$	
	076			077	
☐	\$		☐	\$	
	078			079	
☐	\$		☐	\$	
	080			081	
☐	\$		☐	\$	
	082			083	
☐	\$		☐	\$	
	084			085	
☐	\$		☐	\$	
	086			087	
☐	\$		☐	\$	
	088			089	
☐	\$		☐	\$	
	090			091	
☐	\$		☐	\$	
	092			093	
☐	\$		☐	\$	
	094			095	
☐	\$		☐	\$	
	096			097	
☐	\$		☐	\$	
	098			099	
☐	\$		☐	\$	
	100			101	
☐	\$		☐	\$	
				103	
☐			☐	\$	

Section 3 DEBTS AS OF DECEMBER 31, 1979 (See enclosed instruction sheet.)			AMOUNT OWED ON DECEMBER 31, 1979 (Exclude interest)								
<i>The debts to be reported are those owed as of December 31, 1979 arising from the operation of the acres in section 1, item 4.</i> ■ Source of Debt 1. Federal Land Banks (or Federal Land Bank Associations) 2. The Farmers Home Administration 3. Small Business Administration 4. Insurance Companies — Exclude premiums due 5. Commercial banks and savings banks (national or State banks, trust companies, etc.) 6. Individuals from whom you bought part or all of this acreage — a. Under a mortgage or deed of trust b. Under a land purchase contract 7. Production credit associations 8. Other lending institutions (mortgage companies, real estate agents or dealers, savings and loan associations, agricultural credit corporations, finance companies, State or county agencies, credit unions, livestock loan companies, etc.) 9. Merchants and dealers, including cooperatives, mail order companies, farm machinery companies, and other manufacturers, (exclude debts on 30-day accounts) for purchase of — a. Tractors and farm machinery, including repairs b. Autos and trucks, including repairs c. Gasoline, oil, and other fuel d. Feed, seed, and fertilizer e. Livestock and poultry f. All other purchases for the operation of this acreage from merchants and dealers, including building supplies, fencing, hardware, customwork, and similar purchases 10. Any other individuals, a relative, a friend, a landlord, an estate, etc. — Exclude debts on 30-day accounts. 11. Commodity Credit Corporation loans: a. On crops b. For crop storage facilities 12. Unpaid bills for veterinary services, utilities, past due taxes or insurance premiums, and debts for other purposes relating to this acreage — Include all debts on account not expected to be paid in 30 days.			Total amount owed <i>For each entry in this column please answer columns 2 and 3</i>			Amount of debt secured by real estate <i>Include debts secured by mortgages on land and buildings, deeds of trust, land purchase, etc.</i>			Amount of debt not secured by real estate <i>Include debts secured by notes, machinery, crops, or other non-real estate assets, and unsecured debts.</i>		
			(1)			(2)			(3)		
			None	Dollars	Cents	None	Dollars	Cents	None	Dollars	Cents
☐	104 \$		☐	105 \$		☐					
☐	107 \$		☐	108 \$		☐	109 \$				
☐	110 \$		☐	111 \$		☐	112 \$				
☐	113 \$		☐	114 \$		☐	115 \$				
☐	116 \$		☐	117 \$		☐	118 \$				
☐	119 \$		☐	120 \$		☐					
☐	122 \$		☐	123 \$		☐					
☐	125 \$		☐	126 \$		☐	127 \$				
☐	128 \$		☐	129 \$		☐	130 \$				
☐	131 \$		☐	132 \$		☐	133 \$				
☐	134 \$		☐	135 \$		☐	136 \$				
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☐	143 \$		☐	144 \$		☐	145 \$				
☐	146 \$		☐	147 \$		☐	148 \$				
☐	149 \$		☐	150 \$		☐	151 \$				
☐	152 \$		☐	153 \$		☐	154 \$				
☐	155 \$		☐	156 \$		☐	157 \$				
☐	158 \$		☐	159 \$		☐	160 \$				

Section 4 MARKET VALUE OF AGRICULTURAL PRODUCTS SOLD DURING 1979 (See enclosed instruction sheet.)			Section 6 INCOME AND EXPENSES FROM FARM-RELATED SOURCES IN 1979 (See enclosed instruction sheet.)		
1. What was the total market value of farm products sold from this place in 1979? — Include the value of the landlord's and/or contractor's share, estimating if necessary. Include value of Government CCC loans, but exclude sales of forest products. a. If you rented or leased land from others on a share basis, what was the value of your landlord's share of the total sales reported in item 1 above?			■ Part A — Income from Farm-Related Sources <i>Report amount received before taxes and expenses.</i> 1. Customwork and other agricultural services provided for farmers and others — plowing, planting, spraying, harvesting, preparation of products for market, etc. (If customwork is a separate business, report in section 10, item 1b.) 2. Recreational services — providing hunting, fishing, picnicking, camping, boarding and lodging, or other recreational facilities on this place 3. Payments you received for participation in Government farm programs — Do not include Commodity Credit Corporation loans. 4. Gross cash rent or share payments received from renting out farm land or payments received from lease or sale of allotments — Include payments for livestock pastured on a per-head basis, per-month basis, per-pound basis, etc. 5. Sales of forest products (including maple products, naval stores, etc.) 6. Other business or source of income which is conducted on or CLOSELY RELATED to the AGRICULTURAL OPERATIONS on this place — Specify kind		
Section 5 PRODUCTION CONTRACTS Did you have any contract to produce any crop, poultry, or livestock products in 1979? — Do not include marketing only contracts. (See enclosed instruction sheet.) 163 1 ☐ YES — Complete this section 2 ☐ NO — Go to section 6			■ Part B — Expenses for Farm-Related Income Sources 1. For farm-related sources reported in items 1 through 6 above, enter the total estimated expenses paid by you and others in 1979 — Include all cash operating expenses, taxes, interest, insurance, etc. Do not include expenses already reported in section 2.		
1. How much did you receive from contractor for products produced under contract? Specify items under contract			Section 7 NET CASH FARM INCOME OF PARTNERSHIPS (See enclosed instruction sheet.) Did you raise or produce any agricultural products with others under a partnership in 1979? 031 1 ☐ YES — Complete this section 2 ☐ NO — Go to section 8		
2. What is your estimate of total market value of products you produced under contract?			174 1 ☐ Less than 10 percent 2 ☐ 10 to 29 percent 3 ☐ 30 to 49 percent 4 ☐ 50 to 69 percent 5 ☐ 70 percent and over		
3. What is your estimate of the cost of items and services provided by the contractor?			1. What proportion of the net cash farm income (net sales of agricultural products plus net income from farm-related sources) was received by the senior partner?		

Section 8 TAXES

Did you own any farm or ranch land in 1979?

032

1 ☐ YES — Complete this section (See enclosed instruction sheet.)2 ☐ NO — Go to section 9

1. What was the number of acres of your farm or ranch land as shown on your tax bill(s) for 1979? 175 _____ Acres

2. What was the assessed value of land, buildings, and other improvements shown on your real estate tax bill(s) for 1979? ☐ None ☐ \$ 176 Dollars Cents3. What was the total amount of real estate taxes (land, buildings, and other improvements) payable by you as shown on your tax bill(s) for 1979? ☐ None ☐ \$ 177 Dollars CentsSection 9 ASSETS OWNED BY THE FARM OPERATOR
(See enclosed instruction sheet.)

■ Items owned — Exclude value of land reported in section 1.

1. Dwellings

None

Estimated market
value as of
December 31, 1979

Dollars Cents

a. Farm dwellings for hired laborers ☐ \$ 178b. Operator's dwelling if on this place (section 1, item 4) (If not on this place report in item 21 below.) ☐ \$ 1792. All other buildings except dwellings ☐ \$ 1803. Autos ☐ \$ 1814. Trucks ☐ \$ 1825. Tractors ☐ \$ 1836. Other farm machinery and equipment ☐ \$ 1847. Crops stored: ☐ \$ 185Include crops under
Government CCC loans.a. On-farm ☐ \$ 186b. Off-farm ☐ \$ 1878. Beef animals ☐ \$ 1889. Dairy animals ☐ \$ 18910. Hogs and pigs ☐ \$ 19011. Sheep and lambs ☐ \$ 19112. Poultry — Include layers, broilers, turkeys, etc. ☐ \$ 19213. Other livestock (horses, mink, bees, fish, rabbits, etc.) ☐ \$ 19314. Money owed to you ☐ \$ 19415. U.S. Savings Bonds ☐ \$ 19516. Other bonds, corporate stocks, and certificates of deposit ☐ \$ 19617. Cash values of life insurance ☐ \$ 19718. Money in checking and savings accounts in banks ☐ \$ 19819. Money in savings and loan associations and other savings accounts ☐ \$ 19920. Cash and currency on hand ☐ \$ 200

21. Nonfarm assets owned and debts — Include nonfarm property such as off farm dwellings, cotton gins, stocks of cooperative organizations, motels, stores, vehicles, machinery, and equipment for nonfarm uses, etc.

Estimated market
value of these
assets (as of
December 31, 1979) ..Debts related to
these assets (as of
December 31, 1979) ..

None

Dollars Cents

☐ \$ 201☐ \$ 202☐ \$ 203☐ \$ 204☐ \$ 205☐ \$ 206☐ \$ 207☐ \$ 208☐ \$ 209☐ \$ 210☐ \$ 211☐ \$ 212Section 10 OFF-FARM INCOME DURING 1979
(See enclosed instruction sheet.)

1. How much did you and members of your family living in your household receive in 1979 from each of the following sources?

a. Cash wages, salaries, tips, Armed Forces pay, commissions, piece-rate payments, and cash bonuses (report amount before deducting income taxes and other withholding items).

None

Dollars Cents

(1) Nonfarm jobs or professions ☐ \$ 229(2) Farm work — Exclude customwork reported in section 6, item 1. ☐ \$ 230b. Operation of a non-farm-related business (not reported in section 6) or professional practice. — Report NET after cash expenses. ☐ \$ 231

c. Retirement and/or disability —

(1) Social Security ☐ \$ 232(2) Other public (government retiree, military, or railroad) veterans payments ☐ \$ 233(3) Private pensions ☐ \$ 234d. Public assistance, SSI (Supplemental Security Income), welfare benefits, unemployment compensation ☐ \$ 235e. Interest ☐ \$ 236f. Dividends ☐ \$ 237g. Income from estates or trusts, net cash rental income from nonfarm property, net royalties, or lease payments for mineral rights ☐ \$ 238h. Annuities, alimony, regular contributions from persons not living in the household, and other money income, from any other source ☐ \$ 239

Section 11 WHEN AND HOW OWNED LAND OPERATED WAS ACQUIRED

1. Copy reported acres from section 1, item 1. ☐ None Acres2. Copy reported acres from section 1, item 6. ☐ 2703. Subtract item 2 from item 1, this is the "owned land operated" by you ☐ 271

If "owned land operated" is greater than zero — complete this section, otherwise skip to section 12.

4. When did you purchase or acquire the "owned land operated"? Please enter acres by years listed below.

a. During 1979 ☐ None Acres

(1) Was any of the land purchased in 1979 financed by a mortgage on land you already owned?

281 ☐ Yes ☐ Nob. 1975 through 1978 ☐ 280c. 1970 through 1974 ☐ 281d. 1965 through 1969 ☐ 282e. 1960 through 1964 ☐ 283f. Prior to 1960 ☐ 284g. TOTAL (Should equal item 3 above). ☐ 285

5. How did you purchase or acquire the "owned land operated"? Please enter acres by appropriate source.

a. Purchase from non-relative ☐ None Acresb. Purchase from a relative ☐ 286c. Inherited or gift ☐ 287d. Other — Specify ☐ 288e. TOTAL (Should equal item 3 above). ☐ 289

Section 12 OFF-FARM WORK AND EDUCATION

(See enclosed instruction sheet.)

- **Note:** Answer column 1 for operator.
Answer column 2 for spouse; if no spouse mark (X) box 3, column 2.

1. Off-farm work — Did you (or did your spouse) work for pay at an off-farm job during 1979?
Include self-employment, business, or professional work. Exclude exchange farm work.

If more than one off-farm job, describe the one at which the most hours were worked.

a. Were you (or was your spouse):

- Employee of another farm or ranch?
- Employee of a private company, business or individual, for wage, salary, or commission?
- Federal, State, or local government employee?
- Self employed-operating a farm related business?
- Self employed-operating a nonfarm related business or professional practice?

Column 1
REPORT FOR OPERATOR

- 300 1 ☐ Yes — Complete this section
2 ☐ No — Skip to item 2

- 302 1 ☐
2 ☐
3 ☐
4 ☐
5 ☐
- Mark (X) one box

Column 2
REPORT FOR SPOUSE

- 301 1 ☐ Yes — Complete this section
2 ☐ No — Skip to item 2
3 ☐ No spouse

- 303 1 ☐
2 ☐
3 ☐
4 ☐
5 ☐
- Mark (X) one box

b. What kind of business or industry was this? (Example: public school system, road construction company, textile mill, automobile repair service, truck assembly plant, dairy farm.)

304 Specify _____

c. What kind of work were you (or was your spouse) doing on the off-farm job in 1979?
(Example: high school English teacher, lawyer, sales clerk, real estate agent, automobile mechanic, machinist, practical nurse, manager, farm or ranch worker, etc.)

Specify _____

d. Describe the most important work activity on the off-farm job in 1979. (For example: sells farm supplies, repairs equipment, drives truck, general farm work, manages own business.)

Specify _____

e. How many hours per week were normally worked for pay at this off-farm job?

310 _____ Hours

f. How many weeks per year were normally worked at this off-farm job?

312 _____ Weeks

g. How many miles were traveled one way to work at this off-farm job?

314 _____ Miles

305 Specify _____

Specify _____

311 _____ Hours

313 _____ Weeks

315 _____ Miles

2. Education — What was the highest grade (or year) of school ever completed? Mark (X) applicable box.

- 316
- | | | |
|----------------------------|----------------------------|----------------------------|
| Less than 5 | 5-8 | 9-11 |
| 1 ☐ | 2 ☐ | 3 ☐ |
| 12 | 13-14 | 15-16 |
| 4 ☐ | 5 ☐ | 6 ☐ |
| 17 or more | | |
| 7 ☐ | | |

- 317
- | | | |
|----------------------------|----------------------------|----------------------------|
| Less than 5 | 5-8 | 9-11 |
| 1 ☐ | 2 ☐ | 3 ☐ |
| 12 | 13-14 | 15-16 |
| 4 ☐ | 5 ☐ | 6 ☐ |
| 17 or more | | |
| 7 ☐ | | |

Section 13 HOUSEHOLD CHARACTERISTICS

318

1. Citizenship of operator 1 ☐ United States 2 ☐ Other — Specify country _____

2. Size of household. How many persons were included in your household on December 31, 1979? Include yourself (operator or senior partner), spouse, children, and others such as other relatives, or others living in your household Number

319

320

a. Of these, how many were under 16 years of age? Number

3. Was the farm or family income benefited by any of the following programs during 1979? Mark (X) all that apply.

321

1 ☐ The county Cooperative Extension Service	6 ☐ Direct contact with specialists at a State Agricultural College
2 ☐ Agricultural Conservation Program (ACP) of ASCS	7 ☐ Food stamp or special nutrition programs
3 ☐ Soil Conservation Program	8 ☐ Aid to families with dependent children (AFDC)
4 ☐ Federal Crop Insurance	9 ☐ Formal job training program sponsored by any school, military service, or government program such as CETA
5 ☐ Forest service	

Section 14 REMARKS AND EXPLANATIONS**Section 15 SIGNATURE OF PERSON COMPLETING THIS REPORT — Please check your answers, then sign below.**

Name	330 Date	Telephone	331 Area code	Number

DUE DATE: 20 DAYS AFTER RECEIPT OF FORM

Form Approved: O.M.B. No. 41-S79057

NOTICE Response to this inquiry is required by law (title 13, U.S. Code). By the same law your report to the Census Bureau is confidential. It may be seen only by sworn Census employees and may be used only for statistical purposes. The law also provides that copies retained in your files are immune from legal process.

In correspondence pertaining to this report, please refer to the 11-digit Census File Number (CFN) in label below.

FORM 79-A9B
(11-9-79)U.S. DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS

FARM FINANCE SURVEY — 1979

LANDLORD'S REPORT

COMPLETE AND RETURN TO

Bureau of the Census
1201 East Tenth Street
Jeffersonville, Indiana 47132

The financial needs of the American farmers and farm landlords are changing.

It is important to know facts such as:

Their relative debt burden

That sufficient loan funds are available
from different lendersThe net returns that farm operators and land owners earn
on their investments after paying their expenses

These and many other financial problems can be examined only by obtaining information from you and the other survey respondents. Please give the best answers you can, making estimates when you do not have exact figures. Your answers will be combined with others so that confidentiality is maintained. Please answer each question that applies to you.

CENSUS
USE
ONLY

035

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036

040

037

041

038

042

(Please correct any error in name and address, including ZIP code.)

Section 1 ACREAGE in 1979 and CURRENT MARKET VALUE of LAND and BUILDINGS (See instruction sheet, section 1)

Acres

1. How many acres owned or controlled by you were used in 1979 by the person listed on the top line of the address label? 049

Market value
CENTS NOT REQUIRED

2. What is your estimate of the market value of this acreage including the dwelling and all other buildings? \$ 050

None 051

3. Of the acres entered in item 1, how many were purchased in 1979? ☐ _____ Acres

Section 2 PURCHASES, EXPENDITURES, AND CREDIT USED DURING 1979 in connection with the acreage in section 1, item 1 — The items in this section concern the kinds of purchases and expenditures made and the amount of credit used during 1979 for agricultural operations. In column 1, report the total cost of the purchases or expenditures. In column 2, report the amount of credit used, if any, for the purchases (see instruction sheet, section 2). For each expense or purchase entered in column 1, complete column 2, either with the dollar amount or mark (X) in the "No credit used" box. Do not include your tenants' share of any expenses.

TOTAL COST AND CREDIT USED

Total purchases or
expenditures in 1979
(1)Portion financed
Exclude 30-day accounts
(2)

None	Total amount Cash and credit		No credit used	Dollars		Cents
	Dollars	Cents				
☐	072		☐	073		
☐	074		☐	075		
☐	076		☐	077		
☐	078		☐	079		
☐	080		☐	081		
☐	082		☐	083		
☐	084		☐	085		
☐	086		☐	087		
☐	088		☐	089		
☐	090		☐	091		
☐	092		☐	093		
☐	094		☐	095		
☐	096		☐	097		
☐	098		☐	099		
☐	100		☐	101		
☐			☐	103		

■ Agricultural capital purchases related to the acreage in section 1, item 1, during 1979

- Purchases of land, including buildings — Include only land as reported in section 1, item 3
- Expenditures for land and irrigation improvements including land preparation, well drilling, ponds, drainage, roads, feedlots, fences, trench silos, lagoons, etc.
- Expenditures for buildings and structures — Include new or additions to dwellings, barns, shelters, milking parlors, hog houses, poultry houses, crop storage, silos, etc. Exclude repairs
- Purchases of tractors and farm machinery at net cost —
Total cost minus trade-in values.
 - a. New
 - b. Used
- Purchases of trucks and autos at net cost —
Total cost minus trade-in values.
 - a. New
 - b. Used
- Purchases of breeding livestock and dairy cows and heifers
- All other agricultural capital purchases — Include movable irrigation equipment and machinery such as pipes, siphons, nozzles, pumps and engines; other motor driven vehicles such as airplanes, or other special use vehicles that were used on this place. Exclude capital purchases covered above.

■ Agricultural operating expenses and other purchases related to the acreage in section 1, item 1, during 1979. Do not include here expenses paid by tenants, depreciation, income taxes, expenditures for the purchase of land, buildings, or machinery; expenditures for the landlord's dwelling including repairs, taxes, insurance, and other items.

- Expenditures for feed — grain, hay, silage, mixed feeds, concentrates, etc.
- Purchases of livestock and poultry other than breeding stock and dairy cows and heifers
- Purchases of fertilizer
- Expenditures for hired wages and contract labor — Report gross cash payments to employees including paid family members, before deductions for Social Security, taxes, insurance premiums, etc.
- Purchases of gasoline, diesel fuel, LP gas, other fuel, motor oil, and grease for farm use only
- All other agricultural operating expenditures such as machine hire, customwork, seeds, pesticides, real estate and personal property taxes, utilities; upkeep of farm buildings (including tenant's dwelling), machinery, fences, drains, and irrigation systems; interest and other finance charges; storage charges; lime, soil conditioners, etc.
- Funds borrowed during 1979 in connection with the acreage in section 1, item 1, for any purpose other than listed above (such as replenishment of working capital)

Section 3 DEBTS AS OF DECEMBER 31, 1979 (See enclosed instruction sheet.)		AMOUNT OWED ON DECEMBER 31, 1979 — Exclude interest								
The debts to be reported are those owed as of December 31, 1979 arising from the operation of the acres in section 1, item 1.		Total amount owed For each entry in this column please answer columns 2 and 3.			Amount secured by farm real estate Include debts secured by mortgages on farm land and buildings, deeds of trust, land purchase, etc.			Amount not secured by farm real estate Include debts secured by notes, machinery, crops, or other non-real estate assets, and unsecured debts.		
		(1)			(2)			(3)		
		None	Dollars	Cents	None	Dollars	Cents	None	Dollars	Cents
■ Source of Debt										
1. Federal Land Banks (or Federal Land Bank Associations)		☐	104		☐	105		☐		
2. The Farmers Home Administration		☐	107		☐	108		☐	109	
3. Small Business Administration		☐	110		☐	111		☐	112	
4. Insurance companies — Exclude premiums due		☐	113		☐	114		☐	115	
5. Commercial banks and savings banks (national or State banks, trust companies, etc.)		☐	116		☐	117		☐	118	
6. Individuals from whom you bought part or all of this acreage —										
a. Under a mortgage or deed of trust		☐	119		☐	120		☐		
b. Under a land purchase contract		☐	122		☐	123		☐		
7. Production credit associations		☐	125		☐	126		☐	127	
8. Other lending institutions (mortgage companies, real estate agents or dealers, savings and loan associations, agricultural credit corporations, finance companies, State or county agencies, livestock loan companies, Small Business Administration, etc.)		☐	128		☐	129		☐	130	
9. Merchants and dealers, including cooperatives, mail order companies, farm machinery companies, and other manufacturers (exclude debts on 30-day accounts) for purchase of —										
a. Tractors and farm machinery, including repairs		☐	131		☐	132		☐	133	
b. Autos and trucks, including repairs		☐	134		☐	135		☐	136	
c. Gasoline, oil, and other fuel		☐	137		☐	138		☐	139	
d. Feed, seed, and fertilizer		☐	140		☐	141		☐	142	
e. Livestock and poultry		☐	143		☐	144		☐	145	
f. All other purchases for the operation of this acreage from merchants and dealers, including building supplies, fencing hardware, customwork, and similar purchases		☐	146		☐	147		☐	148	
10. Any other individuals, a relative, a friend, an estate, etc. — Exclude debts on 30-day accounts		☐	149		☐	150		☐	151	
11. Commodity Credit Corporation loans —										
a. On crops		☐	152		☐	153		☐	154	
b. For crop storage facilities		☐	155		☐	156		☐	157	
12. Unpaid bills for veterinary services, utilities, past due taxes or insurance premiums, and debts for other purposes relating to this acreage — Include all debts on account not expected to be paid in 30-days		☐	158		☐	159		☐	160	

Section 4 TAXES (See enclosed instruction sheet.)		Section 6 RENTAL INCOME FOR 1979	
1. What was the number of acres of your farm or ranch land as shown on your tax bill(s) for 1979? (This may be the same or a larger acreage than that reported in section 1, item 1) 175 _____ Acres		The following items are related to your agricultural income for the acres reported in section 1, item 1. (Do not include the tenant's share.)	
2. What was the assessed value of land, buildings, and other improvements shown on your real estate tax bill(s) for 1979? None ☐ Dollars Cents		1. Share rent — How much did you receive in 1979 for the sale of your share of crops, livestock, and livestock products from the acres reported in section 1, item 1? (The value of crops placed under Government Loan or seal in 1979 should be included as sales in 1979, but do not include payments from Government farm programs or the sales of forest products.) None ☐ Dollars Cents	
3. What was the total amount of real estate taxes (land, buildings, and other improvements) payable by you as shown on your tax bill(s) for 1979? ☐ \$		2. Cash rent — How much cash rent did you receive in 1979 from the acres reported in section 1, item 1? Exclude share rental reported in item 1 above. ☐ \$	

Section 5 ASSETS OWNED BY THE LANDLORD (See enclosed instruction sheet.)		Section 7 TOTAL AGRICULTURAL LAND OWNERSHIP AND LAND SALES	
The assets to be reported are those owned as of December 31, 1979 involved with the ownership of the acres in section 1, item 1. Do not include your tenant's share of any assets.		1. In 1979, did you own land in addition to the acres entered in section 1, item 1? ☐ NO — Skip to item 2 ☐ YES — Please enter the total of all acres you owned and your estimate of the market value of the land including buildings	
1. Dwellings — Exclude value of land reported in section 1. None ☐ Estimated market value as of December 31, 1979 Dollars Cents		Acres Market value Dollars Cents	
a. Farm dwellings for hired laborers		210 211	
b. Tenant's dwelling — Exclude if not located on the acres in section 1, item 1.		212 213	
2. All other buildings except dwellings		214	
3. Autos		215 1 ☐ YES 2 ☐ NO	
4. Trucks		3. Of the land you owned in 1979, how many acres were obtained by:	
5. Tractors		a. Purchase	
6. Other farm machinery and equipment		b. Gift or inheritance	
7. Crops stored: (Include crops under Government CCC loans.) { a. On-farm		c. Other — Specify	
b. Off-farm		4. Were you personally operating a farm anytime during 1979? 219 1 ☐ YES 2 ☐ NO	
8. Beef animals		5. Was any land sold by you in 1979 for:	
9. Dairy animals		a. Farming or ranching purposes	
10. Hogs and pigs		b. Other purposes	
11. Sheep and lambs		Acres Sales value Dollars Cents	
12. Poultry — Include layers, broilers, turkeys, etc.		220 221	
13. Other livestock (horses, mink, bees, fish, rabbits, etc.)		222 223	

Section 8 PARTICIPATION IN MANAGEMENT DECISIONS <i>To be reported for the acres in section 1, item 1.</i>			
Management decisions determined by — <i>Mark (X) only one box for each item</i>			
	Landlord only	Tenant only	Landlord and tenant jointly
1. Selection of fertilizer and chemicals	224 ☐	2 ☐	3 ☐
2. Cultivation practices	225 ☐	2 ☐	3 ☐
3. Selection of crop varieties or livestock breeds	226 ☐	2 ☐	3 ☐
4. Harvesting decisions	227 ☐	2 ☐	3 ☐
5. Marketing agricultural products	228 ☐	2 ☐	3 ☐

Section 9 TYPE OF OWNERSHIP <i>Mark (X) the one item which best describes the ownership of land rented out in 1979. (See enclosed instruction sheet.)</i>		
Land owned by —		
1. FAMILY or INDIVIDUAL (sole proprietorship), excluding partnership and corporation	242 ☐	
2. PARTNERSHIP. Include family partnerships	2 ☐ } Complete part A section 10	
3. CORPORATION INCORPORATED UNDER STATE LAW. Answer both a and b	} Complete part B section 10	
a. Is this a family held corporation?		3 ☐ YES 4 ☐ NO
b. Are there more than 10 stockholders?		5 ☐ YES 6 ☐ NO
4. OTHER, such as cooperative, estate or trust, prison farm, grazing association, Indian reservation, etc.		7 ☐ Specify

Skip to section 11

Section 10 CHARACTERISTICS AND OCCUPATION OF LANDLORD	
A. FOR INDIVIDUAL AND PARTNERSHIP LANDLORDS. Senior partner should report for partnerships.	
1. RESIDENCE	
a. Where does the landlord live?	243 ☐ On the land in section 1, item 1
Not on the land in section 1, item 1	☐ On another farm ☐ In a rural area, not on a farm ☐ In a city, town, or urban area
b. Distance of residence from land in section 1, item 1	244 ☐ Less than 5 miles ☐ 5–24.9 miles ☐ 25–49.9 miles ☐ 50 miles and over
2. RACE of landlord	245 ☐ White ☐ Negro or Black ☐ American Indian ☐ Asian or Pacific Islander ☐ Other — Specify
3. SPANISH ORIGIN — Is the landlord (senior partner or person in charge) of Spanish origin or descent (Mexican, Mexican American, Cuban, or other Spanish)?	246 ☐ YES ☐ NO
4. AGE of landlord	247 _____ Years old
5. SEX of landlord	248 ☐ Male ☐ Female
6. CITIZENSHIP of landlord	250 ☐ United States ☐ Other — Specify country
7. OCCUPATION of landlord — At what occupation did the landlord spend the majority of his working time in 1979?	251 ☐ Operating a farm or ranch ☐ Employed by a private business for wages, salary, or commission ☐ Employed by a Federal, State, or local government ☐ Self-employed — operating farm related business ☐ Self-employed operating nonfarm related business or professional practice ☐ Retired — previously farming or farm related business ☐ Retired — nonfarm related occupation ☐ Other — Specify
8. What proportion of the total business income (farm and nonfarm) you and your family received was from the sale of agricultural products and/or rental income from all agricultural lands you owned in 1979?	253 ☐ Less than 25% ☐ 25% to 49% ☐ 50% to 74% ☐ 75% to 100%

Section 10 Continued	
B. FOR CORPORATION LANDLORDS	
In 1979 did the corporation have any business activities or interests other than that of a landlord, example, own or manage a nonfarm business or operate another farm or ranch?	
034 ☐ NO — Skip to section 11	
2 ☐ YES — If "YES" — Did the corporation engage in any of the following activities?	
1. RELATED TO AGRICULTURE	
a. Operate a farm or ranch	255 ☐ YES ☐ NO
b. Manufacture, distribution, sale of farm supplies (feed, fertilizer, farm machinery, etc.)	256 ☐ YES ☐ NO
c. Processing of crops, poultry, livestock (slaughter plant, meat packing, processing, canning, milling)	257 ☐ YES ☐ NO
d. Wholesaling, retailing of farm products (grain elevators, livestock auctions, produce markets, other food stores including supermarkets, etc.)	258 ☐ YES ☐ NO
e. Other activities related to farm products	259 ☐ YES — Specify ☐ NO
2. NONAGRICULTURAL ACTIVITIES	
a. Manufacture of nonagricultural products	260 ☐ YES ☐ NO
b. Wholesaling, retailing of nonagricultural products	261 ☐ YES ☐ NO
c. Finance, insurance, and real estate	262 ☐ YES ☐ NO
d. Other business activities	263 ☐ YES — Specify ☐ NO
3. Mark (X) one box to indicate the appropriate size of total business receipts (farm and nonfarm) of the corporation in 1979	264 ☐ Less than \$100,000 ☐ \$100,000 to \$499,999 ☐ \$500,000 to \$999,999 ☐ \$1,000,000 or more
4. Of the total receipts from all sources, what proportion was from the sale of agricultural products and/or rental income from all agricultural lands owned and/or operated?	265 ☐ Less than 25% ☐ 25% to 49% ☐ 50% to 74% ☐ 75% or more
5. Does a foreign entity (company, individual, government, etc.) own any of the voting stock or other equity rights of the corporation?	267 ☐ YES — Mark (X) one to indicate percent of ownership ☐ NO — Go to section 11
266 ☐ YES ☐ NO	
267 ☐ Less than 10% ☐ 10 to 24% ☐ 25 to 49% ☐ 50% ☐ 51 to 99% ☐ 100%	

Section 11 REMARKS AND EXPLANATIONS	

Section 12 SIGNATURE OF PERSON COMPLETING THIS REPORT — Please check your answers, then sign below.			
Mark (X) one	Name	268 Date	
☐ Owner of land	Telephone	269 Area code	Number
☐ Agent			

79-A9A-L1A
(12-79)



UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Washington, D.C. 20233

OFFICE OF THE DIRECTOR

Reply to:

BUREAU OF THE CENSUS
1201 EAST TENTH STREET
JEFFERSONVILLE, INDIANA 47132

FROM THE DIRECTOR
BUREAU OF THE CENSUS

We are asking your cooperation in providing information for the 1979 Farm Finance Survey that we are sending to a small sample of farm and ranch operators. By obtaining this information from a scientifically selected sample, we can make reliable State estimates at much less cost than if we requested the information from all farm and ranch operators.

With rapidly changing cost-price relationships and the increasing use of credit, up-to-date information on the financial condition of agriculture in your State is urgently needed. You are the only source from which all the necessary information for this important survey can be obtained. Your report, when combined with information furnished by others, will provide totals on the financial condition of farmers and ranchers for the year 1979.

Please fill out and return the enclosed report form within 20 days in the preaddressed envelope provided. Many questions on the form may not be applicable to your operation. These may be skipped by following the instructions on the form. If book figures are not available, please give your best estimates.

Your response to this inquiry is required by law (title 13, United States Code). By the same law, your report to the Bureau of the Census is confidential. It may be seen only by sworn Census employees and may be used only for statistical purposes.

If filing within the time period causes an undue burden, a request for an extension may be sent to the above address. Include the 11-digit Census File Number (CFN) as shown in your address label on all correspondence to us.

Your cooperation will be greatly appreciated.

Sincerely,

VINCENT P. BARABBA

Enclosures

79-A9A-L2A
(1-80)



UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Data Preparation Division
Jeffersonville, Indiana 47132

FROM THE ASSISTANT DIRECTOR FOR
ECONOMIC AND AGRICULTURE CENSUS
BUREAU OF THE CENSUS

Many farmers and ranchers across the Nation have already completed and returned their reports for the 1979 Farm Finance Survey. If you have already done so, we appreciate your promptness and thank you for it.

If you have not completed and returned your report form, please do so within the next couple of days. Since the farms in this survey were drawn by lot in a selected cross-section sample of all agricultural operations, the lack of data for any selected farm will be harmful to the accuracy of the results. It is highly important that we receive a report from everyone in the sample. If you did not conduct any agricultural operations in 1979, it is equally important for us to hear from you. Please complete items 1 through 4 of section 1, explain in section 14, complete section 15 of the report form, and return it to us immediately so that further followups can be eliminated.

In case your report has been lost or mislaid, we are enclosing another copy for your use. A preaddressed envelope is also enclosed for your convenience.

If you have any questions about this report, please write to us at the above address. Please include the 11-digit Census File Number (CFN) appearing in the upper left-hand corner of the address label on your correspondence.

Thank you for your cooperation.

Sincerely,

RICHARD B. QUANRUD

Enclosures

79-A9A-L3A
(3-80)



UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Data Preparation Division
Jeffersonville, Indiana 47132

FROM THE ASSISTANT DIRECTOR FOR
ECONOMIC AND AGRICULTURE CENSUSES
BUREAU OF THE CENSUS

We have not received your completed report for the 1979 Farm Finance Survey, which was mailed to you in March. If you mailed your report within the last several days, it has probably crossed this letter in the mail. If so, please disregard this reminder and accept our thanks for your cooperation.

If you have not completed and returned your report, please do so immediately. We must have your report if the survey results for your State and the Nation are to be accurate and complete. Your response is COMPLETELY CONFIDENTIAL by law (title 13, United States Code).

If you have any questions on how to fill out the report form, please write to us at the above address using the reverse side of this letter.

Sincerely,

RICHARD B. QUANRUD

NOTICE — In compliance with the Privacy Act (P.L. 93579) of 1974, we are required to inform you that response to this inquiry is required by law (title 13, United States Code). By the same law YOUR REPORT TO THE CENSUS BUREAU IS CONFIDENTIAL. It may be seen only by sworn Census employees and may be used only for statistical purposes. Your report CANNOT be used for purposes of taxation, investigation, or regulation. The law also provides that copies retained in your files are immune from legal process.

79-A9A-L3A.1
(5-80)



UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Data Preparation Division
Jeffersonville, Indiana 47132

FROM THE ASSISTANT DIRECTOR FOR
ECONOMIC AND AGRICULTURE CENSUSES
BUREAU OF THE CENSUS

We have not received your completed report for the 1979 Farm Finance Survey. If you mailed your report within the last several days, it has probably crossed this letter in the mail. If so, please disregard this reminder and accept our thanks for your cooperation.

If you have not completed and returned your report, please do so immediately. We must have your report if the survey results for your State and the Nation are to be accurate and complete. Your response is **COMPLETELY CONFIDENTIAL** by law (title 13, United States Code).

If you have any questions on how to fill out the report form, please write to us at the above address using the reverse side of this letter.

Sincerely,

RICHARD B. QUANRUD

NOTICE — In compliance with the Privacy Act (P.L. 93579) of 1974, we are required to inform you that response to this inquiry is required by law (title 13, United States Code). By the same law **YOUR REPORT TO THE CENSUS BUREAU IS CONFIDENTIAL**. It may be seen only by sworn Census employees and may be used only for statistical purposes. Your report **CANNOT** be used for purposes of taxation, investigation, or regulation. The law also provides that copies retained in your files are immune from legal process.

79-A9A-L4A
(3-80)



UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Data Preparation Division
Jeffersonville, Indiana 47132

FROM THE ASSISTANT DIRECTOR FOR
ECONOMIC AND AGRICULTURE CENSUSES
BUREAU OF THE CENSUS

Your completed report for the 1979 Farm Finance Survey still has not been received. It was mailed to you in March and was due 20 days after you received it. We are under a very tight schedule and need your report right away. If you have not returned your completed report, please complete and return it to us immediately in the preaddressed envelope provided. In case you mislaid the previous report, we have enclosed another copy for your use.

Response to this inquiry is required by law (title 13, United States Code). Let me assure you once more that your individual report is COMPLETELY CONFIDENTIAL by law. Your answers will be combined with those of other respondents to produce State and national totals.

Each address in our mailing list has a different Census File Number (CFN) and each has to be accounted for. If you received several forms with different CFN numbers for the same farming operation, mark the extra forms "Duplicate" and return them with your completed report, or separately if your completed report has crossed with this request in the mail.

If you did not conduct any agricultural operations in 1979, it is equally important to hear from you. Please complete items 1 through 4 of section 1 and section 15 of the report form and return it to us immediately so that further followups will not be necessary.

Sincerely,

RICHARD B. QUANRUD

Enclosures

IMPORTANT — In all correspondence, please include the 11-digit Census File Number shown in the address label of your report form.

79-A9A-L4A.1
(5-80)



UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Data Preparation Division
Jeffersonville, Indiana 47132

FROM THE ASSISTANT DIRECTOR FOR
ECONOMIC AND AGRICULTURE CENSUSES
BUREAU OF THE CENSUS

Your completed report for the 1979 Farm Finance Survey still has not been received. We are under a very tight schedule and need your report right away. If you have not returned your completed report, please complete and return it to us immediately in the preaddressed envelope provided. In case you mislaid the previous report, we have enclosed another copy for your use.

Response to this inquiry is required by law (title 13, United States Code). Let me assure you once more that your individual report is **COMPLETELY CONFIDENTIAL** by law. Your answers will be combined with those of other respondents to produce State and national totals.

Each address in our mailing list has a different Census File Number (CFN) and each has to be accounted for. If you received several forms with different CFN numbers for the same farming operation, mark the extra forms "Duplicate" and return them with your completed report, or separately if your completed report has crossed with this request in the mail.

If you did not conduct any agricultural operations in 1979, it is equally important to hear from you. Please complete items 1 through 4 of section 1 and section 15 of the report form and return it to us immediately so that further followups will not be necessary.

Sincerely,

RICHARD B. QUANRUD

Enclosures

IMPORTANT — In all correspondence, please include the 11-digit Census File Number shown in the address label of your report form.

79-A9A-L5
(3-80)



UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Data Preparation Division
Jeffersonville, Indiana 47132

**FROM THE ASSISTANT DIRECTOR FOR
ECONOMIC AND AGRICULTURE CENSUSES
BUREAU OF THE CENSUS**

Many farmers and ranchers have already completed and returned their report form for the 1979 Farm Finance Survey. If you have done so, please accept our thanks for your prompt cooperation.

If you have not completed your report form, please note that it is due 20 days from receipt. Your cooperation will help ensure that the urgently needed results from this survey will be available at the earliest possible date.

Sincerely,

RICHARD B. QUANRUD

79-A9A-L6A
(7-80)



UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Data Preparation Division
Jeffersonville, Indiana 47132

FROM THE AGRICULTURE DIVISION
BUREAU OF THE CENSUS

At this time our records still indicate we have not received your completed report for the 1979 Farm Finance Survey. We realize that this is an extremely busy time of year for you, but the importance of the information being collected and the need for early publication make it imperative that an immediate reply be received.

This survey is being conducted in order that farmer organizations, State and Federal agencies, and others will have more recent and comprehensive data for making decisions that will affect you and other farm operators. Without your report the results of this survey will not be as reliable as intended. It is to everyone's interest that decisions made in regard to farm loans and other financial and credit matters be based on the most reliable data available.

If you have not already done so, please take a few minutes and complete the report form you received several weeks ago, and mail it to us immediately. This will help assure reliable results from this survey and reduce the cost of further followups. To help save time, or if your records are not easily accessible, you may use estimates in completing this report. If you do not think the report form pertains to your operation, please complete as much of the report as possible and return it along with an explanation so that we will be able to process your return.

If you have questions on how to complete the report, please write to us at the above address using the reverse side of this letter.

Thank you for your cooperation.

Sincerely,

ARNOLD L. BOLLENBACHER
Chief, Agriculture Division

79-A9B-L1
(12-79)



UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Washington, D.C. 20233

OFFICE OF THE DIRECTOR

Reply to:

BUREAU OF THE CENSUS
1201 EAST TENTH STREET
JEFFERSONVILLE, INDIANA 47132

FROM THE DIRECTOR
BUREAU OF THE CENSUS

We are asking for your cooperation in providing information for the 1979 Farm Finance Survey.

Your name was given to us as owning or controlling land used for agricultural operations by the person or company whose name is entered in the top line of the address label. To minimize the cost of the survey, only a small sample of farms was selected for each State.

With rapidly changing cost-price relationships and the increasing use of credit, up-to-date information on the financial condition of agriculture in your State is urgently needed. You are the only source from which all the necessary information for this important survey can be obtained. Your report, when combined with information furnished by others, will provide totals on the financial condition of agriculture for your State for 1979.

Please fill out and return the enclosed report form within 20 days in the preaddressed envelope provided. Many questions on the form may not be applicable to your operation. These may be skipped by following the instructions on the form. If book figures are not available, please give your best estimates.

Your response to this inquiry is required by law (title 13, United States Code). By the same law, your report to the Bureau of the Census is confidential. It may be seen only by sworn Census employees and may be used only for statistical purposes.

If filing within the time period causes an undue burden, a request for an extension may be sent to the above address. Include the 11-digit Census File Number (CFN) as shown in your address label on all correspondence to us.

Your cooperation will be greatly appreciated.

Sincerely,

VINCENT P. BARABBA

Enclosures

79-A9B-L2
(1-80)



UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Data Preparation Division
Jeffersonville, Indiana 47132

FROM THE ASSISTANT DIRECTOR FOR
ECONOMIC AND AGRICULTURE CENSUSES
BUREAU OF THE CENSUS

Many of the agricultural landlords across the Nation have already completed and returned their reports for the 1979 Farm Finance Survey. If you have already done so, we appreciate your promptness and thank you for it.

If you have not completed and returned your report, please do so as soon as possible. Since this survey consists of the farms drawn by lot in a selected cross-section sample of all agricultural operations, the lack of data for any selected farm will be harmful to the accuracy of the results. It is highly important that we receive a report from everyone in the sample. Prompt reply will eliminate the need for further followups.

In case your report has been lost or mislaid, we are enclosing another copy for your use. A preaddressed envelope is also enclosed for your convenience.

If you have any questions about this report, please write to us at the above address. In all correspondence to us, please include the 11-digit Census File Number (CFN) appearing in the upper left-hand corner of the address label on your report form.

Thank you for your cooperation.

Sincerely,

RICHARD B. QUANRUD

Enclosures

79-A9B-L3
(1-80)



UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Data Preparation Division
Jeffersonville, Indiana 47132

Date:

FROM THE ASSISTANT DIRECTOR FOR
ECONOMIC AND AGRICULTURE CENSUSES
BUREAU OF THE CENSUS

We have not received your completed 1979 Farm Finance Survey report which was mailed to you recently. If you mailed your report within the last several days, it may have crossed this letter in the mail. If so, please disregard this reminder and accept our thanks for your cooperation.

If you have not completed and returned your report, please do so immediately. We must have your report if the survey results for your State and the Nation are to be accurate and complete. Your response is **COMPLETELY CONFIDENTIAL** by law (title 13, United States Code).

If you have any questions on how to complete the report, please write to us at the above address using the reverse side of this letter.

Sincerely,

RICHARD B. QUANRUD

NOTICE — In compliance with the Privacy Act (P.L. 93579) of 1974, we are required to inform you that response to this inquiry is required by law (title 13, United States Code). By the same law **YOUR REPORT TO THE CENSUS BUREAU IS CONFIDENTIAL**. It may be seen only by sworn Census employees and may be used only for statistical purposes. Your report **CANNOT** be used for purposes of taxation, investigation, or regulation. The law also provides that copies retained in your files are immune from legal process.

79-A9B-L4
(1-80)



UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Data Preparation Division
Jeffersonville, Indiana 47132

FROM THE ASSISTANT DIRECTOR FOR
ECONOMIC AND AGRICULTURE CENSUSES
BUREAU OF THE CENSUS

Your completed report for the 1979 Farm Finance Survey still has not been received. It was due 20 days after you received it. We are on a very tight schedule for publishing the data for your State and need your report right away. If you have not returned your completed report, please complete and return it to us immediately in the preaddressed envelope provided. In case you mislaid the previous report form, we have enclosed another copy for your use.

Response to this inquiry is required by law (title 13, United States Code). Let me assure you once more that your individual report is **COMPLETELY CONFIDENTIAL** by law. Your answers will be combined with those of other respondents to produce State and national totals.

Sincerely,

RICHARD B. QUANRUD

Enclosures

IMPORTANT — In all correspondence, please include the 11-digit Census File Number shown in the address label of your report form.

DUE DATE: 20 DAYS AFTER RECEIPT OF FORM

Form Approved: O.M.B. No. 41-579045

NOTICE - Response to this inquiry is required by law (title 13, U.S. Code). By the same law your report to the Census Bureau is confidential. It may be seen only by sworn Census employees and may be used only for statistical purposes. The law also provides that copies retained in your files are immune from legal process. In correspondence pertaining to this report, please refer to the 11-digit Census File Number (CFN). (Please correct any errors in name and address including ZIP code)	FORM 79-A19.1 (11-2-79) U.S. DEPARTMENT OF COMMERCE BUREAU OF THE CENSUS CENSUS OF HORTICULTURAL SPECIALTIES GREENHOUSE PRODUCTS, NURSERY PRODUCTS, MUSHROOMS, AND SOD COMPLETE AND RETURN TO Bureau of the Census 1201 East Tenth Street Jeffersonville, Indiana 47132 <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <tr> <th colspan="4" style="text-align: center; font-size: small;">CENSUS USE ONLY</th> </tr> <tr> <td style="width: 25%; text-align: center; font-size: x-small;">012</td> <td style="width: 25%; text-align: center; font-size: x-small;">013</td> <td style="width: 25%; text-align: center; font-size: x-small;">014</td> <td style="width: 25%; text-align: center; font-size: x-small;">015</td> </tr> <tr> <td style="text-align: center; font-size: x-small;">016</td> <td style="text-align: center; font-size: x-small;">017</td> <td style="text-align: center; font-size: x-small;">018</td> <td style="text-align: center; font-size: x-small;">019</td> </tr> </table>	CENSUS USE ONLY				012	013	014	015	016	017	018	019
CENSUS USE ONLY													
012	013	014	015										
016	017	018	019										

Important - PLEASE READ INSTRUCTIONS BEFORE COMPLETING EACH ITEM.**SECTION 1 TYPE OF HORTICULTURAL OPERATION IN 1979**

1. Type of business - Mark (X) all appropriate boxes

020 ☐ Bedding plant grower ☐ Foliage plant grower ☐ Potted flowering plants and/or cut flower grower ☐ Nurseryman - Grows and sells woody plants, including fruit trees and environmental ☐ Sod grower ☐ Greenhouse vegetable grower ☐ Flower seed grower	021 ☐ Bulb grower ☐ Vegetable seed grower ☐ Mushroom grower ☐ Other grower - Specify _____ ☐ Florist - Sells but does not grow own flowers and plants - Skip to section 17 ☐ Garden center operator - Sells but does not grow own flowers and plants - Skip to section 17 ☐ Other horticultural operator - Specify _____

2. Type of ownership - Mark (X) the appropriate box

- 022 ☐ Individual proprietor ☐ Partnership ☐ Corporation

3. Do you have more than one place of business?

- 023 ☐ NO - Go to section 2 ☐ YES - Give information requested below for EACH place of business. Include all places of business in this report. (If any explanations or remarks are necessary, enter them in section 17.)

Name of establishment	Address (Number and street, RD number, city or post office, State, ZIP code)	Type of operation	County

SECTION 2 Were any FLOWERING PLANTS OR PLANTS TO PRODUCE CUT FLOWERS OR GREENS grown on this place in 1979?

- 002 ☐ YES - Complete parts A, B, C, and D.
- ☐ NO - Go to section 3

■ **Part A - Potted Flowering Plants** - Enter plant names and codes from list below for items 1 and 2. Complete items 3 through 5 for all plants grown; indicate "None" for items not applicable.

☐ None

1. Plant name									
2. Code									
3. Specify unit of sales: hanging baskets or pots									
a. Average number of plants per unit									
4. Total sales - Include both wholesale and retail									
a. Total number of units sold									
b. Number sold by size of pot									
(1) Under 4 inches									
(2) 4 through 6 inches									
(3) Over 6 inches									
c. Total gross sales - Dollars only									
d. Gross sales by size of pot - Dollars only									
(1) Under 4 inches									
(2) 4 through 6 inches									
(3) Over 6 inches									
5. Wholesale sales only									
a. Number of units sold - Include hanging baskets									
b. Gross sales - Dollars only									

Plant Name	Code	Plant Name	Code	Plant Name	Code	Plant Name	Code
Azalea	024	Chrysanthemum*	079	Gloxinia	134	Poinsettia	189
Begonia	035	Cyclamen	090	Hyacinth*	145	Rose*	200
Calceolaria	046	Daffodil (Narcissus)*	101	Hydrangea	156	Sainpaulia (African Violet)	211
Christmas Cherry	057	Fuchsia	112	Lily, Easter and other*	167	Tulip*	222
Christmas Pepper	068	Geraniums	123	Orchids*	178	Other - Specify on line 1 above	233

* Report cut flowers in part B

SECTION 2 Continued**Part B - Cut Flowers - Enter plant name and code from the list below. (For Hawaii, also see section 16.)**☐ None

1. Plant name
2. Code
3. Specify unit of sales, for example, dozen, bunch, each, etc.
- a. Average number of stems per unit
4. Total sales - Include both wholesale and retail
- a. Number of units sold
- b. Gross sales - Dollars only
5. Wholesale sales only
- a. Number of units sold
- b. Gross sales - Dollars only

Plant Name	Code	Plant Name	Code	Plant Name	Code	Plant Name	Code
Anthurium	244	Daisies	294	Orchid, Cattleya	349	Stephanotis	394
Aster	249	Delphinium	299	Orchid, Cymbidium	354	Stock	399
Bird of Paradise (Strelitzia)	254	Freesia	304	Orchid, Cypripedium	359	Tulips	404
Carnation, standard	259	Gardenia	309	Orchid, Vanda	364	Violets	409
Carnation, miniature	264	Ginger	314	Orchid, other	369	Zinnia	414
Chrysanthemum, pompon	269	Gladiolus	319	Roses, Hybrid Tea (Standard)	374	Other cut flowers - Specify on line 1 above	419
Chrysanthemum, standard	274	Gypsophila	324	Roses, Sweetheart or miniature	379		
Chrysanthemum, Fuji or spider	279	Hyacinth	329	Snapdragon	384		
Daffodil (Narcissus)	284	Iris	334	Statice	389		
Dahlia	289	Lily of the Valley	339				
		Lily, Easter and other	344				

Part C - Unfinished Stock: Unpotted Plants, Rooted Cuttings, etc., for growing on - Enter plant name and code from list below.☐ None

1. Plant name
2. Code
3. Specify unit of sales, for example, dozen, flats, packs, each, etc.
- a. Average number of plants per unit
4. Total sales - Include both wholesale and retail
- a. Number of units sold
- b. Gross sales - Dollars only
5. Wholesale sales only
- a. Number of units sold
- b. Gross sales - Dollars only

Plant Name	Code	Plant Name	Code	Plant Name	Code	Plant Name	Code
Azalea	424	Carnation	439	Gardenia	454	Poinsettia	469
Begonia	429	Chrysanthemum	444	Geranium	459	Saintpaulia	474
Cacti and succulents	434	Foliage plants	449	Hydrangea	464	Other - Specify on line 1 above	479

Part D - Cut Cultivated Greens - Enter plant name and code from the list below.☐ None

1. Plant name
2. Code
3. Specify unit of sales, for example, dozen, bunch, each, etc.
- a. Average number of stems per unit
4. Total sales - Include both wholesale and retail
- a. Number of units sold
- b. Gross sales - Dollars only
5. Wholesale sales only
- a. Number of units sold
- b. Gross sales - Dollars only

Plant Name	Code	Plant Name	Code	Plant Name	Code	Plant Name	Code
Asparagus Plumosus	484	Emerald	499	Leatherleaf	514	Sprengerii	529
Bokwood	489	Holly	504	Pittosporum	519	Ti Leaves	534
Croton	494	Ivy	509	Similax	524	Other	539

SECTION 3 Was any area used to produce selected Cut Flowers, Flowering Potted Plants, Bedding Plants, and plants to produce selected items?

003

- 1 ☐ YES - Complete the table below.
- 2 ☐ NO - Go to section 4

	Total plants grown in 1979	Gross area in production in 1979	Gross area intended for production in 1980
1. Anthuriums	544	Sq. ft.	545
2. Bedding plants, Flowering and Foliar types	546	Sq. ft.	547
3. Bedding plants, Vegetable types	548	Sq. ft.	549
4. Carnation, standard	550	Sq. ft.	552
5. Carnation, miniature	553	Sq. ft.	555
6. Chrysanthemum, Pompon	556	Sq. ft.	558
7. Chrysanthemum, Standard, Fuji, or Spider	559	Sq. ft.	561
8. Chrysanthemum, potted	562	Sq. ft.	563
9. Gladiolus	564	/10 Acres	565
10. Snapdragon	566	Sq. ft.	567
11. Rose, Hybrid tea (Standard)	568	Sq. ft.	570
12. Rose, miniature	571	Sq. ft.	573
13. Potted geranium	574	Sq. ft.	575
14. Potted poinsettia	576	Sq. ft.	577
15. Potted hydrangea	578	Sq. ft.	579
16. Potted lily	580	Sq. ft.	581
17. Other - Specify	582	Sq. ft.	583

SECTION 4 ⁰⁰⁴ **Were any BEDDING PLANTS (including bedding vegetables) grown for sale on this place in 1979?**
 1 ☐ YES — Complete table below. Enter plant name and code from the list below for items 1 and 2. Complete items 3 through 5 for all plants grown. Indicate "None" for items not applicable.
 2 ☐ NO — Go to section 5

1. Plant name										
2. Code										
3. Specify unit of sales, for example, dozen, flats (11X22"), packs, or specify unit and size										
a. Average number of plants per unit										
4. Total sales — Include both wholesale and retail										
a. Total number of units sold										
b. Total gross sales — Dollars only	\$	.00	\$	.00	\$	.00	\$	.00	\$	.00
5. Wholesale sales only										
a. Number of units sold										
b. Gross sales — Dollars only	\$	.00	\$	.00	\$	.00	\$	.00	\$	.00

Plant Name — Flowers	Code	Plant Name — Flowers	Code	Plant Name — Vegetables	Code
Ageratum	584	Marigold	619	Broccoli	659
Alyssum	589	Pansy	624	Cabbage	664
Begonia	594	Petunia	629	Peppers, sweet or hot	669
Coleus	599	Portulaca	634	Tomatoes	674
Dusty Miller	604	Salvia	639	Other — Specify on line 1 above	679
Geraniums	609	Snapdragon	644		
Impatiens	614	Zinnia	649		
		Other — Specify on line 1 above	654		

SECTION 5 ⁰⁰⁵ **Were there any FOLIAGE PLANTS grown for sale on this place in 1979?**
 1 ☐ YES — Complete table below by entering appropriate name and code from the list below.
 2 ☐ NO — Go to section 6

1. Plant name										
2. Code										
3. Specify unit of sales: hanging baskets, pots, etc.										
a. Average number of plants per unit										
4. Total sales — Include both wholesale and retail										
a. Total number of units sold										
b. Number sold by size of pot										
(1) Under 4 inches										
(2) 4 through 6 inches										
(3) Over 6 inches										
c. Total gross sales — Dollars only	\$	.00	\$	.00	\$	.00	\$	.00	\$	.00
d. Gross sales by size of pot — Dollars only										
(1) Under 4 inches	\$	.00	\$	.00	\$	.00	\$	.00	\$	.00
(2) 4 through 6 inches	\$	.00	\$	.00	\$	.00	\$	.00	\$	.00
(3) Over 6 inches	\$	.00	\$	.00	\$	.00	\$	.00	\$	.00
5. Wholesale sales only										
a. Number of units sold — Include hanging baskets										
b. Gross sales — Dollars only	\$	.00	\$	.00	\$	.00	\$	.00	\$	.00

Plant Name	Code	Plant Name	Code	Plant Name	Code
Cacti and succulents	684	Ivy	728	Schefflera	761
Dieffenbachia	695	Palms	739	Other — Specify on line 1 above	772
Dracaena	706	Philodendron	750		
Ferns	717				

6. Foliage plants, for indoor or patio use — Exclude hanging baskets

a. Area in benches and beds				
b. What was the cost of unfinished foliage plants and rooted cuttings purchased from other growers for growing on?				

SECTION 6 ⁰⁰⁶ **Was SOD grown for sale on this place in 1979?**
 1 ☐ YES — Complete section below
 2 ☐ NO — Go to section 7

1. Sod grown for sale				

SECTION 7 ⁰⁰⁷ **Were BULBS, CORMS, or RHIZOMES grown for sale on this place in 1979?**
 1 ☐ YES — Complete section below
 2 ☐ NO — Go to section 8

1. Bulbs, corms, or rhizomes grown for sale				

Area in production in 1979 Square feet	Expected area in production for 1980 Square feet	Cost of purchased plants and cuttings Dollars only
783	784	785
		\$
		.00

Acres harvested	Value of sales in 1979 Dollars only	
Whole acres	Tenths	Total gross sales
786	787	788
	/10	\$
		.00

Acres harvested	Value of sales in 1979 Dollars only	
Whole acres	Tenths	Total gross sales
789	790	791
	/10	\$
		.00

SECTION 8 Were any CULTIVATED MUSHROOMS grown for sale on this place in 1979? — See Information Sheet 008 1 ☐ YES — Complete section below 2 ☐ NO — Go to section 9					
	Pounds produced	Bed area Square feet	Value of sales in 1979 Dollars only		
			Total gross sales		Gross sales at wholesale prices
1. Cultivated mushrooms	792	793	794	795	796
			\$	.00 \$	.00

SECTION 9 Were there any NURSERY PRODUCTS grown for sale on this place in 1979? 009 1 ☐ YES — Complete parts A, B, and C below 2 ☐ NO — Go to section 10								
■ Part A — How many nursery produced plants were sold in 1979?								
	None	Total number sold	Total sales		Wholesale sales			
1. Field grown plants	796	797	798	799	800			
		\$	.00 \$	.00 \$	.00			
2. Container grown plants	801	802	803	804	805			
		\$	.00 \$	.00 \$	.00			
3. Other — Specify	806	807	808	809	810			
		\$	.00 \$	.00 \$	.00			
■ Part B — Lining-out stock — Include understock for budding and grafting — Enter name and code from the list below. None								
1. Plant name or plant group								
2. Code								
3. Total sales — Include both wholesale and retail								
a. Number sold	1	1	1	1	1			
b. Gross sales — Dollars only	\$	.00 \$	.00 \$	.00 \$	.00			
4. Wholesale sales only	2	2	2	2	2			
a. Number sold	3	3	3	3	3			
b. Gross sales — Dollars only	\$	.00 \$	.00 \$	.00 \$	.00			
<table style="width: 100%; border: none;"> <tr> <td style="width: 33%; vertical-align: top;"> FRUIT AND NUT STOCK Citrus stock 805 Deciduous fruit and nut stock 809 Other evergreen fruit and nut stock 813 </td> <td style="width: 33%; vertical-align: top;"> DECIDUOUS ENVIRONMENTALS Ash 817 Maple 821 Oak 825 Rose 829 Other 833 </td> <td style="width: 33%; vertical-align: top;"> EVERGREEN ENVIRONMENTALS Azalea, Rhododendron 837 Juniper 841 Pine 845 Spruce 849 Yew 853 Other 857 </td> </tr> </table>						FRUIT AND NUT STOCK Citrus stock 805 Deciduous fruit and nut stock 809 Other evergreen fruit and nut stock 813	DECIDUOUS ENVIRONMENTALS Ash 817 Maple 821 Oak 825 Rose 829 Other 833	EVERGREEN ENVIRONMENTALS Azalea, Rhododendron 837 Juniper 841 Pine 845 Spruce 849 Yew 853 Other 857
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■ Part C — Environmental Plants, Fruit and Nut Trees, Grapevines, and Small Fruit Plants — Enter name and code from list below: None								
1. Plant name or plant group								
2. Code								
3. Total sales — Include both wholesale and retail								
a. Number sold	1	1	1	1	1			
b. Gross sales — Dollars only	\$	.00 \$	.00 \$	.00 \$	.00			
4. Wholesale sales only	2	2	2	2	2			
a. Number sold	3	3	3	3	3			
b. Gross sales — Dollars only	\$	.00 \$	.00 \$	.00 \$	.00			
<table style="width: 100%; border: none;"> <tr> <td style="width: 33%; vertical-align: top;"> DECIDUOUS SHADE TREES Ash 861 Maple 865 Oak 869 Other 873 </td> <td style="width: 33%; vertical-align: top;"> DECIDUOUS FLOWERING TREES Apple 877 Cherry and plum 881 Dogwood 885 Magnolia 889 Peach 893 Pear 897 Other 901 </td> <td style="width: 33%; vertical-align: top;"> OTHER ENVIRONMENTALS Deciduous shrubs (except roses) 905 Herbaceous plants 909 Roses 913 Vines 917 Other environmentals 921 </td> </tr> </table>						DECIDUOUS SHADE TREES Ash 861 Maple 865 Oak 869 Other 873	DECIDUOUS FLOWERING TREES Apple 877 Cherry and plum 881 Dogwood 885 Magnolia 889 Peach 893 Pear 897 Other 901	OTHER ENVIRONMENTALS Deciduous shrubs (except roses) 905 Herbaceous plants 909 Roses 913 Vines 917 Other environmentals 921
DECIDUOUS SHADE TREES Ash 861 Maple 865 Oak 869 Other 873	DECIDUOUS FLOWERING TREES Apple 877 Cherry and plum 881 Dogwood 885 Magnolia 889 Peach 893 Pear 897 Other 901	OTHER ENVIRONMENTALS Deciduous shrubs (except roses) 905 Herbaceous plants 909 Roses 913 Vines 917 Other environmentals 921						
<table style="width: 100%; border: none;"> <tr> <td style="width: 33%; vertical-align: top;"> BROAD-LEAF EVERGREENS Azalea, Rhododendron 925 Euonymus 929 Holly 933 Pittosporum 937 Other 941 </td> <td style="width: 33%; vertical-align: top;"> NARROW-LEAF EVERGREENS Juniper 945 Pine 949 Spruce 953 Yew 957 Other 961 </td> <td style="width: 33%; vertical-align: top;"> FRUIT AND NUT PLANTS Citrus and subtropical fruit trees 965 Deciduous fruit and nut trees 969 Grapevines 973 Small fruit plants (strawberry, blueberry, etc.) 977 </td> </tr> </table>						BROAD-LEAF EVERGREENS Azalea, Rhododendron 925 Euonymus 929 Holly 933 Pittosporum 937 Other 941	NARROW-LEAF EVERGREENS Juniper 945 Pine 949 Spruce 953 Yew 957 Other 961	FRUIT AND NUT PLANTS Citrus and subtropical fruit trees 965 Deciduous fruit and nut trees 969 Grapevines 973 Small fruit plants (strawberry, blueberry, etc.) 977
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SECTION 10 Were any VEGETABLE SEEDS or VEGETABLES grown under glass or other protection for sale on this place in 1979? — Report bedding vegetable plants in section 4. 010 1 ☐ YES — Complete section below 2 ☐ NO — Go to section 11					
	Area used in 1979		Value of sales in 1979 Dollars only		
	Sq. ft. under glass or other protection	Acres in the open Whole acres Tenths	Total gross sales		Gross sales at wholesale prices
1. Vegetable seed	981	982	983	984	985
		/10	\$	.00 \$	.00
2. Cucumbers	986	987	988	989	990
			\$	.00 \$	.00
3. Lettuce	991	992	993	994	995
			\$	.00 \$	.00
4. Tomatoes	996	997	998	999	1000
			\$	.00 \$	.00
5. Other vegetables — Specify	1001	1002	1003	1004	1005
			\$	.00 \$	.00

SECTION 11 Were any FLOWER SEEDS grown for sale on this place in 1979?

011 1 ☐ YES - Complete section below
2 ☐ NO - Go to section 12

	None	Acres grown		Production Pounds of clean seed	Value of sales in 1979 Dollars only	
		Whole acres	Tenths		Total gross sales	Gross wholesale sales
1. Aster	☐	X01	/10	X02	X03	X04
					\$	\$
2. Marigold	☐	X05	/10	X06	X07	X08
					\$	\$
3. Petunia	☐	X09	/10	X10	X11	X12
					\$	\$
4. Snapdragon	☐	X13	/10	X14	X15	X16
					\$	\$
5. Stock	☐	X17	/10	X18	X19	X20
					\$	\$
6. Sweet Pea	☐	X21	/10	X22	X23	X24
					\$	\$
7. Zinnia	☐	X25	/10	X26	X27	X28
					\$	\$
8. All other flower seeds - Specify _____	☐	X29	/10	X30	X31	X32
					\$	\$

SECTION 12 LAND, STRUCTURES, EQUIPMENT, AND IRRIGATION

1. What is your best estimate of the current market value of land and buildings owned and/or rented by this business on December 31, 1979? Dollars only

X33 \$.00

2. What is the estimated market value of all machinery and equipment usually kept on this place and used for the horticultural operations? Dollars only

X34 \$.00

3. Did you produce florist crops, bedding plants, foliage plants or nursery products in 1979?

X35 1 ☐ YES - Complete items a through d below
2 ☐ NO - Go to item 4

	Potted flowering plants and/or cut flowers	Bedding plants (include vegetable plants)	Foliage plants	Nursery crops (include propagating area)	Anthuriums (Hawaii only)
a. How much greenhouse space in 1979 was used primarily for the production of	X36 Sq. ft.	X37 Sq. ft.	X38 Sq. ft.	X39 Sq. ft.	
b. How much land covered by shade structures (frames, cloth, lath, saran, etc.) was used in 1979 primarily for the production of	X40 Sq. ft.	X41 Sq. ft.	X42 Sq. ft.	X43 Sq. ft.	X44 Sq. ft.
c. (Hawaii only) - How much natural shade area (i.e., "hapuu," citrus, etc.) was used in 1979 for the production of	X45 /10 Acres	X46 /10 Acres	X47 /10 Acres	X48 /10 Acres	X49 /10 Acres
d. How much land area was used in 1979 for the outdoor production of (excluding land covered by shade structures) - Report in acres.	X50 /10 Acres	X51 /10 Acres	X52 /10 Acres	X53 /10 Acres	X54 /10 Acres

4. Did you have land area covered by greenhouses in 1979?

X55 1 ☐ YES - Complete items a through e below
2 ☐ NO - Go to item 5

a. How much land area was covered by greenhouses? None

X56 Square feet

b. How much of the greenhouse area was under glass? None

X57 Square feet

c. How much of the greenhouse area was a permanent structure covered by plastic film? None

X58 Square feet

d. How much of the greenhouse area was under fiberglass? None

X59 Square feet

e. What do you estimate the average (F°) sustained temperature to be for heating? Degrees Fahrenheit

X60

5. Did you irrigate land in 1979 (exclude land covered by greenhouses)?

X61 1 ☐ YES - Complete items a through c below
2 ☐ NO - Go to section 13

a. How many acres were irrigated for the outdoor production of nursery products? None

X62 Acres irrigated

b. How many acres were irrigated for the outdoor production of sod? None

X63 Acres irrigated

c. How many acres were irrigated for the production of other horticultural products grown in the open? None

X64 Acres irrigated

SECTION 13 SALES AND PURCHASES IN 1979 - Report such figures to the nearest WHOLE DOLLAR. If book figures are not available, give your best estimate.

1. What were your gross receipts or gross sales during 1979 of all greenhouse and nursery products grown - cut flowers, flowering and foliage plants (including cacti and succulents), bedding plants, cultivated florist greens, nursery products, bulbs, flower and vegetable seeds, vegetables grown under glass, cultivated mushrooms, and sod? - Do not include the sale of fertilizer, spray materials, garden tools, etc. Dollars only

X65 \$.00

2. Of the total gross receipts or gross sales -

a. How much was wholesale sales? Dollars only

X66 \$.00

b. How much was retail sales? Dollars only

X67 \$.00

3. What were your returns and allowances (discounts and value of returned merchandise)? Dollars only

X68 \$.00

SECTION 14 SELECTED PRODUCTION EXPENSES FOR THE TOTAL HORTICULTURAL OPERATION IN 1979 - Report figures to the nearest WHOLE DOLLAR. If book figures are not easily available, give your best estimate.																																											
1. What was the cost of plants, seeds, bulbs, and florist and nursery stock purchased and used in the production activity during 1979 (include cost of mushroom spawn)?		Dollars only x69 \$.00																																									
2. What was the cost of commercial fertilizer (all forms) used in 1979 (exclude purchases for resale)?		x70 \$.00																																									
3. What was the cost of all other agricultural chemicals purchased for use in production activity (lime, insecticides, herbicides, fungicides, other pesticides, etc.)? - Omit fertilizer		x71 \$.00																																									
4. Report cost of energy for the horticultural production operation in 1979. Include all heating and cooling costs. Exclude heat or air conditioning only for offices, retail outlets, etc.																																											
<table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 10%;"></th><th style="width: 15%;">Expenditures Dollars only</th><th style="width: 15%;">Gallons purchased in 1979</th><th style="width: 15%;">Storage capacity (if any)</th></tr></thead><tbody><tr><td style="text-align: center;">None</td><td></td><td></td><td></td></tr><tr><td>a. Gasoline</td><td>x72 \$.00</td><td>x73</td><td>x74 Gal.</td></tr><tr><td>b. Diesel fuel</td><td>x75 \$.00</td><td>x76</td><td>x77 Gal.</td></tr><tr><td>c. LP gas, butane, propane</td><td>x78 \$.00</td><td>x79</td><td>x80 Gal.</td></tr><tr><td>d. Fuel oil</td><td>x81 \$.00</td><td>x82</td><td>x83 Gal.</td></tr><tr><td>e. Natural gas</td><td>x84 \$.00</td><td></td><td></td></tr><tr><td>f. Kerosene</td><td>x85 \$.00</td><td></td><td></td></tr><tr><td>g. Electricity</td><td>x86 \$.00</td><td></td><td></td></tr><tr><td>h. Other - wood, coal, coke, etc.</td><td>x87 \$.00</td><td></td><td></td></tr></tbody></table>					Expenditures Dollars only	Gallons purchased in 1979	Storage capacity (if any)	None				a. Gasoline	x72 \$.00	x73	x74 Gal.	b. Diesel fuel	x75 \$.00	x76	x77 Gal.	c. LP gas, butane, propane	x78 \$.00	x79	x80 Gal.	d. Fuel oil	x81 \$.00	x82	x83 Gal.	e. Natural gas	x84 \$.00			f. Kerosene	x85 \$.00			g. Electricity	x86 \$.00			h. Other - wood, coal, coke, etc.	x87 \$.00		
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SECTION 15 GREENHOUSE, NURSERY, AND OTHER HORTICULTURAL LABOR USED ON THIS PLACE IN 1979 Exclude employees not directly involved in growing operation, i.e., garden center clerks. If completing this report before January 12, 1980, estimate the number of employees expected to be on the payroll.																																											
1. How many employees were on the payroll of this business during the pay period including January 12, 1980 (January 7 thru January 12)?		None x88																																									
2. How many of the employees on the payroll during the pay period including January 12, 1980, hold year-round or full-time positions?		x89																																									
3. How many unpaid family members worked for this business at any time during the week including January 12, 1980 (January 7 thru January 12)?		x90																																									
4. What was the total of the cash wages paid (before taxes and other deductions) to employees on the payroll of this business during 1979?		x91 \$.00																																									
5. Of the hired workers in 1979, how many were -		x92 \$.00																																									
a. Part-time employees (worked less than 150 days)?		x93 \$.00																																									
b. Full-time employees (worked 150 days or more)?		x94 \$.00																																									
SECTION 16 CUT AND LEI FLOWERS - (FOR HAWAII ONLY) Enter plant name and code from the list below. ☐ None																																											
1. Plant name																																											
2. Code																																											
3. Specify unit of sales, for example, dozen, bunch, each, spray, etc.																																											
a. Average number of stems per unit																																											
4. Total sales - Include both wholesale and retail																																											
a. Number of units sold																																											
b. Gross sales - Dollars only																																											
5. Wholesale sales only																																											
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SECTION 17 REMARKS AND EXPLANATIONS - If you reported no sales in sections 2 thru 11, please explain here the type of horticultural enterprise, if any, you operated in 1979. Also add any other remarks here. Use additional sheet(s), if necessary, and attach.																																											
SECTION 18 SIGNATURE of person completing this report - Please check your answers, then sign below.																																											
Name		Date																																									
Address (Number and street, city, State, ZIP code)		Telephone																																									
		Area code Number																																									
When the U.S. Bureau of the Census data have been tabulated, would you like a summary sheet showing results for your State?																																											
y82 1 ☐ Yes 2 ☐ No																																											

FORM 79-A19(1)
(12-4-79)U.S. DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS

INSTRUCTION SHEET

1979 CENSUS OF HORTICULTURAL SPECIALTIES

1. GENERAL

Please refer to the instructions given below for completing your form. The enclosed census report form is being used by producers and growers throughout the entire United States. Because it is meant for use in all parts of the country, it may contain sections and inquiries which do not apply to you. In this case, mark the "None" or "No" box and go on to the next item or section.

2. IF YOU RECEIVE MORE THAN ONE REPORT FORM

If you have multiple horticulture operations, you should complete a report for EACH SEPARATE and DISTINCT production unit, that is, each individual greenhouse, nursery, etc., or combination of establishments, etc., for which you maintain SEPARATE records of operating expenses and sales, inventories, and production. Return any duplicate or extra report forms (if possible in the same envelope with the report(s) you complete) so we can remove the extra addresses from our mail register. In the space to the right of the address label of the report form you complete, write the 11-digit Census File Number (CFN) from the label of the extra form or forms.

In the cooperative data collection effort between the Bureau of the Census and the U.S. Department of Agriculture (USDA), your name and address may have been included by both. Although we have done our best to un-duplicate the lists, we know it is not possible to recognize and delete all alternate addresses before mailing. If you received a report form from both the Bureau of the Census and the USDA you should:

- Indicate on both forms that you have received a duplicate from the other agency.
 - On the USDA form, write down the 11-digit CFN number located in the mailing label of the census form.
 - On the census form, write down the 10-digit ID source number located in the mailing label of the USDA form.
 - Enter the correct name and/or address if the labels are in error.
- Complete the USDA form.
- Return each form to its respective agency in the envelope provided.

3. PARTNERSHIP OPERATIONS

A partnership is an association of two or more persons who have agreed (informally or under legal contract) on the amount of their contributions and profit distributions.

Complete only ONE report for the entire partnership operation, including all partners' shares on the same report. If two or more report forms were received for the partnership, see instruction 2 above.

Partners who also have separate operations of their own should complete reports for those separate operations. For additional information on partnerships, see section 1 in instruction 5.

4. HOW TO ENTER YOUR RESPONSES ON THE REPORT FORM

Please enter your answers in the proper spaces, on the correct lines, and in the units requested, i.e., dollars, pot size, pounds, etc. Write any explanation outside the answer spaces or on a separate sheet of paper. Enter whole numbers unless the "Tenths" column is provided, such as reporting flower seeds in section 11. If you have 1/2, 1/4, or 1/3 of an acre, convert to the nearest tenths. For example, convert 1/2 to 5/10, 1/3 to 3/10, 1/4 to 2/10, etc.

If you do not have exact figures, please give your best estimates. You may indicate "Est." (for estimated) beside the answer if you like. For all dollar items, we need only whole dollars; cents are not required.

5. COMPLETING THE REPORT FORM

Section 1 — Type of Horticultural Operation in 1979

Item 1 — Type of Business — Mark (X) in all appropriate boxes which best describe the type of business or activity you performed during 1979. If you did not operate any type of horticultural operation during any part of 1979, you should:

- Skip to section 18 and complete Name, Address, Telephone number, etc.
- Explain briefly in section 17 (Remarks and Explanations) or on a separate paper that you did not operate a horticultural business in 1979, for example, "Business leased to others," "Sold business," "Date of sale," "Date of lease," "Date of retirement," etc. The date(s) the transaction occurred are essential. If you sold your business or leased it out to others, please give the name and address of the current owner or operator, if known.

If you marked Florist, Garden Center Operator, or other nongrower horticulture operator, then you should skip to section 17 and give a brief explanation of the type of horticultural operation you operated in 1979.

Item 2 — Type of Ownership — Use the following definitions to assist you in determining the type of ownership for your operation:

Individual Proprietor (or Family Operation) — Defined as a business organization controlled and operated by an individual (includes family operations that are not incorporated and not operated under a partnership agreement).

Partnership — Defined as two or more persons who have agreed on the amount of their contribution (capital and effort) and the distribution of profits. Co-ownership of land by husband and wife or joint filing of income tax forms by husband and wife do not constitute a partnership, unless the agreement to share contributions, decisionmaking, profits, and liabilities exists. Producing products under contract or under share rental agreements do not constitute partnerships.

Corporation — Defined as a legal entity or artificial person created under the laws of a State to carry on a business; does not include cooperatives.

Sections 2—11 and 16 — Greenhouse Products, Nursery Products, Mushrooms, and Sod

Sections 2 through 11 and 16 provide space for reporting products harvested during the year 1979. Please report your products in the appropriate section. If you harvested more than one different crop from the same area or acreage, report the area or acreage for each different crop and fill in the appropriate answer spaces related to each crop harvested. If you have more than one harvest of the same crop on an area, report the area or acreage only once. However, since the value of multiple harvests usually appears high, it would help census accuracy if you will note in the margin how many harvests you made of that crop from one area.

Cold frames — For products grown in hot beds or cold frames, report only the area in the beds or frames.

In the open — For plants produced in the open, give the area of plants in acres and tenths of acres. Round fractions to whole acres except where tenths are requested, as for flower seeds.

Under protection — For plants produced under glass or other protection, show the area of plants in square feet. Report the greenhouse area only once for each product, even though the same product was grown more than once.

Unit of sales — The units of measure on the report form are those most commonly used throughout the country. If you use a different unit of measure, please specify the unit and size or convert your figure to the unit requested.

Value of sales — When reporting value of sales, do not include products bought for resale without additional growing; do not report non-crop garden center items, such as chemicals, fertilizers, etc. Report the total value of sales (wholesale or retail) for those products grown on this place and sold directly from this place. Report only the wholesale value of any products sold through a retail outlet which is not on this place or if the retail outlet is considered a separate business establishment. Estimates are acceptable if exact figures are not available.

To Report Plants in Sections 2, 4, 5, 9, and 16

In each of these sections, report any of the plants which you grow that are listed in that section.

- Find the plant name and the corresponding code number in the list in the section.
- Enter plant name and code on the first two lines of the section.
- Enter the information requested beside the headings of the remaining lines of the column.

To Report Plants in Sections 3, 10, and 11

In these three sections, separate lines are provided for reporting each product grown. Enter the information requested in each column beside the appropriate product.

Section 6 — Sod

Report the total acres of sod harvested from this place in 1979 and the value of sales of the sod. Acreage planted to grass intended for sale as sod in subsequent years and not harvested in 1979 should not be reported.

Section 7 — Bulbs, Corms, or Rhizomes

Report the total acres of bulbs harvested from this place in 1979 and the value of sales of the bulbs.

Section 8 — Mushrooms

Report the square feet of bed space or other space, such as trays, used for mushrooms in 1979 only once even though the space was harvested more than once or more than one crop was grown during the year. For example, if two crops of mushrooms were harvested from an area of 20,000 square feet of bed space, report 20,000 square feet of area used. Note in the margin of the paper the number of times mushrooms were harvested from that area.

Section 12 — Land, Structures, Equipment, and Irrigation

The estimated market value in item 2 refers to ALL machinery and equipment kept on this place and used for the horticulture business. The value should be an estimate of what the machinery and equipment would sell for in its present condition, not the replacement or depreciated value.

Section 13 — Sales and Purchases

In item 1, report the value received during 1979, regardless of the year in which the products were harvested. Give gross values (before deducting taxes and expenses). If full payment was not received for a product or products sold in 1979, report only the amount actually received in 1979.

Section 14 — Selected Production Expenses

Include expenses paid by you and by anyone else for the production of greenhouse products, nursery products, mushrooms, sod, and other horticultural products on this place. Also include 1979 expenses incurred even if not paid in 1979. Please give estimates if you do not know the exact figures.

In item 4, exclude retail nongrower production expenses (for example, heating or cooling for office areas).

Section 15 — Hired Labor

Expenditures for hired labor should include gross wages or salaries, commissions, paid bonuses, and leave pay before deductions, plus the value of benefits paid by you — social security, taxes, unemployment, insurance, etc. Do not include room and board, house rent, or other items paid in kind. Exclude employees not directly involved in the growing operation, i.e., garden center clerks.

79-A19.1-L1
(8-79)



UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Washington, D.C. 20233

OFFICE OF THE DIRECTOR

Reply to:

BUREAU OF THE CENSUS
1201 EAST TENTH STREET
JEFFERSONVILLE, INDIANA 47132

**FROM THE DIRECTOR
BUREAU OF THE CENSUS**

Every 10 years, comprehensive data on horticulture are collected as part of the nationwide census of agriculture program. The form enclosed is for the sixth such census of horticultural specialties, this one covering calendar year 1979.

The information furnished will provide current data about the horticultural industry. Such information is important when considering the substantial changes in production and marketing practices which have taken place over the past 10 years. Your national and State organizations have been emphasizing the need for the totals that will be collected to help guide your industry in its growth.

The horticulture census report form is a standard form used in all States. Thus, many of the questions asked on this form will not be applicable to your operation and may be skipped by following the instructions printed on the form. If book figures are not available, please give your best estimates.

Your response to this inquiry is required by law (title 13, United States Code). By the same law, your report to the Bureau of the Census is confidential. It may be seen only by sworn Census employees and may be used only for statistical purposes.

Please complete and return your report within 20 days in the enclosed preaddressed envelope. Early responses will help us publish the findings at an early date, and will avoid the need for additional requests. If filing within the time period causes an undue burden, a request for extension may be sent to the above address. Include the 11-digit Census File Number (CFN) as shown in your address label on all correspondence to us.

Your cooperation will be greatly appreciated.

Sincerely,

VINCENT P. BARABBA

Enclosures

79-A19.1-L1A
(5-80)



UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Washington, D.C. 20233

OFFICE OF THE DIRECTOR

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1201 EAST TENTH STREET
JEFFERSONVILLE, INDIANA 47132

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Your cooperation will be greatly appreciated.

Sincerely,

VINCENT P. BARABBA

Enclosures

79-A19.1-L2
(1-80)



UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Data Preparation Division
Jeffersonville, Indiana 47132

**FROM THE ASSISTANT DIRECTOR FOR
ECONOMIC AND AGRICULTURE CENSUSES
BUREAU OF THE CENSUS**

Many producers and growers across the Nation have already completed and returned their reports for the 1979 Census of Horticultural Specialties. If you have already done so, we appreciate your promptness and thank you.

If you have not mailed your completed report, please do so as soon as you can. Prompt return will help us to publish the findings at an early date and will avoid the need for additional requests. We cannot complete the census without your help and information. To assist you in this effort, we are enclosing another report form and a preaddressed envelope for your convenience.

To be sure we included every horticultural operation in the census, we obtained names and addresses from many different sources and your name may have been in several of these sources. If you received more report forms (with different Census File Numbers) than you need for each of your separate growing locations or if you have completed similar reports for the U.S. Department of Agriculture this year, please see item 2 of the Instruction Sheet.

If you did not grow greenhouse or nursery products, mushrooms, or sod in 1979, it is equally important for us to hear from you. Please complete the appropriate items on the report and return it to us so that further followups will not be necessary.

If you have any questions about your report, please call our Jeffersonville, Indiana office toll free on (800) 457-6460, Monday through Friday, between 8:00 a.m. and 4:30 p.m. e.s.t.

Thank you for your cooperation.

Sincerely,

RICHARD B. QUANRUD

Enclosures

79-A19.1-L3
(1-80)

**UNITED STATES DEPARTMENT OF COMMERCE****Bureau of the Census**

Data Preparation Division
Jeffersonville, Indiana 47132

Date:

FROM THE ASSISTANT DIRECTOR FOR
ECONOMIC AND AGRICULTURE CENSUSES
BUREAU OF THE CENSUS

We have not yet received your report on the 1979 Census of Horticultural Specialties which we mailed to you recently. If your completed report and this form have crossed in the mail, please excuse this reminder and accept our thanks for your cooperation. However, to expedite processing this census for the industry, we urge you to report promptly.

Horticulture production and sales have expanded greatly in the last 10 years and a new statistical summary of the industry will benefit all horticulturists.

Your answers are COMPLETELY CONFIDENTIAL by law (title 13, United States Code). If you have any problems or questions in completing the report, please write to us at the above address using the reverse side of this letter.

Sincerely,

RICHARD B. QUANRUD

NOTICE -- Every address and file number must be accounted for. If you have not reported or you received more than one Census File Number (CFN), our control files will continue contacting you until a response is received. We received addresses on horticultural activities from several sources. Although we did our best to unduplicate them, we know from experience that some duplication may still exist. If you received several questionnaires with different CFN's, mark the extra forms "Extra" and return them to us with your completed report. Doing this will help us avoid unknowingly sending requests to you even after you reported under another number.

Appendix H

Provisions of Title 13 Relating to the 1978 Census of Agriculture

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Chapter 1.—ADMINISTRATION

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SUBCHAPTER I—GENERAL PROVISIONS

§ 1. Definitions

As used in this title, unless the context requires another meaning or unless it is otherwise provided—

- (1) "Bureau" means the Bureau of the Census;
- (2) "Secretary" means the Secretary of Commerce; and
- (3) "respondent" includes a corporation, company, association, firm, partnership, proprietorship, society, joint stock company, individual, or other organization or entity which reported information, or on behalf of which information was reported, in response to a questionnaire, inquiry, or other request of the Bureau.

§ 2. Bureau of the Census

The Bureau is continued as an agency within, and under the jurisdiction of, the Department of Commerce. (Aug. 31, 1954, ch. 1158, 68 Stat. 1012.)

§ 3. Seal

The Bureau shall have a seal containing such device as has been selected heretofore, or as the Secretary may select hereafter. A description of such seal with an impression thereof shall be filed in

the Office of the Secretary of State. The seal shall remain in the custody of the Secretary or such officer or employee of the Bureau as he designates, and shall be affixed to all documents authenticated by the Bureau. Judicial notice shall be taken of the seal. (Aug. 31, 1954, ch. 1158, 68 Stat. 1012, amended Aug. 28, 1957, Pub. L. 85-207, § 2, 71 Stat. 481; Oct. 17, 1976, Pub. L. 94-521, § 2, 90 Stat. 2459.)

§ 4. Functions of Secretary; regulations; delegation

The Secretary shall perform the functions and duties imposed upon him by this title, may issue such rules and regulations as he deems necessary to carry out such functions and duties, and may delegate the performance of such functions and duties and the authority to issue such rules and regulations to such officers and employees of the Department of Commerce as he may designate. (Aug. 31, 1954, ch. 1158, 68 Stat. 1013, amended Oct. 17, 1976, Pub. L. 94-521, § 3, 90 Stat. 2459.)

§ 5. Questionnaires; number, form, and scope of inquiries

The Secretary shall prepare questionnaires, and shall determine the inquiries, and the number, form, and subdivisions thereof, for the statistics, surveys, and censuses provided for in this title. (Aug. 31, 1954, ch. 1158, 68 Stat. 1013, amended Oct. 17, 1976, Pub. L. 94-521, § 4, 90 Stat. 2459.)

§ 6. Information from other Federal departments and agencies; acquisition of reports from other governmental and private sources

(a) The Secretary, whenever he considers it advisable, may call upon any other department, agency, or establishment of the Federal Government, or of the government of the District of Columbia, for information pertinent to the work provided for in this title.

(b) The Secretary may acquire, by purchase or otherwise, from States, counties, cities, or other units of government, or their instrumentalities, or from private persons and agencies, such copies of records, reports, and other material as may be required for the efficient and economical conduct of the censuses and surveys provided for in this title.

(c) To the maximum extent possible and consistent with the kind, timeliness, quality and scope of the statistics required, the Secretary shall acquire and use information available from any source referred to in subsection (a) or (b) of this section instead of conducting direct inquiries. (Aug. 31, 1954, ch. 1158, 68 Stat. 1013, amended Aug. 28, 1957, Pub. L. 85-207, § 3, 71 Stat. 481; Oct. 17, 1976, Pub. L. 94-521, § 5, 90 Stat. 2460.)

§ 7. Printing; requisitions upon Public Printer; publication of bulletins and reports

The Secretary may make requisition upon the Public Printer for miscellaneous printing necessary to carry out the provisions of this title. He may further have printed by the Public Printer, in such editions as he deems necessary, preliminary and other census bulletins, and final reports of the results of the several investigations authorized by this title, and may publish and distribute such bulletins and reports. (Aug. 31, 1954, ch. 1158, 68 Stat. 1013.)

§ 8. Authenticated transcripts or copies of certain returns; other data; restriction on use; disposition of fees received

(a) The Secretary may, upon written request, furnish to any respondent, or to the heir, successor, or authorized agent of such respondent, authenticated transcripts or copies of reports (or portions thereof) containing information furnished by, or on behalf of such respondent in connection with the surveys and census provided for in this title, upon payment of the actual or estimated cost of searching the records and furnishing such transcripts or copies.

(b) Subject to the limitations contained in sections 6(c) and 9 of this title, the Secretary may furnish copies of tabulations and other statistical materials which do not disclose the information reported by, or on behalf of, any particular respondent, and may make special statistical compilations and surveys, for departments, agencies, and establishments of the Federal Government, the government of the

other reports and materials of a similar nature. (Added Pub. L. 85-207, § 5, Aug. 28, 1957, 71 Stat. 481.)

§ 14. Repealed. Pub. L. 89-473, § 2(a), June 29, 1966, 80 Stat. 221

SUBCHAPTER II—OFFICERS AND EMPLOYEES

§ 21. Director of the Census; duties

The Bureau shall be headed by a Director of the Census, appointed by the President, by and with the advice and consent of the Senate. The Director shall perform such duties as may be imposed upon him by law, regulations, or orders of the Secretary. (Aug. 31, 1954, ch. 1158, 68 Stat. 1014.)

§ 22. Qualifications of permanent personnel

All permanent officers and employees of the Bureau shall be citizens of the United States. (Aug. 31, 1954, ch. 1158, 68 Stat. 1014, amended Sept. 13, 1960, Pub. L. 86-769, § 1, 74 Stat. 911.)

NOTE.—Pub. L. 94-311 requires that the Department of Commerce implement an affirmative action program within the Bureau of the Census for the employment of personnel of Spanish origin or descent and submit a report to Congress by June 16, 1977 on the progress of such program.

§ 23. Additional officers and employees

(a) The Secretary may establish, at rates of compensation to be fixed by him without regard to the Classification Act of 1949, as many temporary positions as may be necessary to meet the requirements of the work provided for by law. Bureau employees who are transferred to any such temporary positions shall not lose their permanent civil service status by reason of the transfer. The Secretary may make appointments to such temporary positions in conformity with the civil service laws and rules.

(b) In addition to employees of the Department of Commerce, employees of other departments and independent offices of the Government may, with the consent of the head of the respective department or office, be employed and compensated for field work in connection with the work provided for by law without regard to section 301 of the Dual Compensation Act.

(c) The Secretary may utilize temporary staff, including employees of Federal, State, or local agencies or instrumentalities, and employees of private organizations to assist the Bureau in performing the work authorized by this title, but only if such temporary staff is sworn to observe the limitations imposed by section 9 of this title. (Aug. 31, 1954, ch. 1158, 68 Stat. 1014, amended Sept. 13, 1960, Pub. L. 86-769, § 2, 74 Stat. 911; Aug. 19, 1964, Pub. L. 88-448, title IV, § 401(p), 78 Stat. 492; Oct. 17, 1976, Pub. L. 94-521, § 12(b), 90 Stat. 2465.)

§ 24. Special employment provisions

(a) The Secretary may utilize the services of nontemporary employees of the Bureau (by assignment, promotion, appointment, detail, or otherwise) in temporary positions established for any census, for not to exceed the period during which appropriations are available for that census. Whenever the Secretary determines that the services of an employee which have been utilized under this section are no longer required in such a temporary position, he may, without regard to the provisions of any other law, return the employee to a continuing position, with rank and compensation not less than that which he held in his last permanent position in the Bureau: *Provided*, That no employee shall, by reason of his service in a temporary position under this subsection, lose the protection of any law or regulation with respect to his separation, suspension, furlough, or reduction in rank or compensation below the level held in his last permanent position in the Bureau. Service by a nontemporary employee in a temporary position under this subsection shall be creditable for step increases (both periodic and longevity) under title VII of the Classification Act of 1949, as amended, as though it were a continuation of service in his last permanent position.

(b) As used in this title with respect to appointments or positions, "temporary" shall be construed to mean not in excess of one year, or

District of Columbia, the government of any possession or area (including political subdivisions thereof) referred to in section 191(a) of this title, State or local agencies, or other public and private persons and agencies, upon payment of the actual or estimated cost of such work. In the case of nonprofit agencies or organizations, the Secretary may engage in joint statistical projects, the purpose of which are otherwise authorized by law, but only if the cost of such projects are shared equitably, as determined by the Secretary.

(c) In no case shall information furnished under this section be used to the detriment of any respondent or other person to whom such information relates, except in the prosecution of alleged violations of this title.

(d) All moneys received in payment for work or services enumerated under this section shall be deposited in a separate account which may be used to pay directly the costs of such work or services, to repay appropriations which initially bore all or part of such costs, or to refund excess sums when necessary. (Aug. 31, 1954, ch. 1158, 68 Stat. 1013, amended Aug. 28, 1957, Pub. L. 85-207, § 4, 71 Stat. 481; Oct. 17, 1976, Pub. L. 94-521, § 6, 90 Stat. 2460-61.)

§ 9. Information as confidential; exception

(a) Neither the Secretary, nor any other officer or employee of the Department of Commerce or bureau or agency thereof, may, except as provided in section 8 of this title—

(1) use the information furnished under the provisions of this title for any purpose other than the statistical purposes for which it is supplied; or

(2) make any publication whereby the data furnished by any particular establishment or individual under this title can be identified; or

(3) permit anyone other than the sworn officers and employees of the Department or bureau or agency thereof to examine the individual reports.

No department, bureau, agency, officer, or employee of the Government, except the Secretary in carrying out the purposes of this title, shall require, for any reason, copies of census reports which have been retained by any such establishment or individual. Copies of census reports which have been so retained shall be immune from legal process, and shall not, without the consent of the individual or establishment concerned, be admitted as evidence or used for any purpose in any action, suit, or other judicial or administrative proceeding.

(b) The provisions of subsection (a) of this section relating to the confidential treatment of data for particular individuals and establishments, shall not apply to the censuses of governments provided for by subchapter III of chapter 5 of this title, nor to interim current data provided for by subchapter IV of chapter 5 of this title as to the subjects covered by censuses of governments, with respect to any information obtained therefor that is compiled from, or customarily provided in, public records. (Aug. 31, 1954, ch. 1158, 68 Stat. 1013, amended Oct. 15, 1962, Pub. L. 87-813, 76 Stat. 922.)

§ 10. Repealed. Pub. L. 86-682, § 12(a), Sept. 2, 1960, 74 Stat. 708, eff. Sept. 1, 1960

§ 11. Authorization of appropriations

There is authorized to be appropriated, out of the Treasury of the United States, such sums as may be necessary to carry out all provisions of this title. (Aug. 31, 1954, ch. 1158, 68 Stat. 1014.)

§ 12. Mechanical and electronic development

The Secretary is authorized to have conducted mechanical and electronic development work as he determines is needed to further the functions and duties of carrying out the purposes of this title and may enter into such developmental contracts as he may determine to be in the best interest of the Government. (Added Pub. L. 85-207, § 5, Aug. 28, 1957, 71 Stat. 481.)

§ 13. Procurement of professional services

The Secretary shall have authority to contract with educational and other research organizations for the preparation of monographs and

not in excess of the specific period during which appropriations are available for the conduct of a particular census, whichever is longer. No employee of the Bureau who holds only a temporary appointment within the meaning of this section shall be considered as other than strictly temporary for purposes of any other provision of law relating to separations, suspensions, or reductions in rank or compensation.

(c) The enlisted men and officers of the uniformed services may be appointed and compensated for service in temporary enumerator positions for the enumeration of personnel of the uniformed services.

(d) The Secretary may fix compensation on a piece-price basis without limitation as to the amount earned per diem, and payments may be made to enumerators for the use of private automobiles on official business without regard to section 4 of the Travel Expense Act of 1949, as amended (5 U.S.C. 837), but at rates not in excess of the rates provided by that Act.

(e) The Secretary may authorize the expenditure of necessary sums for travel expenses of persons selected for appointment for attendance at training courses held by the Department of Commerce with respect to any of the work provided for by law.

(f) Notwithstanding any other provision of law prohibiting the expenditure of public money for telephone service, the Secretary, under such regulations as he shall prescribe, may authorize reimbursement for tolls or charges for telephone service from private residences or private apartments to the extent such charges are determined by the Secretary to have been incurred to facilitate the collection of information in connection with the censuses and surveys authorized by this title. (Aug. 31, 1954, ch. 1158, 68 Stat. 1015, amended Sept. 13, 1960, Pub. L. 86-769, § 3, 74 Stat. 911; Aug. 31, 1964, Pub. L. 88-535; 74 Stat. 744.)

§ 25. Duties of supervisors, enumerators, and other employees

(a) Each supervisor shall perform the duties imposed upon him by the Secretary in the enforcement of chapter 5 of this title in accordance with the Secretary's orders and instructions.

(b) Each enumerator or other employee detailed to serve as enumerator shall be charged with the collection in his subdivision of the facts and statistics called for on such schedules as the Secretary determines shall be used by him in connection with any census or survey provided for by chapter 5 of this title. (Aug. 31, 1954, ch. 1158, 68 Stat. 1015, amended Aug. 31, 1964, Pub. L. 88-530, 78 Stat. 737.)

§ 26. Transportation by contract

The Secretary may contract with field employees for the rental and use within the continental limits of the United States of means of transportation, other than motorcycle, automobile, or airplane, and for the rental and use outside of the continental United States of any means of transportation, which means may be owned by the field employee. Such rental contracts shall be made without regard to section 4 of the Travel Expense Act of 1949, as amended (5 U.S.C. 837). The rentals shall be at rates equivalent to the prevailing rental rates of the locality. The rental contracts within the continental United States may be entered into only when the use by the field employee of such other means of transportation is safer, more economical, or more advantageous to the Government than use of his motorcycle, automobile, or airplane in conducting the census. (Added Pub. L. 85-207, § 6, Aug. 28, 1957, 71 Stat. 482.)

Chapter 5.—CENSUSES

SUBCHAPTER II—POPULATION, HOUSING, AGRICULTURE, IRRIGATION, DRAINAGE, AND UNEMPLOYMENT

142. Agriculture, irrigation, and drainage.

SUBCHAPTER V—GEOGRAPHIC SCOPE, PRELIMINARY AND SUPPLEMENTAL STATISTICS, AND USE OF SAMPLING

191. Geographic scope of censuses.

193. Preliminary and supplemental statistics.

195. Use of sampling.

196. Special censuses.

SUBCHAPTER II—POPULATION, HOUSING, AGRICULTURE, IRRIGATION, DRAINAGE, AND UNEMPLOYMENT

§ 142. Agriculture, irrigation, and drainage

(a) The Secretary shall in 1979, in 1983, and in every fifth year beginning after 1983, take a census of agriculture.

(b) In conjunction with the census to be taken under subsection (a) of this section in 1979, in 1988, and every tenth year beginning after 1988, the Secretary shall take a census of irrigation and drainage.

(c) The data collected in each of the censuses taken under this section shall relate to the year immediately preceding the year in which such census is taken. (Aug. 31, 1954, ch. 1158, 68 Stat. 1020, amended Aug. 28, 1957, Pub. L. 85-207, § 10, 71 Stat. 483; Mar. 15, 1976, Pub. L. 94-229, § 1, 90 Stat. 210.)

NOTE.—The statistical classification of farms in effect on January 1, 1975, with respect to censuses taken under section 142 of title 13, United States Code, shall be effective through June 30, 1976, and any statistical report issued on or before June 30, 1976, with respect to any such census shall reflect such classification, but may also include additional classifications as deemed appropriate by the Secretary.

§§ 143 to 146. Repealed. Pub. L. 85-207, § 11, Aug. 28, 1957, 71 Stat. 483.

SUBCHAPTER V—GEOGRAPHIC SCOPE, PRELIMINARY AND SUPPLEMENTAL STATISTICS, AND USE OF SAMPLING

§ 191. Geographic scope of censuses

(a) Each of the censuses authorized by this chapter shall include each State, the District of Columbia, the Virgin Islands, Guam, the Commonwealth of the Northern Mariana Islands, and the Commonwealth of Puerto Rico, and as may be determined by the Secretary, such other possessions and areas over which the United States exercises jurisdiction, control, or sovereignty. Inclusion of other areas over which the United States exercises jurisdiction or control shall be subject to the concurrence of the Secretary of State.

(b) For censuses taken in the Virgin Islands, Guam, the Commonwealth of the Northern Mariana Islands, or any possession or area not specifically designated in subsection (a) of this section, the Secretary may use census information collected by the Governor or highest ranking Federal official, if such information was obtained in accordance with plans prescribed or approved by the Secretary.

(c) If, pursuant to a determination by the Secretary under subsection (a) of this section, any census is not taken in a possession or area over which the United States exercises jurisdiction, control, or sovereignty, the Secretary may include data obtained from other Federal agencies or government sources in the census report. Any data obtained from foreign governments shall be obtained through the Secretary of State. (Added Pub. L. 85-207, § 14, Aug. 28, 1957, 71 Stat. 483, amended Oct. 17, 1976, Pub. L. 94-521, § 9, 90 Stat. 2463-64.)

§ 193. Preliminary and supplemental statistics

In advance of, in conjunction with, or after the taking of each census provided for by this chapter, the Secretary may make surveys and collect such preliminary and supplementary statistics related to the main topic of the census as are necessary to the initiation, taking, or completion thereof. (Added Pub. L. 85-207, § 14, Aug. 28, 1957, 71 Stat. 484.)

§ 195. Use of sampling

Except for the determination of population for purposes of apportionment of Representatives in Congress among the several States, the Secretary shall, if he considers it feasible, authorize the use of the statistical method known as "sampling" in carrying out the provisions of this title. (Added Pub. L. 85-207, § 14, Aug. 28, 1957, 71 Stat. 484,

amended Oct. 17, 1976, Pub. L. 94-521, § 10, 90 Stat. 2464.)

§ 196. Special censuses

The Secretary may conduct special censuses for the government of any State, or of any county, city, or other political subdivision within a State, for the government of the District of Columbia, and for the government of any possession or area (including political subdivisions thereof) referred to in section 191(a) of this title, on subjects covered by the censuses provided for in this title, upon payment to the Secretary of the actual or estimated cost of each such special census. The results of each such special census shall be designated "Official Census Statistics". These statistics may be used in the manner provided by applicable law. (Added Pub. L. 94-521, § 11, Oct. 17, 1976, 90 Stat. 2464.)

Chapter 7.—OFFENSES AND PENALTIES

SUBCHAPTER I—OFFICERS AND EMPLOYEES

Sec.

- 211. Receiving or securing compensation for appointment of employees.
- 212. Refusal or neglect of employees to perform duties.
- 213. False statements, certificates, and information.
- 214. Wrongful disclosure of information.

SUBCHAPTER II—OTHER PERSONS

- 221. Refusal or neglect to answer questions; false answers.
- 222. Giving suggestions or information with intent to cause inaccurate enumeration of population.
- 223. Refusal, by owners, proprietors, etc., to assist census employees.
- 224. Failure to answer questions affecting companies, businesses, religious bodies, and other organizations; false answers.
- 225. Applicability of penal provisions in certain cases.

SUBCHAPTER III—PROCEDURE

- 241. Evidence.

SUBCHAPTER I—OFFICERS AND EMPLOYEES

§ 211. Receiving or securing compensation for appointment of employees

Whoever—

- (1) receives or secures to himself any fee, reward, or compensation as a consideration for the appointment of any person as supervisor, enumerator, clerk, or other officer or employee of the Department of Commerce or bureau or agency thereof, referred to in subchapter II of chapter I of this title; or
 - (2) in any way receives or secures to himself any part of the compensation paid to any person so appointed—
- shall be fined not more than \$3,000 or imprisoned not more than five years, or both. (Aug. 31, 1954, ch. 1158, 68 Stat. 1022.)

§ 212. Refusal or neglect of employees to perform duties

Whoever, being an employee referred to in subchapter II of chapter I of this title, and having taken and subscribed the oath of office, neglects or refuses, without justifiable cause, to perform the duties enjoined on such employee by this title, shall be fined not more than \$500. (Aug. 31, 1954, ch. 1158, 68 Stat. 1022.)

§ 213. False statements, certificates, and information

(a) Whoever, being an officer or employee referred to in subchapter II of chapter I of this title, willfully and knowingly swears or affirms falsely as to the truth of any statement required to be made or subscribed by him under oath by or under authority of this title, shall be guilty of perjury, and shall be fined not more than \$2,000 or imprisoned not more than five years, or both.

(b) Whoever, being an officer or employee referred to in subchapter II of chapter I of this title—

- (1) willfully and knowingly makes a false certificate or fictitious return; or
- (2) knowingly or willfully furnishes or causes to be furnished, or, having been such an officer or employee, knowingly or will-

fully furnished or caused to be furnished, directly or indirectly, to the Secretary or to any other officer or employee of the Department of Commerce or bureau or agency thereof, any false statement or false information with reference to any inquiry for which he was authorized and required to collect information provided for in this title—

shall be fined not more than \$2,000 or imprisoned not more than five years, or both. (Aug. 31, 1954, ch. 1158, 68 Stat. 1022.)

§ 214. Wrongful disclosure of information

Whoever, being or having been an employee or staff member referred to in subchapter II of chapter I of this title, having taken and subscribed the oath of office, or having sworn to observe the limitations imposed by section 9 of this title, publishes or communicates any information, the disclosure of which is prohibited under the provisions of section 9 of this title, and which comes into his possession by reason of his being employed (or otherwise providing services) under the provisions of this title, shall be fined not more than \$5,000 or imprisoned not more than 5 years, or both. (Aug. 31, 1954, ch. 1158, 68 Stat. 1023, amended Oct. 17, 1976, Pub. L. 94-521, § 12(a), 90 Stat. 2464.)

SUBCHAPTER II—OTHER PERSONS

§ 221. Refusal or neglect to answer questions; false answers

(a) Whoever, being over eighteen years of age, refuses or willfully neglects, when requested by the Secretary, or by any other authorized officer or employee of the Department of Commerce or bureau or agency thereof acting under the instructions of the Secretary or authorized officer, to answer, to the best of his knowledge, any of the questions on any schedule submitted to him in connection with any census or survey provided for by subchapters I, II, IV, and V of chapter 5 of this title, applying to himself or to the family to which he belongs or is related, or to the farm or farms of which he or his family is the occupant, shall be fined not more than \$100.

(b) Whoever, when answering questions described in subsection (a) of this section, and under the conditions or circumstances described in such subsection, willfully gives any answer that is false, shall be fined not more than \$500.

(c) Notwithstanding any other provision of this title, no person shall be compelled to disclose information relative to his religious beliefs or to membership in a religious body. (Aug. 31, 1954, ch. 1158, 68 Stat. 1023, amended Aug. 28, 1957, Pub. L. 85-207, § 15, 71 Stat. 484; Oct. 17, 1976, Pub. L. 94-521, § 13, 90 Stat. 2465.)

§ 222. Giving suggestions or information with intent to cause inaccurate enumeration of population

Whoever, either directly or indirectly, offers or renders to any officer or employee of the Department of Commerce or bureau or agency thereof engaged in making an enumeration of population under subchapter II, IV, or V of chapter 5 of this title, any suggestion, advice, information or assistance of any kind, with the intent or purpose of causing an inaccurate enumeration of population to be made, shall be fined not more than \$1,000 or imprisoned not more than one year, or both. (Aug. 31, 1954, ch. 1158, 68 Stat. 1023, amended Aug. 28, 1957, Pub. L. 85-207, § 16, 71 Stat. 484.)

§ 223. Refusal, by owners, proprietors, etc., to assist census employees

Whoever, being the owner, proprietor, manager, superintendent, or agent of any hotel, apartment house, boarding or lodging house, tenement, or other building, refuses or willfully neglects, when requested by the Secretary or by any other officer or employee of the Department of Commerce or bureau or agency thereof, acting under the instructions of the Secretary, to furnish the names of the occupants of such premises, or to give free ingress thereto and egress therefrom to any duly accredited representative of such Department or bureau or agency thereof, so as to permit the collection of statistics with respect to any census provided for in subchapters I and II of chapter 5 of this title, or any survey authorized by subchapter IV or V of such chapter

insofar as such survey relates to any of the subjects for which censuses are provided by such subchapters I and II, including, when relevant to the census or survey being taken or made, the proper and correct enumeration of all persons having their usual place of abode in such premises, shall be fined not more than \$500. (Aug. 31, 1954, ch. 1158, 68 Stat. 1023, amended Aug. 28, 1957, Pub. L. 85-207, § 17, 71 Stat. 484.)

§ 224. Failure to answer questions affecting companies, businesses, religious bodies, and other organizations; false answers

Whoever, being the owner, official, agent, person in charge, or assistant to the person in charge, of any company, business, institution, establishment, religious body, or organization of any nature whatsoever, neglects or refuses, when requested by the Secretary or other authorized officer or employee of the Department of Commerce or bureau or agency thereof, to answer completely and correctly to the best of his knowledge all questions relating to his company, business, institution, establishment, religious body, or other organization, or to records or statistics in his official custody, contained on any census or other schedule or questionnaire prepared and submitted to him under the authority of this title, shall be fined not more than \$500; and if he willfully gives a false answer to any such question, he shall be fined not more than \$10,000. (Aug. 31, 1954, ch. 1158, 68 Stat. 1024, amended Aug. 28, 1957, Pub. L. 85-207, § 18, 71 Stat. 484; Oct. 17, 1976, Pub. L. 94-521, § 14, 90 Stat. 2465.)

§ 225. Applicability of penal provisions in certain cases

(a) In connection with any survey conducted by the Secretary or other authorized officer or employee of the Department of Commerce or bureau or agency thereof pursuant to subchapter IV of chapter 5 of this title, the provisions of sections 221, 222, 223 and 224 of this title shall apply—

(1) with respect to the answering of questions and furnishing of information, only to such inquiries as are within the scope of the schedules and questionnaires and of the type and character heretofore used in connection with the taking of complete censuses under subchapters I and II of chapter 5 of this title, or in connection with any censuses hereafter taken pursuant to such subchapters;

(2) only after publication of a determination with reasons therefor certified by the Secretary, or by some other authorized officer or employee of the Department of Commerce or bureau or agency thereof with the approval of the Secretary, that the information called for is needed to aid or permit the efficient performance of essential governmental functions or services, or has significant application to the needs of the public, business, or industry and is not publicly available from nongovernmental or other governmental sources;

(3) in the case of any new survey, only after public notice, given by the Secretary or other authorized officer or employee of the Department of Commerce or bureau or agency thereof at least thirty days in advance of requesting a return, that such survey is under consideration.

(b) The provisions for imprisonment provided by section 222 of this title shall not apply in connection with any survey conducted pursuant to subchapter II of chapter 3 of this title, or to subchapter IV of chapter 5 of this title.

(c) The provisions of sections 221, 222, 223, and 224 of this title shall not apply to any censuses or surveys of governments provided for by subchapters III and IV of chapter 5 of this title, nor to other surveys provided for by subchapter IV of such chapter which are taken more frequently than annually.

(d) Where the doctrine, teaching, or discipline of any religious denomination or church prohibits the disclosure of information relative to membership, a refusal, in such circumstances, to furnish such information shall not be an offense under this chapter. (Aug. 31, 1954, ch. 1158, 68 Stat. 1024, amended Oct. 17, 1976, Pub. L. 94-521, § 15(a), 90 Stat. 2465.)

SUBCHAPTER III—PROCEDURE

§ 241. Evidence

When any request for information, made by the Secretary or other authorized officer or employee of the Department of Commerce or bureau or agency thereof, is made by registered or certified mail or telegram, the return receipt therefor or other written receipt thereof shall be prima facie evidence of an official request in any prosecution under such section. (Aug. 31, 1954, ch. 1158, 68 Stat. 1025, amended Aug. 28, 1957, Pub. L. 85-207, § 19, 71 Stat. 484; Oct. 17, 1976, Pub. L. 94-521, § 15(b), 90 Stat. 2465.)

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