U.S. CENSUS OF AGRICULTURE : 1959

Final Report—Vol. I—Part 17—Counties

FARMS • FARM CHARACTERISTICS

LIVESTOCK and PRODUCTS

CROPS • FRUITS • VALUES

Missouri

COUNTIES

Prepared under the supervision of
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PREFACE

Volume I, Counties, is one of the five principal reports presenting the results of the 1959 Census of Agriculture. This volume, in 54 parts, presents the compilation of the information given by farm operators to census enumerators in 1959.

The 1959 Census of Agriculture was taken in conformity with the Act of Congress of August 31, 1954 (amended August 1957), which codified Title 13, United States Code.

The collection of the data was carried out by census enumerators directed by supervisors appointed by the Director of the Bureau of the Census and working under the direction of Robert B. Voight, then Chief, Field Division. Paul R. Squires, then Special Assistant to the Director, was responsible for the recruitment of the field staff. The planning of the census and the compilation of the statistics were supervised by Ray Hurley, Chief, Agriculture Division, Warder B. Jenkins, Assistant Chief, and Orvin L. Wilhite, Assistant Chief. They were assisted by M. Vincent Lindquist, Thomas Jabine, Robert S. McCauley, John C. Mackey, Robert Standley, Hilton E. Robison, Helen E. Teir, Carl R. Nyman, Kenneth R. Norell, Gladys L. Eagle, Henry L. DeGraff, Charles H. Boehne, Joseph A. Correll, Margaret G. Wood, Evelyn K. Jett, Simon Yablon, Emma B. Gass, Charlotte J. Messinese, Bennie L. Sharp, Isaac E. Lemon, James M. Lindsey, Samuel S. Murray, William F. Kauffman, Hector Vila, Harry P. Owings, Charles A. Nicholls, Henry A. Tucker, Robert S. Boyle, Helen M. Davenport, Albert W. Graybill, Lois G. Miller, Thomas D. Monroe, Gerald P. Owens, Bernard L. Ross, Marvin M. Thompson, Helen D. Turner, Kurt W. Luethy, Arnold L. Bollenbacher, George W. Coffman, Joseph A. Horak, Samuel J. Hundley, Donald K. Larson, Chester G. Lykins, Wilmer R. Maxham, Virgil L. McClain, Jr., Darrell D. Prochaska, Robert J. Rades, Hubert E. Sites, Duane E. Traylor, Donald H. von Steen, Elmer O. Rea, Frances G. Compton, Lillian W. Bentel, and Neil V. Perkins.

Acknowledgment is made of the technical assistance and the loan of personnel by the United States Department of Agriculture in the planning, the enumeration, and the compilation of the 1959 Census of Agriculture.

August 1961

UNITED STATES CENSUS OF AGRICULTURE: 1959

FINAL REPORTS

Volume I—Counties—A separate part for each State. Statistics on number of farms; farm characteristics; acreage in farms; cropland and other uses of land; land-use practices; irrigation; farm facilities and equipment; farm labor; farm expenditures; use of commercial fertilizer; number and kind of livestock; acres and production of crops; value of farm products; characteristics of commercial farms, farms classified by tenure, by size, type, and economic class; and comparative data from the 1954 Census of Agriculture.

Volume I is published in 54 parts as follows:

Part	State or States	Part	State or States	Part	State or States
	New England States:		West North Central—Continued		Mountain:
1	Maine.	19	South Dakota.	38	Montana.
2	New Hampshire.	20	Nebraska.	39	Idaho.
3	Vermont.	21	Kansas.	40	Wyoming.
4	Massachusetts.		South Atlantic:	41	Colorado.
5	Rhode Island.	22	Delaware.	42	New Mexico.
6	Connecticut.	23	Maryland.	43	Arizona.
	Middle Atlantic States:	24	Virginia.	44	Utah.
7	New York.	25	West Virginia.	45	Nevada.
8	New Jersey.	26	North Carolina.		Pacific:
9	Pennsylvania.	27	South Carolina.	46	Washington.
	East North Central:	28	Georgia.	47	Oregon.
10	Ohio.	29	Florida.	48	California.
11	Indiana.		East South Central:	49	Alaska.
12	Illinois.	30	Kentucky.	50	Hawaii
13	Michigan.	31	Tennessee.		Other Areas:
14	Wisconsin.	32	Alabama.	51	American Samoa.
	West North Central:	33	Mississippi.	52	Guam.
15	Minnesota.		West South Central:	53	Puerto Rico.
16	Iowa.	34	Arkansas.	54	Virgin Islands.
17	Missouri.	35	Louisiana.		
18	North Dakota.	36	Oklahoma.		
		37	Texas.		

Volume II—General Report.—Statistics by Subjects, United States Census of Agriculture, 1959. Summary data and analyses of the data by States, for geographic divisions, and for the United States, by subjects, as illustrated by the chapter titles listed below:

Chapter	Title	Chapter	Title
I	Farms and Land in Farms.	VII	Field Crops and Vegetables.
II	Age, Residence, Years on Farm, Work Off Farm.	VIII	Fruits and Nuts, Horticultural Specialties, Forest Products.
III	Farm Facilities, Farm Equipment.	IX	Value of Farm Products.
IV	Farm Labor, Use of Fertilizer, Farm Expenditures, and Cash Rent.	X	Color, Race, and Tenure of Farm Operator.
V	Size of Farm.	XI	Economic Class of Farm.
VI	Livestock and Livestock Products.	XII	Type of Farm.

Volume III—Irrigation of Agricultural Lands. Western States (Dry Areas)—Data by States for drainage basins and a summary for the area, including number and types of irrigation organizations, source of water, expenditures for works and equipment since 1950, water used and acres served for irrigation purposes.

Volume IV—Drainage of Agricultural Lands. Data by States on land in drainage organizations, number and types of organizations, cost of drainage and drainage works.

Volume V—Special Reports, Part 1.—Horticultural Specialties. Statistics by States and a summary for the United States presenting number and kinds of operations; gross receipts and/or gross sales; sales of nursery products, flower seed, vegetables grown under glass, and propagated mushrooms; number of container-grown plants; inventory products; sales of bulb crops; employment; structures and equipment.

Titles of additional parts of this volume are not available as this report goes to press.

MISSOURI

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INTRODUCTION

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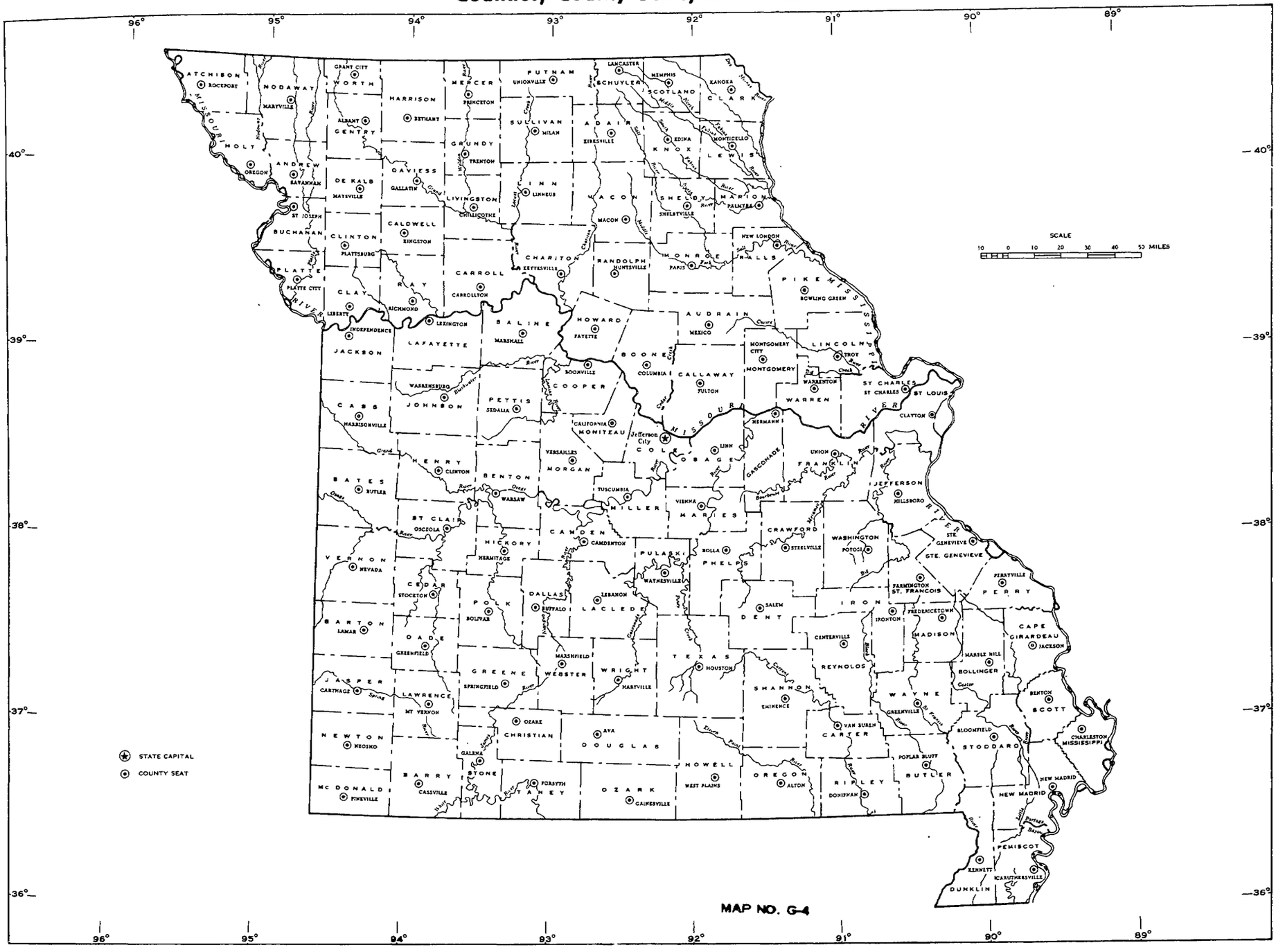
MISSOURI
Counties, County Seats, and Rivers



MAP NO. G-4

INTRODUCTION

THE 1959 CENSUS OF AGRICULTURE

History of the Census.—The 1959 Census is the 17th nationwide agricultural census. The first agricultural census was taken in 1840, at the same time as the Sixth Decennial Census of Population. From 1850 to 1920, an agricultural census was taken every 10 years. With increased application of scientific findings and the growing use of mechanization in agriculture, farming practices were changing so rapidly that facts collected at 10-year intervals were no longer adequate. Aware of the need for more accurate and timely information, the Congress in 1909 (36 stat. 10, sec. 31, provided for a census to be taken in 1915 and every 10 years thereafter which was to be in addition to the census of agriculture to be taken at the time of the decennial census of population. The 1915 census was not taken, however, because of the abnormal conditions created by World War I. Beginning with 1920, a national agricultural census has been taken every 5 years.

Legal Basis for the Census.—The 1959 Census of Agriculture was authorized by an Act of Congress, as were all prior censuses of agriculture. "Title 13, United States Code-Census," codified in August 1954, and amended in August 1957 and September 1960, is now the legal basis for censuses of agriculture and other censuses, and surveys conducted by the Bureau of the Census. Section 142, paragraph (a), of Title 13 makes provision for the Census of Agriculture. It reads as follows:

> "The Secretary shall, beginning in the month of October 1959, and in the same month of every fifth year thereafter, take a census of agriculture, provided that the censuses directed to be taken in October 1959 and each tenth year thereafter, may, when and where deemed advisable by the Secretary, be taken instead in conjunction with the censuses provided in section 141 of this title." (Section 141 relates to the decennial censuses of population, unemployment, and housing to be taken as of the first day of April of each decennial year.) Under authority granted by Section 4 of Title 13, the Secretary of Commerce delegated "the functions and duties imposed upon him by this title" to the Director of the Bureau of the Census.

Pretest of the 1959 Census.—A "pretest" of the field procedures of the 1959 Census of Agriculture was conducted in 17 counties of the United States during the fall of 1958. The purpose of the pretest was to provide the Bureau with a measure of the effectiveness of the questions and procedures planned for the 1959 nationwide census. Three versions of the agriculture questionnaire—the first one for Northern States, the second for Southern States, and the third for Western States—were used in the pretest. Each version contained questions appropriate to the type of agriculture in the part of the country where it was used. All major aspects of field forms and procedures, from the hiring and training of crew leaders and enumerators to actual interviews with farm operators, were given a "trial run" in each of the 17 counties. Preliminary versions of reporting forms, maps, payroll records, training guides, and instruction manuals were subjected to actual use under conditions simulating those expected in the nationwide enumeration conducted in the fall of 1959.

In making final preparations for the 1959 census, the staff of the Bureau drew heavily on the results of the pretest, as well as on experience gained from previous censuses.

Training Program for Personnel for Enumeration.—Every person hired to do work in connection with the 1959 Census of Agriculture received specialized training for his job. Staff members of the Washington and Regional Offices of the Bureau and of the U.S. Department of Agriculture trained approximately 110 agriculture field assistants and 2,100 crew leaders. The crew leaders, in turn, trained and supervised approximately 30,000 enumerators. All training was presented according to procedures contained in various guides and manuals prepared by the Bureau. The training program included filmstrips, map-reading, practice interviewing, and practice filling of questionnaires and other census forms. In most instances, training sessions were held near the areas in which employees worked and immediately prior to the beginning of their assignments.

Enumeration Period.—The actual enumeration in the conterminous United States (see page XIV) started at dates varying from October 7 to November 18, 1959. In general, starting dates were based upon regional variations in harvesting seasons and on weather conditions. The primary aim was to have the enumeration late enough to follow the harvesting of the bulk of important crops and early enough to precede the advent of winter weather with the attending unfavorable travel conditions. The bulk of the enumeration work was completed within three to four weeks after the starting date. In Hawaii, the enumeration was made during the months of December 1959 and January 1960; and in Alaska, during April 1960.

Enumeration starting dates for the censuses of 1959 and 1954 are given in State table 11, together with figures showing the percentage of farms enumerated in the State during weekly periods. The average enumeration date for the 1959 census for each county is given in county table 6.

Data for inventory items—land in farms, machinery and equipment, livestock, and poultry—relate to the situation at the actual time of enumeration of each individual farm. Data for acres, production, and sales of crops relate generally to the crops harvested during the crop year 1959, regardless of whether and when they were sold while data for sales of livestock and livestock products relate to the calendar year 1959. Since the enumeration was made before the end of 1959, special emphasis was placed upon the inclusion of estimates for crops yet to be sold and for livestock and livestock products expected to be sold in the period from the time of enumeration to the end of the calendar year. Instructions on the questionnaire and the wording of questions were designed to assure that full crop-year or calendar-year data would be reported. For example, "How much of this year's crop was or will be sold?"

ENUMERATION FORMS AND PROCEDURES

Authorization.—Section 5 of Title 13 of the United States Code authorizes the preparation of forms and questionnaires used in the census. It reads as follows:

> "The Secretary 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."

The Agriculture Questionnaire.—The questionnaire for the 1959 Census of Agriculture was prepared by the staff of the Bureau. Selection of the inquiries was based on the results of the 1958 pretest and experience gained in earlier censuses. Careful consideration was given to such factors as the current availability

of data from other sources, the possibility of obtaining data by methods other than a census, the adequacy of the data that might be obtained, and the need for and usefulness of the data. Two committees gave advice and counsel to the Bureau. One of these, a Special Advisory Committee, was composed of members designated by the organizations they represented, following an invitation from the Director of the Bureau of the Census to name a representative to serve in an advisory capacity. The Special Advisory Committee for the 1959 Census of Agriculture was made up of one representative from each of the following: Agricultural Publishers Association, American Association of Land-Grant Colleges and State Universities, American Farm Bureau Federation, American Farm Economic Association, American Statistical Association, Farm Equipment Institute, National Association of Commissioners, Secretaries, and Directors of Agriculture, National Council of Farmer Cooperatives, National Farmers' Union, National Grange, Rural Sociological Society, and the U.S. Department of Agriculture. A representative of the Bureau of the Budget was in attendance at all meetings of the Advisory Committee.

Because of the special interest of the U.S. Department of Agriculture in censuses of agriculture, the Director of the Bureau of the Census sought the continuous cooperation of that organization in developing plans, questionnaires, and procedures for the 1959 Census of Agriculture. Working Groups were established in the U.S. Department of Agriculture to make recommendations for the following general subjects:

Tenure, Land Values, and Mortgage Debt
Land Use and Conservation and Production Practices
Field Crops
Fruits and Vegetables
Forest Products
Livestock, Poultry, and Dairy
Income and Expenditure (including Contractual Operations)
Farm Labor
Equipment and Facilities (including Structures)

Each Working Group had the responsibility for ascertaining the U.S. Department of Agriculture's need for data in the field covered by its "terms of reference" and for presenting recommendations to a small Joint Committee comprising representatives of both the Bureau of the Census and the U.S. Department of Agriculture. The Joint Committee received written recommendations from each Working Group. The Chairman of each Group appeared before the Joint Committee as did any member of the Working Group who was needed to present supplemental information of a specialized nature.

Prior to the formulation of the questionnaire, State Agricultural Colleges and other major users of census data were invited to suggest inquiries for the enumeration. Each member of the Special Advisory Committee had the opportunity and the responsibility for channeling in suggestions from the organization he represented. The number of inquiries submitted from all sources greatly exceeded the number that could be included in the census, from the point of view of cost, of the respondent's time and patience, and of practical value to the majority of users of data.

The final selection included 316 questions, some of which consisted of several parts, for the 48 States comprising the conterminous United States. Although each of the 316 questions was asked in one or more of the 48 States, considerably less than this total was asked in any one State because of the use of "State" questionnaires. Moreover, about 50 questions out of the total were asked of approximately one-fifth of all farm operators in the State. The number of questions ranged from 159 on the questionnaire for Maine to 194 on the questionnaire for California. In all, 38 versions of the questionnaire—one for each State or combination of adjoining States and two for Texas—were used for the 1959 census in the conterminous United States as compared with 21 versions in 1954 and 41 in 1950. A separate version was used in Alaska and another in Hawaii.

Differences in the questionnaires were designed to account for regional and local differences in agriculture. Most, but not all, of the differences related to crops. The use of State questionnaires made possible the inclusion of separate inquiries for all important crops grown within a State and, at the same time, a reduction in the total number of inquiries for a State. Questions that did not apply, to any considerable degree, to a particular State were omitted from the questionnaire used in that State. For example, separate questions about citrus fruits were omitted from all questionnaires except for the few States where citrus fruits are grown. An added advantage of State questionnaires was that production and sales data could be asked in the unit of measure most commonly used by the farmers in each State. Regional variation in the number and type of questions is an important provision of the census for obtaining complete coverage of agricultural operations.

About 2 weeks before the start of the enumeration, agriculture questionnaires were mailed to most households in rural areas. A letter was attached to each questionnaire asking the farm operator to fill the questionnaire and to give it to the enumerator when he called. The purpose of this procedure was to save time and money in taking the census and to improve the quality of the information given by farm operators. By having the questionnaire ahead of time, the farmer could determine what information would be required and could check his records in advance of the enumerator's visit. It was, however, the responsibility of the enumerator to obtain an agriculture questionnaire for each place which qualified. If the questionnaire had been filled out by the farm operator, the enumerator was instructed to examine the questionnaire for completeness and accuracy and, if need be, to give the farmer such help as might be necessary.

Agricultural Operations.—The training of enumerators stressed the concept that a census of agriculture is a census of agricultural operations rather than a census of farms. This concept was intended to assure a complete agricultural census free of any personal judgment by enumerators as to what constitutes a farm. In accordance with clearly defined procedures, an enumerator was required to obtain an agriculture questionnaire for each person who had charge of one or more agricultural operations, whether or not he considered himself to be a farm operator. For enumeration purposes, it was considered that there were agricultural operations on a place if, at any time in 1959—

a. Any livestock (hogs, cattle, sheep, goats, horses, or mules) were kept on the place.
b. A combined total of 20 or more chickens, turkeys, and ducks were kept on the place.
c. Any grain, hay, tobacco, or other field crops were grown on the place.
d. A combined total of 20 or more fruit trees, grapevines, and nut trees were on the place.
e. Any vegetables, berries, or nursery or greenhouse products were grown on the place for sale.

As a result of the requirement that all places having agricultural operations be enumerated, more questionnaires were obtained than are included in the tabulations for farms. During the office processing operations that followed the completion of enumeration, criteria were applied to the questionnaires to sort out for tabulation those that represented farms according to the census definition of a farm (see page XIV).

Enumeration Assignments and Enumeration Districts.—To assure a complete enumeration within the time allotted, the United States (excluding Alaska and Hawaii) was divided into 29,374 Enumeration Assignments, or EA's. Each EA comprised an

area that one enumerator could reasonably be expected to canvass within a 3- to 4-week period, as indicated by performance records from the 1954 census.

Each EA was made up of one or more Enumeration Districts, or "ED's," as the geographic unit for enumeration. Prior to the enumeration, the ED's were classified into three groups on the basis of the density of dwellings in relation to the number of farms, as indicated by the 1954 Census of Agriculture, the 1950 Census of Population and Housing, current population estimates, and highway maps showing culture which were basic to establishing the boundaries of each assignment. Through the use of different canvassing procedures for each group of ED's, the Bureau was able to reduce the cost of enumeration without running any material risk of missing any farms or other places with agricultural operations. The ED groupings and canvassing procedures are described below.

Group I Enumeration Districts.—In general, ED's with no well-defined cluster of dwellings were considered to be open-country areas and comprise Group I. For each ED of Group I, in his Enumeration Assignment, the enumerator was required to list in his Record Book the name of every head of household living in the ED and also the name of every person not living in the ED who had agricultural operations there. There were approximately 20,751 ED's in Group I for the 1959 Census.

Group II Enumeration Districts.—Rural ED's in which the number of dwellings was large in relation to the number of farms were considered to be in Group II. For each ED, in Group II, the enumerator was required to list the head of the household for all dwellings in the ED except for those on less than one acre of ground in built-up residential areas of 50 or more dwellings. He was also required to determine, by observation or local inquiry, whether there were any farms or other places with agricultural operations in the built-up areas and, if so, to obtain an agriculture questionnaire. There were approximately 7,979 ED's in Group II.

Group III Enumeration Districts.—Most incorporated places and unincorporated villages having approximately 150 or more dwellings were designated as separate ED's and are classified as Group III. Also, most ED's in counties around large metropolitan areas were designated as Group III Ed's. Prior to the 1959 Census of Agriculture, places enumerated in these areas during the 1954 Census of Agriculture were listed in the Enumerator's Record Book. The enumerator was required to visit and enumerate or otherwise account for each place listed in his Record Book. In addition, he was instructed to ask at each of these places if there were any farms or other places with agricultural operations in the Enumeration District, and, if so, to add them to his list and enumerate them. There were approximately 15,836 Group III ED's in 1959. According to the 1954 Census, these ED's contained 380,575 farms.

A few enumeration districts that comprised incorporated places or that were within an incorporated city were classified as Group I or Group II because they had a large number of farms. A few others, comprising extensive rural districts requiring considerable travel, were classified as Group III because they had only a small number of farms.

Enumerator's Record Book.—Each enumerator received one or more Record Books containing a listing form for use during canvassing. (See appendix for facsimile of one page of listing form included in Enumerator's Record Book.) The lines on the listing form were numbered in consecutive order. Except as otherwise prescribed for Group II and Group III ED's, the enumerator listed in his Record Book the name of each head of household living in his assigned area and also the name of each person not living in his area who had agricultural operations there. As he made his listing, he also asked the questions about agricultural operations that were printed on the listing form. Answers to these questions determined, for the enumerator, whether or not an agriculture questionnaire was required for the person listed and, if so, whether he or some other enumerator was responsible for getting it. Thus, the Record Book served as an important aid to the enumerator in securing complete coverage of all agricultural operations within his area. At the same time, it helped to prevent enumeration of the same place by two or more enumerators.

Enumeration Maps.—As a second aid to getting complete coverage, each enumerator received a map or, in a few exceptional cases, a brief written description of the area assigned to him for enumeration. He was required to plan and follow an orderly route of enumeration within the boundaries of his assigned area in accordance with established canvassing procedures. As the enumerator listed a place in his Record Book, he indicated its location by copying onto his map the number of the line on which he listed it. This numbering system indicated the enumerator's route of travel, and helped both the enumerator and his crew leader to determine the extent of coverage of the enumerator's assignment at any given time.

Lists of Special and Large Farms.—Prior to the enumeration, a card list of "special and large farms" was prepared on the basis of records obtained from the 1954 census and from Federal and State agricultural agencies. In general, "special and large farms" fell into one of three categories: (1) farms having unusually large acreages, livestock inventories, or annual sales as indicated by available records; (2) farms known to be specializing in such operations as broiler production, turkey growing, feed lots, nursery or greenhouse production, cranberry bogs, citrus groves, etc.; (3) farms that might easily be overlooked because they had absentee operators or were not locally thought of as farms, such as institutions, Indian reservations, grazing associations, etc.

Enumerators were given the cards for the special and large farms within their assignment areas to use as aids to obtaining complete coverage. Generally, the cards provided insurance against the omission of farming units that could have a significant effect on the totals for a given county or State. The enumerator was instructed to obtain an agriculture questionnaire for each special or large farm in his area or to write an explanation on the card as to why an agriculture questionnaire was not required on the basis of 1959 operations. The crew leader had a duplicate set of cards for use in checking enumeration coverage.

Landlord-Tenant Questionnaire.—As in several previous censuses, a special landlord-tenant questionnaire was used in some parts of the South as a supplement to the agriculture questionnaire. Its purpose was to help the enumerator get complete and accurate coverage of individually operated tracts of land that were actually part of one operating unit under the control of one landlord. To accomplish this purpose, the enumerator was required to fill a landlord-tenant questionnaire for each landlord who had any land worked on shares. The entries made in this questionnaire included the name of each sharecropper, tenant, or renter; the amount of land assigned to each; and the acreage and quantity of crops harvested on shares. By checking these entries against the agriculture questionnaires obtained for the individual operators, the enumerator and the Central Office could verify that each part of the operating unit controlled by the landlord was enumerated and that it was enumerated only once. The landlord-tenant questionnaire was used in 386 counties in the 1959 census as compared with approximately 900 counties in 1954.

Township Sketch Map.—In some areas of the Great Plains, a considerable portion of land is farmed by nonresident operators—that is, by persons who do not live on the land they operate or who live on it only during part of the year. Enumerators in these areas used a special mapping form, the Township Sketch, in addition to their enumeration maps as an aid to obtaining complete coverage. Each township included on the sketch was identified by township and range number and was divided into 144 small squares. In a standard section of 640 acres, each square represented a quarter section of land, or 160 acres. As the enumerator canvassed his assignment area, he indicated the acreage and location of each farm, ranch, and tract of nonfarm

land by drawing its boundaries on the sketch. He also used a simple numbering system as a cross reference between the agricultural land identified on the sketch and the questionnaire on which it was reported. The Township Sketch was used in all counties of North Dakota and South Dakota and in selected counties of Colorado, Kansas, Minnesota, Montana, Nebraska, New Mexico, Oklahoma, and Wyoming.

Field Review of Enumerator's Work.—In the 1959 census, greater emphasis was placed on a detailed review of enumerators' work during enumeration than had been the case in previous censuses. The objective was to detect and correct enumeration errors as early as possible in order to achieve and maintain a high quality of individual performance. Starting on the first day of enumeration and continuing throughout the enumeration period, each crew leader was instructed to make regular and frequent visits to his enumerators. At each visit, he was to follow a clearly defined procedure for observing the enumerator's conduct of interviews and for checking his listings, maps, questionnaires, and other forms for accuracy and completeness.

As an aid to checking coverage and enumerator efficiency, the crew leader was given a list containing estimates, based on the 1954 census, of the number of questionnaires required in each enumeration assignment area within his district, and of the mileage and time required to obtain those questionnaires.

SAMPLING

Use of Sampling.—In the 1959 census, as in several previous censuses, sampling was used in two ways: for enumeration and for tabulation. Sampling in enumeration consisted of the collection of information about the items included in sections IX through XV of the questionnaire for only a sample of farms. The "sample" items relate to sales of dairy products and sales of livestock, use of fertilizer and lime, farm expenditures, land-use practices, farm labor, equipment and facilities, rental agreements, farm values, and farm mortgage debt. The same sample of farms was used for tabulations by type of farm and by economic class of farm and for many of those by size of farm and by color and tenure of operator.

Description of the Sample.—The sample used for the 1959 Census of Agriculture consisted of all farms with a total area of 1,000 or more acres or with estimated sales of $100,000 or more in 1959, and approximately 20 percent of all other farms. Farms with 1,000 or more acres were universally included in the sample during enumeration. As the enumerator filled the questionnaire, he determined the number of "acres in this place" (see question 7 of the agriculture questionnaire). If the acreage amounted to 1,000 or more he was required to fill sections IX through XV of the questionnaire. Farms with less than 1,000 acres, with estimated sales of $100,000 or more, were included in the sample during the office processing. For these farms the information for sections IX through XV was obtained by mail.

The selection of farms of less than 1,000 acres for inclusion in the sample was made during enumeration, according to the following procedure: As the enumerator determined that he was required to obtain a questionnaire, he assigned a number to it, whether or not he was able to obtain the questionnaire on his first visit. He assigned numbers in consecutive order, beginning with "1" for the first questionnaire required in each enumeration district within his area. He was instructed to fill sections IX through XV on all questionnaires for which the assigned number ended in "2" or "7" (i.e. 2, 7, 12, 17, 22, etc.).

Adjustment of the Sample.—An adjustment in the part of the sample that was comprised of farms of less than 1,000 acres and with estimated sales of less than $100,000 was made by a process essentially equivalent to stratifying the farms in the sample by size of farm. The purpose of this adjustment was to improve the reliability of the estimates based on the sample and to reduce the effects of possible biases introduced by enumerators who deviated from the prescribed procedure for selecting the sample farms. The adjustment procedure was carried out for "blocks" of counties, each consisting of from one to ten counties in a State. To adjust the sample, separate counts were made for each county, and for the block of counties of all farms and of farms in the sample for each of 10 size-of-farm groups based on the "acres in this place" (question 7). The 10 size-of-farm groups were as follows: under 10 acres, 10 to 49 acres, 50 to 69 acres, 70 to 99 acres, 100 to 139 acres, 140 to 179 acres, 180 to 219 acres, 220 to 259 acres, 260 to 499 acres, and 500 to 999 acres. Farms of less than 1,000 acres, but with value of sales of $100,000 or more, were excluded from these counts. For each size-of-farm group, the number of farms in the sample for the block of counties was adjusted to make it equal or approximately equal to the total number of farms divided by five. This was accomplished for each group by the elimination or duplication on a random basis, of farms in those counties where the difference between the actual proportion in the sample and the expected 20 percent was in the same direction as the difference for the block of counties.

Estimation of Totals for the Sample.—For the items included in the sample part of the questionnaire (sections IX through XV), estimated totals for all farms were derived from the tabulated totals for the farms in the adjusted sample. First, item-by-item totals, as tabulated for that part of the sample comprising farms of less than 1,000 acres and with estimated sales of less than $100,000, were multiplied by 5. These estimated item-by-item totals were then added to the corresponding item totals, as tabulated, for all farms of 1,000 acres and over and farms with estimated sales of $100,000 and over. The resulting values represent the estimated totals for all farms.

Presentation of Sample Data.—In tables where a small amount of data based on the sample farms is presented together with data for all farms, the data based on the sample are printed in italics. Other tables contain headnotes explaining that most of the data are estimates based on reports for only a sample of farms.

Reliability of Estimates.—The estimated totals for all farms of the items enumerated for only the sample farms are subject to sampling errors. The estimated totals obtained by making tabulations for only the farms included in the sample are also subject to sampling errors. State tables 23 and 24 contain approximate measures of the sampling reliability of the estimates for numbers of farms reporting and for item totals. While these measures indicate the general level of sampling reliability of the estimates, they do not completely reflect errors arising from sources other than sampling; for example, errors in the original data reported by farmers. Errors arising from sources other than sampling may, in some instances, be relatively more important than sampling variation, especially for county totals.

The general level of sampling reliability of estimated totals may be determined from the data in State tables 23 and 24. State table 24 contains a list of items, together with a figure for each item indicating one of the four levels of sampling reliability that are presented in State table 23. For each item the sampling error according to the number of farms reporting may be determined from State table 23, in the column for the level of sampling reliability designated in State table 24. To determine the sampling reliability for any item, reference must be made to State table 24 to find out which of the four levels of sampling reliability given in State table 23 should be used, and also the appropriate county or State table to obtain the number of farms reporting the item.

As explained in State table 23, the level of sampling reliability designated as level 1 should always be used to determine the sampling reliability of estimated numbers of farms or of farms reporting.

State table 23 shows percentage limits such that chances are about 68 out of 100 that the difference between an estimate based on the sample and the figure that would have been obtained from a tabulation of all farms would be no more than the percentage specified for the estimated number of farms reporting that item. The chances are about 99 out of 100 that the difference would be less than 2½ times the percentage specified.

As indicated by the percentages in State table 23, the smaller the number of farms reporting a given item, the larger the relative sampling error in the estimated total for that item. Even so, considerable detail is presented for each item, by several classifications of farms, in order to permit the appraisal of estimates for various combinations of items not shown in this report. Percentages and averages that may be derived from the tables will generally have greater relative reliability than the corresponding estimated totals. However, significant patterns of relationships may be observed in the estimated totals even though the individual data are subject to relatively large sampling errors.

The data representing estimates based on a sample of farms for the 1954 census were obtained in essentially the same way as in 1959. Therefore, State tables 23 and 24 may also be used to determine the sampling errors for the 1954 data.

Differences in Data Resulting From Differences in Tabulating Procedures.—Many of the figures in the detailed State tables represent estimates obtained by tabulating only the sample farms. The totals for these detailed distributions will generally differ somewhat from totals presented in other tables obtained from different distributions which were tabulated on a 100 percent basis. Moreover, although most of the figures presented by counties were obtained from tabulations of all farms, the data in county table 4 for commercial farms, and all of the data in the county tables on dairy products and livestock sold, fertilizer and lime, farm expenditures, land-use practices, farm labor, facilities and equipment, and value of land and buildings were estimated for each county on the basis of data tabulated for the farms in the sample. The State totals in the county tables for these items, though based also on the sample, were obtained in a different series of tabulating runs, and so may differ slightly from totals presented in some State tables. For reasons of economy the sample distributions were not adjusted to the 100 percent totals even when such totals were available, nor were slight discrepancies resulting from different runs of the sample data always reconciled unless the differences were large enough to affect the usefulness or reliability of the data.

PROCESSING OPERATIONS

Completion of Enumeration.—As an enumerator completed his assignment, he turned the portfolio containing questionnaires and other census materials over to his crew leader. After making a final review of the enumerator's work, the crew leader mailed the portfolio to the Agriculture Processing Office at Parsons, Kansas. There, each enumerator portfolio was thoroughly checked for completeness of all required forms and for correct application of the sampling procedure.

Editing of Questionnaires.—Each agriculture questionnaire was individually edited and coded before the information was transferred to punch cards and tabulated. As the first major step in the editing process, questionnaires that did not represent farms according to the census definition were withdrawn from further processing. (See p. XIV.) As the second major step, the remaining questionnaires were examined for errors, omissions, and inconsistencies. Among the specific items subjected to consistency checks were the following:

a. Total acreage compared with its distribution by use.

b. Acreage of individual crops harvested compared with total cropland harvested.

c. Irrigated acreage compared with total acres in the farm.

d. Total acreage of individual crops for all purposes compared with the acreage harvested for specific purposes.

e. Quantity of crops harvested in relation to acreage harvested.

f. Sales in relation to production and, for livestock, to inventories.

g. Total livestock compared with the inventory by age and sex.

h. Expenditures compared with production and inventories.

Obvious errors in calculations or in units of measure, and misplaced entries were corrected as they were found. Entries not clearly legible were rewritten. Many omissions or inconsistencies were disregarded during editing. Those of significant magnitude could be and were handled more efficiently and economically during mechanical processing operations. Questionnaires containing major inconsistencies and omissions were referred to members of the technical staff for review. Depending on the magnitude of the data involved, the technical staff corrected (or supervised the correction of) the questionnaires either on the basis of information reported for other farms of similar type in the area or on the basis of additional information received in response to letters directed to the farm operators.

Coding of Questionnaires.—Most of the numerical information on a questionnaire was self-coding in that the inquiry number was utilized for the item identification on punch cards or on tabulations runs. However, some manual coding was also necessary for such items as irrigated crops for selected States, crops infrequently reported, miscellaneous poultry, etc. Code numbers were entered on questionnaires to classify farms and, in some cases, to identify data for individual items. All farms were coded by size of farm in terms of total acreage, by race, and by tenure of operator. Farms in the 17 Western States, Louisiana, and Hawaii were also coded on the basis of irrigated cropland and irrigated pasture. Additional codes were applied to all farms included in the sample to classify them by type of farm and by total value of agricultural products sold. Individual items were coded only where reports were received for crops or poultry not covered by separate inquiries on the questionnaire. This coding was necessary to assure inclusion of the data in the appropriate farm product totals.

Tabulation of Data.—After the questionnaires were edited and coded, the information on them was punched on cards. The cards were then mechanically sorted and fed into machines which transferred the data to tabulation sheets. One of the initial and primary steps in the machine handling of the punch cards was to separate and list those cards which lacked necessary information, those which contained inconsistent or impossible data, and those on which the data were possible but of such magnitude that a further review of the individual questionnaires was warranted. The listing sheets were examined and, as necessary, the cards were corrected. When the cards for a particular county were considered satisfactory, the data were tabulated.

Subject-matter specialists of the Bureau and the U.S. Department of Agriculture examined all tabulations for reasonableness and consistency. As necessary, they made corrections on the basis of a further review and reappraisal of the original reports and verification of the editing, coding, and punching.

PRESENTATION OF STATISTICS

Statistical Content of This Report.—This report is part of Volume I of the 1959 Census of Agriculture. Volume I consists of 54 parts, each part containing information about agriculture for a single State, Commonwealth, or Possession. Each part contains county data for that particular State or area. The term "county," as used in this report embraces election districts in Alaska, parishes in Louisiana, municipios (municipalities) in Puerto Rico, etc. The statistics for 1959 were obtained from the Census of Agriculture taken in the "conterminous United States" (see following paragraph), Hawaii, and Puerto Rico during the period October 1959 to January 1960 and in Alaska, American Samoa, Guam, and Virgin Islands as of April 1, 1960. Comparative data for years prior to 1959 were obtained from earlier censuses.

In the planning of the publications for the 1960 Censuses of Population and Housing and the 1959 Census of Agriculture, the term "conterminous United States," recommended by the Board of Geographic Names to designate the 48-State area as it existed before Alaska and Hawaii became States, was adopted by the Bureau of the Census.

The definitions and explanations in this introduction for volume I generally have application broad enough to include the States of Alaska and Hawaii, and the Commonwealth of Puerto Rico and the island possessions. However, specific application in many instances may be limited to the conterminous United States; for example, references to earlier censuses, to the sampling methods and procedures, to specific sections or questions on the questionnaires, and to specific table numbers.

For each part of volume I (one part for each State or area), a facsimile of the appropriate questionnaire is reproduced in the appendix.

The statistics for States and counties are presented according to the same general plan as was followed in the volume I reports for the 1954 and the 1950 censuses. State and county totals are given for nearly all items for which information was obtained in the 1959 census. However, most of the data by economic class of farm, type of farm, and color and tenure of farm operator are given only for States.

Comparative data for the States are given for each census year beginning with 1920. Comparative data for counties are given for the years 1959 and 1954. For some items, the data obtained from the 1959 census are the only ones available. For comparative purposes 1950 data are carried in county table 6 for the kind of road on which farms were located.

Comparability of Data.—The data obtained from the various censuses of agriculture are not strictly comparable for all items. For example, differences from one census to another in the time of enumeration, the wording of the questions, and the definition of a farm cause some lack of comparability. Differences considered to have a significant effect on the comparability of data are described in the text and/or mentioned in footnotes to the tables.

Minor Civil Divisions.—As in prior censuses, data for most of the items included in the 1959 Census of Agriculture were tabulated for minor civil divisions. The term "minor civil division" applies to the primary subdivision of a county into smaller geographic areas such as townships, precincts, districts, wards, beats, municipalities, etc. Figures for these smaller geographic areas are not included in any of the published reports, but they may be supplied upon request and payment of the costs of compiling and checking the data.

Prior to the 1954 Census, an enumeration assignment did not include more than one minor civil division, even in cases where the township, precinct, etc., did not have enough farms to provide a full workload for an enumerator. In 1954, and again in 1959, the aim was to make enumeration assignments large enough to keep each enumerator fully occupied in his area for a 3- to 4-week period. Hence, in some areas, two or more adjoining minor civil divisions were combined into one enumeration assignment. An enumeration assignment never comprised the whole of one minor civil division and a part of another, nor a part of two or more minor civil divisions. A minor civil division that included too many farms for one enumerator to cover during the enumeration period was divided into two or more enumeration assignments.

In some cases, the minor civil division tabulations provide totals for a single minor civil division, even when such totals required a grouping of enumeration assignments. In other cases, the minor civil division tabulations provide totals for a combination of two or more adjoining minor civil divisions. The data for each individual minor civil division included in such totals can be tabulated separately, however, since each questionnaire obtained in the census contains the designation of the minor civil division in which the farm headquarters was located. An additional charge must be made for a separate tabulation of any small area included in a total for two or more combined minor civil divisions.

Requests for census information for minor civil divisions should be directed to the Agriculture Division, Bureau of the Census, Washington 25, D.C.

DEFINITIONS AND EXPLANATIONS

Descriptive Summary and References.—The definitions and explanations that follow relate only to those items that are considered to be inadequately described in the tables where they appear. Although the descriptive terms and explanations refer specifically to the 1959 Census of Agriculture, many of them also apply to earlier censuses. Most of the definitions consist of a résumé of the questionnaire wording, supplemented by excerpts from instructions given to enumerators. For exact wording of the questions and of the instructions included on the questionnaire, see the facsimile of the 1959 Agriculture Questionnaire in the appendix of this report.

An analysis of the questions asked in the 1959 census, and of the data obtained, is given in Volume II, General Report, Statistics by Subjects, United States Census of Agriculture, 1959. The general report presents statistics for States by subject matter.

General Farm Information

Census Definition of a Farm.—For the 1959 Census of Agriculture, the definition of a farm was based primarily on a combination of "acres in the place" and the estimated value of agricultural products sold.

The word "place" was defined to include all land on which agricultural operations were conducted at any time in 1959 under the control or supervision of one person or partnership. (For definition of "agricultural operations", see p. X.) Control may have been exercised through ownership or management, or through a lease, rental, or cropping arrangement.

Places of less than 10 acres in 1959 were counted as farms if the estimated sales of agricultural products for the year amounted to at least $250. Places of 10 or more acres in 1959 were counted as farms if the estimated sales of agricultural products for the year amounted to at least $50. Places having less than the $50 or $250 minimum estimated sales in 1959 were also counted as farms if they could normally be expected to produce agricultural products in sufficient quantity to meet the requirements of the definition. This additional qualification resulted in the inclusion as farms of some places engaged in farming operations for the first time in 1959 and places affected by crop failure or other unusual conditions.

To avoid biases arising from an enumerator's personal judgment and opinion, the Bureau did not give enumerators the defini-

tion of a farm. Instead, enumerators were instructed to obtain questionnaires for all places considered farms by their operators and for all other places that had one or more agricultural operations. (See "Agricultural Operations", p. X.) In 1954, enumerators were instructed to fill questionnaires on the same basis as in 1959. In 1950, agricultural operations were defined to include every place of 3 or more acres, whether or not the operator considered it a farm, and every place having "specialized operations", regardless of the acreage. "Specialized operations" referred to nurseries and greenhouses and to places having 100 or more poultry, production of 300 or more dozen eggs in 1949, or 3 or more hives of bees. In all of the three last censuses, as a result, questionnaires were filled for a considerable number of places that did not qualify as farms. The determination as to which questionnaires represented farms was made during office processing operations and only those questionnaires meeting the criteria for a farm were included in the tabulations.

For both the 1950 and 1954 Censuses of Agriculture, places of 3 or more acres were counted as farms if the annual *value* of agricultural products, whether for home use or for sale but exclusive of home-garden products, amounted to $150 or more. Places of less than 3 acres were counted as farms only if the annual *sales* of agricultural products amounted to $150 or more. A few places with very low agricultural production because of unusual circumstances, such as crop failure, were also counted as farms if they normally could have been expected to meet the minimum value or sales criteria.

In the censuses from 1925 to 1945, enumerators were given a definition of "farm" and were instructed to obtain reports only for those places which met the criteria. According to this definition, farms included all places of 3 or more acres, regardless of the quantity or value of agricultural production, and places of less than 3 acres if the value of agricultural products, whether for home use or for sale, amounted to $250 or more. Because of changes in price level, the $250 minimum resulted in the inclusion of varying numbers of farms of less than 3 acres in the several censuses taken during this period. Generally, the only reports excluded from tabulation were those taken in error and those showing very limited agricultural production, such as only a small home garden, a few fruit trees, a small flock of chickens, etc. In 1945, reports for places of 3 acres or more were tabulated only if at least 3 acres were in cropland and/or pasture or if the value of products in 1944 amounted to at least $150.

The decrease in the number of farms in 1950 and 1954, as compared with earlier censuses, was partly due to the change in farm definition, especially with respect to farms of 3 or more acres in size. Some of the places of 3 or more acres that were not counted as farms in 1950 and 1954 because the value of their agricultural production was less than $150 would have qualified as farms if the criteria had been the same as in earlier censuses.

For 1959, the decrease in the number of farms as compared with all prior censuses resulted partly from the change in farm definition. The fact that sales of agricultural products in 1959 was used resulted in the exclusion of some places that would have qualified as farms had the value of agricultural products alone been considered. The increase in the acreage minimum also had an effect. The reduction in the number of farms due to change in definition, 1954 to 1959, is shown for each county in county table 1. Some characteristics of the places not counted as farms in 1959, but which would have been included in 1954, are shown in State table 10.

The change in farm definition made in 1950 and again in 1959 had no appreciable effect on the totals for livestock or crops because the places affected by the change ordinarily accounted for less than 1 percent of the totals for a given county or State.

For the States that comprise the conterminous United States, two figures are published for each county on the number of farms in 1959. One is an actual count of all farms and the other is an estimate based on the number of farms included in the sample. For almost every county there is a difference between the actual number of farms and the estimated number of farms. Because of sampling procedure and sampling variability, the number of farms in the sample seldom agrees exactly with the actual number of farms. For most counties, the actual number of farms in the sample was either more or less than precisely 20 percent of all farms. Similarly, totals estimated on the basis of data for the sample farms may be slightly more or slightly less than the actual totals that would have been obtained had the data been tabulated for all farms. Therefore, the estimated number of farms reporting certain items may, in some instances, be greater than the total number of farms shown in county table 1. However, the estimated number of farms is given in county tables 5 and 6 so that estimates based on the sample farms may be related to the estimated rather than the actual number of farms.

Farm Operator.—The term "farm operator" is used to designate a person who operates a farm, either doing the work himself or directly supervising the work. He may be the owner, a member of the owner's household, a hired manager, or a tenant, renter, or sharecropper. If he rents land to others or has land worked on shares by others, he is considered as operator only of the land which he retains for his own operation. In the case of a partnership, only one partner is counted as an operator. The number of farm operators is considered to be the same as the number of farms.

Farms Reporting or Operators Reporting.—Figures for farms reporting or operators reporting, based on a tabulation of all farms, represent the number of farms, or operators, for which the specified item was reported. For example, if there were 1,922 farms in a county and only 1,465 had chickens 4 months old and over on hand at the time of enumeration, the number of farms reporting chickens would be shown as 1,465. The difference between the total number of farms and the number of farms reporting a particular item represents the number of farms not having that item, provided a correct report was received for all farms.

Where applicable, figures may be given for the number of farms or operators not reporting items that were intended to be obtained for all farms; for example, residence of farm operator, State table 4. The number not reporting, as compared with the total number of farms or operators, indicates the extent of incompleteness of the reporting of the data for the item.

Land Area.—The approximate total land area of States and counties as reported for 1959 is, in general, the same as that reported for all censuses beginning with 1940. Such differences as are shown reflect political changes in boundaries or actual changes in land area caused by changes in the number or size of reservoirs, lakes, streams, etc. For Alaska, the areas for election districts represent the gross area of land and water.

Land in Farms.—Except for managed farms, the land to be included in each farm was determined from the answers to questions about the number of acres owned, the number of acres rented from others or worked on shares for others, and the number of acres rented to others or worked on shares by others. The acres owned and the acres rented from others or worked on shares for others were first added together and then the acres rented to others or worked on shares by others were subtracted. The result represented the number of acres in the farm. The number of acres in a managed farm was the difference between the total land managed and that part of the managed land that was rented to others or worked on shares by others.

In the 1959, 1954, and 1950 censuses, enumerators were instructed to record total figures for land owned, land rented from others, and land managed for others, including any part of the land that was rented to others. In censuses prior to 1950, enu-

merators were instructed to exclude all land rented to others and to record only that portion of the acreage owned, rented from others, or managed for others that was retained by the farm operator. Thus, the figures for the individual tenures of land are not entirely comparable for all censuses. However, the land included in each farm was determined on essentially the same basis for all censuses.

The acreage designated in the tables as "land in farms" consists primarily of "agricultural" land—that is, land used for crops and pasture or grazing. It also includes considerable areas of land not actually under cultivation nor used for pasture or grazing. For example, the entire acreage of woodland and wasteland owned or rented by farm operators is included as land in farms, unless it was being held for nonagricultural purposes or unless the acreage was unusually large. For 1959 and 1954, if a place had 1,000 or more acres of woodland not pastured and wasteland, and if less than 10 percent of the total acreage in the place was used for agricultural purposes, the acreage of woodland not pastured and wasteland was reduced to equal the acreage used for agriculture. The procedure used in 1950 for excluding unusually large acreages of woodland not pastured and wasteland differed slightly from the one used in 1959 and 1954. In 1950, adjustments were made in places of 1,000 or more acres (5,000 or more in the 17 Western States), if less than 10 percent of the total acreage was used for agricultural purposes.

Except for open range and grazing land used under government permit, all grazing land was to be included as land in farms provided the place of which it was a part was a farm. Grazing land operated by Grazing Associations was to be reported in the name of the person chiefly responsible for conducting the business of the Association. Land used rent free was to be reported as land rented from others. All land in Indian reservations that was used for growing crops or grazing livestock was to be included. Land in Indian reservations that was not reported by individual Indians and that was not rented to non-Indians was to be reported in the name of the cooperative group that used the land. In some instances, an entire Indian reservation was reported as one farm.

Land owned.—All land that the operator and/or his wife held under title, purchase contract, homestead law, or as heir or trustee of an undivided estate at the time of enumeration is considered as owned.

Land Rented from Others.—This item includes not only land that the operator rented or leased from others but also land he worked on shares for others and land he occupied rent free. Grazing land used under government permit or license is not included.

Land Rented to Others.—This item includes all land rented or leased to others, except land leased to the government under the Soil Bank, and all land worked by others on shares or on a rent-free basis. For the most part, the land rented to others represents agricultural land but it also includes land rented for residential or other purposes. The tenant or sharecropper is considered as the operator of land leased, rented, or worked on shares even though his landlord may supervise his operations. The landlord is considered as operator of only that portion of the land not assigned to tenants or croppers.

Land Managed.—This item includes all tracts of land managed for one or more employers by a person hired on a salary basis. A hired manager was considered to be the operator of the land he managed since he was responsible for the agricultural operations on that land and frequently supervised others in performing those operations. Managed land was always to be reported on a separate questionnaire whether or not the manager also operated a farm on his own account.

Land in Two or More Counties.—An individual farm was always enumerated in only one county, even in cases where the land was located in two or more counties. If the farm operator lived on the farm, the farm was enumerated in the county where he lived. If he did not live on the farm, the figures for the farm were tabulated for the county where the farm headquarters was located. In cases where there was any question as to the location of the headquarters, figures for the farm were tabulated for the county where most of the land was located.

Land in Farms According to Use.—Land in farms has been distributed according to the way in which it was used in 1959. The land uses described in the following paragraphs are mutually exclusive; that is, each acre of land is included only once even though it may have had more than one use during the year.

Cropland Harvested.—This category refers to all land from which any crops were harvested in 1959, whether for home use or for sale. It includes land from which hay (including wild hay) was cut and land in berries and other small fruits, orchards, vineyards, nurseries, and greenhouses. Matured crops hogged off or grazed were considered to have been "crops harvested" and were reported here. Land from which two or more crops were harvested in 1959 was to be counted only once in the land-use classification. Land used for other purposes either before or after the crops were harvested was to be reported as cropland harvested, without regard to the other uses.

The enumerator was instructed to check the figure for cropland harvested for each farm by adding the acreages of the individual crops and subtracting the acreages from which two or more crops were harvested. This checking procedure was repeated during the office processing of questionnaires for all farms having 100 or more acres of cropland harvested.

Cropland used only for Pasture.—This land-use classification includes rotation pasture and all other land used only for pasture or grazing that the operator considered could have been used for crops without additional improvement. Enumerators were instructed to include land planted to crops that were hogged off, pastured, or grazed before maturity but to exclude land pastured before or after hay or other crops were harvested from it. Permanent open pasture may have been reported either for this item or for "other pasture" depending on whether or not the operator considered it as cropland.

The figures for 1945 and earlier censuses are not entirely comparable with those for the last three censuses. For 1945, the figures include only cropland used solely for pasture in 1944 that had been plowed within the preceding seven years. The figures for 1940, 1935, and 1925 are more nearly comparable with those for 1959, 1954, and 1950, however, because they include land pastured that could have been plowed and used for crops without additional clearing, draining, or irrigating.

Cropland not Harvested and not Pastured.—This classification represents a total of three subclasses for the 17 Western States and two subclasses for other States.

Cultivated Summer Fallow.—This subclass of land is shown only for the 17 Western States. It refers to cropland that was plowed and cultivated but left unseeded for the 1959 harvest in order to control weeds and conserve moisture.

Soil Improvement Grasses and Legumes.—For the 1959 census, land used only for cover crops to control erosion or to be plowed under for green manure is tabulated separately from "other cropland". After the establishment of the Soil Bank, land that would normally have been used for other purposes was frequently planted to soil-improvement crops. In counties where large acreages were placed in the Soil Bank, the total of land used for soil-improvement crops plus "other cropland" may be considerably larger than the "other cropland" shown for previous censuses.

Other Cropland.—This subclass includes idle cropland, land in crops intended for harvest after 1959, and cropland not harvested because of complete crop failure, low prices, labor shortage, or other reasons. The 1959 figures for "other cropland" are not entirely comparable with those for previous censuses since they do not include land used only for soil-improvement crops. (See preceding paragraph.)

Woodland Pastured.—This classification includes all woodland where livestock were pastured or grazed in 1959. The instruction on the questionnaire—"Include as woodland all wood lots and timber tracts; cutover and deforested land which has value for wood products and has not been improved for pasture"—represents a somewhat more precise definition than the corresponding instruction contained on the 1954 questionnaire. No definition of woodland was given in 1950 apart from an instruction to enumerators not to include brush pasture as woodland. Some of the changes in woodland acreages from one census to another may merely represent differences in interpretation as to what constitutes "woodland."

Woodland not Pastured.—This classification refers to all woodland not used for pasture or grazing in 1959, including land in operated farms that was placed in the Soil Bank and planted to trees. Unusually large tracts of timberland that were reported as woodland not pastured were excluded from

the tabulation of land in farms when it was evident that such land was held primarily for nonagricultural purposes.

Other Pasture.—This classification refers to all land other than woodland and cropland that was used only for pasture or grazing in 1959. It includes noncrop open or brush pasture and cutover or deforested land that has been improved and used for pasture. The figures for the last three censuses are comparable but those for 1945 include all nonwoodland pasture that had not been plowed during the preceding seven years. For the 1940 census and earlier years, the figures are more nearly comparable with those for the last three censuses. However, the classification may be somewhat less inclusive because land that could have been plowed and used for crops without additional clearing, draining, or irrigating was classified as plowable pasture and included with "cropland used only for pasture".

Improved Pasture.—This subclass refers to that portion of "other pasture" on which one or more of the following practices had been used: liming, fertilizing, seeding, irrigating, draining, or the clearing of weed or brush growth. The figures are comparable with those for 1954, when the question on improved pasture was asked for the first time.

Other Land.—This classification refers to all land not included in the preceding land-use classifications, such as house lots, barn lots, lanes, roads, ditches, land area of ponds, and wasteland. This figure for 1959 was obtained from the machine tabulations by subtracting the total of all other uses from the total land in all farms reported for a given county or classification. Hence, there is no figure given to represent the farms reporting this item.

Value of Land and Buildings.—Only average values of land and buildings per farm and per acre are presented in this report. They are estimates based on data obtained for sample farms. Estimates of the total value of land and buildings by States, geographic divisions, and the United States, are presented in volume II.

The enumerator was instructed to record the market value of the land and the buildings on that land. Market value was defined as the price which the farm operator would expect to receive for the land and buildings if he were to sell them on the day of enumeration.

More problems and difficulties arise in the enumeration of farm-real-estate values than in the enumeration of most other agricultural items. Most of the items enumerated require the respondent to make a statement of fact. For example, information about the number and value of farm animals sold alive during the year is based on actual transactions. Similarly, information about livestock inventories relates to the situation existing on a specific place at a specific time. Reports concerning the value of land and buildings, however, are estimates based almost entirely on opinion. The majority of farms have not changed hands for many years and are not currently for sale. For such farms, the operators are not likely to have any clear basis for estimating the value. To make an intelligent and objective estimate, a respondent first needs to make an estimate of the prevailing average market value of farms in his community. Then, he must either add to or subtract from that estimate to allow for the different characteristics of his own farm. In many cases, an operator who would not sell his farm under any circumstances may report an unreasonably high market value. In other cases, a farm operator who acquired his real estate during a period of relatively low prices may estimate an unrealistically low value by current standards. Because of the extent of variation that is known to exist in real estate values, it is difficult to devise checking procedures that will identify inaccurate estimates.

Age of Operator.—Farm operators were classified by age into six age groups. The average age of farm operators was derived from the sum of the ages of all farm operators reporting age divided by the number reporting. The number of farm operators 65 or more years of age is an actual count based on the operators reporting age.

Residence of Operator.—Farm operators were classified by residence according to whether or not they lived on the farms they were operating. Some of those who did not live on the farms they operated themselves lived on farms operated by others. In cases where all the land was rented from others or worked on shares for others, the operator was considered to live on the farm operated provided the dwelling he occupied was included in the rental agreement. The dwelling, in such cases, was not necessarily on the land being operated. Similarly, a farm operator who did not live on the land being cultivated or grazed but who had some agricultural operations (other than a home garden) at his dwelling was considered as living on the farm operated.

Since some farm operators live on their farms only during a part of the year, comparability of the figures for various censuses may be affected by the date of enumeration.

In a few cases, the enumerator failed to report the residence of the farm operator. Differences between the total number of farms and the number of farm operators classified by residence indicate the extent of under-reporting.

Year Began Operating Present Farm.—Enumerators were instructed to report the year during which a farm operator began to operate his present farm and, if the year was 1958 or later, also to report the month. The year was intended to refer to the first year of the period during which the operator had been in continuous charge of his present farm or of any part of it. The time of year that farmers move is indicated by the month they began operating their farms, as shown by a monthly breakdown of the reports for farmers who began operating their present farms during 1958 and 1959.

Off-Farm Work and Other Income.—To obtain a measure of the extent to which farm operators rely on nonfarm sources for part of their income, four questions were asked of all farm operators. The first question asked for the number of days the operator worked off his farm in 1959. The other three questions, to be answered "Yes" or "No," asked (1) whether other members of the operator's household did any work off the farm; (2) whether any income was received from sources other than the sale of agricultural products from the farm operated; and (3) whether the combined income of all members of the household from off-farm work and other sources was greater than the total value of agricultural products sold from the farm operated.

Off-farm work was defined to include work on someone else's farm for pay as well as all types of nonfarm jobs, businesses, and professions, whether the work was done on the farm premises or elsewhere. Exchange work was not included.

The questions asked in the 1959 Census are closely comparable with those asked in 1954. The data for 1959 are actual totals of all operators reporting off-farm work and other income whereas those for 1954 are estimated totals based on the sample.

Equipment and Facilities.—In 1959 as in several earlier censuses, data about specified equipment and facilities were obtained for only a sample of farms. Farm operators were asked to report equipment and facilities that were on the farm at the time of enumeration, regardless of ownership. They were to include items that were temporarily out of order but not any that were worn out.

Data in terms of actual number were obtained for the following items of farm equipment in 1959: (1) grain combines, (2) corn pickers, (3) pick-up balers, (4) field forage harvesters, (5) motortrucks, (6) wheel tractors, (7) garden tractors, (8) crawler tractors, and (9) automobiles. Definitions given enumerators included the following specifications, among others: **Corn pickers** related to all types of machines used for picking corn, whether used in separate or in combined picking-shelling operations. **Pick-up balers** were to include both hand-tie and automatic balers but not stationary ones. **Motortrucks** were to include pick-up trucks and truck-trailer combinations; jeeps and station wagons

were also to be included if they were used primarily as trucks, but school buses were specifically excluded. Wheel tractors specifically excluded garden tractors, implements with built-in power units, such as self-propelled combines or powered buck rakes, and the power unit of a truck-trailer combination. Automobiles were to include jeeps and station wagons if they were used primarily as passenger cars.

Questions to be answered "Yes" or "No" provided information as to the presence or absence of the following items: (1) telephone, (2) home freezer, (3) milking machine, (4) electric milk cooler, (5) bulk-type milk cooler (in six States only—Michigan, Minnesota, New York, Ohio, Pennsylvania, and Wisconsin), (6) crop drier and (7) power-operated elevator, conveyor, or blower.

Comparable data from one census to another are not available for all items. The questions asked about equipment during a given census reflect changes in farm mechanization and in the facilities available to farm families. Questions about some items of equipment were asked in 1959 for the first time (electric milk cooler, crop drier, bulk-type milk cooler, etc.). Similarly, some questions that were asked in earlier censuses were omitted in 1959. For example, the use of electricity is now so widespread that there is no longer any need for obtaining a count of the farms having it.

Farms by Kind of Road.—The classification of farms by the kind of road on which they are located is based on only a sample of farms. The enumerator was instructed to report, on the basis of his own observation, the kind of road on which the most frequently used entrance to the farm was located. For farms consisting of two or more tracts, he was to limit his report to the tract on which the farm operator had his dwelling or other headquarters.

Farm Labor.—The questions about farm labor were asked only for the sample farms and related to persons working during the calendar week preceding the week of enumeration. Since the enumeration starting dates varied by geographic areas, and the enumeration within each area lasted over a period of several weeks, the calendar weeks to which the data apply also vary. Thus, the data for an individual farm may relate to any one week during the months of October, November, or December, or even, in a few instances, to weeks during September 1959 or January 1960.

Farm labor was defined to include any work, chores, or planning necessary to the agricultural operations of the farm; and to exclude housework, contract construction work, custom machine work, and repair, installation, or construction work done by persons employed specifically for such work. The farm labor information contained in this report represents estimates based on answers to questions relating to the farm work or chores done during the week by (1) operator, (2) unpaid members of the operator's family, and (3) hired persons. An operator was considered as working if he worked one or more hours; unpaid members of the operator's family, if they worked 15 or more hours; and hired persons, if they worked at all during the week.

Data are not fully comparable from one census to another, primarily because of differences in the period to which they relate. In 1954, the data were purposely related to either one of two calendar weeks, depending in part on the starting date set for the enumeration and in part on which week represented a period of peak employment within a given State. For the majority of States, the period specified was the week of September 26–October 2; for other States, the week of October 24–30.

In 1950, as in 1959, the data related to the week preceding the actual enumeration. Unlike 1959, however, enumeration starting dates were identical for all States in 1950 (April 1) but since several weeks were required to complete the enumeration, the calendar week preceding the enumeration was not identical for all farms. In 1945 and 1935, the number of farm workers related to the first week in January and, in 1940, to the last week in March. In 1945, 1940, and 1935, only persons working the equivalent of two or more days during the specified week were to be included. In 1945 and 1940, an additional specification limited the workers to those 14 years old and over.

Experience gained from earlier censuses indicates that farm labor data are often unsatisfactorily reported unless the week specified is the week immediately preceding the actual enumeration. When a farm operator was asked to report the number of persons employed during a specified week that was several weeks prior to enumeration, he often reported the highest number of persons employed during the year. Obviously incorrect reports were adjusted to make the data reflect more nearly the situation known to exist during the specified week. The farm labor data for 1954 relates to a specified week which, in some cases, was several weeks prior to enumeration. Few adjustments were made in those data, however, even though there were indications of incorrect reporting.

Regular and Seasonal Workers.—Hired persons working on the farm during the week concerned were classed as "regular" workers if the period of actual or expected employment was 150 days or more during the year. They were classed as "seasonal" workers if the period of actual or expected employment was less than 150 days. In cases where the period of employment was not reported for an individual farm, it was estimated from data for such items as basis of payment, wage rates, expenditures for labor in 1959, and type of farming operations.

Hired Workers by Basis of Payment.—Hired persons were also classified according to whether they were paid on a monthly, weekly, daily, or hourly basis, or by piecework. In cases of incomplete reporting, the basis of payment for hired workers was supplied during the office processing operations.

Wage Rates and Hours Worked.—The agreed cash rate of pay was asked for each class of hired worker except those employed on a piecework basis. (The number and the earnings of persons paid on a piecework basis were required for those who worked on Friday of the week preceding the enumeration.) The number of hours that workers were expected to work to earn their pay was asked for each class except those employed on an hourly or piecework basis. For 1959 and 1954, the data include office estimates for farms submitting incomplete reports of wage rates and hours worked. The estimates were consistent with the size and type of operations for the individual farm as compared with similar farms in the area for which complete reports were received. The corresponding data for 1950 apply only to farms that reported both wage rates and hours worked.

Fertilizer and Lime.—The questions about fertilizer and lime, asked only for the sample farms, relate to the acreage on which fertilizer and lime were used and to the quantity used. Farm operators were asked to report total quantities used in 1959 on the farms they operated regardless of when or by whom the fertilizer and lime were purchased. In the South, some landlords who operated farms themselves included the fertilizer and lime they had purchased for use on their tenant-operated land. Such fertilizer and lime may also have been reported by the tenants. When double reporting was detected during the editing process, the data on the questionnaires concerned were adjusted to eliminate duplication in the totals.

The 1959 data for fertilizer and lime are entirely comparable with those for 1954. A breakdown between dry and liquid fertilizing materials was not obtained in 1954 and data on cost of either fertilizer or lime were not obtained in 1959.

Fertilizer.—The report for fertilizer was to refer only to commercial fertilizer and fertilizing materials, including rock phosphate. The acres fertilized and the tons of fertilizer applied to those acres were obtained separately for selected crops. The selected crops varied by region so that it was possible to obtain detailed data for the crops most commonly fertilized in each region. In cases where the same land was used for more than one crop, the acres fertilized were to be reported separately for each crop. If the same crop was fertilized more than once, however, the acres in that crop were to be reported only once. In all cases, the total quantity of fer-

tilizer used in 1959 was to be reported, including quantities used on land occupied by crops planted in 1958 or by crops to be harvested in 1960.

Reports for quantity of fertilizer and fertilizing materials used were required for both dry and liquid materials. The terms "dry" and "liquid" referred to the form in which the fertilizers and fertilizing materials were purchased and not to the way in which they were applied. Thus, dry fertilizers were those purchased in dry or solid form, as powders, dusts, granules, pellets, etc.; liquid fertilizers were those purchased in fluid form, as solutions or as liquefied gases.

Lime.—The data for lime relate to the total acreage limed in 1959 and the total tonnage of lime and liming materials used on those acres for purposes of conditioning the soil. Instructions on the questionnaire stated that ground limestone, hydrated and burnt lime, marl, and oyster shells were to be included but that lime used for spraying or sanitation purposes was to be omitted.

For some counties, the tonnage of lime shown in the table may be less than the tonnage reported for the Agriculture Conservation Program or the Conservation Reserve Program of the Soil Bank. Differences may be due either to sampling error or to under-reporting by farm operators. Many of the differences are minimized or eliminated entirely in the data presented on a State or regional basis.

Specified Farm Expenditures.—The data for farm expenditures are estimates based on reports obtained from the sample farms. The 1959 questionnaire contained questions for six items of farm expenditure: (1) purchase of feed for livestock and poultry, (2) purchase of livestock and poultry, (3) machine hire, (4) hired labor, (5) seeds, bulbs, plants, and trees, and (6) gasoline and other petroleum fuel and oil. With the exception of items (2) and (5), exactly the same questions were asked in 1954. For each item specified, the total expenditures made for the farm in 1959 were to be reported, whether made by the farm operator, his landlord, or both. A farm operator who rented part of his land to others was to report only the expenditures for the land he operated himself. Enumerators were instructed to ask respondents who had difficulty estimating their expenses for the period between enumeration and the end of the year to estimate them on the basis of current costs.

Feed.—The report on feed purchased for livestock and poultry was to include expenditures for grain, hay, millfeeds, pasture, salt, condiments, concentrates, and mineral supplements as well as for the grinding and mixing of feed. The estimated cost of items furnished by a landlord, contractor, or other owner for feeding poultry and livestock kept on the farm was also to be included. Payments made by a tenant to his landlord for feed grown on the tenant farm were to be excluded.

Livestock and Poultry.—The cost of baby chicks and turkey poults was to be included in the expenditures made for the purchase of livestock and poultry. Enumerators were instructed to ask the farm operator to include the cost or estimated purchase value of poultry and livestock provided by others and cared for by the operator under a contract feeding arrangement. The cost of livestock purchased for resale within 30 days was not to be included. A short-term transaction of that nature was considered to be a dealer operation, not an agricultural one.

Data on the purchase of livestock and poultry were not obtained in 1954. The instructions for the 1950 census specified that expenditures for domestic rabbits, fur-bearing animals kept in captivity, and bees were to be included. Any lack of comparability in the 1950 and 1959 data resulting from inclusion or exclusion of rabbits, fur-bearing animals, or bees is considered to be so slight as to be insignificant.

Machine Hire.—Expenditures for machine hire relate to custom machine work, such as tractor hire, threshing, grain or seed combining, silo filling, baling, cotton picking, cotton ginning, corn picking, plowing, vegetable harvesting, fruit picking, spraying, and dusting. Any amount spent for the labor included in the cost of machine hire was to be considered as part of the total expenditure. The cost of freight or trucking and exchange work without pay were to be omitted.

Hired Labor.—Expenditures for hired labor were to include total cash payments made in 1959 to family members and to others for farm labor. Payments to persons supplied by a contractor or a cooperative organization and paid directly by them or by the crew boss were also to be included. Payments for the following types of work were to be excluded: housework, contract construction work, custom machine work, and repair, installation, or construction work done by persons specifically employed for such work.

Gasoline and Other Petroleum Fuel and Oil.—Expenditures for gasoline and other petroleum fuel and oil were to relate only to the products used in the farm business. Enumerators were instructed to exclude the cost of petroleum products used for the family automobile when operated for other than farm business purposes and of products used in the farmhouse for heating, cooking, and lighting.

Seeds, Bulbs, Plants, and Trees.—Expenditures were to represent the total amount spent for seeds, bulbs, plants, and trees to be used on the farm operated. The value of seed grown on the farm was to be excluded. For nurseries and greenhouses, the cost of products purchased for immediate resale was also to be excluded.

This item of expenditure was not included in the 1954 Census. The data are comparable with those for 1950, however.

Crops

Crops Harvested.—The 1959 agriculture questionnaire was similar to the questionnaire used in several previous censuses in that it provided for the collection of detailed data for all crops harvested on each individual farm. The variation in the crops listed on the questionnaires used in different States made possible the separate reporting of all important crops grown in a given area. All versions of the questionnaire contained several "All other crops" questions where crops not specifically listed in separate questions were to be reported.

Acreage of Crops Harvested.—In most instances, the acreage reported for individual crops represents the area harvested during 1959. The area harvested is often less than the area planted. For fruit orchards and groves, vineyards, and planted nut trees, the acreage reported represents the total area in both bearing and nonbearing trees and vines as of the date of enumeration—usually a date in October, November, or December 1959. For soybeans, cowpeas, and peanuts, the acreage grown for all purposes was reported as well as the acreage harvested for specific purposes. For velvet beans, only the acreage grown was reported. As the enumeration was about to begin in South Florida (those counties in which the enumeration was begun on October 7), an instruction was issued to the effect that the data for vegetables and potato crops should relate to a full year, beginning on October 1, 1958, and ending September 30, 1959.

Quantity of Crops Harvested.—Except for citrus fruits, olives, avocados, and for vegetable and potato crops in South Florida (see preceding paragraph) data for quantity harvested relate to the calendar year 1959. For citrus fruits, the quantity harvested from the bloom of 1958 for the 1958–59 marketing season was to be reported. For olives, the crop harvested in 1959 was to be reported for all States except California and Arizona. Enumerators in those two States were instructed to report olives harvested from the bloom of 1958 during the 1958–59 harvest season (September 15, 1958, to February 28, 1959). In the case of avocados, the data for California were to relate to the quantity harvested from the bloom of 1958 for the marketing season that extended from October 1, 1958 to September 30, 1959; the data for Florida were to relate to the crop harvested for the marketing season that extended from July 1, 1959, to February 28, 1960. Respondents were to estimate quantities not yet harvested at the time of enumeration.

Unit of Measure.—The unit of measure in which quantities were to be reported has varied for some crops, not only from State to State, but also from census to census. The aim has been to permit reporting in the units of measure currently in use. In the State and county tables, the quantities harvested for each crop are usually expressed in the unit of measure given on the 1959 agriculture questionnaire. In 1959, for corn and Irish potatoes, a choice between two units in which to report the production was given in some States. (See the discussion for those crops.) To provide readily comparable information, data published in earlier reports in different units of measure generally have been converted to the units used in 1959.

Corn.—In the 1959 census, detailed questions regarding the purpose for which corn was harvested were asked in all States. For most States, bushels was the only unit specified for corn

for grain. In some areas, however, where farmers were not accustomed to using bushels as the unit of measure, the questionnaire contained a provision for the quantity of corn for grain to be reported either in bushels (shelled basis) or in baskets of ear corn. As in former censuses, some reports were received in units of measure other than bushels or baskets. Prior to tabulation, all reports were converted to bushels (shelled basis) on the basis of the following factors: 70 pounds of ear corn, 2 baskets of ears, or 56 pounds of shelled corn equal one bushel. A barrel of ear corn was usually considered equal to 5 bushels of shelled corn.

Annual Legumes.——For soybeans, cowpeas, and peanuts, the acres and quantity grown or harvested for specific purposes, as well as the total acreage grown for all purposes, were obtained for areas where these crops are grown extensively; for velvetbeans, only the total grown for all purposes was obtained. For all these crops except, possibly peanuts, the total acreage grown for all purposes includes some acreage that was plowed under for green manure. In a few Southern States, separate figures were obtained for the acres grown alone and the acres grown with other crops. In 1959, as in 1954, enumerators were instructed to report green soybeans and blackeyes and other green cowpeas harvested for sale as vegetables and not as annual legumes.

Hay Crops.—Data for the total acres of land from which hay was cut exclude the acreage in sorghum, soybean, cowpea, and peanut hays. These crops were reported in separate questions in the States where they are important. To obtain the total acres from which other hays were cut, the acres of the various hay crops, including grass silage, were added together for each county. The corresponding totals for 1954 were obtained by the same procedure. For the 1950 census, however, the totals were based on farmers' own reports of their total acreage in harvested hay crops.

The questionnaire contained an instruction that if two or more cuttings were made from the same land, the total production from all cuttings was to be reported but the acres cut were to be counted only once. In cases where both hay and grass silage were cut from the same land, the total acreage was to be reported for both crops. In 1959, as in 1954, alfalfa hay included alfalfa and alfalfa mixtures for hay and for dehydrating; clover and timothy hay included clover, timothy, and mixtures of clover and grasses; small grain hay included oats, wheat, barley, rye, or other small grains cut for hay. The hay crops listed on the questionnaire varied somewhat from one State or region to another. The kinds of hay to be included in separate questions can be determined for a specific State from reference to the facsimile of the questionnaire that is in the appendix.

The tonnage of hay, including alfalfa hay for dehydrating, is given on a dry-weight basis. Prior to tabulation, production reported in green weight was converted to its dry-weight equivalent by dividing by 3. However, the production of grass silage is given in terms of green weight.

Field Seed Crops.—The field seed crops listed on each version of the questionnaire were limited to those considered most important within the given State. Each version of the questionnaire contained space for listing other field seed crops in order to facilitate the reporting of all field seed crops harvested. Quantity harvested was to be reported in terms of clean seed for most field seed crops. Bluegrass, or Junegrass seed, was to be reported in terms of green seed for Iowa, Kansas, Kentucky, Minnesota, Missouri, Nebraska, North Dakota, South Dakota, and Tennessee. No mention was made of "green-weight basis" for other States where this crop was to be reported in the "All other" question.

Irish Potatoes and Sweetpotatoes.—For Irish potatoes and sweetpotatoes (including yams), the total quantity harvested was to be reported for each crop in all cases, whether harvested for home use or for sale or whether used for livestock feed. The acreage harvested was to be reported for each crop only in cases where the quantity amounted to 20 or more bushels (or the approximate equivalent in terms of hundredweights, barrels, or pounds, as explained on different versions of the questionnaire). This method of reporting was designed to facilitate the enumeration of potatoes harvested on small plots for home use. Essentially the same procedure was followed in both 1954 and 1950. In earlier censuses, however, the acreage of Irish potatoes and sweetpotatoes was to be reported in all cases, even when production was solely for home use. Therefore, the data on acres for censuses prior to 1950 are not fully comparable with those for the last three censuses, especially in counties or States where production is largely for home use.

The unit of measure in which quantity was to be reported varied from one State or region to another to correspond with the units most commonly used in a given area. In 27 States, the questionnaire provided a choice for reporting either bushels or 100-pound bags (hundredweights). The published data for counties and States are in terms of bushels.

Berries and Other Small Fruits.—The question for berries and other small fruits related specifically to the acreages and quantities harvested for sale. Only tame or cultivated berries were to be reported except for the New England States, where wild blueberries were also to be included. Enumerators were instructed always to report the total quantity of each kind of berry harvested for sale but to report the area harvested only when it amounted to one-tenth acre or more. Nonbearing areas and areas and quantities harvested for home use were to be excluded. The data for 1959 and 1954 are fully comparable.

Tree Fruits, Nuts, and Grapes.—In 1959, as in 1954, fruit trees, nut trees, and grapevines were not enumerated for farms having a combined total of less than 20 at the time of enumeration. Both bearing and nonbearing trees and vines were to be included but not any that had been abandoned. For censuses prior to 1954, all fruit or nut trees and grapevines on the farm were to be enumerated, regardless of the number. Because of this change in enumeration procedure, the data for 1959 and 1954 are not fully comparable with those for earlier censuses. In commercial fruit-producing counties, the change in procedure may have had a considerable effect on the number of farms reporting without causing any significant changes in the number of trees and vines nor in the quantity harvested. In counties where most of the trees or vines are in small plantings and where production is largely for home use, however, the change may have caused a significant reduction not only in the number of farms reporting but also in the number of trees and vines and in the quantity harvested.

In both 1959 and 1954, the area in fruit orchards, groves, vineyards, and planted nut trees was enumerated when there were 20 or more fruit trees, nut trees, and grapevines. In 1950, the corresponding area was enumerated only if it amounted to one-half acre or more. In censuses prior to 1950, the area was to be reported regardless of its size or of the number of trees and vines. Enumerators frequently omitted the fractional acreages in small plantings and home orchards, however. In some counties, small plantings or home orchards comprise a sizeable proportion of the total fruit and nut acreage. For those counties, the change from one census to another in acreage of land in fruits and nuts may not be due to fact but merely to differences in enumeration.

In 1959, California was the only State for which the acreage in each individual fruit and nut crop was obtained. In 1954, such acreage was also obtained for Arizona. In all States, the number of bearing and nonbearing trees or vines on the farm at the time of enumeration and the quantity harvested in 1959 were to be reported separately for each fruit and nut crop. (Exceptions in the harvest period for citrus fruits, avocados, and

olives are described on p. XIX.) The unit of measure in which quantities were to be reported varied from one State to another. Tables in this report show quantities in the unit of measure appearing on the 1959 questionnaire used in the State.

Nursery and Greenhouse Products.—The questions about nursery and greenhouse products related only to products grown on the place for sale. Crops bought for resale without additional cultivation were to be excluded. The area used for growing and the value of sales were to be reported separately for each of three groups, as follows:

a. Nursery products, (trees, shrubs, vines, and ornamentals).
b. Cut flowers, potted plants, florist greens, and bedding plants. For these items, the area grown in the open was to be reported separately from the area grown under glass.
c. Vegetables grown under glass, flower seeds, vegetable seeds, vegetable plants, bulbs, and mushrooms. For these items, the area grown in the open was to be reported separately from the area grown under glass or in the house.

The data obtained for 1959 are comparable with those for 1954 and 1950 since the questions asked were essentially the same in the three censuses. Detailed data regarding the production and sale of nursery, greenhouse, and other horticultural products on farms having sales of $2,000 will be published in volume V, part 1.

Forest Products.—The forest products data obtained in the Census of Agriculture relate only to the products cut on farms. Commercial logging, timber operations, and forest products grown or cut on nonfarm places are excluded. Therefore, the data in this report do not represent the total forestry output or income for a county or State.

The questions included on the 1959 agriculture questionnaire are more detailed than those asked in the 1954 Census. Value was obtained for the sale of standing timber or trees and for the sale of poles and piling, bark, bolts, and mine timbers. The quantity cut, whether for home use or sale, and the quantity sold were obtained for individual forestry products such as firewood and fuelwood, fence posts, sawlogs and veneer logs. Data relating to pulpwood, Christmas trees, maple trees, and maple syrup were obtained in States where such products are important commercially.

Value of Crops Harvested.—The total value of crops harvested represents the estimated value of all crops harvested during the crop year 1959. It includes the value of quantities consumed on farms as food, feed, seed, etc., as well as quantities sold. Farmers were not asked to report values of crops harvested; the values were calculated in the Processing Office. For individual crops, the quantity harvested was multiplied by the average price at which the crop was sold in the State. State average prices were furnished to the Bureau of the Census by the Agricultural Marketing Service of the U.S. Department of Agriculture. They are based on reports received from a sample of farmers and dealers. Quantities harvested were not obtained for vegetables nor for nursery and greenhouse products. Therefore, for those crops, the value of sales, as obtained in the enumeration, was used in the calculation of total value of crops harvested.

Value of Crops Sold.—The questionnaire required value of sales of crops to be reported only for total vegetables, nursery and greenhouse products, and certain forest products. For all other crops, the value of sales was calculated on a county level during processing operations by multiplying the State average prices by either the quantity sold or the quantity harvested. Reports of quantity sold were obtained during the enumeration only for some of the major field crops. Quantity harvested was used in the calculation of value of crops sold for such crops as cotton, tobacco, etc., that are customarily grown for sale. The procedures used for the various crops are described on page XXV. They are similar to the procedures followed in 1954. In 1950, values of crops sold were obtained for each farm during the enumeration.

IRRIGATION

Definition of Irrigated Land.—Irrigated land is defined as land watered for agricultural purposes by artificial means. These means included subirrigation as well as systems whereby water was applied to the ground surface, either directly or by sprinklers. Land flooded for rice cultivation was considered as irrigated. Land flooded during high-water periods was to be included as irrigated only if water was directed to agricultural use by dams, canals, or other works. The definition of irrigated land specifically excluded land where the "water table", or natural level of underground water, was controlled by drainage works with no additional water brought in by canals or pipes.

Enumeration of Irrigated Land.—A question on total land irrigated was asked in all States, with the exception of Alaska. The acreage reported for this question includes not only irrigated cropland but also any other land that was irrigated in 1959.

The questionnaires used in the 17 Western States, Louisiana, and Hawaii included several additional questions regarding irrigation. These questions related to the acreage of land irrigated by sprinklers, irrigated land from which crops were harvested, specific crops irrigated, and source of irrigation water. Such additional data, for irrigated farms, are presented in county table 1a for these States.

Statistics on the irrigation enterprises which supplied irrigation water were collected in the 1959 Census of Irrigation and are published in Volume III, "Irrigation of Agricultural Lands". This report contains a considerable amount of data about irrigation for the 17 Western States and Louisiana.

Irrigated Farms.—All farms reporting any land irrigated in 1959 are counted as irrigated farms.

Land in Irrigated Farms.—Data for *land in irrigated farms according to use* relate to the entire acreage in these farms, including land that was not irrigated.

Land Irrigated.—Data for land irrigated relate only to that part of the land in irrigated farms that was watered by artificial means at any time in 1959. Separate figures are given for farms reporting land irrigated by sprinklers whether or not the land was also irrigated by other means. Additional figures are given for farms reporting land irrigated by sprinklers only. Data on sprinkler irrigation were not obtained in the 1954 census.

Irrigated Cropland Harvested.—The data for irrigated cropland harvested relate to all irrigated land from which crops were harvested in 1959, regardless of the method of irrigation. An instruction on the questionnaire reminded enumerators and respondents to include irrigated land from which hay was cut, irrigated land in both bearing and nonbearing fruit and nut crops, and irrigated land from which volunteer crops were harvested. Each irrigated acre was to be reported only once, regardless of how many crops were harvested from it.

Other Irrigated Land.—This classification was obtained by subtraction of the acreage of irrigated cropland harvested from the acreage of total land irrigated. It represents primarily irrigated cropland not harvested and irrigated pasture or grazing land.

Farms Irrigated By Number of Acres Irrigated.—All farms on which any land was irrigated in 1959 are classified according to the number of acres irrigated in county table 1a for the 17 Western States, Louisiana, and Hawaii. This classification is based on total land irrigated. Therefore, it includes not only the irrigated land from which crops were harvested but also all other irrigated land, regardless of use.

Land Irrigated By Source of Water.—The agriculture questionnaire contained a question as to what proportion of irrigated water used on the farm in 1959 was obtained from groundwater, surface-water, and irrigation-organization sources. Respondents were asked to report separately the percentage of

water obtained from each source. The number of acres that were irrigated by water from each source or combination of sources was calculated during office processing operations by applying the percentages to the total land irrigated.

Ground-water sources relate to wells (pumped or flowing) and springs; **surface-water sources** relate to streams, lakes, reservoirs, and sewage and drainage ditches. For each of these sources, only water obtained by pumps or other works operated as part of the operator's own farm or as part of another single farm was to be included. **Irrigation-organization sources** relate to irrigation enterprises organized to supply water to a group of farms, regardless of how or where the enterprise obtained the water. The irrigation enterprise may be a legal organization or a group of farmers informally organized to operate a supply ditch or other works to provide water for their own farms.

Land-Use Practices

Summary Information.—The 1959 data for land-use practices are estimates based on reports obtained from only a sample of farms. Comparable data are not presented for 1954 because questions about land-use practices were included on the 1954 questionnaire for only a limited number of States. The various land-use practices relate to methods for reducing soil erosion, either by improving the soil, controlling the run-off of water, or reducing the blowing of topsoil.

Cropland in Cover Crops.—The data relate to land on which cover crops were turned under for green manure in 1959 and which was then planted to another crop. The entire acreage of cover crops so used was to be reported even if the following crop failed.

Cropland Used for Grain or Row Crops Farmed on the Contour.—This item relates to land on which grain or row crops were planted in level rows around the slope of a hill.

Land in Strip-Cropping Systems for Soil-Erosion Control.—Strip-cropping was defined as the practice of alternating close-sown crops with strips or bands of row crops or of alternating either close-sown or row crops with bands of cultivated fallow land. The published data refer to the total acreage of all fields and tracts in which strip-cropping was practiced in 1959.

System of Terraces on Crop and Pasture Land.—This item relates to the acreage in ridge-type or channel-type terraces constructed on sloping cropland and pastureland.

Livestock and Poultry

Inventories.—Data for livestock and poultry on farms relate to the number on hand at the time of enumeration. All livestock and poultry, including those being kept or fed under contract, were to be enumerated on the farm or ranch where they were, regardless of who owned them. Livestock in transit from one grazing area to another or grazing in national forests, grazing districts, open range, or on land used under permit were to be reported as being on the place where the person who had control over them had his headquarters.

The time of year at which livestock and poultry are enumerated affects the data. Therefore, the date of enumeration needs to be considered when totals for the various censuses are compared. Both the 1959 and the 1954 census data represent fall inventories. These censuses came at a time of large-scale movement of flocks and herds from one range to another, from ranch to feed lot, and from farm or ranch to market.

The censuses of 1920, 1925, 1935, and 1945 were taken as of January 1 and those of 1930, 1940, and 1950, as of April 1. A count made in April varies considerably from one made in January. In most areas a large number of animals are born between January and April. A considerable number of older animals die or are sold during the same period. In the range States, along with the change in season and grazing condition, sheep and cattle are moved from one locality or county to another. This movement may affect the comparability of data for counties and, in some cases, for States. The comparability of data by age has been affected also by changes in the questions from one census to another.

Milk Cows, Cows Milked, Milk Produced, and Butter.—Data on the number of milk cows, cows milked, and milked produced relate to the day preceding the enumeration. Data for butter churned were obtained only for 14 States and relate to the calendar week preceding the enumeration. The data for cows milked yesterday and milk produced yesterday are not given in this volume. These figures were obtained primarily to serve the needs of the U.S. Department of Agriculture in making monthly and annual estimates of milk production. These figures can be made available, at a small cost, to others who express an interest in them.

Whole Milk and Cream Sold.—Data for whole milk and cream sold relate to the entire year 1959 and are estimates based on reports obtained for farms in the sample. All milk and cream sold from the farm (except quantities purchased from some other place and then resold) were to be included, regardless of who shared the receipts. The questionnaire provided three alternative units of measure for reporting the quantity of milk sold—pounds of milk, gallons of milk, and pounds of butterfat. The respondent was thus permitted to report quantity according to the unit of measure in which payment was received. In the State and county tables, the data for milk are given in the unit of measure most commonly used in the State. Pounds of butterfat were converted into gallons or pounds of whole milk on the basis of the average butterfat content of milk as shown by data furnished by the Agricultural Marketing Service of the U.S. Department of Agriculture.

Sows and Gilts Farrowing.—In the 1959 census, data were obtained for the number of litters farrowed between December 1, 1958, and June 1, 1959, and from June 1 to December 1, 1959. In the 1954 census, data were obtained for the sows and gilts that farrowed rather than for the number of litters.

Sheep, Lambs, and Wool.—In the 1959 census, questions about sheep, lambs, and wool were asked in all States. Data on shearings and on amount of wool shorn were obtained for lambs and sheep separately. In the 1954 census, sheep and lamb inventories were not obtained for Florida, Georgia, and South Carolina.

Goats and Mohair.—In 1959, questions on goats, kids, and mohair appeared on the questionnaires for the following nine States: Arizona, California, Missouri, Nevada, New Mexico, Oklahoma, Oregon, Texas, and Utah. In 1954, corresponding data were obtained for Louisiana, New Mexico, Oklahoma, Oregon, Texas, Washington, and selected counties in Missouri.

Bees and Honey.—No questions on bees and honey were included on the questionnaires for either the 1959 or the 1954 census. In 1959, however, enumerators were instructed to obtain agriculture questionnaires for places not having agricultural operations if they were engaged in beekeeping. The number of hives of bees and the amount of honey sold were to be reported in the "Remarks" space of the questionnaire. Data for bees and honey are not included in this report.

Value of Livestock on Farms.—To obtain the value of livestock on farms, the number of each class of livestock or poultry on hand was multiplied by the State average price for 1959, as furnished by the Agricultural Marketing Service of the U.S. Department of Agriculture. Comparable data for 1954 were compiled by the same method on the basis of average prices for that year.

Sales of Live Animals.—Data for the number and value of animals sold alive in 1959 are estimates based on reports for sample farms only. Corresponding data for 1954 were obtained for all farms. The dollar value of sales was obtained from the farmer

for cattle, calves, and horses and mules. Average value per head for other livestock sold was obtained from the U.S. Department of Agriculture. In the 1959 census, respondents were asked to report separately the number of live animals already sold and the number estimated to be sold between the time of enumeration and the end of the year. This separation of reports for the number sold and to be sold was designed to assure more complete coverage of all livestock sales made during the year. In the 1954 census, only totals for the entire year were obtained though reference was made to animals to be sold between enumeration and the end of the year.

Sales of Poultry and Poultry Products.—For both the 1959 and the 1954 Censuses, sales of chickens were obtained for two groups: (1) broilers and (2) other chickens. The enumeration of broiler sales presents problems arising from the varied contractual arrangements under which broilers are produced. The questionnaire contained an instruction to the effect that all broilers grown for others under contract were to be reported as sold. During office processing operations, the data reported for inventories and sales of chickens four months old and over, chicken eggs sold, and broilers sold were carefully examined. Obvious inconsistencies indicating confusion between broilers and other chickens were corrected on the basis of estimated values and, for sample farms, on the basis of data reported for expenditures for feed, poultry and livestock purchases, hired labor, etc.

Questions relating to poultry other than chickens (and broilers) were generally the same in 1959 as in 1954. In the 1959 census, however, only total numbers were obtained for turkeys and turkey fryers raised and for turkey hens kept for breeding whereas the 1954 questionnaire asked for a breakdown between light and heavy breeds. Also, for poultry other than chickens and turkeys, the 1959 census obtained the number sold whereas the 1954 census obtained the number raised.

Classification of Farms

Scope of Classification.—Data for land in farms, and for cropland harvested in farms classified by size, by color of operator and by tenure of operator were tabulated for all farms. However, most of the detailed data by size of farm, by color of operator, by tenure of operator, by economic class, and by type of farm are estimates based on farms in the sample. The farm classifications by size of farm, color of operator, tenure of operator, economic class of farm, and type of farm were made in the processing office on the basis of data reported on each questionnaire.

Farms by Size.—Farms were classified by size according to the total land area established for each farm. The same classification was used for all States. According to definition, a farm is essentially an operating unit, not an ownership tract. All land operated by one person or partnership represents one farm. In the case of a landlord who has assigned land to croppers or other tenants, the land assigned to each cropper or tenant is considered a separate farm even though the landlord may operate the entire landholding as one unit in respect to supervision, equipment, rotation practice, purchase of supplies, or sale of products. In some parts of the South, a special Landlord-Tenant Questionnaire was used to assure an accurate enumeration of each unit within a multiple-unit operation. A change was made in the size classification for 1959, as contrasted with several preceding years, by subdividing the 1,000-acre-and-over group and by combining two previously recognized groups, viz., 10 to 29 acres and 30 to 49 acres.

Farms by Color of Operator.—Farms were classified by color of operator into two groups, "white" and "nonwhite." "Nonwhite" includes primarily Negro and Indian operators but also some of other racial origin.

Enumerators were instructed to report the race on the basis of their own observation whenever possible rather than by asking the respondent.

Farms by Tenure of Operator.—The classification of farms by tenure of operator was based on data reported for land owned, land rented from others or worked for others on shares, land managed for others, and land rented to others or worked on shares by others. The same basis of classification was used in 1959 as in 1954.

For 1959, each questionnaire was coded, during the editing process, to indicate whether it represented a farm operated by a full owner, part owner, manager, or tenant. The sample questionnaires for tenants were given a code to indicate the kind of tenant.

The various classifications of tenure, as used for the 1959 census, are defined below:

a. **Full Owners** operate only land they own.

b. **Part Owners** operate land they own and also land rented from others.

c. **Managers** operate land for others and are paid a wage or salary for their services. Persons acting merely as caretakers or hired as laborers are not classified as managers. If a farm operator managed land for others and also operated land on his own account, the land operated on his own account was considered as one farm and the land managed for others as a second farm. If, however, he managed land for two or more employers, all the managed land was considered to be one farm.

d. **Tenants** rent from others or work on shares for others all the land they operate. They are further classified, as described below, on the basis of rental arrangements in regard to the payment of cash rent, sharing of crops, sharing of livestock or livestock products, and the furnishing of work power by the landlord.

(1) **Cash Tenants** pay cash rent, either on a per-acre basis or for the farm as a whole.

(2) **Share-Cash Tenants** pay part of the rent in cash and part in a share of the crops and/or of the livestock and livestock products.

(3) **Crop-Share Tenants** pay a share of the crops but not of the livestock or livestock products.

(4) **Livestock-Share Tenants** pay a share of the livestock or livestock products. They may or may not also pay a share of the crops.

(5) **Croppers** are tenants whose landlords furnished all the work animals or tractor power. They usually work under the close supervision of the landowners or their agents, or other farm operators. Also, the land assigned to them is often merely a part of a multi-unit operation. Croppers may or may not also pay cash rent or a share of crops, livestock, or livestock products. Data for croppers are available for only 16 southern States and Missouri.

(6) **Other Tenants** are those who did not qualify for inclusion in any of the foregoing subclassifications. They may have had the use of land rent-free or in return for a fixed quantity of products, payment of taxes, maintenance of buildings, etc.

(7) **Unspecified Tenants** are those for whom the rental arrangement was not reported.

The definition of each subclass of tenant was essentially the same for earlier censuses as for 1959. In 1945, however, the enumerator was asked to determine the subclass of tenants whereas in other censuses all classifications were made during the processing of questionnaires on the basis of the data reported. The procedure used in 1945 may have affected the comparability of the data, especially for cash tenants and share-cash tenants.

Farms by Economic Class.—The totals for farms by economic class are estimates for all farms made on the basis of data reported only for the sample farms. The economic classifications represent groupings of farms that are similar in characteristics and size of operation. The economic classes were established on the basis of one or more of four factors: (1) total value of all farm products sold, (2) number of days the farm operator worked off the farm, (3) the age of the farm operator, and (4) the relationship of income received by the operator and members of his household from nonfarm sources to the value of all farm products sold. Institutional farms, Indian reservations, agricultural experiment stations, and grazing associations were always classified as "abnormal."

The total value of farm products sold was obtained by addition of the reported or estimated values for all products sold from the farm. The value of cattle and calves, horses and mules, dairy products, some poultry products, vegetables, nursery and greenhouse products, standing timber, and miscellaneous forest products was obtained from the farm operator during the enumeration. The quantity sold was obtained during enumeration for corn, sorghums, small grains, hay, small fruits, some of the forest products, chickens and chicken eggs, hogs, sheep, and goats. To obtain the value of sales of these products, the quantity sold was multiplied by State average prices.

For each of the other products, the entire production was multiplied by the State average price. If the resulting value amounted to $100 or more, the entire quantity produced was considered as sold. This procedure was followed only in establishing the economic class and the type of farm but was not used in establishing the total value of products sold from the farm. (See p. XXV.)

Farms were grouped into two major categories, commercial farms and other farms, mainly on the basis of total value of products sold. The 1959 class intervals and some of the criteria for determination of a given class are different from those used in 1954 and in 1950. In general, for 1959, all farms with a value of sales amounting to $2,500 or more were classified as commercial. Farms with a value of sales of $50 to $2,499 were classified as commercial if the farm operator was under 65 years of age and (1) he did not work off the farm 100 or more days during the year and (2) the income received by the operator and members of his family from nonfarm sources was less than the value of all farm products sold. The remaining farms with a value of sales of $50 to $2,499 and institutional farms and Indian reservations were included in one of the groups of "other farms."

Commercial farms were divided into six economic classes on the basis of the total value of all farm products sold, as follows:

Class of Farm	*Value of Farm Products sold*
I	$40,000 and over
II	$20,000 to $39,999
III	$10,000 to $19,999
IV	$5,000 to $9,999
V	$2,500 to $4,999
VI*	$50 to $2,499

*Provided the farm operator was under 65 years of age, and—
(1) he did not work off the farm 100 or more days, and (2) the income that he and members of his household received from nonfarm sources was less than the total value of farm products sold.

Other farms were divided into three economic classes as follows:

a. **Class VII, Part-time.**—Farms with a value of sales of farm products of $50 to $2,499 were classified as "part-time" if the operator was under 65 years of age and he either worked off the farm 100 or more days or the income he and members of his household received from nonfarm sources was greater than the total value of farm products sold.

b. **Class VIII, Part-retirement.**—Farms with a value of sales of farm products of $50 to $2,499 were classified as "part-retirement" if the farm operator was 65 years old or over. Many of these are farms on which the income from nonfarm sources was greater than the value of sales of agricultural products. Others are residential, subsistence, or marginal farms. In previous censuses, the age of the farm operator was not a criterion for grouping farms by economic class. Since the number of elderly people in our population has been steadily increasing during recent years, a separate classification for farms operated on a part-retirement basis was considered important for an adequate analysis of the agricultural structure of a county or State.

c. **Class IX, Abnormal.**—All institutional farms and Indian reservations were classified as "abnormal," regardless of the value of sales. Institutional farms include those operated by hospitals, penitentiaries, schools, grazing associations, government agencies, etc.

Farms by Type.—The data for farms by type are estimates based on data tabulated for the farms in the sample. The type represents a description of the major source of income from farm sales. To be classified as a particular type, a farm had to have sales of a particular product or group of products amounting in value to 50 percent or more of the total value of all farm products sold during the year.

The types of farms, together with the products on which type classification is based, are as follows:

Type of Farm	*Source of Cash Income*
	(Products with sales value representing 50% or more of total value of all farm products sold)
Cash-grain	Corn, sorghums, small grains, soybeans for beans, cowpeas for peas, dry field and seed beans and peas.
Tobacco	Tobacco.
Cotton	Cotton.
Other field-crop	Peanuts, potatoes (Irish and sweet), sugarcane for sugar or sirup, sweet sorghums for sirup, broomcorn, popcorn, sugar beets, mint, hops, and sugar beet seed.
Vegetable	Vegetables.
Fruit-and-nut	Berries, other small fruits, tree fruits, grapes, and nuts.
Poultry	Chickens, chicken eggs, turkeys, and other poultry products.
Dairy	Milk and cream. The criterion of 50 percent of total sales was modified in the case of dairy farms. A farm having value of sales of dairy products amounting to less than 50 percent of the total value of farm products sold was classified as a dairy farm, if— (a) Milk and cream sold accounted for more than 30 percent of the total value of products sold and— (b) Milk cows represented 50 percent or more of total cows and— (c) The value of milk and cream sold plus the value of cattle and calves sold amounted to 50 percent or more of the total value of all farm products sold.
Livestock other than dairy and poultry	Cattle, calves, hogs, sheep, goats, wool and mohair except for farms in the 17 Western States, Louisiana, and Florida that qualified as livestock ranches.
Livestock Ranches	Farms in the 17 Western States, Louisiana, and Florida were classified as livestock ranches if the sales of livestock, wool, and mohair represented 50 percent or more of the total value of farm products sold and if pastureland or grazing land amounted to 100 or more acres and was 10 or more times the acreage of cropland harvested.
General	Field seed crops, hay, silage. A farm was classified as general also if it had cash income from three or more sources and did not meet the criteria for any other type.
Miscellaneous	Nursery and greenhouse products, forest products, mules, horses, colts and ponies. Also all institutional farms and Indian reservations.

The type classifications were essentially the same for the 1959 as for the 1954 census except that tobacco farms and livestock ranches were not separately classified in 1954. Tobacco was included as one of the crops used in the classification of "other field crop" farms in 1954. The farms classified as livestock ranches in 1959 would have been classified as "livestock other than dairy and poultry" in 1954 without regard to the acreage in pasture.

Value of Farm Products Sold.—Data for the value of farm products sold in 1959 were obtained by enumeration for some products and by estimation for others. The questionnaire used for the 1959 census provided for farm operators to report value of sales for the following products:

Vegetables	Miscellaneous poultry products
Nursery and greenhouse products	Milk and cream
	Cattle
Standing timber	Calves
Miscellaneous forest products	Horses, mules, colts, and ponies

For all other agricultural products, the value of sales was estimated during the office processing. The State average prices used for calculating the value of farm products sold were furnished to the Bureau by the Agricultural Marketing Service of the U.S. Department of Agriculture. One of three following procedures was used.

(1) For the products for which data on quantities sold were obtained during enumeration, the State average prices were multiplied by the county totals of the quantities reported as sold or the quantities reported as produced for sale. The following products were covered by this procedure:

Corn for grain	Fence posts
Sorghums for grain, seed, sirup, or dry forage	Sawlogs and veneer logs
	Christmas trees
All small grains	Chickens (broilers and others)
Hay crops	Chicken eggs
All berries and small fruits[1]	Hogs and pigs
Firewood and fuelwood	Sheep and lambs
Pulpwood	Goats and kids

[1] Adjustment made for cranberries based on Cranberry Payment Program.

(2) For most of the agricultural products which are customarily raised for sale, the entire quantity produced was considered to be sold. The State average prices were, accordingly, multiplied by the county total of production. The following crops were covered by this procedure:

Cotton	Sugarcane for sugar
Popcorn	Tobacco
Sugar beets for sugar	Wool
Broomcorn	Mohair

(3) For all other crops, the State average prices were multiplied by the quantities sold as estimated on the basis of crop-disposition data furnished by the Agricultural Marketing Service, data reported in questions for "other crops" on the 1959 questionnaire, or data obtained from earlier censuses.

For all tree fruits, nuts, and grapes, the entire quantity produced was considered as sold, except for apples, apricots, sour and sweet cherries, peaches, plums, prunes, avocados, tangerines, oranges, and grapefruit in States where a portion of the crop was not harvested or was subjected to excess cullage as indicated by data obtained from the Agricultural Marketing Service of the U.S. Department of Agriculture.

The data for 1959 are comparable with those for 1954 since essentially the same procedures were used in both censuses for estimating quantities and values of farm products sold. In 1959, as in 1954, data for the sales of farm products represent total sales for the entire farm, regardless of who shared the receipts. For tenant-operated farms, the landlord's share of agricultural products was considered as sold provided the products were moved off the tenant farm. All crops, livestock, and poultry raised under a contract arrangement were considered as sold from the farm where they were raised. For institutional farms, all agricultural items produced on land operated by the institution and consumed by the inmates were to be reported as sold.

All sales data relate to one year's farm operations. Crop sales are for crops harvested during the crop year, whether the crops were actually sold immediately after harvest or placed in storage for later sale. Sales of livestock and livestock products relate to the calendar year, regardless of when the livestock or products were raised or produced. All wool and mohair reported as shorn or clipped was considered as sold.

Enumerators were instructed to record gross values of quantities sold, with no deductions for feed, seed, fertilizer, water, labor, or marketing costs. For some products, however, net values may have been reported. In the case of milk, particularly, some farm operators may have reported the payments they received as the gross value of sales, even though the buyer had deducted handling and hauling charges before making payment. Adjustments were made in the data reported only in cases of obvious error.