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BUREAU OF THE CENSUS
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TAKEN IN THE YEAR 1910

VOLUME VI

AGRICULTURE
1909 AND 1910

REPORTS BY STATES, WITH STATISTICS FOR COUNTIES

ALABAMA-MONTANA

PREPARED UNDER THE SUPERVISION OF
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FEBRUARY 20, 1913.

Of the final census reports listed on page 3, Volumes VI and IX have thus far been issued.

The volumes numbered I to XI, constituting the complete reports of the census, are being issued in a very limited edition, intended chiefly for libraries, institutions, and special students of statistics.

A condensed report, entitled Abstract of the Census, has been printed in a much larger edition, intended for more general distribution, and prepared in such a way as to meet the need of most persons desiring information concerning the results of the census. It contains in tabular form all important census statistics for the United States as a whole and for each state and principal city, together with a brief text explaining the figures and their meaning. The Abstract therefore is a condensation of the complete census reports, both tables and text, and not merely a compilation of tables.

The Abstract is issued in special editions for each of the several states, each edition containing a supplement giving the detailed statistics for counties, cities, and other civil divisions of the state to which it relates, designed to meet the needs of persons resident in that state or especially interested in it. The supplement contains also both tables and text.

As a compact reference work of general and local interest the Abstract is more convenient for most persons than the voluminous final reports.

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- Volume I.—GENERAL REPORT AND ANALYSIS.
 - Volume II.—REPORTS BY STATES, WITH STATISTICS FOR COUNTIES, CITIES, AND OTHER CIVIL DIVISIONS—ALABAMA TO MONTANA.
 - Volume III.—REPORTS BY STATES, WITH STATISTICS FOR COUNTIES, CITIES, AND OTHER CIVIL DIVISIONS—NEBRASKA TO WYOMING; ALASKA, HAWAII, AND PORTO RICO.
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- Volume V.—GENERAL REPORT AND ANALYSIS.
- Volume VI.—REPORTS BY STATES, WITH STATISTICS FOR COUNTIES—ALABAMA TO MONTANA.
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- Volume IX.—REPORTS BY STATES, WITH STATISTICS FOR PRINCIPAL CITIES.
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LETTER OF TRANSMITTAL.

DEPARTMENT OF COMMERCE AND LABOR,
BUREAU OF THE CENSUS,
Washington, D. C., February 20, 1913.

SIR:

I have the honor to transmit herewith Volume VI of the Reports of the Thirteenth Decennial Census, relating to agriculture.


The census of agriculture was taken in conformity with "An act authorizing the taking of the Thirteenth and subsequent Decennial Censuses," approved July 2, 1909. The statistics were collected in 1910, and relate to the date of April 15, 1910, so far as they pertain to farms and farm property, tenure, mortgage debt, color and nativity of farmers, and size of farms; while the statistics for farm production (crops and live stock products) and for selected farm expenses and receipts are for the calendar year 1909. The field work was done by the enumerators appointed to collect statistics of population and agriculture. Included in this volume are also the statistics of irrigation compiled in conformity with the law approved February 25, 1910. The facts regarding irrigation were secured in part by the regular census enumerators on supplemental schedules covering such information as could be supplied by the operators of farms. Those facts which could be supplied only by the owners or officials of irrigation enterprises were collected on special schedules by special agents appointed for this purpose.

The results of the census of agriculture are contained in three volumes, consisting of Volumes V, VI, and VII of the Reports of the Thirteenth Decennial Census. Volume V contains a summarization of the statistics by subjects, with a general analysis and discussion, data regarding each subject being presented by geographic divisions and states. Volume VI, the present volume, contains a separate report on agriculture for each of the 25 states to which it refers (Alabama to Montana), together with a report on irrigation for those states in which irrigation statistics were collected, each report as to agriculture or as to irrigation having previously been issued as a bulletin. Volume VII contains similar reports on agriculture and irrigation for the remaining states and for the outlying territories of Alaska, Hawaii, and Porto Rico.

The collection and compilation of the statistics of agriculture, including irrigation, and the preparation of the text of the present volume have been under the supervision of Le Grand Powers, chief statistician for agriculture (1909-1912), and John Lee Coulter, expert special agent for agriculture, with the assistance of Ray Palmer Teele, expert special agent for irrigation.

The chiefs of division during the Thirteenth Census period were William A. Hathaway, William J. Barrows, and Arthur J. Hirsch.

Respectfully,


Director.

Hon. CHARLES NAGEL,
Secretary of Commerce and Labor.

AGRICULTURE (INCLUDING IRRIGATION).

INTRODUCTION, EXPLANATIONS, AND DEFINITIONS OF TERMS.

INTRODUCTION.

The statistics of agriculture for the different states and territories were published as separate bulletins as rapidly as the statistics were compiled. Two series were published, the first containing approximately half of the material, the second reproducing all that was printed in the first series and in addition thereto all statistics subsequently compiled. Separate bulletins on irrigation were published for states in which irrigation is important. The complete bulletins for agriculture covering 25 states in alphabetical order (from Alabama to Montana) are now collected in the present volume. Bulletins pertaining to irrigation for

Arizona, California, Colorado, Idaho, Kansas, and Montana are also included. Volume VII reproduces the bulletins pertaining to agriculture for other states, territories, and outlying possessions (Nebraska to Wyoming; Alaska, Hawaii, and Porto Rico) and bulletins pertaining to irrigation for Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, Oregon, South Dakota, Texas, Utah, Washington, and Wyoming. The figures and accompanying text in this volume are the same as those given in the separate bulletins, except in so far as corrections of a few errors have been found necessary.

AGRICULTURE.

The statistics of agriculture were collected and compiled to comply with the following provisions of section 8 of the act of July 2, 1909, providing for the Thirteenth Census:

The schedules relating to agriculture shall include name, color and country of birth of occupant of each farm, tenure, acreage of farm, acreage of woodland and character of timber thereon, value of farm and improvements, value of farm implements, number and value of live stock on farms and ranges, number and value of domestic animals not on farms and ranges, and the acreage of crops planted and to be planted during the year of enumeration, and the acreage of crops and the quantity and value of crops and other farm products for the year ending December thirty-first next preceding the enumeration.

Statistics of farms and farm property, including data pertaining to tenure, mortgage indebtedness, color and nativity of farmers, and size of farms, relate to April 15, 1910; those of farm products (including crops, live stock products, and domestic animals sold or slaughtered on farms) and of selected farm expenses and receipts are for the calendar year 1909.

Description of tables.—The report for each state summarizes the general results of the census inquiry, presenting a series of tables in which the most important figures for the state as a whole are shown, and carrying such text as seemed necessary to properly explain and interpret these tables. At the end of the report pertaining to agriculture for each state are six county tables, in which the statistics for all important items are given by counties.

Table 1 shows the population, number of farms, color and nativity of farmers, classification of farms by size groups, total land area, acreage of farms, value of farm property, and number and value of domestic animals and of poultry and bees, as of April 15, 1910. Comparative data for June 1, 1900, are given in italics for certain items.

Table 2 gives the number of farms on April 15, 1910, the farm acreage, and the value of farm property

operated by owners, tenants, and managers, respectively, together with the number of farm operators who own all of the land they operate, the number who rent additional land, and the number of each class of tenants. Statistics of farm mortgages are included in this table. Comparative data for June 1, 1900, are given in italics for certain items.

Table 3 gives statistics pertaining to the products of live stock on farms (dairy products, poultry and eggs, honey and wax, and wool, mohair, and goat hair); also the number of each class of domestic animals sold or slaughtered on farms, together with the receipts from the sales of animals and the total value of animals slaughtered on farms, for the year 1909.

Table 4 shows the total value of farm crops and of the broad groups thereof, together with the acreage (or the number of trees, plants, or vines of bearing age) and production of the principal individual crops for the year 1909.

Table 5 gives statistics relating to selected farm expenses for 1909 and also shows the receipts from the sale of crops suitable for feeding animals.

Table 6 shows the number and value of domestic animals in barns and inclosures not on farms, by classes, together with the number of dairy cows and mature horses and mules, on April 15, 1910.

Definitions.—To assist in securing comparability for its statistics of agriculture, the Bureau of the Census provided the enumerators with certain definitions and instructions, the more important of which were essentially as given below.

Farm.—A "farm" for census purposes is all the land which is directly farmed by one person managing and conducting agricultural operations, either by his own labor alone or with the assistance of members of his household or hired employees. The term "agricultural operations" is used as a general term referring to the work of growing crops, producing other agricultural products,

and raising animals, fowls, and bees. A "farm" as thus defined may consist of a single tract of land, or of a number of separate and distinct tracts, and these several tracts may be held under different tenures, as where one tract is owned by the farmer and another tract is hired by him. Further, when a landowner has one or more tenants, renters, croppers, or managers, the land operated by each is considered a "farm."

In applying the foregoing definition of a "farm" for census purposes, enumerators were instructed to report as a "farm" any tract of 3 or more acres used for agricultural purposes, and also any tract containing less than 3 acres which produced at least \$250 worth of farm products in the year 1909.

Farmer.—A "farmer" or "farm operator," according to the census definition, is a person who directs the operations of a farm. Hence owners of farms who do not themselves direct the farm operations are not reported as "farmers." Farmers are divided by the Bureau of the Census into three general classes according to the character of their tenure, namely, owners, tenants, and managers.

Farm owners include (1) farmers operating their own land only, and (2) those operating both their own land and some land hired from others. The latter are sometimes referred to in the census reports as "part owners," the term "owners" being then restricted to those owning all their land.

Farm tenants are farmers who, as tenants, renters, or croppers, operate hired land only. They were reported in 1910 in three classes: (1) *Share tenants*—those who pay a certain share of the products, as one-half, one-third, or one-quarter; (2) *share-cash tenants*—those who pay a share of the products for part of the land rented by them and cash for part; and (3) *cash tenants*—those who pay a cash rental or a stated amount of labor or products, such as \$7, 10 bushels of wheat, or 100 pounds of seed cotton per acre.

Managers are farmers who are conducting farm operations for the owner for wages or a salary.

Farm land.—Farm land is divided into (1) improved land, (2) woodland, and (3) all other unimproved land. The same classification was followed in 1880. At former censuses, except that of 1880, farm land was divided into improved land and unimproved land, woodland being included with unimproved land. *Improved land* includes all land regularly tilled or mowed, land pastured and cropped in rotation, land lying fallow, land in gardens, orchards, vineyards, and nurseries, and land occupied by farm buildings. *Woodland* includes all land covered with natural or planted forest trees which produce, or later may produce, firewood or other forest products. *All other unimproved land* includes brush land, rough or stony land, swamp land, and any other land which is not improved or in forest. The census classification of farm land as "improved land," "woodland," and "other unimproved land" is one not always easy for the farmers or enumerators to make, and the statistics therefore must be considered at best only a close approximation.

Total value of farm products.—No attempt has been made at the census of 1910 to compute or even to estimate approximately the total value of farm products. Among the numerous difficulties which stand in the way of obtaining a total which would be at once comprehensive, free from duplication, and confined exclusively to the products of a definite period of time are the following:

(1) The duplication resulting from the feeding of farm crops to farm live stock, when the value both of the products derived from

such live stock and of the crops are included in the same total. In 1900 an attempt was made to eliminate this duplication by means of an inquiry as to the total value of the products of each farm fed to the live stock on that farm, but aside from the fact that this would not eliminate the duplication where the products of one farm are fed to the live stock of another farm, it is believed that the farmers were unable to make even approximately accurate answers to the inquiry, and it was accordingly not included in the schedule for 1910.

(2) The fact that farmers may buy domestic animals during the census year which are subsequently sold or slaughtered during the same year and that it is impossible to eliminate the duplication accurately, and the further fact that the value of domestic animals sold or slaughtered or of forest products cut during a given year (as well as some other minor items) does not usually represent a value created wholly during that year, and that it is quite impossible to ascertain the value created during the year.

(3) The fact that the returns for some products are incomplete. The returns for all products are to a considerable extent estimates made by the farmers. Special difficulty was encountered in cases where the person in possession of the farm in April, 1910, when the census was taken, was not in possession of it during the crop year 1909. In such cases the farmer was not always able to report completely and accurately the products of the land for the preceding year. It is probable that the returns for the principal crops are in general fairly accurate, but that those for minor crops and for dairy and poultry products are frequently understatements, particularly because the home consumption was disregarded or underestimated. In the belief that no accurate result could be obtained from such an inquiry, the Bureau of the Census did not even attempt to ascertain the total quantity and value of certain by-products, such as straw and cornstalks, which are of considerable importance, the schedule calling only for the value of such by-products sold.

Comparability of data collected at the different censuses.—At former censuses the date of enumeration has been as of June 1, whereas the census of 1910 was as of April 15. This change of date has affected the comparability of the statistics for the different censuses to some extent. The statistics are closely comparable for such items as land area, total and improved farm acreage, tenancy, mortgage debt, color and nativity of farmers, size of farms, and most items pertaining to farm values. Serious difficulty, however, is encountered when an attempt is made to compare the statistics pertaining to the various classes of live stock. This subject is more fully discussed in the various state bulletins, in the Abstract, and in Volume V of the Thirteenth Decennial Census reports. Statistics pertaining to crops and live stock products, as well as those pertaining to selected farm expenses and receipts, should be closely comparable because they refer to the preceding calendar or crop year. It is probable that the census of 1910 secured rather more accurate statistics than former censuses in this respect, because the time of enumeration was six weeks earlier than at former censuses and farmers probably remembered a little more accurately the details for the preceding year.

IRRIGATION.

The statistics pertaining to irrigation were collected under the Act of February 25, 1910, which contained the following clause:

Inquiries shall also be made as to the location and character of irrigation enterprises; quantity of land irrigated in the arid region of the United States and in each state and county in that section under state and Federal laws; the price at which these lands, including water rights, are obtainable; the character and value of crops produced on irrigated lands, the amount of water used per acre for said irrigation, and whether it was obtainable from national, state, or private works; the location of the various projects and method of construction, with facts as to their physical condition; the amount of capital invested in such irrigation works.

The information called for by this law which could be supplied by farm operators was obtained on "supplemental schedules" by regular census enumerators as a part of the agricultural census. The remaining data, which were supplied by the owners or officials of irrigation enterprises, were obtained on "special schedules" by special agents. The data relating to number of farms irrigated and to irrigated crops are taken from the "supplemental schedules," while all data relating to acreage irrigated and to irrigation works and their construction and operation were taken from the "special schedules."

In accordance with the law, the data collected have been classified primarily according to the state and Federal laws by virtue of which the land was brought under irrigation.

A report (previously published as a separate bulletin) dealing with irrigation for each state in which special statistics on this subject were collected appears in this volume immediately following the report pertaining to agriculture for the same state. At the end of each report on irrigation there is a general table which gives in detail, by counties, the data summarized in the text for the state as a whole. For purposes of comparison the total number of farms, approximate land area, the total acreage of land in farms, and the acreage of improved land in farms, have been included in the table.

Definitions.—Such of the terms used as are not self-explanatory are defined below.

Farms irrigated.—The number of "farms irrigated" is the number of farms on which irrigation is practiced and is equivalent to the term "number of irrigators" used in reports of previous censuses.

Types of enterprise.—The types of enterprise under which the lands irrigated in 1909 are classified are as follows:

United States Reclamation Service enterprises, which operate under the Federal law of June 17, 1902, providing for the construction of irrigation works with the receipts from the sale of public lands.

United States Indian Service enterprises, which operate under various acts of Congress providing for the construction by that service of works for the irrigation of land in Indian reservations.

Carey Act enterprises, which operate under the Federal law of August 18, 1894, granting to each of the states in the arid region 1,000,000 acres of land on condition that the state provide for its irrigation, and under amendments to that law granting additional areas to Idaho and Wyoming.

Irrigation districts which are public corporations that operate under state laws providing for their organization and management, and empowering them to issue bonds and levy and collect taxes with the object of obtaining funds for the purchase or construction, and for the operation and maintenance of irrigation works.

Cooperative enterprises, which are controlled by the water users under some organized form of cooperation. The most common form of organization is the stock company, the stock of which is owned by the water users.

Commercial enterprises, which supply water for compensation to parties who own no interest in the works. Persons obtaining water from such enterprises are usually required to pay for the right to receive water, and to pay, in addition, annual charges based in some instances on the acreage irrigated and in others on the quantity of water received.

Individual and partnership enterprises, which belong to individual farmers or to neighboring farmers, who control them without formal organization. It is not always possible to distinguish between partnership and cooperative enterprises, but as the difference is slight this is unimportant.

Source of water supply.—Of the terms used in the classification according to source of water supply, none requires explanation except "reservoirs." The only reservoirs which are treated as independent sources of supply are those filled by collecting storm water or from watercourses that are ordinarily dry. When reservoirs are filled from streams or wells, the primary source is considered the source of supply.

Acre-foot.—The "acre-foot," used to express the capacity of reservoirs, is the volume of water required to cover 1 acre to a depth of 1 foot, or 43,560 cubic feet.

Cost.—The cost of irrigation enterprises is that given by the owners. For the larger works the cost given is taken, in most cases, from the books of account and represents the actual cost. In the case of most of the private and partnership and many of the cooperative enterprises, however, the works were built by their owners without records of money or labor expended, and the cost given represents the owners' estimates. The cost reported for 1910 includes the cost of construction and of acquiring rights. The latter usually consists of filing fees only. In some instances it includes the purchase price of rights, but these cases are so rare that they are unimportant. The cost reported for 1899, shown for purpose of comparison, was designated "cost of construction," but probably includes the cost of acquiring rights, as in 1910. The average cost per acre is based on the acreage enterprises were capable of irrigating in 1910 and the cost to July 1, 1910.