

UNITED STATES DEPARTMENT OF COMMERCE

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BUREAU OF THE CENSUS

J. C. CAPT, Director (Appointed May 22, 1941)

WILLIAM LANE AUSTIN, Director (Retired January 31, 1941)

PHILIP M. HAUSER, Assistant Director



SIXTEENTH CENSUS OF THE UNITED STATES : 1940

AGRICULTURE

HANDBOOK

**Descriptions and Illustrations of the Uses of Agriculture
Census Statistics in Education, Business, Research,
and Visual Analysis; with Explanations of the
Technique of Tabulation and Procedures**

Prepared under the supervision of

ZELLMER R. PETTET

Chief Statistician for Agriculture

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SIXTEENTH CENSUS OF THE UNITED STATES: 1940

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Part 1.—New England, Middle Atlantic, and East North Central States
 2.—West North Central States
 3.—South Atlantic States

Part 4.—East South Central States
 5.—West South Central States
 6.—Mountain and Pacific States

Volume II.—Statistics by Counties for Value of Farm Products, Farms Classified by Major Source of Income, and Farms Classified by Total Value of Products (three parts).

Part 1.—Northern States Part 2.—Southern States Part 3.—Western States

Volume III.—General Report—Statistics by Subjects for the United States, Geographic Divisions, and States (one volume).

Chapter I.—Farms and Farm Property	Chapter VI.—Cooperation, Labor, Expenditures, Machinery, Facilities, and Residence
II.—Size of Farms	VII.—Livestock and Livestock Products
III.—Color, Tenure, and Race of Farm Operator	VIII.—Field Crops and Vegetables
IV.—Farm Mortgages and Farm Taxes	IX.—Fruits and Nuts, and Horticultural Specialties
V.—Work Off Farm, Age, and Years on Farm	X.—Value of Farm Products

United States Summary Bulletins.—Statistics for the United States, Geographic Divisions, and States in condensed form as follows:

First Series Summary—Number of Farms, Uses of Land, Values, Principal Classes of Livestock and Livestock Products; and Specified Crops Harvested.
 Second Series Summary—Farm Mortgages, Taxes, Labor, Expenditures, and Miscellaneous Farm Information; Goats and Mohair; and Fruits, Vegetables, and Minor Crops.
 Third Series Summary—Value of Farm Products, Farms Classified by Major Source of Income, and Farms Classified by Total Value of Products.

✓ Territories and Possessions.—Farms and Farm Property, Livestock and Livestock Products, and Crops (one volume). (Separate agricultural bulletins are available for Hawaii and Puerto Rico.)

Territories:	Possessions:	
Alaska	American Samoa	Puerto Rico
Hawaii	Guam	Virgin Islands of the United States

✓ Irrigation of Agricultural Lands.—Statistics by Drainage Basins and by Counties for 20 Irrigation States and a Summary for the United States (one volume).

Twenty Separate State Maps Showing Irrigation by Drainage Basins.
 A Separate Composite Map Showing Irrigation by Drainage Basins.

✓ Drainage of Agricultural Lands.—Statistics for 38 Drainage States with County Data for 36 States and a Summary for the United States (one volume).

A Separate Map of the United States Showing Location of Land in Drainage Enterprises for 38 States.

SPECIAL STUDIES AND MONOGRAPHS

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✓ Cows Milked and Dairy Products.—Number of Cows Milked, Milk Produced, Disposition of Dairy Products, and Number of Cows Kept Mainly for Milk Production, Classified by Number of Cows Milked, by Counties; with Related Data for Other Classes of Livestock and Livestock Products for the States and also for the United States (one volume).

✓ Special Cotton Report.—Cotton Harvested by Number of Bales Harvested, and by Counties, with Acreage and Production of Cotton, and Value of Farm Products (one volume).

✓ Special Cross-Line Acreage Report.—Farms Reporting and Acreage by Place of Enumeration and by Location of Acreage, with Relationship to All Farms, by Counties: 1940 and 1935 (one volume).

✓ Abandoned or Idle Farms—Number and Acreage, with Classification of Those Reporting Acreage by Cause of Nonoperation and by Year of Abandonment, by States and by Counties, with a Summary for the United States.

Drainage Monograph.—A Comparison of Agriculture Within and Outside of Drainage Enterprises in the Alluvial Lands of the Lower Mississippi Valley (paper bound).

Irrigation Monograph.—A Tabular and Graphic Presentation of Specified Irrigation Census Statistics (paper bound).

¹Agriculture volumes I and II and the volumes "Irrigation of Agricultural Lands" and "Drainage of Agricultural Lands" are comprised of State bulletins. Separate bulletins for each State are available. Separate chapters of Agriculture volume III are also available.

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INTRODUCTION

INTRODUCTION — CENSUS OF AGRICULTURE HANDBOOK

With the urgent need for exact basic information on everything pertaining to food production, even the 20,000 pages of statistics in the 17 volumes of the Agriculture Census, 1940, are not sufficient. Numerous Government agencies and multitudes of business firms and private individuals demand all available data. If these data are not included in the Bureau of the Census Agriculture publications, these parties desire to know how or where the information may be obtained. Many want to know whether the material may be secured in greater detail—for tenure, size, income groups, etc.—than that included in the available publications and if tabulations or cross tabulations can be made from the 81,000,000 agricultural punch cards to solve their problems or meet the demands which are troubling them.

The inquirers are first referred to the Agriculture Census publications, with which they may not be familiar. If these publications do not carry the data desired, it is usually necessary to furnish the inquirer with a set of punch cards and numerous machine-tabulation sheets that he may understand the Bureau of the Census method sufficiently well to describe the special data which he desires. In presenting descriptive matter in the most convenient form, at the Census of 1935 a condensed reproduction of the punch cards and the machine-tabulation sheets was made in a booklet entitled, "A Descriptive Supplement—Technique of Tabulation." Notwithstanding that this publication was of a technical nature, more than 3,000 copies were furnished upon requests, which resulted in many orders for special tabulations. The demand for similar data in 1940 is the principal reason for the preparation of this Handbook, for the experience in 1935 indicates that the Bureau should go much further than a mere description of the technical phases of the work.

Many requests have come to the Bureau for samples of special tabulations and other descriptive matter to show how certain information may be obtained, also for samples of the actual use made of the statistics to help in determining whether such material could be used to advantage, or to determine whether special tabulations might help in solving perplexing problems.

A number of useful articles have been prepared by agencies other than the Bureau of the Census, showing the use which they have actually made of Census material, the methods which they employed, and other pertinent information. Among those who had prepared such articles were H. E. Childs, Supervisor of Visual Education in the public schools of Providence, Rhode Island; Prof. E. B. Hill, Farm Management Department, Michigan

State College; and Dr. F. W. Lathrop, Specialist in Agricultural Education, of the United States Office of Education. Other persons or agencies whose projects illustrate the uses made of Agriculture Census data are named in chapters III and IV of this publication.

This book has been arranged in four chapters—(I) Technique of Tabulation and Procedures; (II) Uses of Agriculture Census Statistics in Education; (III) Uses of Farm Statistics for Business and Research (including farmers and cooperatives); and (IV) Visual Analysis—A Means of Exploration in Statistical Research.

Chapter IV describes a method, for the use of researchers, called Exploratory Analysis, that will enable the researcher to make an exploration of the interrelationship of significant items desired for the study and which will aid in determining what tabulations should be made, either on a universal or on a sample basis. Preparations are being made for further tabulations on a sample basis which will show the usefulness of that type of research, and which can be made at much lower cost than complete tabulations.

To summarize: It is the purpose of this booklet to show the detailed information that may be obtained from the huge store of data of the Agriculture Census and to offer helpful examples of the uses made of it by leading educators, business men, farm cooperatives, and the general public.

Relatively few samples of tables have been offered as examples, inasmuch as the regular Bureau of the Census publications contain such information, and since these publications are available, at a very low cost from the Superintendent of Documents, Government Printing Office, Washington, D. C., or may be consulted in almost any library. A price list of these publications will be found in chapter II, or they may be obtained, if free copies are still available, by writing to the Bureau of the Census, Department of Commerce, and mentioning this Handbook.

Particular attention is called to the graphic presentations, such as maps, graphs, and charts, which convey information more readily than the usual statistical tables.

Various members of the Division of Agriculture staff of the Bureau of the Census have prepared the material for these chapters. These members include H. E. Robison and Lois Hutchison who prepared chapter I on Technique of Tabulation and Procedures; Lois Hutchison, chapter II on Uses of the Data in Education; Z. R. Pettet and Irvin Holmes, chapter III on Business and Research; C. R. Nyman, chapter IV on Exploratory Analysis; and H. A. Tucker, arrangement and presentation of the material.