

UNITED STATES DEPARTMENT OF COMMERCE

JESSE H. JONES, Secretary

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

VOLUME III

GENERAL REPORT

STATISTICS BY SUBJECTS

Prepared under the supervision of

ZELLMER R. PETTET

Chief Statistician for Agriculture

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Vital Statistics—HALBERT L. DUNN, *Chief Statistician.*

LETTER OF TRANSMITTAL

DEPARTMENT OF COMMERCE

BUREAU OF THE CENSUS

Washington, D. C., December 24, 1942

STR:

I transmit herewith volume III of the Reports on Agriculture, Sixteenth Decennial Census. These data are shown by geographic divisions and by States, with summaries for the United States.

Provision for the 1940 Agriculture Census was made in the Act providing for the Fifteenth Decennial Census which was approved on June 18, 1929. The final reports of the Census of Agriculture, 1940, are contained in four volumes: Volume I (in six parts) and volume II (in three parts) each with reports by States, with statistics for counties; volume III, General Report, statistics by subjects; and Special Poultry Report.

The collection and compilation of these statistics and the preparation of this volume were made under the supervision of Z. R. Pettet, Chief Statistician for Agriculture, with the assistance of Sherman S. Slick, Assistant Chief Statistician, Warder B. Jenkins, Chief of Technical Staff, and Hilton E. Robison, Senior Agricultural Statistician. The graphic material was prepared in cooperation with Clarence E. Batschelet, Geographer.

Acknowledgment is made of the cooperation of representatives of the United States Department of Agriculture and of the Division of Statistical Standards, Bureau of the Budget.

Respectfully,

J. C. CAPT,

Director of the Census

Hon. JESSE H. JONES,

Secretary of Commerce

SIXTEENTH CENSUS OF THE UNITED STATES: 1940

Reports on Agriculture, Irrigation, and Drainage

Volume I.—Statistics by Counties for Farms and Farm Property, with Related Information for Farms and Farm Operators; Livestock and Livestock Products; and Crops (six parts).

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
II.—Size of Farms
III.—Color, Tenure, and Race of
Farm Operators
IV.—Farm Mortgages and Farm
Taxes
V.—Work off Farm, Age, and
Years on Farm

Chapter VI.—Cooperation, Labor, Expenditures,
Machinery, Facilities, and
Residence
VII.—Livestock and Livestock Products
VIII.—Field Crops and Vegetables
IX.—Fruits and Nuts, and
Horticultural Specialties
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.

Special Poultry Report.—Statistics by Geographic Divisions and States for Poultry of All Kinds on Hand and Raised; by Counties for Chickens and Chicken Egg Production by Number of Chickens on Hand; and by Counties for Farms Reporting Chickens and Turkeys Raised by Numbers Raised (one volume).

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).

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:
Alaska
Hawaii

Possessions:
American Samoa
Guam

Puerto Rico
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.

GENERAL REPORT ON AGRICULTURE BY SUBJECTS

SUMMARY OF CONTENTS

(A detailed table of contents is shown at the beginning of each chapter)

	Page		Page
Introduction-----	7	Chapter VIII.—Field crops and vegetables-----	685
Scope and method of census-----	9	Summary for all crops-----	690
Reports on agriculture-----	16	Cereals-----	699
Explanation of terms-----	16	Sorghums-----	699
Comparability of statistics-----	16	Flax-----	701
Chapter I.—Farms and farm property-----	19	Annual legumes-----	701
Chapter II.—Size of farms-----	65	Hay-----	702
Chapter III.—Color, tenure, and race of farm operator-----	133	Clover and grass seeds-----	702
Chapter IV.—Farm mortgages and farm taxes-----	235	Cotton-----	703
Chapter V.—Work off farm, age, and years on farm-----	321	Tobacco-----	703
Chapter VI.—Cooperation, labor, expenditures, machinery, facilities, and residence-----	439	Sugarcane-----	703
Chapter VII.—Livestock and livestock products-----	555	Sugar beets-----	703
Horses and mules-----	561	Silage crops (other than corn and sorghums)-----	703
Cattle-----	570	Crops grazed or hogged off-----	703
Hogs-----	572	All other field crops-----	703
Sheep-----	574	Potatoes (Irish and sweet)-----	703
Goats-----	574	Farm garden-----	703
Farm slaughter-----	575	Vegetables for sale-----	703
Livestock purchases-----	575	Chapter IX.—Fruits and nuts, and horticultural specialties----	821
Livestock sales-----	575	Chapter X.—Value of farm products-----	867
Poultry-----	575	Appendix-----	1025
Bees-----	576	Schedules-----	1026
Fur animals-----	577	Instructions-----	1047
		Index-----	1069

INTRODUCTION

CONTENTS

	Page
Scope and method of Census-----	9
Legal basis for the Census-----	9
Area of enumeration-----	9
Dates of enumeration-----	9
The trial census and preliminary work-----	9
The 1940 farm and ranch schedule-----	9
Plan of regionalization of agriculture schedule, census of 1940-----	11
Method of canvass-----	11
Tabulation and office procedure-----	11
Number of counties and minor civil divisions, by States, 1940-----	12
Number of counties classified by number of farms, by States: Census of 1940-----	14
Flow chart—Census of Agriculture—1940-----	15
Reports on Agriculture-----	16
Explanation of terms-----	16
Comparability of statistics-----	16
Changes in date of enumeration-----	16
Changes in form of schedule and the wording of questions and instructions-----	17
Other factors affecting comparability-----	17
Map of the United States showing geographic divisions-----	18

INTRODUCTION

SCOPE AND METHOD OF CENSUS

Legal basis for the census.—The Sixteenth Decennial Census of Agriculture was authorized by the Act of Congress, approved June 18, 1929, which provided for the Fifteenth and subsequent decennial censuses. Under the provisions of this Act, the 1940 Census of Population and Agriculture was to be taken as of the first day of April; the number and form of the inquiries in the schedules used were to be determined by the Director of the Census with the approval of the Secretary of Commerce; each enumerator was charged with the collection in his subdivision of the statistics called for on the schedules; and the enumerator was to visit personally each dwelling house in his subdivision and in case no person competent to answer the inquiries was available he was to obtain the required information from persons living nearest to such place who were competent to answer the inquiries. Pertinent paragraphs of this Act are included in the appendix to this volume.

Area of enumeration.—The 1940 Census of Agriculture covered the continental United States (the 48 States and the District of Columbia), Alaska, Hawaii, Puerto Rico, Guam, American Samoa, and the Virgin Islands of the United States. The data in this volume, as well as in volumes I and II of the Sixteenth Census Reports on Agriculture, are for the continental United States only. The statistics on agriculture for the outlying territories and possessions are published separately. The Census Act, under which the Sixteenth Decennial Census was taken, did not provide for an enumeration of the Philippine Islands. The most recent agricultural census, made by the Commonwealth of the Philippines, was taken as of January 1, 1939.

Dates of enumeration.—As mentioned above, the Sixteenth Decennial Census of Agriculture was taken as of April 1, 1940. The dates for previous censuses of agriculture were: January 1, 1935, 1925, and 1920; April 1, 1930; April 15, 1910; and June 1 for the earlier census years. These changes in the date of enumeration affect the comparability of the statistics for inventory items, which are taken as of the census date, and to a lesser extent the statistics for production and other items which relate to the preceding calendar year or crop year. The livestock and livestock products items are particularly affected by changes in dates of enumeration. This point is discussed in detail in Chapter VII.

The trial census and preliminary work.—A "Trial Census of Agriculture"; on a very limited scale, was taken as of January 1, 1938. The schedule used was prepared early in 1937 by a special advisory committee made up of representatives of the United States Department of Agriculture, Central Statistical Board, and the Bureau of the Census. The State statisticians of the United States Department of Agriculture performed nearly all of the actual enumeration and forwarded the schedules to the Bureau of the Census for tabulation and analysis. The statisticians made written reports on all items of interest connected with the enumeration. Their reports included comments on the wording and the arrangement of questions, the time required for filling out a schedule, the reaction of farmers to certain questions, the relative accuracy of replies obtained, and other pertinent facts relating to enumeration problems. These comments were carefully studied and indexed for later use in the preparation of the 1940 schedule. This trial enumeration was very helpful in determining the nature and form of the 1940 questionnaire; in improving the instructions to area managers, district supervisors, and enumerators; and in the planning for the tabulations and publications. The results of this trial enumeration, which covered approximately 3,000 farms in selected counties in 40 States, were published in the form of mimeographed releases.

In advance of the date of the 1940 enumeration more than 2,300,000 sample schedules were distributed to farmers, farm organizations, agricultural workers, newspapers, and others who were in a position to publicize the fact that a Census of Agriculture was about to begin. This opportunity for advance study was intended to promote a better understanding of the census task and of the information required as well as to expedite the work and lessen the load for census enumerators. The Census Bureau also cooperated with the Extension Service and the Division of Crop and Livestock Estimates (now Agricultural Statistics Division) of the United States Department of Agriculture, the United States Office of Education, and numerous colleges and farmers' organizations, in a campaign to promote farm record-keeping as a necessary step in preparation for the census.

The 1940 farm and ranch schedule.—As pointed out, the Director of the Census has legal authorization to determine, with the approval of the Secretary of Commerce, the number, form, and subdivisions of inquiries in the schedules. If census facts are to serve adequately as administrative tools in the carrying out of social and economic programs, every suggested inquiry from whatever source must be given serious consideration. Likewise, every schedule must be planned to secure the maximum of useful data, and at the same time the trouble to the respondents and the expense to the Government must be given consideration. To attain these ends, the Director of the Census not only had the aid of members of his permanent staff, but he also sought the advice and constructive criticism of advisory committees and of other experts outside his own organization.

A Special Census Advisory Committee for preparing the 1940 Farm and Ranch Schedule was designated by the Honorable Daniel C. Roper, former Secretary of Commerce. Members of this committee and their affiliations were:

<u>Member</u>	<u>Representing</u>
Dr. S. H. DeVault (Chairman), Head, Department of Agricultural Economics, University of Maryland.	American Farm Economic Association
Mr. W. F. Callander, Chairman, Crop Reporting Board, Bureau of Agricultural Economics, U. S. Department of Agriculture.	Chairman, Census Advisory Committee of U.S. Department of Agriculture
Mr. W. R. Ogg, Director of Research, American Farm Bureau Federation.	American Farm Bureau Federation
Mr. Fred Brønckman, Washington Representative, The National Grange.	The National Grange
Mr. Harold F. E. Jeunet Farm Journal.	Agricultural Publishers Association
Mr. H. G. Keeney, Vice-President, National Farmers' Union.	Farmers' Educational and Cooperative Union of America
Mr. Ole A. Negaard, Special Consultant, Central Statistical Board	Central Statistical Board

The chairman and the members of the committee located in Washington met frequently and, with the assistance of representatives of the United States Department of Agriculture and of the Bureau of the Census, did much of the spade work in preparing and arranging the questions. The full committee met from time to time to pass judgment on what had been done and to offer suggestions for improvements. Both the full committee and the subcommittee made themselves available to all individuals desiring to make personal appearances in support of any inquiries in which they were interested. For several years prior to the enumeration the Bureau of the Census had catalogued all suggestions and criticisms received concerning the nature and form of inquiries and the general make-up of the schedule. These suggestions, most of which had come in voluntarily, and the comments of the State statisticians of the "1938 Trial Census" were given careful consideration by the committee. Mr. W. F. Callander of the United States Department of Agriculture acted as a clearing house for channeling in the recommendations of that Department and Mr. Ole A. Negaard acted in the same capacity for the other Government agencies. Attention was given by the committees not only to the make-up of the schedule but also to the preparation of instructions to enumerators. A few suggestions for publication of the data were also made.

This committee's final draft of the Farm and Ranch Schedule, of the Plantation Schedule, and of Instructions to Enumerators, with a few changes, were referred to the General Census Advisory Committee for further study. Only a few relatively minor changes were necessitated by the recommendations of the General Committee. Seven drafts of the Farm and Ranch Schedule were prepared and carefully considered before a copy was sent forth for printing.

The number of requests for special inquiries exceeded, by far, the physical limitations of a schedule. After careful consideration 232 numbered inquiries, or questions, were decided upon. In order to permit the use of this large number of questions, and in order to lighten, insofar as possible, the task for both the farmer and the enumerator, regionalized Farm and Ranch Schedules were used. Under this plan the 48 States and the District of Columbia were divided geographically into 9 regions as follows:

Region 1			
Connecticut	Iowa	Minnesota	Pennsylvania
Delaware	Maine	New Hampshire	Rhode Island
District of Columbia	Maryland	New Jersey	Vermont
Illinois	Massachusetts	New York	West Virginia
Indiana	Michigan	Ohio	Wisconsin
Region 2	Region 3	Region 4	Region 5
Kentucky	Alabama	Florida	Colorado
Missouri	Georgia		Kansas
North Carolina	Mississippi		Montana
Tennessee	South Carolina		Nebraska
Virginia			North Dakota
			South Dakota
			Wyoming
Region 6	Region 7	Region 8	Region 9
Arkansas	Louisiana	Idaho	Arizona
New Mexico	Texas	Nevada	California
Oklahoma		Oregon	
		Utah	
		Washington	

A map outlining these regions is presented on page 11. These 9 regions do not conform to the 9 geographic divisions into which the States have been grouped for presentation of the tabulated data.

All inquiries on the face of the Farm and Ranch Schedule carried under major headings of Farm Operator, Farm Tenure, Farm Acreage, Values, Farm Mortgage Debt and Farm Taxes, Other

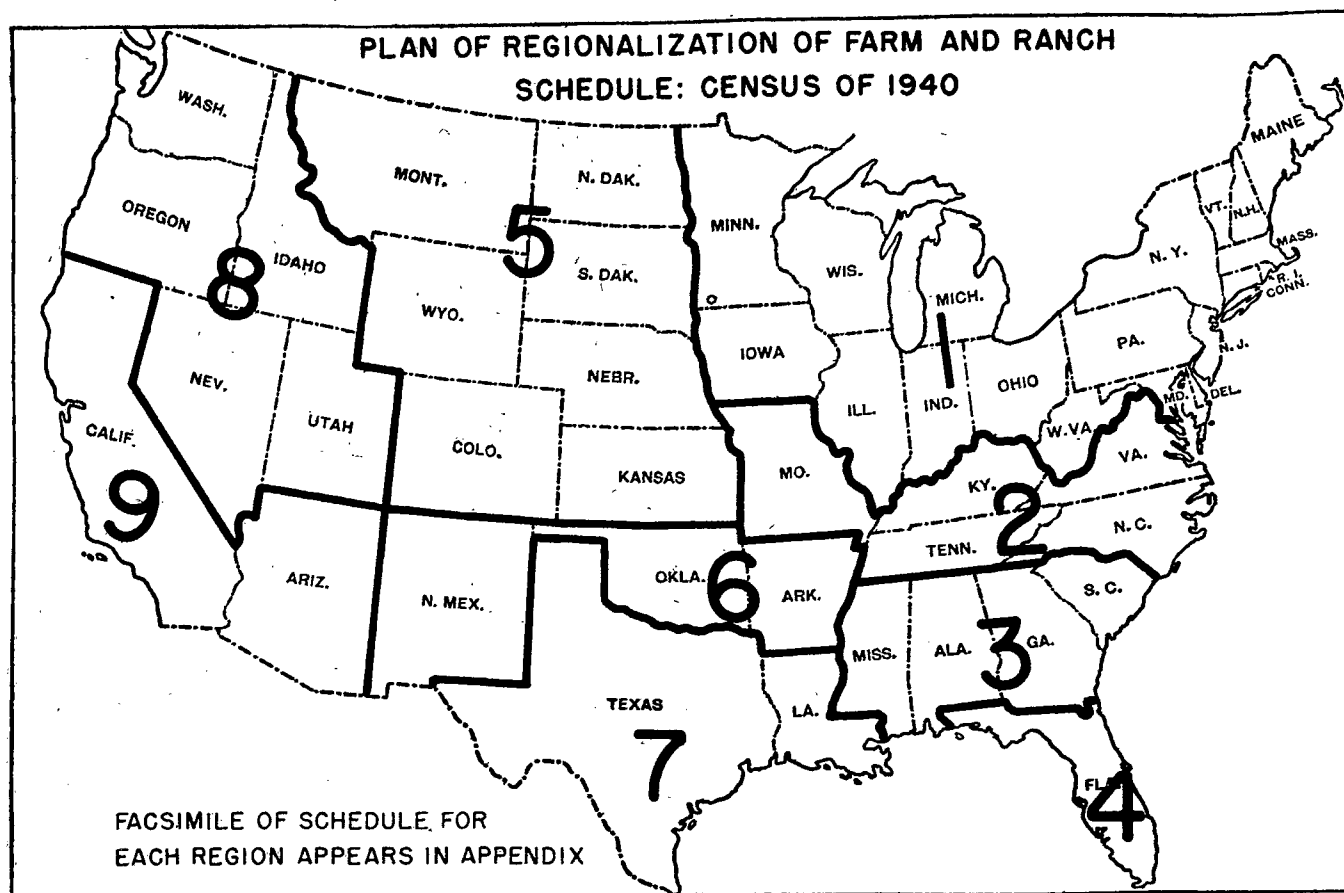
Land Owned, Work Off Farm and Years on This Farm, Irrigation, Cooperative Selling and Purchasing, Farm Labor, Farm Expenditures, Farm Machinery and Facilities, and Supplemental Information were the same for all regions. This was true also of the questions on livestock and livestock products which occupied the first column on the reverse side of the schedule as well as those on value of products which were interspersed with the livestock and crops questions on the reverse side of the schedule. The regionalization was determined solely, therefore, on the basis of the crops grown in the various States. For example, Q. 102 on durum and macaroni wheat appears on the schedule for Region 5 only. Insofar as possible, the regionalization also took into account common differences in units of production. In the case of potatoes, as an illustration, production was to be reported in bushels for all States except Arizona and California (Region 9). In these two States potato production was to be reported in 100-lb. bags. The conversion factors used in reducing the reported production figures to a common unit in order to present United States and geographic division totals, are presented in chapters VIII and IX of this volume. In the case of citrus fruits, the regionalization of the Farm and Ranch Schedule also took into account differences in the crop season. For California and Arizona (Region 9) the citrus production figures relate to the crop of 1938-39 from the bloom of 1938, while for all other citrus-producing regions production was reported for the crop of 1939-40 from the bloom of 1939.

In addition to the questions on specified principal crops, there were "catch-all" questions for miscellaneous or unspecified crops, one such "catch-all" question was at the end of each of the blocks relating to field crops, vegetables for sale, small fruits, orchard fruits, nuts, and citrus fruits. Reproductions of the 9 regionalized 1940 Farm and Ranch Schedules will be found in the Appendix to this volume.

Although the total number of major inquiries (numbered questions) was 232, as a result of this regionalization of the crops inquiries, the count of numbered questions appearing on the Farm and Ranch Schedules ranged from 170 in Region 2 to 188 in Region 9. The completeness and accuracy of the returns for any inquiry are, of course, materially affected by whether the item is listed on the schedule or whether it must be written in by the enumerator, as well as by the position of the inquiry on the schedule, particularly in its relation to the element of fatigue on the part of both the questioner and the respondent.

A supplementary schedule, called the Plantation (Multiple-Farm Unit) Schedule was also required from the landlord, manager, or operator of a plantation (multiple-farm unit) operated as one working unit on which five or more farm families (including at least one cropper or tenant family) was regularly employed. This Plantation Schedule was provided for use only in the southern States and in a few other areas where cotton production is important. The purpose of this schedule was two-fold: (1) To make possible a statistical treatment of the entire plantation as a unit; and (2) to avoid the danger of duplications or omissions in the returns for animals, crops, and expenditures. The Plantation Schedule was only supplementary; a separate Farm and Ranch Schedule was still required for the home farm of the plantation and one for each of the croppers and other classes of tenants.

In addition to the census of farms and ranches in 1940 there were two other censuses relating to agricultural lands, one a census of irrigation enterprises and the other, a census of drainage enterprises. The census of irrigation enterprises covered 20 States and that for drainage enterprises covered 38 States. The results of each of these censuses are presented in a series of State bulletins. Each series will be assembled with a summary for the United States, and published as a single volume. Statistics on irrigated and nonirrigated crops representing individual farm returns were obtained on the Farm and Ranch Schedules for Regions 5-9 inclusive, and are presented in county table 15 of volume I, and chapter VIII of this volume. Such statistics should not be confused with the 1940 Census of Irrigation which is an enumeration of irrigation enterprises.



Method of canvass.—For purposes of administrative control of the enumeration, the United States, including its territories and possessions, was divided into 104 areas, each area being administered by an area manager. These areas were, in turn, subdivided into 532 districts, each of which was headed by a district supervisor. The number of enumerators employed in the Sixteenth Decennial Census was 102,117, each enumerator being assigned one or more of the 150,170 enumeration districts. These enumeration districts were laid out in such fashion that: (1) All incorporated places formed separate enumeration districts; (2) each township, precinct, judicial district or other minor civil division, or "balance of township" formed one or more enumeration districts; (3) parts of 2 or more townships or other minor civil divisions were not placed in the same enumeration district.

During the period September 25 to November 18, 1939, the area managers were given an intensive course of instruction in all phases of census work, including agriculture. This school for area managers was held in Washington, D. C. Similar regional schools of instruction were held for the district supervisors February 26 to March 2, 1940, in New York City; Chicago, Ill.; Minneapolis, Minn.; Kansas City, Mo.; Denver, Colo.; San Francisco, Calif.; Dallas, Tex.; and Atlanta, Ga. School was also held in Washington, D. C., March 4 to 9, 1940, for district supervisors in Pennsylvania, West Virginia, Maryland, Delaware, the District of Columbia, and Virginia. Prior to the work of actual enumeration, the area managers and district supervisors were further instructed by means of home-study courses conducted by correspondence. The enumerators in turn were instructed by the supervisors by means of prepared home-study courses, and in some cases through group instruction including the use of especially prepared sound motion pictures.

The district supervisors were provided with instructions for making a detailed examination of the first schedules returned by each enumerator, and for checking key items on all succeeding schedules. When the completed schedules for a

subdistrict were returned by the enumerator, the district supervisor was also instructed to check the completeness of the farm enumeration by means of the identification maps used by the enumerator to indicate farm locations. The district supervisor then assembled the Farm and Ranch Schedules by counties, made a preliminary announcement of the number of farms by counties, and forwarded the schedules to the Bureau of the Census in Washington.

Tabulation and office procedure.—When the schedules were received in Washington they were counted, arranged by minor civil divisions (townships, precincts, wards, beats, or other civil divisions of the county), and placed in folios. The individual Farm and Ranch Schedules were then examined by a force of, approximately, 1,300 clerks. These clerks had been given an intensive training in the correct procedure to be followed in coding, editing, and reviewing the schedules.

The hand coding process consisted of entering on each schedule the necessary code designations to indicate the tenure of the farm operator and the major source of income as well as the code numbers for any miscellaneous crops or miscellaneous kinds of poultry that were reported. The coding of farms by size and by total value of products was done mechanically, after the date had been transferred from the schedules to punch cards.

The editing and reviewing procedure consisted mainly of an inspection of the individual schedules for faulty or poorly written figures; for misplaced, omitted, duplicated, or inconsistent entries; and for conformity to the Census definition of a farm. Doubtful cases were submitted to specialists in the particular subject in which problems arose. These specialists were either experts in the regular employ of the Bureau of the Census or agricultural statisticians who were loaned for this work from the Division of Agricultural Statistics, Department of Agriculture. In some cases State agricultural statisticians were called in for consultation regarding important problems peculiar to their respective States. In some instances, correspondence with enumerators or farm operators was necessary in order to clarify unusual reports or to secure needed additional information.

TABLE 1.—NUMBER OF COUNTIES AND

STATE	Number of count- ties	NUMBER OF MINOR CIVIL DIVISIONS																			
		Total	Beats	Total	Districts								Cores	Grants	Islands	Locations	Independent municipalities				
					Civil	Election	Judicial	Magisterial	Militia	Representative	School	Supervisory					Total	Boroughs	Cities	Towns	Villages
United States, total—	² 3,098	51,627	410	6,945	1,201	695	7	1,510	1,649	35	1,806	42	9	14	147	5	4,340	1,190	1,541	586	1,225
Alabama	67	1,356															1		1		
Arizona	14	42		42								42									
Arkansas	75	1,482																			
California	58	504															1		1		
Colorado	65	1,189															6		6		
Connecticut	8	169																			
Delaware	3	35		35						35											
District of Columbia	1	1															1		1		
Florida	67	1,415																			
Georgia	159	1,650		1,649					1,649								1		1		
Idaho	44	813																			
Illinois	102	1,638															1		1		
Indiana	92	1,015																			
Iowa	99	1,676															1		1		
Kansas	105	1,698															148		148		
Kentucky	120	709		709				709													
Louisiana	⁴ 64	519															1		1		
Maine	16	1,080											5	5	147		21		21		
Maryland	⁵ 24	302		301		301											1		1		
Massachusetts	14	351															39		39		
Michigan	83	1,435															165		165		
Minnesota	87	2,995															675	1	95		579
Mississippi	82	410	410																		
Missouri	⁶ 115	1,310															1		1		
Montana	56	1,837		1,660							1,660										
Nebraska	93	1,516															85		81		2
Nevada	17	78		7			7														
New Hampshire	10	258												8		5	11		11		
New Jersey	21	566															331	255	52	23	1
New Mexico	31	722																			
New York	62	999															60		60		
North Carolina	100	1,027																			
North Dakota	53	2,244															333		111	1	221
Ohio	88	1,442															84		28		56
Oklahoma	77	1,489															518		132	366	
Oregon	36	1,696																			
Pennsylvania	67	2,561															984	934	49	1	
Rhode Island	5	39															7		7		
South Carolina	46	574		146							146						1		1		
South Dakota	69	2,258															305		140	165	
Tennessee	95	1,201		1,201	1,201																
Texas	254	1,534																			
Utah	29	423		3			3														
Vermont	14	256											4	1			8		8		
Virginia	⁶ 124	473		449				449									24		24		
Washington	39	2,125															17		5	12	
West Virginia	55	352		352				352													
Wisconsin	71	1,794															513		149		364
Wyoming	³ 24	390		369			369														

¹ Congressional (surveyed) townships included in unorganized territory.² Comprises 3,006 counties, 64 parishes, 26 independent cities, the District of Columbia, and 1 national park.³ Yellowstone National Park in Idaho, Montana, and Wyoming counted only in Wyoming.⁴ Parishes.⁵ Includes 1 independent city.⁶ Includes 24 independent cities.

MINOR CIVIL DIVISIONS, BY STATES, 1940

STATE	NUMBER OF MINOR CIVIL DIVISIONS—Continued																							
	Patents	Plantations	Police jury wards	Precincts				Points	Purchases	Strips	Surpluses	Unorganized towns	Towns	Townships ¹			Tracts	Indian reservations	Military reservations	National parks	U.S. navy yard	Unorganized territory ¹		
				Total	Commissioners	Election	Justices							Total	Civil	Judicial						Total	Surveyed townships	Other unorganized territory
United States, total	1	67	518	12,362	96	10,819	1,437	2	7	4	3	2	3,603	20,990	20,487	503	2	15	5	³ 4	1	2,183	2,173	10
Alabama				1,355		1,355																		
Arizona																								
Arkansas														1,482	1,482									
California														503		503								
Colorado				1,182		1,182												1						
Connecticut													169											
Delaware																								
District of Columbia																								
Florida				1,415		1,415																		
Georgia																								
Idaho				798		798														(³)		15		15
Illinois				195		195								1,444	1,444									
Indiana														1,015	1,015									
Iowa														1,675	1,675									
Kansas														1,550	1,550									
Kentucky																								
Louisiana			518																					
Maine	1	67						2	4	3		418					2	1				384		384
Maryland																								
Massachusetts													312											
Michigan														1,266	1,266							4		4
Minnesota														1,892	1,892							426		426
Mississippi																								
Missouri														1,309	1,309									
Montana				141		141								34	34					(³)		2		2
Nebraska				925		925								507	507							1		1
Nevada														71	71									
New Hampshire									7				222									6		6
New Jersey														235	235									
New Mexico				720		720												2						
New York													952					7						
North Carolina														1,027	1,027									
North Dakota														1,414	1,414			1				496		496
Ohio														1,358	1,358									
Oklahoma														969	969				1	1				
Oregon				1,693		1,693													1			2		2
Pennsylvania														1,576	1,576			1						
Rhode Island													52											
South Carolina														427	427									
South Dakota														1,163	1,163				1	1		790		790
Tennessee																								
Texas				1,533	96		1,437															1		1
Utah				418		418																2		2
Vermont												2	238									3		3
Virginia																								
Washington				1,979		1,979								73	73			1	2	1	1	51	48	3
West Virginia																								
Wisconsin													1,280					1						
Wyoming																				³ 1				

TABLE 2.—NUMBER OF COUNTIES CLASSIFIED BY NUMBER OF FARMS, BY STATES: CENSUS OF 1940

STATE	Number of counties	COUNTIES BY NUMBER OF FARMS REPORTED															
		Total	Under 250		250-499	500-749	750-999	1,000-1,499	1,500-1,999	2,000-2,499	2,500-2,999	3,000-3,499	3,500-3,999	4,000-4,999	5,000-7,499	7,500 and over	
			None	Under 100													
United States	3,098	167	4	64	99	182	199	218	497	499	481	292	214	129	125	81	14
Alabama	67								4	7	11	15	16	8	6		
Arizona	14	2			2	1	4	1	2	1	1		1		1		
Arkansas	75								8	13	18	12	4	4	9	6	1
California	58	7		4	3	7	4	3	9	9	4	2	1	1	1	8	2
Colorado	63	13		7	6	12	10	6	14	6		1			1		
Connecticut	8								1		2	4		1			
Delaware	3									1		1			1		
District of Columbia	1	1		1													
Florida	67	14		4	10	9	11	10	13	3	4			2	1		
Georgia	159	3			3	9	15	33	44	26	19	7	1	1	1		
Idaho	44	5			5	8	7	8	7	5	1	2		1			
Illinois	102						2	7	20	19	23	13	14	4			
Indiana	92					1	1	4	7	31	33	9	5	1			
Iowa	99								7	31	41	13	5	2			
Kansas	105	2			2	9	9	11	24	21	22	5	2				
Kentucky	120						2	7	31	27	15	17	11	5	3	2	
Louisiana	64	3			3	4	5	2	8	10	6	6	8	3	5	3	1
Maine	16						1	1	1	3	3	4	1	1		1	
Maryland	24	1		1				1	10	3	5	1	2	1			
Massachusetts	14	3		2	1				2	1	4		1	1	1	1	
Michigan	83	5			5	1	8	6	16	5	8	5	10	5	10	4	
Minnesota	87	1			1	1		3	14	20	20	12	8	3	3	1	1
Mississippi	82						2	4	4	5	11	8	17	8	8	10	5
Missouri	115	1		1			1	1	11	36	28	16	17	3	1		
Montana	56	8			8	12	11	7	14	4							
Nebraska	93	4			4	7	10	10	28	22	5	3	1				
Nevada	17	12		6	6	3	2										
New Hampshire	10						1	1	3	1	2	2					
New Jersey	21	3		1	2	2		3	5	5	1	2					
New Mexico	31	1			1	5	7	4	5	7	1	1					
New York	62	6	1	3	2	2	2	1	4	8	10	9	5	4	8	3	
North Carolina	100	1		1		1	3	6	10	12	17	10	12	7	12	7	2
North Dakota	53					2	6	3	24	8	9	1					
Ohio	88								2	13	28	25	10	5	5		
Oklahoma	77						1	2	7	17	19	16	7	6	2		
Oregon	36	2			2	6	3	3	5	5	3	4	1		3	1	
Pennsylvania	67	2			2	2	4	2	7	9	11	9	6	5	6	3	1
Rhode Island	5	1			1	2	1		1								
South Carolina	46							1	2	9	9	8	8	2		7	
South Dakota	69	3		1	2	8	13	10	20	12	3						
Tennessee	95					2	4	5	10	14	12	14	13	8	8	4	1
Texas	254	29		8	21	36	22	17	45	23	22	13	9	17	16	5	
Utah	29	6		1	5	7	4	3	4	2	1	1	1				
Vermont	14					1	1	1	1	5	4	1					
Virginia	124	25	2	23		6	6	16	23	17	14	5	1	5	4	2	
Washington	39					5	8	1	7	3	3	3	1	1	3	4	
West Virginia	55					3	1	6	8	15	12	7	3				
Wisconsin	71					1	3	2	6	7	17	9	13	6	4	3	
Wyoming	24	3	1		2	7	4	6	3	1							

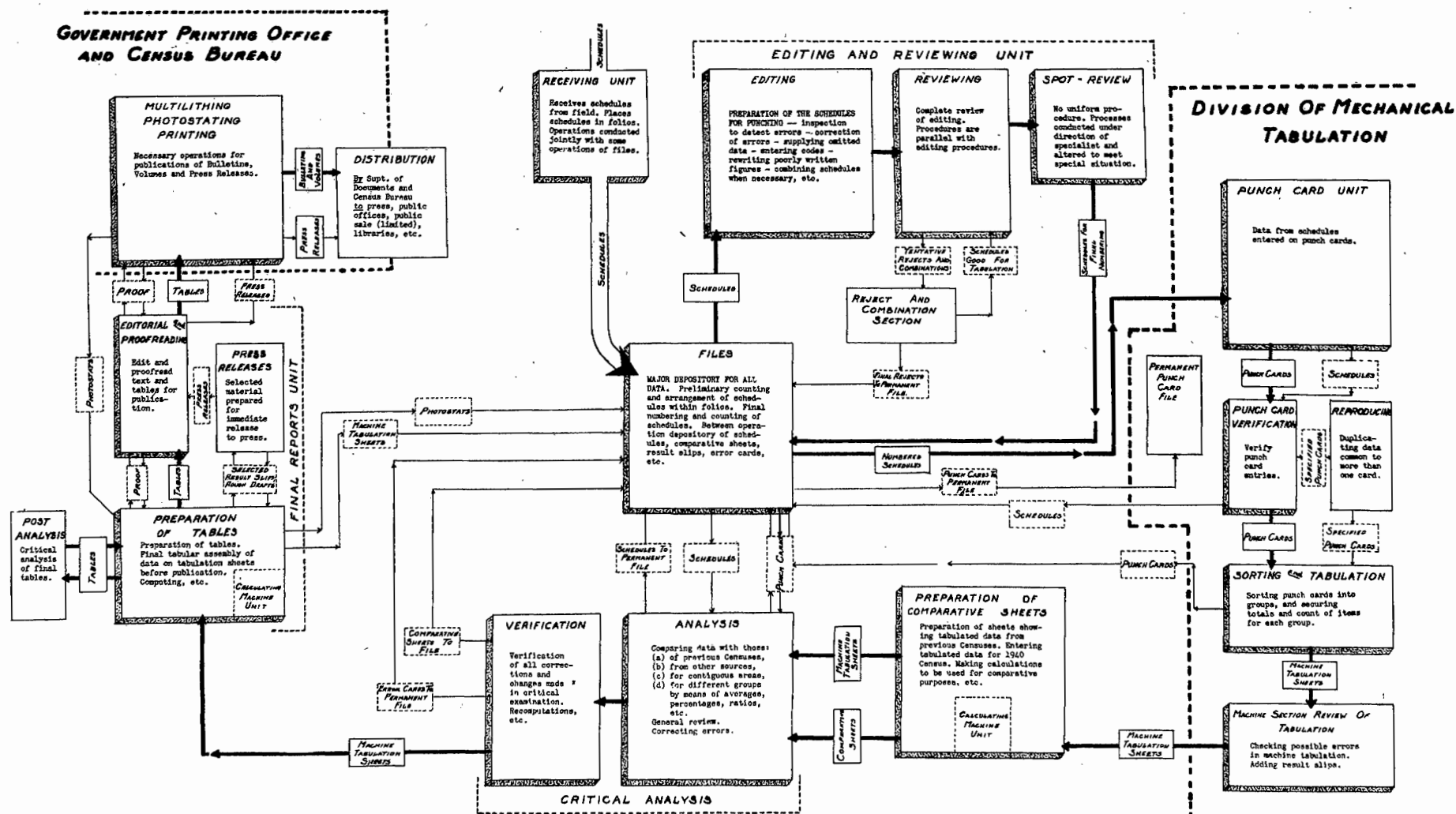
When all acceptable schedules for a county had been coded and edited, they were reassembled by minor civil divisions and given permanent identification numbers. The numerical information on schedules, including both the answers to the questions and the code numbers, was then transferred to a series of punch cards. To further insure accuracy of the final results the punch cards were run through a machine, called a collator, which picked out items in excess of certain predetermined totals or items which did not conform to certain relationships with other items. These unusual items thus brought into view were given close examination to determine their accuracy. This collation of the cards was thought to be a distinct forward step in census technique. To summarize the data the punch cards were sorted into the desired groupings and were then tabulated mechanically. The information was always totaled for each county by minor civil divisions. County totals,

other than for crop and livestock items, were also obtained by color and tenure of the operator; some county data were tabulated by size of the farm based on the total acreage in the farm; some by the value of products or major source of income; and some by specified groups, such as size of herd, size of flock, etc.

The machine tabulation sheets, called result slips, were given a critical examination to test the reasonableness of the tabulation results. When the critical examination work had been completed the information on the result slips was transferred to county, State, or United States tables and the results were first published in press releases; then in a series of 3 State bulletins showing county figures; and finally in chapters covering, by States, certain commodities or specialized fields of data.

UNITED STATES CENSUS OF AGRICULTURE - 1940

FLOW CHART



REPORTS ON AGRICULTURE

Because of the large number of inquiries included on the 1940 Farm and Ranch Schedule, the tabulation, critical analysis, and publications were divided into three phases. In so doing the precedence of tabulation was based primarily on the relative importance of items, and also on their arrangement on the schedule and their relationship to other items. Thus, United States totals for some of the more important individual items were made available at a much earlier date than would have been possible other wise.

The first series of tabulations covered the number, acreage, and value of farms; the value of buildings and of implements and machinery on farms; farm land according to its utilization; some of the preceding items classified by the color of the farm operator, some by the tenure of the farm operator, and some by the size of the farm; farms reporting and numbers of specialized classes of livestock and poultry, with some of their products; and farms reporting with the acreage and production of specified field crops harvested.

The second series of tabulations included: Mortgage debt for farms of operating owners (both full owners and part owners); taxes on farm property owned by full owners and part owners; work off their farms by farm operators for pay or income; age of operator; year of occupancy translated into the number of years the operators had been working their present farms; whether the farm operators reside on their farms; cooperative selling and purchasing of goods and services; farm labor employed at specified times; expenditures for selected items; inventories of automobiles, motortrucks, and tractors, with the year of latest model of each general class; the availability, use, and source of electric current; farms with telephones; kinds of roads adjoining farms; race of farm operators; inventory of goats; mohair production; goats milked; farm slaughter, purchases, and sales of various classes of livestock; miscellaneous poultry; fur-bearing animals kept in captivity; and pelts and information for those crops which were not carried in the first series, namely, the individual annual legumes, clover and grass seeds, miscellaneous field crops, farm garden, vegetables harvested for sale, horticultural specialties, small fruits, tree fruits, nuts, and grapes.

The third series tabulations covered the calculated values of the livestock inventory, livestock products, and crops harvested; and the reported value of farm products sold, traded, or used by farm households, with statistics for farms classified by major source of income, and by total value of products, 1939.

The results of each of these three series of tabulations were released in the form of preliminary State and United States reports. The initial preliminary State report was issued December 23, 1940, while the first United States report on number of farms, land in farms, and value of land and buildings was published February 5, 1941.

Three series of bulletins, showing county and State totals, were issued for each State. In general, the subject matter of these bulletins followed the order of tabulation described above. The first and second series State bulletins, which contain statistics on farms, farm acreage, general farm data, livestock numbers and products, and crops were later bound and published as volume I (in 6 parts) of the Reports on Agriculture. The third series bulletins, one issued for each State, present county and State statistics on value of products and farms classified by major source of income and by total value of products. These were bound and published as volume II (in 3 parts) of the final Reports on Agriculture.

Three United States summary bulletins, presenting United States, geographic division, and State figures, were also published. In subject matter, these correspond to the first, second, and third series State bulletins; but they were not bound and published in volumes I and II. The United States, geographic division, and State figures contained in these three summary bulletins, as well as additional tabulations for many items, all arranged by subjects, make up this General Volume (volume III) of the Reports on Agriculture. The plan of publication for the censuses of Irrigation and Drainage has been

described. As indicated previously, these Reports on Agriculture relate to the continental United States only. The agricultural statistics for outlying territories and possessions are published in separate bulletins.

A volume entitled "Special Poultry Report" was also issued. This publication contains State figures on all poultry items covered by the 1940 census—numbers on hand, 1940, and numbers raised, 1939, for chickens, ducks, turkeys, geese, guineas, pigeons, quail, pheasants, and other poultry; number of chickens sold, and number of chicken eggs produced, 1939—as well as all available comparative figures for preceding censuses. In addition, it contains tables showing figures for each county, for the 1940, 1935, and 1930 Censuses, on number of chickens on hand, chickens raised, chickens sold, and chicken eggs produced for farms classified by number of chickens on hand, county figures on number of farms reporting chickens raised, 1939, classified by number of chickens raised, and county figures on number of farms reporting turkeys raised, 1939, classified by number of turkeys raised.

Another volume entitled "Cows Milked and Dairy Products" is being prepared. This publication will contain State figures on all dairy items covered by the 1940 Census—cows kept for milk production on hand, Apr. 1, 1940, cows milked in 1939, milk produced, butter churned; milk, cream, and butter sold—as well as all available comparative figures for preceding censuses. In addition, county data for the 1940 Census are shown for the number of cows milked; milk produced; butter churned; milk, cream, and butter sold; and cows kept for milk production; for farms classified by number of cows milked. In this county table some comparative data are also shown for 1930 Census.

EXPLANATION OF TERMS

Detailed explanations of the terms used are given in the chapters of this volume where the item concerned is first discussed. All text discussions should be supplemented by a careful study of the instructions to enumerators and of the Farm and Ranch Schedule which are produced in the Appendix to this volume. Similar information, given in the general reports for previous censuses, should always be referred to in order to appraise the degree of comparability between the figures for the various censuses.

COMPARABILITY OF STATISTICS

Changes in date of enumeration.—Earlier, attention was called to the fact that the 1940 Census of Agriculture was taken as of April 1, the same date as the census of 1930; whereas the 1920 and middecennial enumerations of 1935 and 1925 were made as of January 1, the 1910 census as of April 15, and the preceding censuses as of June 1. These changes in the date of enumeration have an important bearing upon the degree of comparability between statistics for the same item in successive censuses. The outstanding example of an item seriously affected by changes in date of enumeration is, of course, the inventory number of any of the several species of livestock. This is true because of the seasonal variation in livestock numbers caused by births and purchases on the one hand as against sales, slaughter, and deaths on the other. A more detailed appraisal of this problem will be found in chapter VII of this volume. The livestock inventory is, however, only one of many items affected by changes in date of enumeration. It is known that reports on livestock products, such as the annual production figures on milk and eggs, are influenced by the season when the enumeration is made, due to the tendency to use current production in arriving at the yearly totals.

Changes in date of enumeration also affect the reports on crops and other historic items because of the seasonality of changes in residence of farm operators. The 3 months, January 1 to April 1, is a period when a large proportion of the shift of tenants between farms takes place. Where there has been a change in farm operators, correct answers to questions on acreage and production for the previous year are difficult to secure. In all cases memory of a fact becomes increasingly difficult as the time between its happening and the date of the census increases. On the other hand, an enumeration made early

in January may be more affected by omission of reports for absentee operators, than would be the case of a census taken in April after spring work had started and the growing season was more advance.

Changes in form of schedule and the wording of questions and instructions.— Reproductions of the 1940 Farm and Ranch Schedule, as well as the instructions to enumerators, will be found in the Appendix to this volume. Similar information for the Censuses of 1935, 1930, 1920, and 1910 will be found in the volume entitled "General Report" for each of these enumerations, while the 1925 farm schedule and instructions are reproduced in parts I, II, and III of the 1925 Reports on Agriculture. Volume V, part I of the 1900 Census Reports on Agriculture presents copies of the schedules used and other pertinent information for all enumerations from 1850 to 1900, inclusive. A study of the schedules and instructions will reveal that the inquiries on agriculture have undergone a continued process of evolution as a result of experience gained with previous censuses, shifts in the needs of the users of these statistics, and rapid and extensive changes in the form of American agriculture itself. These changes in schedule design and wording of questions and instructions are very important as affecting the comparability of the figures. Some outstanding examples of differences in inquiries, for the 1940 Census of Agriculture compared with preceding enumerations, are: Classification of land according to use, age groups for livestock inventories, regionalization of crop questions, crop season and units of production for citrus fruits, and breakdown and wording of the questions on value of products. These

changes, as well as other principal differences, are discussed in the chapter covering that particular subject in this volume. It should be remembered that not only may the wording of the inquiry seriously affect the nature of the returns; but, in addition, the position of the inquiry on the schedule, its relation to other items, the mechanical arrangement of the question, and the punctuation employed are frequently of great importance. In the case of minor crops, of local importance only the degree of coverage may depend, to a considerable extent, upon whether the item is listed on the schedule or whether it must be written in by the enumerator. In this connection, see the discussion of the regionalization of the 1940 Farm and Ranch Schedule which has already been given. The incompleteness for minor crops may be of considerable importance from the standpoint of the individual item concerned, but on the basis of grand totals of acreage and value, such omissions are relatively unimportant.

Other factors affecting comparability.—Duplication of acreage undoubtedly occurred, in some cases, where the landlord and the tenant both reported operations on the rented land. Similarly, duplication may have been possible for tracts of land operated some distance from the home farm, particularly if the tracts were in different enumeration districts. Unwillingness of the farm operator to answer certain questions always causes some unsatisfactory returns. The various agricultural programs have undoubtedly influenced the nature of the 1940 Census returns, but an appraisal of the effect of such programs is outside the scope of this volume.

Map of the United States. Showing Geographic Divisions

