AGRICULTURE

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 for the United States

Prepared under the supervision of

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LETTER OF TRANSMITTAL

DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS
Washington, D.C., October 30, 1942

SIR:

I transmit herewith for publication a special compilation from the Census of Agriculture Returns of the Sixteenth Decennial Census entitled "Cows Milked and Dairy Products." This report gives information by size of herd, and by counties, for all of the items relating to cows milked, milk production, and sales of dairy products.

Added interest in dairy production during this war period has prompted numerous requests for this type of presentation from producers, distributors, and manufacturers of dairy products and from others who have need of a statistical compendium on this subject. In addition, formal request was received from The Honorable Secretary of Agriculture who stressed that Department's need of county statistics in the establishment of local goals for increased milk production.

Provision for the Sixteenth Decennial Census was made in the Act providing for the Fifteenth and subsequent Decennial Censuses which was approved June 18, 1929. The information contained in this report was secured from farm operators by census enumerators in a personal canvass of the individual farms.

The collection and compilation of these statistics and the preparation of this volume were under the supervision of Z. R. Pettet, Chief Statistician for Agriculture, assisted by Sherman S. Slick, Assistant Chief Statistician, and members of the staff. Special acknowledgment is given to Warden B. Jenkins, Chief of Technical Staff, for the general form of presentation of tables, maps, and charts. The graphic material was prepared under the supervision of Clarence E. Batschelet, Geographer of the Census.

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.

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

Part 4.—East South Central States
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Part 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.

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


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

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

Territories and Outlying 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 Puerto Rico
Outlying Possessions: American Samoa 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.
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Cows milked and milk produced, 1939 and 1929; dairy products sold and butter churned, 1939; and cows kept for milk Apr. 1, 1940; by number of cows milked, by Counties

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COWS MILKED AND DAIRY PRODUCTS

INTRODUCTION

Increased interest in dairy production during this war period has arisen through the impulse of producing cows only for domestic use, but also for lend-lease requirements. This interest, coupled with the need of various governmental agencies, producers, distributors, and manufacturers, prompted this presentation. Formal request for such a publication was received from the Secretary of Agriculture who stated, in part:

"... This information is in constant demand by governmental agencies on county unit (basis) and is necessary to the establishment of accurate local goals for increased milk production. "... These county data will ... bring home to county organizations of farmers the reasonableness of their production goals and their personal responsibility for the accomplishment of the goals."

"... many employees in the Department of Agriculture, who are working on the problem of production goals for dairy products to meet our war needs, have expressed a lack of basic information on numbers of cows milked and production of milk, by counties, and by size of herd milked."

"Need for these data on a county basis has recently been expressed, among persons interested in establishing facilities for producing milk in various ways for export to our allies."

"... These tabulations by counties are needed for effective planning and successful accomplishment of the farmer's part in production for victory."

The primary purpose in presenting this report entitled "Cows Milked and Dairy Products" is to make available, by counties, much of the data collected by the 1940 Federal Census of Agriculture relating to cows milked. These statistics relate to milk produced, and quantity of and income from specified dairy products sold, particularly, when these items are arrayed by size of milking herd, or more precisely by the number of cows and heifers milked during all or any part of the 1939 calendar year.

To portray more effectively the geographic distribution of the production of dairy products and the form in which the producer disposes of his products, the presentation of the numerical data has been supplemented by the use of visual aids in the form of maps and diagrams. A historical series of dot maps is also given to show the growth of dairying, since data relative to the number of hogs first collected in 1850. A classification by number of cows milked was first made in the Census of 1920, but not as many items were included, nor was the number of class units as numerous as in 1940. In the earlier Census, the classification was made only for the number of heifers, the total number of cows milked with the number milked for dual-purpose breeding, and milk production. In the 1940 classification, information was secured for the number of heifers, the total number of cows milked, the number of cows kept for milk, milk production, butter churned on farms, farms reporting any dairy products sold, and the quantities of whole milk, cream, and butter sold. However, in the later Census, information was not secured as to the proportion of cows milked which was of beef or dual-purpose breeding. In 1930, data were tabulated for 9 class units; whereas, in 1940, data were tabulated for 13 class units, the additional groups representing a further breakdown of the smaller herds.

Additional tables are presented to show, by States, the relationship of:

1. The number of cows kept mainly for milk production to the total number of cattle.
2. The number of cows to the total number of cattle.
3. The value of cattle to the total value of all livestock.
4. The value of dairy products to the total value of all livestock products.
5. The income from sales of dairy products to the total gross farm income for all farms and also for specified groups of farms.

(6) The income from various specified sources for dairy products farms to the income for all classified farms.

Because figures are given to bring out all of the relationships more clearly, and comparative figures for earlier censuses are given when available.

DEFINITIONS AND EXPLANATIONS

Only those items are discussed which need clarification or for which explanatory remarks affecting comparability are required. Other publications give, in considerable detail, a description of the method of canvass, the definition of a farm, a discussion of the comparability of livestock numbers and livestock production, the method of classifying farms as to income, etc.

In the definition of a farm carried on the general farm schedule, the enumerators were cautioned to "Include dry-lot or barn dairies." "... and "... note report as a farm any tract of land of less than 3 acres, unless its agricultural products in 1939 were valued at $200 or more." Thus, the numbers of cows milked and the production of milk shown in this tabulation are not quite all-inclusive of all cows or total milk production.

Farms reporting—The term "farms reporting" indicates the number of farms for which the specified items shown in a particular table were reported. If there were 1,922 farms in a county and sale of dairy products were made from 1,466 of these farms in the calendar year 1939, and the enumeration of that farm complete, the number of farms reporting dairy products sold would be given in the table as 1,466.

Livestock and livestock products.—For convenience, the term "livestock" in the Census reports is made to include not only domestic animals, such as horses, mules, cattle, sheep, and goats, but also fur-bearing animals kept in captivity, poultry, and bees. It follows, then, that the term "livestock products" should include production from the above classes. This general usage is followed throughout with one exception, viz., the term "livestock or dairy sold or traded" excludes poultry, bees, and fur animals. In tables 3, 4, 15, 17, and 18, income from sales of poultry and poultry products is shown in a separate total; while income from bees, honey, wax, goat milk, and fur animals, together with income from wool, mohair, meat, hides, etc., is included in the figure for "other livestock products."

In theory, a change in the date of enumeration should have little effect on the volume of milk production reported for the previous calendar year. However, experience indicates that, when accurate records of production are not kept, daily production of milk at the time of the enumeration does affect the total volume reported for a calendar year. This means that a census of milk production taken as of April 1, or near peak production, for the previous calendar year, would tend to give somewhat higher figures than a census taken in January which is near the low point of production.

The nature and form of the inquiries for recording inventories of cattle, number of cows milked, quantity of milk produced, quantity of butter churned, and sales of specified dairy products are given in table 1 along with numerical totals for the United States. These are given for each Census beginning with the first Census of Agriculture in 1850. As may be noted by an inspection of these inquiries, the terminology for determining the number of milk cows and the number of cows milked has not been constant. Most of these differences are brought out also in the historical tables. No separation of milk cows was made in 1840. The first recording of the number of milk cows milked was made in the Census of 1920 and has been repeated for each succeeding census. A slight improvement in the wording of the question for this item was attempted in the 1940 Census in that the number was to relate to cows milked during any part of the previous year; whereas, in the previous censuses the inquiry mentioned the number milked during all or any part of the previous year. In presenting the number of cows and heifers on hand and the number of cows and heifers milked, the word "heifers" is sometimes omitted for brevity.
Attention is directed to the relationship of the figures for the number of cows kept for milk and the number of cows milked for the three censuses where these contrasts can be made. In 1940, the number of cows kept mainly for milk production exceeds the number of cows milked by 2,137,066. For the other years, the number of cows milked exceeds the number kept for milk production by 1,055,674, the difference being 625,266 for 1930, and 3,046,795 for 1925. It should be remembered that the totals for the number of cows milked include some cows which were of dual-purpose type and some which were kept mainly for beef production. As stated previously, this total was secured in the 1930 Census only, and for that Census the number of beef and of dual-purpose cows milked was 3,371,507. A comparison of all these data indicates that dairy herds were expanding rapidly at the time of the 1940 census, or that farmers had been replacing beef with dairy-type cows, or that they were possibly keeping cows of identical type conformation, but for a different purpose. The interpretation placed upon each question, by the enumerators, in the 1930 Census, were enumerated, i.e., they were offered considerable difficulty, but was accomplished in a satisfactory manner.

Values and income.—The 1940 values for livestock and livestock products are calculated figures derived by multiplying numbers or production by unit prices. The latter were obtained jointly by the Bureau of the Census and the United States Department of Agriculture.

The figures for farm income for the calendar year 1939, shown in this report, were enumerated, i.e., they were secured by enumerators from the operators in response to 10 separate questions. These questions, in the order of their appearance on the schedule, were as follows:

Value of all dairy products sold or traded in 1939.

Value of all livestock sold or traded in 1939, except poultry, bees, and fur animals.

Value of all poultry eggs, baby chicks, poults, etc., sold or traded in 1939.

Value of wool, mohair, nettles, hides, etc., bees, honey, wax, and fur animals and pelts sold or traded in 1939.

Value of the crops reported under Questions 87-149 (including landlord's share) which were or are to be sold or traded. (Crops used in this question refer to field crops harvested in 1929.)

Value of vegetables harvested in 1939 for sale.

Agricultural specialties, sales in 1939.

Value of all fruits and nuts, including small fruits, produced in 1939, that were or are to be sold or traded.

Value of products of this farm in 1939 that were used by your family and by all households on this farm.

Value of forest products sold in 1939.

The first of the questions which related to the value of dairy products called for the value of all dairy products (other than goat milk and goat cheese) sold or traded in 1939.

The question specified milk, cream, butter, and cheese, and the enumerator was instructed to include the sale of byproducts, such as butter milk or skim milk.

Dairy animals sold alive were included under the second income question, although the proceeds could reasonably be considered as dairy income. For the 10 questions given above relating to sales of farm products and the value of products used on the farms by farm households, furnished the basis for classifying the farms by major source of income. The basis for this classification was the largest value reported for any of the individual questions. This method of classification, although not wholly satisfactory, points out areas of intensive production.

TABLE I.—HISTORY OF ENUMERATION OF CATTLE AND DAIRY PRODUCTS—

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<td>CULLS AND CALVES OVER 3 MONTHS OLD, APR. 1, 1940</td>
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<td>Of this number, how many were—</td>
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<tr>
<td>(a) Cows and heifers that were 6 years old and over on Jan. 1, 1940, and are—</td>
</tr>
<tr>
<td>(b) Mainly for milk production</td>
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<tr>
<td>(c) Mainly for beef production</td>
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Cows milked and dairy products, 1939:

Value of all dairy products sold or traded in 1939:

| TABLE 93. | COWS MILKED AND DAIRY PRODUCTS, 1939 |
|-------------------------|
| SEASONS OF 1939 (AM. T.) |
| (Figures in italics are values at present time.) |
| CATTLE, APRIL 1, 1939 | Number | 2,137,066 |
| Of the total number, how many were— | |
| (a) Cows and heifers that were 6 years old and over on Jan. 1, 1934, and are— | |
| (b) Mainly for milk production | Number | 3,371,507 |
| (c) Mainly for beef production | Number | 2,137,066 |

Cows milked and milk butter produced on farm in 1939:

Value of all dairy products sold or traded in 1939:

Value of all dairy products sold or traded in 1939 (Butterfat content)

Value of all milk produced, butter consumed, milk, etc., sold to stock, or otherwise disposed of.

Butter churned on farm in 1939:

Value of all dairy products sold or traded in 1939 (Cream, butter, cheese, etc.) (Unit sales)

Value of all dairy products sold or traded in 1939 (Cream, butter, cheese, etc.) (Unit sales)