

# **CHAPTER IX**

## **VALUE OF FARM PRODUCTS**

(897)

# CONTENTS

Introduction.....	Page 901				
Presentation of statistics.....	901				
Other published data.....	902				
Differences in published data.....	902				
DEFINITIONS AND EXPLANATIONS					
Period of time covered.....	902				
Actions taken during office processing to insure complete reporting of sales.....	902				
Products traded.....	903				
Government payments and loans.....	903				
Value of sales and production for farms with new operators.....	903				
Value of farm products sold for institutional farms.....	903				
Interfarm movement.....	903				
Farm products purchased for resale.....	903				
Gross income of farm operators.....	903				
Methods of obtaining value of farm products sold.....	904				
Value of production.....	904				
Limitations and reliability of data on the value of farm products produced and sold.....	905				
COMPARABILITY OF DATA FOR 1949 AND 1954					
Value of farm products sold.....				Page 905	
Value of production.....				906	
FARM PRODUCTS SOLD, BY SOURCE					
All crops.....				906	
Cotton.....				906	
Wheat.....				906	
Corn.....				906	
Vegetables.....				906	
Fruits and nuts.....				906	
Horticultural specialties.....				906	
Forest products sold.....				906	
Livestock and poultry and their products sold.....				907	
Cattle and calves.....				907	
Hogs and pigs.....				907	
Sheep and lambs.....				907	
Dairy products.....				908	
Chickens.....				908	
Chicken eggs.....				908	
CHARTS					
Comparison of indexes for total sales of farm products and prices received by farmers, for the United States: 1939 to 1954.....				908	
Value of farm products sold, for the United States: 1939 to 1954.....				908	
MAPS					
Farms with less than \$2,500 gross sales as a percent of all farms, Census of 1954.....				908	
Value of all farm products sold, dollars, 1954.....				909	
Average value per farm of farm products sold, 1954.....				909	
Value of all crops sold as a percent of all farm products sold, 1954.....				910	
Average value of farm products sold per acre of all land in farms, 1954.....				910	
Value of all crops sold, dollars, 1954.....				911	
Value of fruits and nuts sold, dollars, 1954.....				911	
Value of vegetables harvested for sale, dollars, 1954.....				911	
Value of horticultural specialties sold, dollars, 1954.....				911	
Value of forest products sold, dollars, 1954.....				911	
Value of livestock and livestock products, other than dairy and poultry sold, dollars, 1954.....				911	
Value of dairy products sold, dollars, 1954.....				911	
Value of poultry and poultry products sold, dollars, 1954.....				911	
TABLES FOR THE UNITED STATES					
Table —					Page
1.—Value of all farm products sold, by source; for the United States: 1954 and 1949.....					912
2.—Specified crops—Total value of production for the United States: 1954 and 1949.....					914
TABLES FOR GEOGRAPHIC REGIONS, DIVISIONS, AND STATES					
Table —					Page
3.—Value of farm products sold and number of farms, by divisions and States: 1954, 1949, and 1944.....					915
4.—Value of farm products sold, by major sources; by divisions and States: 1954, 1949, and 1944.....					916
5.—Value of crops sold, by major groups; by divisions and States: 1954, 1949, and 1944.....					918
6.—Value of livestock and poultry and their products sold, by major groups; by divisions and States: 1954, 1949, and 1944.....					920
7.—Value of specified farm products sold, by divisions and States: 1954.....					922
8.—Value of production of field crops other than vegetables, fruits, nuts, and horticultural specialties, total and specified crops; by divisions and States: 1954 and 1949.....					926
9.—Unit prices used in computing values for specified items, by divisions and States: 1954 and 1949.....					932

## CHAPTER IX.—VALUE OF FARM PRODUCTS

**Introduction.**—This chapter presents available statistics for the value of sales and value of production of farm products based on data collected in the 1954 Census of Agriculture. For comparative purposes, some data for sales are presented for the Censuses of 1950 and 1945 and for value of production for the Census of 1950. The value figures published in this chapter provide a basis for analyzing and evaluating the relative agricultural importance of a specific crop or livestock item or of a particular area of the United States. They present the status as of a given time and, to the extent that historical data are available, they afford a basis for appraising the changes which have taken place over a period of time. Before the data are used, one should have a thorough knowledge of how they were obtained and their limitations. This is particularly true if the data are to be compared with those for previous Censuses or with other series of data relating to agricultural values.

The sales data compiled in the Censuses of Agriculture do not represent gross farm income. The term "value of sales", as used in this chapter, is probably as descriptive of Census farm income data as any that can be used. There are several reasons why Census value of sales data might not correspond to cash receipts, as generally thought of.

Government payments for rental and benefit, soil conservation, price adjustment, price parity, Sugar Act, and production programs are not incorporated in the Census data for value of sales. For 1954, cash receipts are not included for several items, such as farm sales of butter, buttermilk, cheese, and skim milk; goats and goat milk; bees, honey and wax; home-butchered meat; hides and pelts; rabbits and fur animals; corn and sorghum fodder and silage; grain straw; and the rental of pasture.

On the other hand, Census sales data include the landlord's share of a crop removed from a share-rented farm, even though such share was fed by the landlord to livestock on another farm. From the standpoint of the share-tenant farm, some of the production is exchanged for the use of the land. Such exchanged production is considered a sale.

Sales data for those farm products for which data were secured were to represent the total movement of agricultural products from farms and ranches. They were to include the landlord's share of crops and livestock sold or to be sold and also his share taken to his own farm for use there. Sales of crops grown on a contract basis, livestock fed on a contract basis, and poultry raised under contract with feed dealers or others were to be reported as sales from the farm. Thus, the total value of sales as shown in this chapter were intended to represent a gross sales figure for all farms regardless of who shared in the sales.

The data given in this chapter represent either value of sales or value of production regardless of whether or not the farm operator made a profit. Neither series of data represents net returns. The instructions provided that the cost of production should not be deducted from the total sales when the value of sales was enumerated. However, in the case of livestock sold, the farm operators probably reported the net amount they received. If trucking, transportation or other marketing costs were paid by the farm operator, he probably reported the value of animals sold after such costs had been deducted. Likewise, in the case of dairy and other livestock and poultry products, farm operators

probably reported the net amount received after hauling and other marketing costs had been deducted. Also, in the case of vegetables harvested for sale, marketing costs paid by the farm operator were probably deducted from gross sales when reporting the value of vegetables sold.

The State average prices used in computing both value of sales and value of production were obtained cooperatively by the Agricultural Marketing Service of the United States Department of Agriculture and the Bureau of the Census. The prices are based on reports provided by a sample of farmers and dealers. The average prices were secured and calculated separately for each State.

Value of production data are not available for all crops, livestock, and livestock products. Information on value of production is either incomplete or not available for fruits, nuts, home-used vegetables, horticultural specialties, forest products, livestock, and livestock products. For field crops, it was not feasible to place a value on some of the by-products.

For 1954, there is no count of farms reporting any farm products sold. Counts for the number of farms reporting the sale of individual items are usually available. These are published in the tables of this volume in the appropriate chapter. For example, the number of farms reporting sales of the several types of wheat—winter, spring, or durum—may be found in Chapter VII, and the number of farms reporting sales of hogs may be found in Chapter VI.

**Presentation of statistics.**—The tables in this chapter show State, division, region, and United States totals for 1954 for a particular value item and a varying amount of comparable information for previous Census years. The tables also show pertinent derived data, such as average per farm, average price per unit, or percent of United States total. Information for more individual crops is presented in the tables for the United States than in the division and State tables.

For value of sales of farm products, the tables show first the total value of all farm products sold. This presentation is followed with sales by major sources, such as crops sold, livestock and poultry and their products sold, and forest products sold. Two subsequent tables show the composition of each of the major sources, such as field crops, vegetables, fruits and nuts, horticultural specialties; dairy products, livestock and livestock products other than dairy and poultry; and poultry and poultry products. Then, sales data are shown separately for many of the individual crop and livestock items. (Information for additional items, by States, may be obtained in the various parts of Volume I.)

Table 8 provides the only value of production data, for regions, geographic divisions, and States. In this table, data are shown only for field crops as a group and for a few of the important individual field crops. Value of production data are not available for other groups of agricultural products. In preparing over-all totals for value of production, for presentation in Table 2 of this chapter and in State Table 16 of the various parts of Volume I, it has been necessary to substitute value of sales for value of production for some items.

All values are a function of both price and quantity. Since many of the values were computed, the average price per unit is important. The average prices used in obtaining values are, therefore, presented in Table 9 of this chapter.

Established methods of Census data presentation have been followed. The States have been arranged according to geographic divisions. Geographic division totals, regional totals for the North, the South, and the West, and United States totals are shown.

**Other published data.**—In addition to the data presented in this chapter, dollar values of sales and production, and the number of farms reporting various items of sales and production are available in other chapters of this volume and in other published reports for the 1954 Census of Agriculture.

Data for the quantity sold and for the number of farms reporting sales are not presented in this chapter. Available data are shown in Chapter VI for livestock and livestock products, in Chapter VII for field-crop and vegetable items, and in Chapter VIII for fruits and nuts, horticultural specialties, and forest products. A classification of the farms reporting, based on the quantity sold (in the case of vegetables, dollar sales) is shown, at the State level, in Volume I for many of the principal crops and livestock items.

A limited amount of data for the quantity and for value of farm products sold, by source, is given in this volume, by tenure of operator for commercial farms in Chapter X, for farms classified by economic class in Chapter XI, and for commercial farms by type of farm in Chapter XII.

County data for the value of farm products sold, by source, appear in the separate State reports, Parts 1 to 33, of Volume I. County figures also are given in Volume I for one or more types of data—farms reporting, amount sold, and dollar sales—for many of the field crops, vegetables, small fruits, horticultural specialties, forest products, milk, cream, animals sold alive, and poultry and poultry products.

Statistics on the value of sales for several of the principal crops, livestock and livestock products, and poultry and poultry products are also shown for State economic areas in Volume I. Data are also given in Volume I by State economic areas, for farms reporting, quantity, and value of whole milk and of cream sold, by size of herd; for farms reporting and number of chickens and chicken eggs sold, the value of chicken eggs sold, and for value of other poultry and poultry products, by size of flock.

**Differences in published data.**—The data presented in this chapter were obtained by a summation of the enumerated or computed values of sales and production for all farms. For corresponding items, the totals shown in this chapter are in agreement with those presented in Chapters VI, VII, and VIII. Differences exist, however, between these totals and the totals shown in Chapters X, XI, and XII, which were obtained by making estimates based on data tabulated for only a sample of farms.

## DEFINITIONS AND EXPLANATIONS

For a discussion of the definitions that have general application for enumerative procedures, for sampling procedures, and for a statement on the completeness of the Census, attention is directed to the Introduction to this volume. For other more specific definitions and explanations covering crop and livestock items see the text for Chapters VI, VII, and VIII.

**Period of time covered.**—Data for both value of sales and value of production, for the 1954 Census, relate to the 1954 production of crops, with a few exceptions. For citrus fruits, olives, and avocados, the data relate to the crop for the 1953-54 season that was harvested from the bloom of 1953.

Since the Census was taken in the fall of 1954, the market movement for many of the crops had not been completed at the time of the enumeration. In the wheat-producing areas, several months had elapsed since harvest. For corn, soybeans, cotton, and several other crops the harvest was still in progress when the enumeration was beginning. A portion of some crops had been placed under government loan. In anticipation of the fact that

the sales year would not be completed, it was necessary to stress, by questionnaire notes and instructions to the enumerator, that the sales should include both the quantities that had been sold and those that would be sold regardless of date of sale. Thus, the sales and production data for crops, with the exception noted for certain fruits, are for the 1954 harvest.

Data for sales of livestock and poultry and their products are for the 1954 calendar year. For most of the livestock and poultry items, only data on sales were obtained as no data on production were asked for. For many livestock products, such as milk, cream, and eggs, sales take place almost immediately after production. However, for other products, such as wool and mohair, the sale may be delayed for a considerable length of time after production. For live animals and poultry, the producer has some choice as to when he will market his product. If the time of sale was likely to coincide with the end of the calendar year, it was necessary for the farm operator to decide whether or not to report his imminent marketing as sales for 1954. The sales data shown in the tables of this chapter generally represent the values as reported by farm operators for the calendar year 1954 and were to include the estimated amounts that were to be sold before January 1, 1955. The exceptions to this general statement are wool and mohair; for these, the data relate to the amount of wool shorn or mohair clipped during the year 1954. All of the wool and mohair were considered as sold, so for these products the sales and production data are identical. Thus, the value of sales of wool and mohair is the same as the value of the production during the calendar year 1954, regardless of whether these products were sold in 1954.

**Actions taken during office processing to insure complete reporting of sales.**—For both crops and livestock products for which the value of sales were to be obtained from each farm operator, the enumerator was instructed to determine the value for quantities that were still to be sold on the basis of current local market prices. In some instances, sales data were supplied or increased during the office processing of the questionnaires, when it was obvious that the sales had not been reported or were grossly underreported. In the application of the rules for supplying or correcting sales data, liberal provision was first made for feed, seed, and use by the family of the farm operator and hired employees on the farm. All changes were made on the individual questionnaires. Thus, all facts available for a given farm were appraised before a figure was supplied or revised.

If the data reported on a particular questionnaire were insufficient to use as a guide, or if the data for many questionnaires filled by one enumerator appeared to be questionable, reference was made to the data on other questionnaires before any changes were made.

Several examples of editing procedures affecting quantities sold, value of sales, economic class of farm, and type of farm, are presented in order to indicate the kind of checking and changes made during office processing of the individual questionnaires.

(a) **Corn, grain sorghums, oats, barley, emmer, spelt, and proso millet.**—If 200 or more bushels of these crops were harvested without entries for bushels sold and there were no reports for livestock or poultry (on hand, sold, or raised), the entire quantities harvested, minus allowances for seed, were sold. If, however, there were livestock or poultry (on hand, sold, or raised), the questionnaire was referred to the technical staff for review when the production of corn and other feed grains exceeded 30 times the number (on hand and sold) of cattle, horses, and hogs.

The technical staff generally used the following rules for determining the amounts of corn and other feed grains required for feed:

- (1) 30 bushels for each total cattle on hand and sold (45 bushels for cattle on feed).
- (2) 30 bushels for each horse and mule on hand or sold.
- (3) 30 bushels for each 3 hogs and pigs on hand or sold.
- (4) 30 bushels for each 10 sheep and lambs on hand and sold.
- (5) 30 bushels for each 100 poultry on hand and sold (or raised).

If the unsold quantity, after these calculations and after an allowance of 2 bushels per acre for seed (corn and sorghums excepted), exceeded the feed requirements by more than 100 bushels, or by more than 20 percent, the quantity sold was estimated or the reported quantity sold was revised.

(b) **Wheat.**—If 200 or more bushels were harvested, without an entry for quantity sold, the quantity harvested minus the estimated seed requirement at the rate of 2 bushels per acre harvested was considered as sold. However, an estimate for quantity sold was not made if the computed quantity sold was less than 100 bushels. If 1,000 or more bushels of wheat were harvested and less than three-fourths of quantity harvested was reported as sold, the quantity sold was calculated by subtracting seed requirements from the quantity harvested.

(c) **Rice and flaxseed.**—If more than 100 bushels (or 50 100-lb. bags or 50 bbl.) were harvested, the entire quantity harvested minus an allowance of 2 bushels per acre for seed was considered sold.

(d) **Dairy products.**—If 5 or more cows were reported as milked the day preceding the enumeration and no dairy products were reported sold, the sales of dairy products were estimated on the basis of surrounding questionnaires, unless the farm had a considerable number of hired laborers.

(e) **Animals sold.**—If no hogs and pigs were reported as sold and there were a total of 2 or more sows farrowing or 10 or more hogs on hand, the questionnaire was referred to the technical staff. No action was taken for only a few such referrals in an Enumerator's District except when the number of sows farrowing totaled 5 or more or the number of hogs on hand, 50 or more. When corrections were considered necessary, sales were entered on the basis of questionnaires for farms of the same type and size of operation or on the basis of a tabulation of data for 10 questionnaires in the same enumeration district or in the same county.

If no cattle or calves were reported as sold and 10 or more total cattle or 5 or more cows were on hand, the report was referred to the technical staff. As a basis for deciding whether corrections were required, the technical staff was required to look at other questionnaires in the same enumeration district. If the enumerator had consistently not reported cattle and calves sold, a tabulation was made for questionnaires showing cattle and calves sold to obtain a ratio of number sold to number on hand for herds of various sizes separately for beef and dairy cattle. These data were used as a guide for estimating the number and value of cattle and calves sold. If the number of cattle and calves sold was not reported for only an occasional questionnaire, no action was required unless 20 or more total cattle or 10 or more cows were on hand.

When the number of animals sold was not reasonably consistent with the number on hand, it was difficult to determine the correctness of the report for the number sold. Most reports of this kind were accepted unless the amount of feed purchased or other information indicated an error in the reporting. Reports showing a large number of animals sold, or a large number on hand and none or a small number of animals sold were verified or corrected on the basis of correspondence.

**Products traded.**—Farm products are occasionally traded for goods or services, such as trading eggs for groceries, trading hay for baling charges, or trading cottonseed for ginning charges. The value of products traded were to be included in the value of products sold. However, the enumerator was not instructed to ask specifically for information regarding farm products traded.

**Government payments and loans.**—The income from government payments is not included in either value of sales or value of production. Crops such as corn, wheat, cotton, etc., that had been sealed and placed under government loan were to be reported as sold. However, the unit prices applied to these quantities were the same unit prices that were applied to all other quantities and did not represent the loan value. The average unit values used for such crops as sugar beets and sugarcane were the market price per ton and did not include the government subsidy payments.

**Value of sales and production for farms with new operators.**—The value data for both sales and production were related to specific farms, not to the operators.

The sales data were to represent the movement of the 1954 farm production from the farm regardless of who operated the farm or who owned the crops or livestock or poultry. When a farm operator left a farm during 1954, and disposed of his crops and livestock before the date of enumeration, the new operator gave the report for the farm. In doing so, the new operator may not have known of the sales of the former operator. For that reason, instructions on the agriculture questionnaire emphasized that the operator presently in charge should include all sales from the place whether made by him or by others. For crops it was usually possible to determine the correctness of the individual report. For livestock sales, however, usually the information was inadequate to provide a basis for making changes.

**Value of farm products sold for institutional farms.**—The determination of the value of production for an institutional farm was no different from that of any other farm. It consisted of multiplying the reported production by the State average price per unit. The reported value of sales for institutional farms often required revision. The products of the farm consumed by inmates or residents of the institution were to be considered as sold. For this type of farm, the value of sales figures were increased if it appeared that they did not include both the actual sales of farm products for the farm, as well as the value of the portion consumed in the institution. The value of products sold, however, was not to include products consumed by livestock on the farm.

**Interfarm movement.**—If the over-all value of sales data are used as a measure of agricultural output, the interfarm movement of farm products tends to inflate the totals. Some feed crops and livestock move between farms. Thus, the same farm product may be reported as sold two or more times. For example, corn may be sold from one farm and fed on another farm. The animals which consumed it may be sold later by the second operator. In this example, the corn would be included in the value of crop sales on one farm and again on another farm in the value of livestock or livestock products sold. If feeder livestock are purchased, it is possible for their sale to be reported by two operators in a given calendar year.

The interfarm movement of crops should have no influence on the value of crop production, since the production for each crop was reported only once.

**Farm products purchased for resale.**—The instructions to enumerators stated that items purchased for resale were not to be included in the value of sales. For example, a dairy farmer might be operating a retail milk route, bottling and delivering not only the production from his own farm but also milk from neighboring farms. In such a case, the value of sales was to include only the production from the operator's farm. This same type of instruction was applicable to fruits and vegetables if a producer operated a packing or marketing service, for other than his own products.

In order to exclude dealer sales of livestock, the procedures provided that sales of animals were to be included only when the animal had been on the farm or ranch or in the feed lot for 30 or more days. This rule was also applied to slaughtering establishments which were also conducting a feeding operation. In processing the questionnaires, the sales figures for such operations were compared with the production or inventory figures. When there was any question as to whether or not the data should be included, letters were written to determine just what the sales and inventory figures represented.

**Gross income of farm operators.**—Value of sales, as computed from the Census of Agriculture do not reflect gross income of farm operators or even gross farm income. The principal omissions in respect to gross income of farm operators and their families are:

(a) Farm sales of minor items, such as butter, cheese, skim milk, bees, honey, fodder, silage, grain straw, pasture rental, fur animals, etc.; (b) Monies received from nonfarm sources, such as off-farm work, interest on investments, or pensions; (c) Receipts from boarders and lodgers, government benefit payments, cash rents, and income from businesses conducted on or off the premises; (d) An allowance for the crop or livestock products used by the families of the farm operator and his hired employees; (e) A rental value for the use of family dwellings; and (f) Changes in the value of farm inventories of crops, livestock, equipment, etc.

**Methods of obtaining value of farm products sold.**—Data on the value of farm products sold were obtained for the 1954 Census of Agriculture by two methods: (a) The value of sales for most livestock and poultry and their products, and for vegetables, horticultural specialties, and forest products were enumerated by asking the farm operator to report the value of such products sold for the calendar year. (b) The value of sales for all other farm products was computed by multiplying the enumerated or estimated quantity sold by State average price per unit. For wool and mohair, the quantities produced during the calendar year were enumerated and the value of sales was computed by multiplying the enumerated quantities produced by the State average prices per unit. Thus, all wool shorn and mohair clipped in the calendar year 1954 were considered to be sold. During the enumeration, farm operators were asked to report the quantity sold and to be sold for most of the important crops such as the grain crops, hay crops, and small fruits and berries. The Composite Questionnaire in the Appendix provides a list for those crops for which the quantity sold was enumerated.

The entire quantities harvested for a second group of important crops were considered to be sold. This group included all tree fruits, grapes, and nuts (see exceptions below), cotton, sugar beets, hops, broomcorn, sugarcane for sugar, and tobacco. For these products, the enumerated quantities harvested were multiplied by a State average price per unit to secure the value of sales. (These average prices were also used to compute the value of production.)

Fruit disposition data published by the Agricultural Marketing Service of the United States Department of Agriculture indicated that in 1954 the quantity harvested for certain crops in some States was not all sold because of quality, price, or grade restrictions under marketing programs. In such instances, the portion of the crop not sold provided no economic return to the grower since it was either destroyed or donated to a charitable or relief organization. It was decided that where a significant proportion of the crop was not sold, as indicated by disposition data, the enumerated quantity harvested should be reduced in line with the disposition data in order to provide a value of sales figure that represented the actual situation. The following list shows by States the particular fruits and the percentage of the enumerated quantity harvested that was counted as sold in order to compute the value of sales.

<i>Crop and State</i>	<i>Estimated percent of the quantity sold</i>
Peaches	
California (Clingstone peaches only).....	96
Colorado.....	96
Utah.....	80
Plums	
California.....	94
Prunes	
California.....	97
Avocados	
Florida.....	96
Tangerines and mandarins	
Florida.....	90
Valencia oranges	
California.....	99
Navel oranges	
California.....	98
Other oranges	
California.....	98
Grapefruit	
Florida.....	97

With the exception of these few fruit crops in four States listed above, the value of sales for tree fruits, nuts, and grapes is the same as the value of production.

For a third group of crops comprising the major seed crops, soybeans, cowpeas, peanuts, dry field beans, sugarcane and sorghum for sirup, and maple products the quantity sold was calculated on the basis of crop disposition data published by the Agricultural Marketing Service of the U. S. Department of Agriculture. The published percentages sold for 1954 were applied to the reported quantities harvested. The estimated quantity sold was multiplied by the State average price per unit to secure the computed value of sales. In the case of Irish potatoes and sweet potatoes, the quantity sold was estimated after making a per farm allowance for home use by families on the farm.

For a fourth group of crops, the quantity sold was estimated on the basis of reports for either the 1954 or the 1950 Censuses of Agriculture. The quantity sold for these items was not always completely reported and therefore, it was necessary to estimate the quantity sold on the basis of all available data. Except for annual legume hays, the crops in this group were of minor importance and not widely grown. In no instance would their value of sales have any significant effect on the total value of sales for a State, division, region, or for the United States. A complete list of this group of crops is given on page XXIII of the Introduction to Volume I.

**Value of production.**—Farmers were not asked for the value of any part of their production. A value of production has been computed for field crops as a group and for the individual field crops. For most other crops, the value sold has been substituted for the value of production in arriving at an over-all total value of production for all crops harvested.

For berries and other small fruits, the quantity harvested represents commercial production for sale. The amount harvested was multiplied by the State average price per unit and the resulting dollar figure represents the value of sales. For this group of crops the value of sales was substituted for the value of production in arriving at the total value of production for all crops harvested, as shown in Table 2.

The completeness of coverage of farm lands, farm production, and the production of farm products for sale was not significantly different for the 1954 and 1950 Censuses.

The value of production shown for several tree fruit, nut, and grape crops is slightly higher than is shown for the value of sales because it was estimated that part of some crops in four States was not sold. No production values have been computed for livestock products and poultry products.

When the total production was enumerated, the value of production was computed by multiplying the production by the estimated State price per unit. The calculated value includes the part of the crop consumed on the farm either as food or as feed, the part of the crop used for seed, and the part of the crop sold. The State average prices were obtained cooperatively by the Agricultural Marketing Service of the United States Department of Agriculture and the Bureau of the Census. The prices are based on reports provided by a sample of farmers and dealers. The same average price was used to compute the value of sales and the value of production.

Production data for vegetables harvested have not been enumerated in any Census since 1920, largely because of the difficulty of obtaining reports and of converting, to a common unit, the various sizes of containers used for harvesting and marketing vegetables. The value data for vegetables relate to commercial production for sale and have been used to represent the value of vegetable production. For institutional farms, the instructions provided that the quantity of vegetables produced on the farm and consumed by inmates or residents was to be considered as sold.

Horticultural specialties include nursery and greenhouse products and also flower and vegetable seeds and plants, bulbs, and



mushrooms. The value of these products, in three groupings, was enumerated on the basis of dollars of sales. The quantities harvested were not enumerated because of the difficulty of providing a common unit of measure. The values of any quantities produced and consumed on the farm where produced were not enumerated and are relatively insignificant in relation to the values of sales. For these products, the value of sales has been used, without adjustment, to represent the value of production.

For forest products, quantities cut were enumerated for some of the principal products. The number of cords of firewood and fuelwood cut on farms in the calendar year was obtained for all States. The number of fence posts cut was secured for all States except Arizona and California. The number of board feet of sawlogs and veneer logs cut (including any sold as standing timber) and the cords of pulpwood cut were enumerated for most of the States where these items represent a substantial proportion of the total value of farm forest production. The reported quantity for sawlogs and veneer logs did not differentiate between that which was cut by the farmer and that which was sold as standing timber. The difference in value per thousand board feet, between logs cut and delivered to a mill and timber "on the stump" is substantial. Since data were not available regarding the proportion of sawlogs and veneer logs sold as standing timber, it was impossible to obtain a satisfactory unit value for the cut of sawlogs and veneer logs. Therefore, the value of production of sawlogs and veneer logs was not calculated. No quantities are available for the cut or harvest of piling and poles, bolts, Christmas trees, hewn ties, mine props, bark, and other miscellaneous forest products. Production of maple sugar and sirup was obtained for only nine important producing States. Because the quantities cut or harvested was not obtained for all forest products, it is not possible to calculate an over-all value of production for all forest products. (The tables of Chapter VIII show by States both the quantity and value of production for some forest products.)

**Limitations and reliability of data on the value of farm products produced and sold.**—The primary purposes of collecting data in a Census on the value of production and the value of farm products sold is to furnish data for counties and other local areas to provide a basis for the classification of farms by economic class and type of farm, and to give over-all measures for indicating the variation in the organization and relative importance of agricultural production in various producing areas.

The data on the value of farm products sold do not provide a measure of total farm production for sale. They do not indicate total farm income, as they do not include the receipts of farmers for the sale of some products (rental of pasture, sales of butter, cheese, meat, hides, fur animals, goats, etc.) and government payments under various programs.

The value of all farm products sold does not include estimates on the value of farm products produced on or sold from places not considered as farms and for farms and farm land missed by Census enumerators. The value of agricultural products produced on or sold from places not qualifying as farms is probably only a fraction of one percent of the total produced on places qualifying as farms.

Estimates made on the basis of a careful check of the enumeration indicated that the farms and farm lands missed by the Census were equal to 5.4 percent of the farm land, 4 percent cropland harvested, and had the equivalent of 3.3 percent of the value of all farm products sold for the farms and farm lands included in the 1954 Census of Agriculture. (For a detailed statement regarding the completeness of the Census, see the Introduction to this volume.)

The data on the value of farm products sold are affected by underreporting on the part of farm operators. This underreporting is much more significant in the case of livestock and livestock products than in the case of crops. In the case of some crops such as vegetables, cotton, and fruits, farm operators pay

packaging, processing, and some marketing costs. In such cases, the reported value of such crops sold often represents the amount the farm operators received after the packaging, processing, and marketing costs had been deducted.

In the 1950 Census, farm operators were asked to report the value of cotton and fruits and nuts sold. Because farm operators underreported the gross value of sales, largely because ginning, packing, and other costs were deducted from gross sales, the value of the cotton crop was understated by approximately \$300 million and the value of fruits and nuts sold by approximately \$127 million for 1949. The value of these crops sold was computed for 1954 and, hence, the value of sales for 1954 is not subject to underreporting similar to that for 1949. In the case of dairy and poultry products, hauling, marketing charges, etc., are often deducted when the farm operator receives payment for his products. In many cases, it appears that the farm operator reported the amount he received after deductions for these costs, and not the amount of gross sales.

In the case of livestock, farm operators did not always report all animals sold especially when the animals are owned by the landlord or someone else. Also, when several sales were made during the year, the farm operator may have forgotten one or more of the sales when reporting the number sold during the year. For the 1954 Census, it was necessary for the operator to estimate the number of animals to be sold during the remaining two or three months of the year. Such estimates were subject to considerable error especially for those kinds of livestock with heavy marketings during the winter. In reporting value of animals sold, the Census enumerator often used the current local market prices per head to compute the total value. If these current prices were not representative of prices received during the entire year, then the value of sales may not have been accurately reported. It appears that this procedure affected significantly the reporting of the value of cattle and hogs sold for 1954 when the prices of both cattle and hogs declined during the year.

## COMPARABILITY OF DATA FOR 1949 AND 1954

**Value of farm products sold.**—The data on the value of all farm products sold are not fully comparable for 1949 and 1954 because of differences in items included, method of determining sales, and the extent in underreporting of sales.

The total value of farm products sold for 1954 does not include values for some minor items, such as the sale of butter, cheese, skim milk; bees, honey; fodder, silage, grain straw; fur animals and their pelts, etc., and receipts from pasture rental. The values for these relatively minor items were included in the 1949 totals. These omitted items would not represent more than one percent of the gross value of sales.

The 1954 data also excludes the value of sales of sheep and wool for 3 States and the value of mohair for 41 States. These additional exceptions introduce no appreciable effect on the comparability of the data for the two years.

Differences in method of determining sales affected primarily the comparability of figures on the value of cotton and of fruits and nuts sold. If the same method used in 1954 for determining the value of sales had been used for 1949, the value of cotton sold would have been approximately \$300 million more and the value of fruits and nuts sold \$127 million more than shown for 1949. The change in method of determining the sale of crops, largely cotton and fruits and nuts, accounted for an increase between 1949 and 1954 in the value of all crops sold for the United States by about 3.5 percent.

The underreporting of the value of livestock sold was greater for 1954 than for 1949. It is estimated that if the sales of livestock for 1954 had been as completely reported as for 1949, approximately \$600 million would have been added to the value of all livestock and livestock products sold in 1954. This estimate is

equivalent to approximately 5 percent of the value of all livestock and livestock products sold in 1954.

For the United States, the differences in method of determining value of sales and in underreporting of sales probably affects the comparability of the value of farm products sold for 1949 and 1954 by about 4 percent. However, the effect of these differences on the comparability data for 1949 and 1954 is considerably greater for individual States, geographic divisions, and regions.

**Value of production.**—The value of production data for 1954 are reasonably comparable with figures for prior Censuses. The value of production for crops has been calculated for several Censuses by multiplying the quantities harvested by average prices per unit.

The production period covered has been comparable from Census to Census. For most items, the production period has been a crop year. For a few crops, such as citrus, avocados, and olives, special instructions or the inquiry on the questionnaire has indicated the crop year for which the data were to relate.

The average prices used for computing the value of production have been obtained since 1925 cooperatively by the Bureau of the Census and the United States Department of Agriculture.

Some differences in the comparability of value of production of crops arise from differences in the inclusion of items in totals for all crops or for certain groups of crops.

The significant differences in items included in the value of production for crops for 1954 and 1949 are indicated by the following data.

	1954	1949
Total value of production for all crops harvested.....	\$18, 679, 258, 631	\$16, 295, 854, 995
Value of pasture receipts (included in other field crops harvested).....	( <sup>1</sup> )	34, 138, 323
Value of peanuts hogged or grazed.....	15, 575, 700	( <sup>2</sup> )
Value of tree fruits and nuts for farms with a total of less than 20 trees and vines.....	( <sup>1</sup> )	<sup>3</sup> 24, 000, 000

<sup>1</sup> No data obtained for 1954.

<sup>2</sup> Not computed for 1949.

<sup>3</sup> Estimated.

These differences do not affect the totals for all crops by more than one-third of 1 percent. The totals for a group of crops, or for an individual crop, such as peanuts and the total for a State, may be affected more by the differences indicated above.

For livestock and poultry and most livestock and poultry products, the value of production shown for 1954 and 1949 represent the value of livestock and poultry and livestock and poultry products sold as the quantity produced for these farm products was not obtained. The values shown for these items are not fully comparable for 1949 and 1954. (For a statement regarding the comparability, see discussion under heading "Value of farm products sold.")

### FARM PRODUCTS SOLD, BY SOURCE

**All crops.**—The total value of all crops sold—field crops, vegetables, fruits, nuts, and horticultural specialties—amounted to \$12,222 million for 1954. This total was 24.7 percent above the corresponding figure for 1949. The total value of all crops sold represented 49.6 percent of the total value of all agricultural products sold in 1954 as compared to 44.5 percent for 1949. It is estimated that less than one-fifth of the 24.7 percent increase in the value of crops sold from 1949 to 1954 resulted from the change in the method of determining the value of all crops sold. The change in method of determining the value of crops sold affected primarily the value of cotton and the value of fruit and nut crops sold.

**Cotton.**—Cotton was the most important single crop on the basis of the value of sales. The computed value of sales for 1954 was \$2,515 million and represented 10.2 percent of the total value of all agricultural products sold and 20.6 percent of the total value of crops sold. All cotton lint and seed were considered to be sold. The total value of cotton including the value of both lint and seed sold in 1954 was 14.6 percent above that reported for 1949. The 1949 total value of the cotton crop, as obtained from farm operators, was \$2,194 million whereas the value of production (quantity harvested times an estimated unit price plus the value of the seed) was \$2,491 million. A part of the difference between the reported value of sales and the calculated value of production was due to a failure of farm operators to include a value for the cottonseed. Nearly all of the 14.6 percent increase in the value of cotton sold between 1949 and 1954 was the result in the change in the procedure for determining the value of sales.

**Wheat.**—Wheat is the second most important crop on the basis of the value of sales. The value of sales for the 1954 crop was \$1,716 million and represented 7.0 percent of the total value of farm products sold and 14.0 percent of the total value of all crops sold. The quantity of wheat sold represented 88.4 percent of the quantity harvested in 1954 as compared with 84.0 percent in 1949. The average value per bushel for the 1954 crop was \$2.13 as compared with \$1.86 for 1949.

**Corn.**—Corn is the third most important single crop item from the standpoint of total value of sales. The 1954 value of the portion sold as grain was \$1,449 million and represented 5.9 percent of the total value of sales of all farm products. The 1954 total comprised 11.9 percent of the total value of the sales of all crops. The value of corn sold, as grain, in 1954 was 42.6 percent above the \$1,016 million reported for corn and corn products (silage, fodder, etc.) for 1949. The percentage of the crop sold was 31.0 in 1949 as compared with 38.6 in 1954. The average value per bushel increased from \$1.24 in 1949 to \$1.44 in 1954. The increased value of sales was the result of both a higher percentage of the crop sold and a higher average price per bushel.

**Vegetables.**—The total value of vegetables sold in 1954 was \$645 million or 6.3 percent above the \$607 million reported for 1949. The value of vegetables sold was 5.3 percent of the total value of all crops sold for 1954 as compared with 6.2 percent for 1949. For 1954, vegetables sold represented 2.6 percent of the total value of all farm products sold as compared with 2.8 percent for 1949.

**Fruits and nuts.**—The total value of fruits and nuts sold, for 1954, was calculated to be \$1,198 million, or 51.3 percent above the total of \$792 million for 1949. The 1954 figure represents 9.8 percent of the total value of all crops sold, as compared with 8.1 percent in 1949. Nearly one-third of the increase from 1949 to 1954 in the value of fruits sold was the result of the change in the method of determining the value of fruits and nuts sold and the remainder was the result of increased production and higher prices. For 1949, the value of fruit sold was obtained by asking farm operators for the estimated value sold for all fruits and nuts, including berries and other small fruits. In 1954, the value of sales was computed by multiplying quantity harvested by a State average price per unit. (For a more detailed discussion of the computation of fruit values, see the subhead, "Methods of obtaining value of farm products sold.")

**Horticultural specialties.**—The total value of horticultural specialties sold in 1954, at \$454 million, was 15.7 percent above the \$392 million reported for 1949. For 1954, the value of sales represented 3.7 percent of the total value of all crops sold as compared with 4.0 percent for 1949.

**Forest products sold.**—The value of forest products sold in 1954, \$130 million, was 3.7 percent below the \$135 million reported for 1949. The value represented 0.5 percent of the total value of all farm products sold in 1954 as compared with 0.6 percent for 1949. The value of forest products sold includes only the value of sales from farm production.



**Livestock and poultry and their products sold.**—The total value of sales of livestock and poultry and their products in 1954 was \$12,292 million, or 1.5 percent greater than the \$12,114 million reported in 1949. This total represents 49.9 percent of the total value of all products sold in 1954 as compared with 54.9 in 1949.

The method for determining the value of livestock and poultry products sold for 1954 was essentially the same as that used for the 1950 Census. For both Censuses, each farm operator was asked to report the quantity and value of the principal kinds of livestock and livestock products sold.

However, the reporting of the value of livestock and livestock products sold was less complete for the 1954 than the 1950 Census. The 1954 Census was taken during October and November, and it was necessary for the farm operators to estimate sales for November and December. In the case of cattle and hogs, the value of sales may be understated by 10 to 20 percent because of the underreporting of the number sold and, also, because of the use of approximate market prices at the time of the enumeration for calculating the value of sales. (The market price of cattle and hogs declined in 1954.) Because of differences in underreporting, the value of livestock sold for 1954 is probably understated by 5 to 7 percent in comparison with the value of livestock sold for 1949. A more detailed statement regarding the underreporting of cattle and hogs sold is given under **cattle and calves** and **hogs and pigs**.

Some of the livestock sold from farms move to other farms for further growth or fattening. A considerable number of some kinds of livestock such as cattle and sheep move across State boundaries to farms in other States. The number and value of animals sold include not only those sold for slaughter but, also, those moving to farms both within and outside of the State.

**Cattle and calves.**—The value of sales of cattle and calves for 1954, \$4,283 million, was slightly less than the \$4,297 million reported for 1949. The 1954 total represents 17.4 percent of the total value of all farm products sold as compared with 19.5 percent for 1949.

The cattle and calves sold alive totaled 44.4 million head in 1954 as compared with 36.3 million, head sold in 1949. The number of cattle and calves sold includes the number sold for further fattening and growth by other farm operators, as well as those sold for slaughter.

A comparison of the number of cattle and calves sold with the commercial slaughter is given in the following table.

Item	1954			1949		
	Census sales	Commercial slaughter <sup>1</sup>		Census sales	Commercial slaughter <sup>1</sup>	
		Total	Under Federal inspection		Total	Under Federal inspection
	(000)	(000)	(000)	(000)	(000)	(000)
Cattle and calves, total.	44,351	37,763	26,049	36,319	28,841	19,671
Cattle <sup>2</sup>	24,223	25,017	18,476	20,692	18,013	13,222
Calves <sup>2</sup>	20,128	12,746	7,573	15,627	10,828	6,449

<sup>1</sup> Source: U. S. Department of Agriculture.  
<sup>2</sup> The classification of all cattle as cattle or calves by farm operators and by operators of commercial slaughter houses is not made on a comparable basis.

The above data indicate that the calculated inter-farm sales of cattle and calves were about 6.6 million head in 1954 and 7.5 million head in 1949. Some data are available to indicate the general accuracy of these figures. The inspected stocker and feeder shipments from public stockyards amounted to 5,240,000 head in 1954 and 4,186,000 head in 1949. Stocker and feeder cattle would have originated on a farm or ranch and would have returned to another farm or ranch for further growth and fattening.

Considerable numbers of cattle and calves move to market, especially in the Corn Belt and dairy areas during the last quarter of the year. It was necessary for the farm operator to estimate both the number and value of these animals sold. In computing the value of such animals sold for 1954, Census enumerators were instructed to use the current local market price. Enumerators appear to have used, in many cases, the approximate market price at the time of enumeration to calculate the value of animals sold for the entire year. Inasmuch as the market price of cattle declined in 1954, the computing of value of cattle and calves sold on the basis of prices in October or November would result in an understatement of the value of cattle sold.

**Hogs and pigs.**—The 1954 Census enumerated value of sales for hogs and pigs was \$2,279 million. This is 4.4 percent below the \$2,385 million reporting for 1949.

The number of hogs and pigs sold was not completely reported. The number sold was 11.4 percent less than the number slaughtered in commercial establishments in 1954, as shown by the following data:

Item	1954			1949		
	Census sales	Commercial slaughter <sup>1</sup>		Census sales	Commercial slaughter <sup>1</sup>	
		Total	Under Federal inspection		Total	Under Federal inspection
	(000)	(000)	(000)	(000)	(000)	(000)
Hogs and pigs sold alive.....	57,419	64,827	52,894	65,512	64,761	53,032

<sup>1</sup> Source: U. S. Department of Agriculture.

Since the data on number of hogs and pigs sold include hogs and pigs sold for further growth and fattening, the number sold from farms should exceed the number slaughtered. It is estimated that the number of hogs and pigs sold for 1954 is understated by 10 to 20 percent as compared with the number reported as sold for 1949. This underreporting of hogs and pigs sold probably resulted largely from the failure of farm operators to accurately estimate or report the number of hogs and pigs to be sold during October, November, and December of 1954. In estimating the value of hogs to be sold, Census enumerators were instructed to use the local market price at the time of the enumeration. In many cases, it appears that Census enumerators used the market price to compute the value of hogs and pigs sold during the entire year. As the market price of hogs declined materially during 1954, this method of calculating the value of sales would result in understating the value of hogs even more than the percentage estimated for the number sold.

**Sheep and lambs.**—For 1954, the value of sheep and lambs sold was \$328 million, or about 3.8 percent below the \$341 million for 1949.

A comparison of the enumerated number of sheep and lambs sold alive with commercial slaughter follows:

Item	1954			1949		
	Census sales	Commercial slaughter		Census sales	Commercial slaughter	
		Total	Under Federal inspection		Total	Under Federal inspection
	(000)	(000)	(000)	(000)	(000)	(000)
Sheep and lambs.....	22,336	15,920	14,148	20,003	13,376	12,136

From these data, the indicated inter-farm movement of sheep and lambs was 6,416,000 head for 1954 and 6,627,000 head for 1949. The total movement across State lines, from producer through stockyards to producer, was estimated by the United States Department of Agriculture as 5,986,000 for 1954 and 5,963,000 for 1949. The total sales shown by the Census include not only sheep and lambs sold for slaughter but also those sold to other farmers as well as those shipped to stockyards for further sale to farm operators for further growth or fattening.

**Dairy products.**—The total value of dairy products (milk and cream) sold, was \$3,334 million for 1954, or 8.3 percent above the \$3,079 million reported for all dairy products sold, for 1949. Sales of milk and cream, in 1954, represented 27.1 percent of the total value of all livestock and poultry and their products sold, and 13.5 percent of the value of all farm products sold.

In many cases, the value of dairy products sold as reported by farm operators represented the net amount received after hauling and marketing costs had been deducted.

**Chickens.**—The value of all chickens sold, in 1954 totaled \$698 million, or 23.0 percent more than the \$568 million reported for 1949.

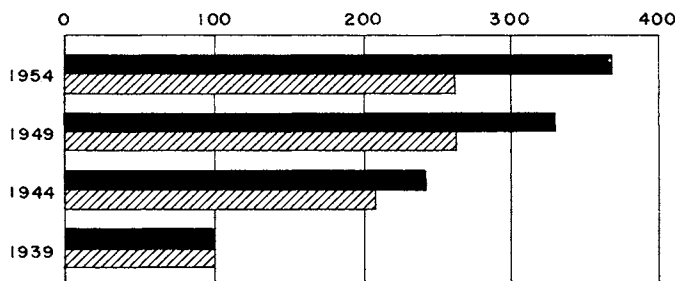
Broilers comprised 81.8 percent of the number of all chickens sold in 1954. The value of broilers sold comprised 79.9 percent of the value of all chickens sold in 1954. No data were obtained

regarding the sale of broilers separately from other chickens sold for 1949.

It was necessary for the farm operators and Census enumerators to estimate the number and value of chickens and broilers sold during the last two or three months of 1954. As many farm operators do not keep complete records of the numerous sales of chickens usually made during the year, the data on the number and value of chickens sold are probably subject to considerable reporting error particularly by the considerable number of farmers not engaged in the specialized production of poultry and poultry products. The accurate enumeration of broiler production and sales is difficult because of the varied arrangements made by farm operators for the production of broilers. The proportion of the production and sale of chickens occurring on specialized poultry and broiler farms is increasing and this change has probably resulted in improvement in the accuracy of the reporting of the production and sale of chickens.

**Chicken eggs.**—The value of sales for chicken eggs in 1954 was \$917 million or 9.1 percent below the \$1,008 million reported for 1949. Data on the quantity and value of chicken eggs sold are subject to considerable reporting errors as many farm operators, especially those not engaged in the specialized production of poultry and poultry products do not maintain complete records of the numerous sales made during a calendar year.

COMPARISON OF INDEXES FOR TOTAL SALES OF FARM PRODUCTS AND PRICES RECEIVED BY FARMERS, FOR THE UNITED STATES: 1939 TO 1954

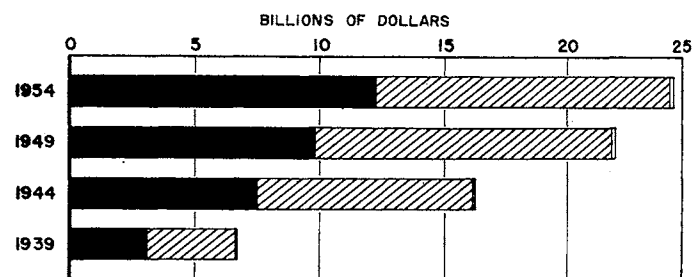


■ TOTAL SALES OF FARM PRODUCTS AS SHOWN BY CENSUS (1939=100)  
 ▨ PRICES RECEIVED BY FARMERS

Source: Agriculture Marketing Service, United States Department of Agriculture

64C-152

VALUE OF FARM PRODUCTS SOLD, FOR THE UNITED STATES: 1939 TO 1954



■ ALL CROPS SOLD  
 ▨ LIVESTOCK AND LIVESTOCK PRODUCTS SOLD  
 □ FOREST PRODUCTS SOLD

54C-153

