

# THE Marketing and Transportation SITUATION

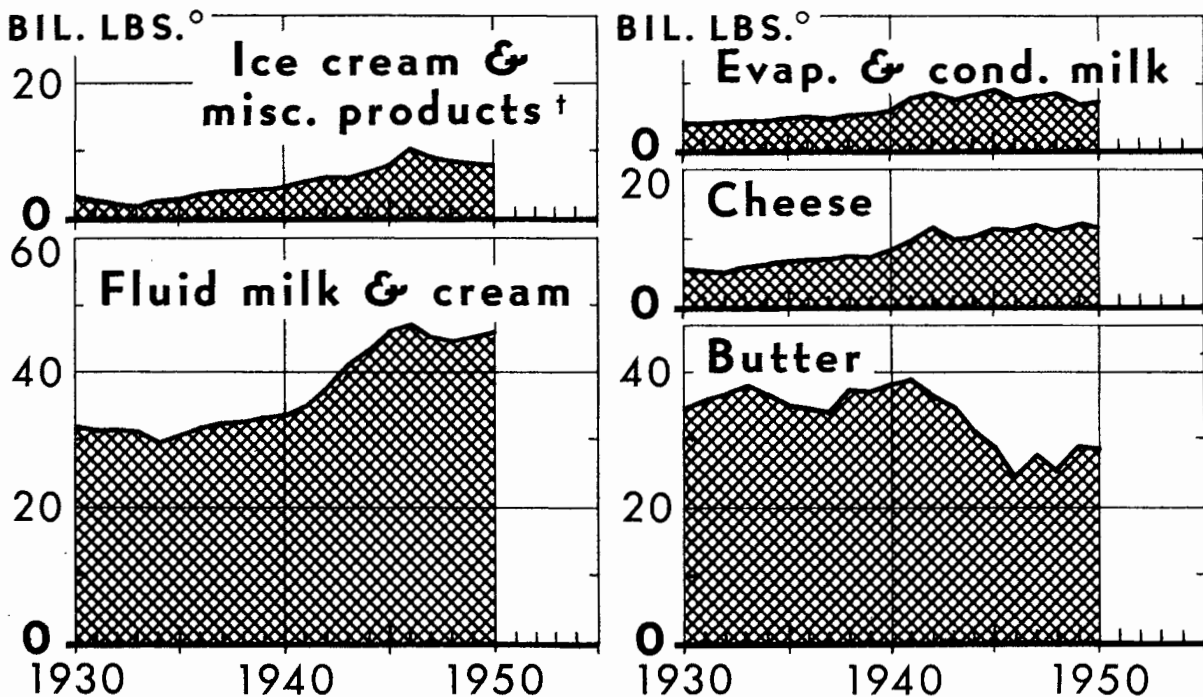
BUREAU OF AGRICULTURAL ECONOMICS  
UNITED STATES DEPARTMENT OF AGRICULTURE

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## USE OF MILK SOLD BY PRODUCERS\*



\* INCLUDES MILK EQUIVALENT OF CREAM AND BUTTER SOLD BY PRODUCERS

° MILK EQUIVALENT

† INCLUDES DRY WHOLE MILK AND VARIOUS OTHER MINOR PRODUCTS

U. S. DEPARTMENT OF AGRICULTURE

NEG. 48360-XX BUREAU OF AGRICULTURAL ECONOMICS

The quantity of milk used to make creamery butter and butter sold by producers rose to a record high in 1941. It then represented 41 percent of the milk (including the milk equivalent of butter and cream) sold by producers, compared with 36 percent used as fluid milk and cream and 23 percent used in cheese and other whole-milk products. The diversion of milk from the production of butter to use as fluid milk and cream and to make whole-milk products

reached a peak in 1946 but it has slackened somewhat since that year. Cheese is the only milk product with a continuing upward trend in output since World War II. In 1950, only 28 percent of the milk (including the milk equivalent of butter and cream) sold by producers was used to make butter. About 46 percent was used as fluid milk and cream, and 26 percent for whole-milk products.

Table 1.- THE MARKET BASKET: Retail cost of 1935-39 average annual purchases of farm food products by a family of three average consumers, farm value of equivalent quantities sold by producers, marketing charges, and farmer's share of the consumer's food dollar, 1913-51

Year	Retail cost <u>1/</u> Dollars	Farm value <u>2/</u> Dollars	Marketing charges <u>3/</u> Dollars	Farmer's share : Percent
1913-15 average	267	121	146	45
1920	567	244	323	43
1922	408	162	246	40
1929	436	183	254	42
1933	277	90	186	32
1935-39 average	341	135	204	40
1940	319	127	192	40
1941	349	154	194	44
1942	409	195	213	48
1943	459	236	229	51
1944	451	233	230	52
1945	459	246	229	54
1946	528	279	258	53
1947	644	335	308	52
1948	690	350	340	51
1949	646	308	337	48
1950	645	308	337	48
1950 - Sept.	658	320	338	49
Oct.	657	316	340	48
Nov.	659	322	336	49
Dec.	681	336	344	49
1951 - Jan.	709	357	352	50
Feb.	726	371	354	51
Mar.	724	366	357	51
Apr.	718	363	355	51
May	724	358	365	49
June	724	355	369	49
July	723	352	<u>4/</u> 370	49
Aug.	714	355	<u>4/</u> 358	50
Sept.	711	357	354	50

1/ Calculated from retail prices collected by the Bureau of Labor Statistics and the Bureau of Agricultural Economics.

2/ Payments to farmers for equivalent quantities of farm produce minus imputed value of byproducts obtained in processing.

3/ Marketing charges equal margin (difference between retail cost and farm value) minus processor taxes plus Government payments to marketing agencies.

4/ Revised.

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THE MARKETING AND TRANSPORTATION SITUATION  
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Approved by the Outlook and Situation Board November 20, 1951

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SUMMARY

Farmer's Share of Consumer's  
Food Dollar

Farmers received about 50 cents of the consumer's dollar spent for farm food products in October, the same as in the 2 preceding months. <sup>1/</sup> This share was slightly larger than in the same months a year ago, but below that received in the years 1943 to 1948.

Retail prices of farm foodstuffs increased about 1 percent from mid-September to mid-October and averaged only slightly below the high reached in February this year. Prices received by farmers for food products also averaged about 1 percent higher in October but were 3 percent below the February high. Farm prices for food products have increased the last 3 months, following a continuous decline from February to July. Charges for marketing farm foods in October were about 2 percent higher than in February but below the high reached in July.

Shifts in Market Outlets for  
Oranges and Milk

Changes are constantly taking place in the form in which many agricultural products are marketed; milk and oranges are two outstanding examples of these shifts. The relative quantities of these products marketed through the different fresh and processed channels is changing in response to shifts in consumer preferences, changes in consumer incomes, technological developments in food processing, and changes in the total supply of each type of product.

<sup>1/</sup> The figure for October 1951 is a preliminary estimate based on latest available retail price data. Estimates of the division of the retail price between farmers and marketing agencies are based on comparisons of concurrent prices at the farm and retail levels, except for seasonal canning crops, dried fruits, sugar, and vegetable oil products. During a period of rising prices, the farmer's share calculated on this basis is somewhat higher than the share which would be obtained by comparing prices received by farmers for particular lots of products with prices paid by consumers for the same lots after they have moved through the marketing system. The reverse is true in periods of declining prices.

Oranges.- A major shift in the manner of marketing of oranges has taken place during the last decade. About 63 percent of the Florida oranges marketed in the 1950-51 season were utilized in processed products compared with 4 percent in the 1938-39 season. The bulk of the processed products comes from Florida, although an increasing proportion of the oranges grown in the California-Arizona area in recent years has been processed. The enormous expansion in the production of oranges and technological improvements in processing them have been the principal factors promoting the rapid expansion of the processing industries.

The rapid growth in the output of frozen concentrated orange juice has accounted for most of the increase in the quantity of oranges processed. More than half of the oranges processed were used in the manufacture of that product during the 1950-51 season. Canned single-strength juice also takes a significant proportion of the orange crop.

Consumers are substituting processed orange products for fresh oranges. However, the processed products, particularly frozen concentrated juice, are undoubtedly enlarging the over-all market for oranges because of their year-round availability and convenience. Consumers are currently paying less for processed orange products than for the equivalent quantity of juice in fresh oranges.

Relatively lower marketing and transportation costs for processed products have made possible more economical distribution of oranges in all areas of the domestic market. Because processed products can be stored, the marketing season for a crop has been extended beyond the period when fresh oranges can be sold. Processed Florida orange products are now competing with California-Arizona Valencias, which are marketed at a time when sales of fresh Florida oranges are negligible.

The problem of obtaining the optimum allocation of fruit among the various types of markets is one of the most urgent problems facing the citrus fruit industry. Decisions about the rate of processing and shipping of fresh and processed products must be made in advance of the harvesting season. Some control over the movement into distribution channels is necessary as consumption of processed products is spread over many months.

Milk.- Butter is the only major dairy product whose production now takes a smaller quantity of milk than in 1940. The milk equivalent of cream used to make creamery butter and butter made and sold by farmers represented 28 percent of all milk (or its equivalent) sold by producers in 1950 compared with 43 percent in 1940. The proportion used as fluid milk and cream increased from 38 percent in 1940 to 46 percent in 1950. These changes were associated with increases in the per capita consumption of fluid milk and cream and of each of the major manufactured whole-milk products, and with a decrease in the per capita consumption of butter. As a result, a higher proportion of the nutrients in the total milk supply are being consumed than in 1940.

These shifts in utilization have caused changes in the type of dairy product sold by farmers. Farmers now sell larger quantities of whole milk to plants and dealers than in 1940, and they separate smaller quantities for sale as cream. The increased demand for nonfat dry milk solids has been another reason for selling whole milk rather than cream. Retail sales of milk by farmers direct to consumers and sales of farm butter have continued to decline.

## RECENT FARM-RETAIL-PRICE SPREADS

### Preliminary Estimates for October

Farm value of the foods in the "market basket" <sup>2/</sup> rose about 1 percent between September 15 and October 15, 1951, to an estimated annual rate of \$360. Higher prices for milk and butterfat, potatoes, and some of the truck crops accounted for most of the increase.

The retail cost of market-basket foods also advanced 1 percent between mid-September and mid-October, rising to an annual rate of \$720. <sup>3/</sup> Increases in retail prices of beef, dairy products, eggs, potatoes, and some of the fresh vegetables contributed to the over-all rise. New dollar-and-cent retail price ceilings for certain beef products became effective on October 1.

At an estimated annual rate of \$360 in mid-October, total charges for marketing the foods in the market basket were about 2 percent higher than a month earlier. Higher marketing charges for the meat products group accounted for most of the over-all increase.

### Little Change in Farm Value of Food Products from August to September

At an annual rate of \$357, the farm value of the market-basket foods in September was about the same as in the preceding month. The September figure was 4 percent below the record high of \$371 reached in February 1951 but 11 percent higher than a year earlier. All commodity groups showed increases from the September 1950 levels.

The farm value of the meat products group declined about 1 percent between mid-August and mid-September. A 7-percent decline in the farm price of hogs more than offset increases in the prices of beef cattle and veal calves. A decrease of 4 percent, which resulted mainly from lower prices for cottonseed and soybeans, was recorded for the miscellaneous products group.

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<sup>2/</sup> The "market basket" contains quantities of farm food products equal to the 1935-39 average annual purchases per family of three average consumers. Full details are presented in Agricultural Information Bulletin No. 4, "Price Spreads Between Farmers and Consumers."

<sup>3/</sup> Total retail cost of all foods currently consumed per family of three average consumers is roughly 50 percent higher than the retail cost of the "market basket." The market basket of farm food products does not include imported foods, fishery products, or other foods of nonfarm origin; it does not include food consumed in households on farms where produced; it measures the cost at current prices of 1935-39 average prewar purchases and does not allow for the currently higher level of per capita food consumption, which is 10 to 15 percent above the level for 1935-39; and does not include additional mark-ups for preparation and service of meals purchased in eating places.

A seasonal rise in the farm price of eggs caused an increase in the farm value of the poultry and eggs group between August and September. Farm value of the dairy products group was about 1 percent higher. Higher prices for apples and oranges for fresh consumption and for potatoes and sweetpotatoes raised the farm value of the fresh items in the fruits and vegetables group in spite of lower prices for most truck crops.

Small Reduction in  
Retail Cost

Retail cost of the market basket of farm foods declined from an annual rate of \$714 in August to \$711 in September which was 2 percent below the record of \$726 established last February. The retail cost in September, however, was 8 percent above September a year earlier. Increases were recorded for all commodity groups, ranging from 4 percent for miscellaneous products to 15 percent for poultry and eggs.

A decrease of 3 percent in the retail cost of the fruits and vegetables group from August to September accounted for most of the reduction in the retail cost of the market basket. Prices of apples, several of the fresh vegetables, and some of the canned items were lower in September. The retail cost of the miscellaneous products group was slightly lower. Seasonally higher prices for eggs increased the retail cost of the poultry and eggs group. Changes were negligible for other major commodity groups.

Marketing Charges Down 1 Percent  
from August to September

Charges for marketing the foods in the market basket declined from \$353 in mid-August to \$354 in mid-September. This reduction resulted mainly from lower charges for marketing the fruits and vegetables group. The dairy products and poultry and eggs group also showed decreases. Charges for marketing the meat products group were 3 percent higher.

Marketing charges for the market-basket foods were 5 percent higher in September this year than in September 1950. Increases were noted for all commodity groups except meat products and poultry and eggs.

Farmer's Share of Consumer's Food Dollar  
Remains at 50 Cents in September

Farmers received 50 cents of the dollar that consumers spent for farm foods in August and September. During the preceding year, the farmer's share has varied from 48 cents in October 1950 to 51 cents in February, March, and April of this year.

SHIFTS IN MARKETING ORANGES FROM FRESH  
TO PROCESSED FORM 1/

By

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Trends in Marketing Oranges

The rapid growth in consumer acceptance of frozen concentrated orange juice has focused attention on shifts in the pattern of marketing oranges which have been taking place over the last decade. Prior to the 1939-40 season, more than 95 percent of the Florida oranges marketed were sold for fresh consumption. During the 1950-51 season just ended, only 37 percent of all Florida oranges were marketed in fresh form. This shift has necessitated a reappraisal of the marketing structure in Florida. Other production areas have been forced to increase their marketings of processed products in order to compete more effectively with Florida.

More than 60 percent of the California-Arizona orange crop is in Valencias, a juice orange. Most of these oranges are harvested from May to November, a period when the quantity of fresh oranges marketed from Florida is relatively low. Increased sales of orange juice processed from Florida oranges has provided additional competition for California-Arizona Valencias during the summer months. The proportion of the Valencia crop processed increased from about 15 percent in the early 1940's to almost 40 percent in the 1950-51 season. The remainder of the California-Arizona crop is largely navel oranges, which are still marketed primarily in fresh form. Navel oranges are not as satisfactory for processing as other major varieties.

Several forces have contributed to the great change in the marketing pattern for oranges. The more important factors have been rapidly expanding production of oranges and technological improvements in food processing.

United States production of oranges averaged 108,869,000 boxes in the last five seasons, beginning 1946-47, an increase of 69 percent over the 5-year prewar average of 64,394,000 boxes. The greater portion of this increase occurred in Florida, while production in the California-Arizona area remained relatively stable. Further increases in the production of oranges are expected over the next several years. As production increased over the decade, it became much more difficult to market the large orange crops through fresh-fruit outlets at satisfactory prices to growers. This resulted in increased pressure on the citrus industry for the development and expansion of market outlets for processed products.

Technological improvements in other food industries helped to stimulate the processing of oranges into juice. Over the last several decades, a trend has been evident in the movement of food processing from the home to the factory. The perfection of processing techniques and the development of satisfactory equipment made possible a large-scale citrus processing industry.

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1/ This report is based on the results of several research projects made possible by funds appropriated under the Research and Marketing Act of 1946.

### Primary Processing Outlets

The three primary outlets for processing oranges into juice are: Frozen concentrated orange juice, canned single-strength juice, and concentrated orange juice 65 degrees Brix (hot pack). <sup>2/</sup> Some oranges are used in juice blends, usually with grapefruit. Small quantities of oranges are also utilized each year for fruit segments, marmalades, and jellies.

Canned Single-Strength Juice.- Processing of oranges into single-strength juice started in the middle 1920's but the pack was relatively small until the late 1930's. Much research was directed toward developing a single-strength juice that would receive favorable consumer acceptance. The quality of the product was improved by the adaptation of the flash pasteurization technique which was largely accepted by the citrus industry by the 1938-39 season. As a result, consumer demand for single-strength orange juice increased during the early 1940's. Government purchases for the Armed Forces and shipments abroad under lend-lease agreements also increased during this period.

Production of single-strength juice continued to increase throughout most of the war years and in the immediate postwar period. The total United States pack of single-strength juice has averaged about 22 million cases (equivalent No. 2 cans) in the postwar period, 1945-46 through 1949-50, compared with an average of 8 million cases during the war years. In the 1950-51 season, 20,912,000 cases (equivalent No. 2 cans) of single-strength juice were packed in Florida, which required about 12,381,000 boxes of oranges or 18 percent of the crop. Final figures are not yet available for the 1950-51 pack of canned single-strength juice in the California-Arizona area, but in the past few years the pack has averaged about 2 million cases.

Hot Concentrated Orange Juice.- Orange concentrate 65 degrees Brix, often referred to by the trade as "hot pack" or "hot concentrate," is produced by a process of evaporation of fresh orange juice under vacuum. The juice is usually deaerated to prevent excessive foaming and is then pasteurized. Orange concentrate 65 degrees Brix is reconstituted on the ratio of 6.75 to 1. Production of "hot pack" concentrate was started on a small scale by two Florida and several California processors before World War II. Because this product required much less shipping space than single-strength juice, large quantities were sent abroad to the Armed Forces and allied countries during the war.

The primary outlet for this product is to institutions, where it is served as a reconstituted juice. Substantial quantities of hot concentrates have been purchased by the Government for use in the school-lunch program. In the postwar period, limited quantities have been exported to Europe under the Marshall Plan. Hot concentrates are often used as a base in making carbonated beverages and in the manufacture of noncarbonated fruit drinks such as those frequently distributed by dairies. A relatively new and expanding outlet for this product is as a base in the manufacture of canned and bottled orangeades. Hot concentrates also have a limited use in confectionery and bakery products.

Total production of "hot-pack concentrate" reached a wartime peak of almost 5 million gallons in the 1942-43 season, but declined to slightly over 1 million gallons by 1945-46. During the last several years, the pack has averaged almost 5 million gallons. The hot-pack concentrate outlet has been

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<sup>2/</sup> Brix refers to percentage of soluble solids.



relatively more important in the California-Arizona area than in Florida; in the 1949-50 season about two-thirds of the total production was packed from California-Arizona oranges.

Frozen Concentrated Orange Juice.- The citrus industry has sought continuously to perfect a processed juice that would more nearly retain its freshness and aroma. The perfection of a processed nonpasteurized product, frozen concentrated orange juice, largely fulfilled this desire. Frozen concentrated orange juice was successfully produced in Dunedin, Fla., by a high-vacuum, low-temperature evaporation process in 1945. <sup>3/</sup> This product received immediate consumer acceptance; consumer purchases have increased at a phenomenal rate since commercial production was begun in the 1945-46 season. By 1948-49, the pack of frozen concentrated orange juice in Florida exceeded 10 million gallons, and in 1949-50 totaled approximately 22 million gallons. In 1950-51, the pack reached 30,785,000 gallons, which utilized about 35 percent of the total quantity of Florida oranges marketed.

Commercial production of frozen concentrated orange juice in the California-Arizona area did not begin until the summer of 1948. The California-Arizona pack reached 3,490,000 gallons in the 1949-50 season. Pack data are not available for the current season, but the output is estimated to be about 5 million gallons.

Frozen concentrated orange juice is more uniform in solids content and sugar-acid ratio than single-strength juice or fresh juice. Variations found in the solid content of fresh orange juice can be eliminated in manufacturing the frozen concentrated orange product. Also, the natural variations in the sugar-acid ratio of fruit can be controlled by proper blending which adds greatly to the uniformity of the product. Quality has been an important element in gaining an increasing volume of sales for this relatively new product.

The large increase in the consumption of oranges in the form of frozen concentrated orange juice has been accompanied by a fairly substantial decrease in the per capita consumption of fresh oranges from the postwar peak of 1946-47. The volume of oranges utilized in the other two primary processing outlets -- canned single-strength juice and hot concentrates -- has remained relatively stable since the 1946-47 season. The frozen concentrated outlet appears to be the most promising one for marketing the increased production of oranges which is forecast for the next few years.

#### Effect of Increased Processing on the Citrus Industry

The increased importance of citrus processing, brought about largely by technological developments, has had and will continue to have important influences on consumption and on prices received by producers and paid by consumers. The continuing importance of processing probably will force changes in allocation to various methods of utilization and in marketing channels and facilities for handling at wholesale and retail.

Longer Marketing Period.- Fresh oranges must be marketed within a relatively short time after harvest, while oranges processed into concentrates and single-strength juice may be stored and marketed over a longer period of time.

<sup>3/</sup> The technique for manufacturing frozen concentrated orange juice was developed by the Florida Citrus Commission in cooperation with the U. S. Department of Agriculture. Research on the technique was done at the field station of the Bureau of Agricultural and Industrial Chemistry, U. S. Department of Agriculture, in Winter Haven, Fla. A patent was issued and assigned to the Secretary of Agriculture for the licensing of producers.

The Florida orange crop, formerly marketed within a 9-month period can now be marketed in processed form throughout the year. The marketing season of these orange products from Florida has been expanded to compete with California-Arizona Valencia oranges which are normally sold from May through October.

Marketing of fresh oranges has a definite seasonal pattern, reaching a peak in the winter and declining to a relatively low level in the summer. The marketing of a substantial volume of the orange crop in the form of frozen concentrated and canned juices has greatly increased the quantity of these products purchased by householders during the period when fresh orange consumption is low (fig. 1). For example, household purchases of oranges and orange products (in equivalent boxes of fresh oranges) were approximately 30 percent higher in July-September 1951 than in the same months a year ago. <sup>4/</sup> Practically all of this gain was accounted for by increased purchases of frozen concentrated and canned single-strength juices.

Lower Transportation Costs.- A comparison of transportation costs for equivalent quantities of fresh and processed orange products reveals that it is much cheaper to ship oranges in the processed form, particularly as frozen concentrated juice (table 2).

Table 2.- Cost of transporting a dozen fresh oranges and equivalent quantities of frozen concentrated juice and single-strength juice to New York City <sup>1/</sup>

Origin	Fresh oranges	Frozen concentrated juice	Single-strength juice
	Cents	Cents	Cents
Lake Wales, Fla. ....	6.4	1.1	2.7
Los Angeles, Calif. ....	10.9	1.2	3.2

<sup>1/</sup> Transportation charges are based on freight rate data furnished by the Transportation and Warehousing Branch, PMA, U. S. Dept. of Agr.

According to freight rates in effect September 15, 1951, the cost of shipping a dozen fresh oranges from Lake Wales, Fla., to New York City is 6.4 cents, compared with 1.1 cents for an equivalent quantity in the form of frozen concentrated orange juice and 2.7 cents for single-strength juice. <sup>5/</sup> The differences are more pronounced for shipments from the California-Arizona area to New York City.

Wider Area of Distribution.- Unlike fresh oranges, canned single-strength juice and hot-pack concentrates may be transported long distances with little or no refrigeration. As pointed out, the bulk and weight of oranges are reduced by processing, resulting in lower transportation costs, especially for long distances. Prior to processing, the market for Florida oranges was primarily limited to the eastern half of the United States but processing has effectively extended the market over the entire country and has expanded exports to Canada. Processed products have also brought about a potentially greater distribution in other foreign markets.

<sup>4/</sup> "Consumer Fruit and Juice Purchases," published quarterly, beginning Jan.-Mar. 1950, by the BAE and the Fruit and Vegetable Branch, PMA, U. S. Dept. of Agr.

<sup>5/</sup> Transportation charges include an allowance for the protective services which are usually applied to fresh oranges and frozen concentrated orange juice in transit.

Lower Retail Prices for Processed Products.- Household consumers are currently paying a lower average price for orange juice in the processed form than for an equivalent quantity of juice from fresh oranges. In September 1951, household consumers paid an average of 46.7 cents per dozen for fresh oranges. The average price paid for equivalent quantities of juice in frozen concentrated form was 31.8 cents and in canned single-strength juice was 21.8 cents. <sup>6/</sup>

The increased marketings of frozen concentrated orange juice during the last two seasons (1949-50 and 1950-51) have been accompanied by lower average prices relative to fresh orange prices (fig. 2).

During 1948-49 and in the first part of the 1949-50 season, prices paid by householders for equivalent quantities of frozen concentrated orange juice and fresh oranges were approximately equal. The price differences between the two products, however, increased considerably from May to October in 1950 and have remained relatively large since that time. Although the average price paid for canned single-strength juice has been consistently below that for equivalent quantities of fresh oranges, the difference between the two increased at the end of the 1950-51 season.

As lower retail prices generally result in larger purchases, these lower prices for the processed part of the orange crop should result in an enlargement of the total market for the expanding orange crop. The convenience of preparation for consumption and the nonperishability of these processed products in comparison with the fresh fruit are other factors that probably stimulate increased household buying of frozen concentrated and single-strength orange juices.

Citrus Byproducts.- The increased processing of oranges into juice has resulted in a larger volume of waste solids, available for conversion into citrus byproducts. About 55 to 60 percent of the bulk citrus fruit remains as peel, rag, and seeds after processing. The volume of solid citrus waste is estimated at about 2.5 million tons annually. <sup>7/</sup> Disposal of this increased citrus waste is an added cost to the industry unless it can be economically utilized in the form of byproducts. In the last decade, research has made possible the conversion of an increasing volume of citrus waste into new, valuable products, such as animal feeds, citrus molasses, and orange oil. Growers, processors, and consumers have all benefited by the utilization of citrus waste into useful products.

The Problem of Allocation of Oranges Among Outlets.- The increasing importance of processing outlets in the marketing of oranges has created the problem of optimum allocation among the fresh, frozen concentrated, and canned single-strength juice outlets in order to give the greatest returns to growers.

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<sup>6/</sup> The equivalent quantity of a dozen fresh oranges in frozen concentrated and single-strength juice forms was derived by using the average monthly size and juice yield per box provided by the Fruit and Vegetable Branch, PMA. Price data were obtained from "Consumer Purchases of Selected Fresh Fruits, Canned and Frozen Juices, and Dried Fruits," published monthly, beginning Jan. 1950, by the BAE and the Fruit and Vegetable Branch, PMA.

<sup>7/</sup> "Citrus Cannery Waste, Its Use and Disposition," Harry W. von Loesecke, Bur. of Agr. and Indus. Chem., ARA, U. S. Dept. of Agr., Nov. 1950, p. 1

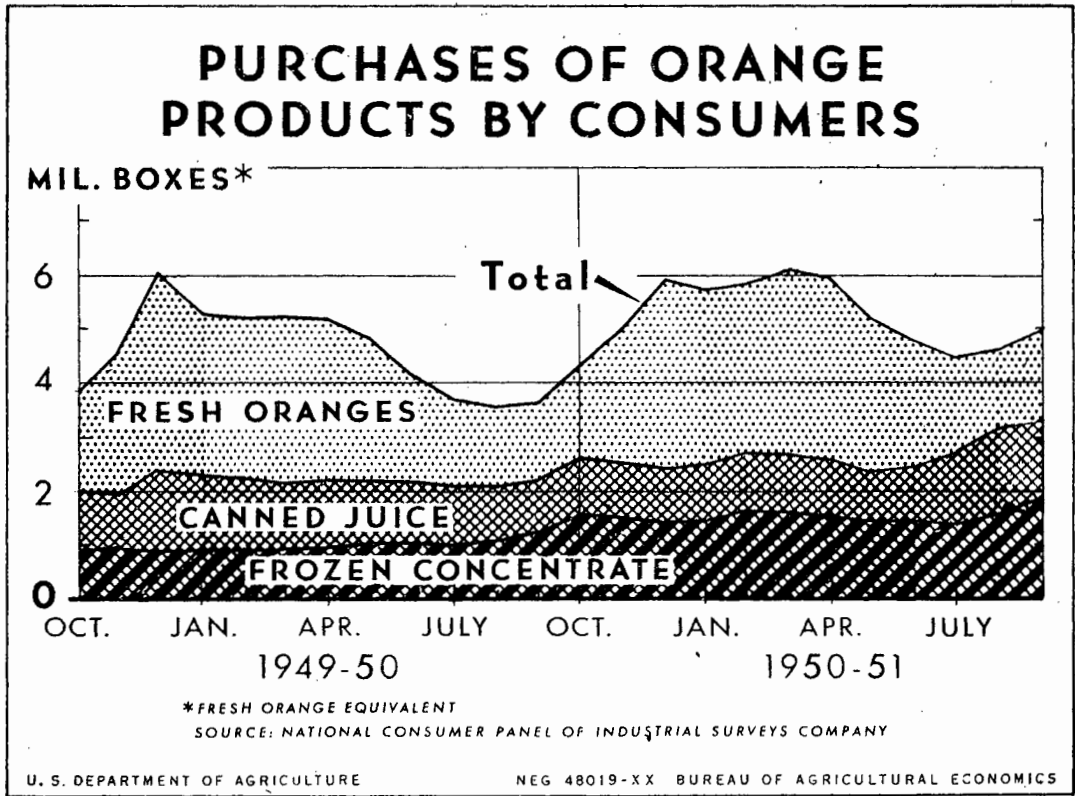


Figure 1

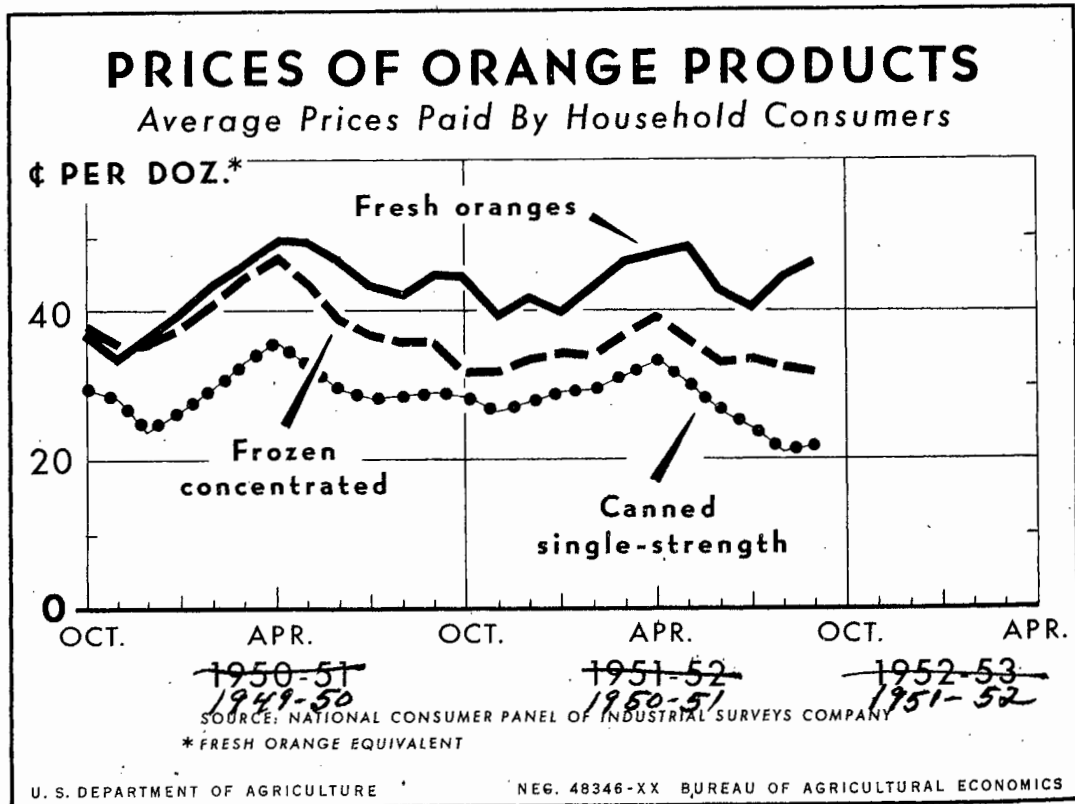


FIGURE 2

Decisions must be made with respect to the quantities of fruit required to supply each type of market. Prices paid for oranges in each market must be at levels which will obtain the necessary quantities of raw materials and permit retail prices which will move maximum quantities of orange products into consumption channels. Decisions on pricing, processing, and shipping policies must be made in advance of the harvesting season and account must be taken of the fact that consumption of processed products will be spread over many months. Trends in production, and the rapid changes in patterns of production and distribution, make it necessary for the industry to have the best possible information on production, demand factors, and price-consumption relationships, particularly for the current year and to some extent for subsequent seasons. This type of information would aid the citrus industry in reaching decisions on the movement of fruit into the different market channels which could be expected to yield the largest returns to all segments of the industry and move the increasing output of oranges into consumption in an orderly manner.

A large carry-over of processed products at the end of a crop year may affect adversely prices to growers for fruit sold in the fresh and processed outlets during the following season. Processors with a large inventory on hand may reduce purchases of fruit for processing and use their stock accumulations as a bargaining power for lower prices. These reduced purchases will increase the supply of fruit in fresh outlets and may depress fresh fruit prices. Lower prices in the fresh market will, in turn, have a further depressing effect on the prices paid for fruit utilized in processing.

The carry-over of frozen concentrated and single-strength orange juices has been increasing over the last several seasons. On November 1, 1951, cold storage holdings of frozen concentrated orange juice totaled about 12,400,000 gallons, an increase of 55 percent over a year ago. This carry-over was approximately 35 percent of the total 1950-51 pack of frozen concentrated orange juice. Florida packers' stocks of canned single-strength orange juice totaled 468,358 cases on November 1, 1951, compared with 293,666 cases a year earlier.

The shift in marketing oranges has resulted in excess capacity in fresh fruit packing houses. Packing facilities are not being utilized to their fullest capacity in some areas of production during the harvest season because of the decrease in the volume of fruit sold in fresh outlets. Excess capacity in this segment of the citrus industry may cause a higher unit cost of production for packed fruit. This problem is being attacked by the consolidation of several fresh fruit packing houses into one strong unit, especially among fresh fruit packers in California. <sup>8/</sup> If the trend in consolidation is continued and applied to those parts of the citrus industry where excess capacity exists, then rising costs and uneconomic operations can be held to a minimum.

The shifts that have occurred in the marketing of oranges have enabled the citrus industry to move increasing supplies of fruit at profitable prices to growers. An indicated upward trend in the production of oranges over the next few years is likely to accentuate the problem of marketing oranges at satisfactory prices. The stability of the citrus industry, including the continuation of reasonable returns to growers, depends to an important degree on the optimum allocation of fruit among the various alternative outlets and this will be dependent to a considerable extent on effective cooperation between growers and their marketing agencies.

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<sup>8/</sup> "Citrus Co-ops Consolidate to Cut Costs," J. K. Samuels, Coop. Res. and Serv. Div., FCA, U. S. Dept. of Agr., May 1951.

## CHANGES IN MARKET OUTLETS FOR MILK

Farmers altered their milk-marketing practices considerably between 1940 and 1950, in line with the changes in the utilization of milk after it left the farm. The most significant development was the shift from selling cream to selling whole milk. Between 1940 and 1950, the quantity of whole milk sold by farmers to plants and dealers increased from 47.2 to 74.3 billion pounds, but the quantity of milk separated for sale as cream declined from 33.0 to 20.7 billion pounds. As percentages of the total milk equivalent of all dairy products sold by farmers, whole milk sold to plants and dealers increased from 54 percent in 1940 to 74 percent in 1950. Milk separated on farms for sale as cream decreased from 38 to 21 percent. During the same period, retail sales of milk and cream by farmers direct to consumers decreased from 7 percent to 4 percent, and milk used to make butter sold by farmers decreased from about 2 percent to less than 1 percent.

The shift from selling cream to selling whole milk was partly induced by the increase in the quantity of milk used for fluid consumption and for making cheese and other whole-milk products and by the decrease in the quantity used for making butter (cover chart). Another factor promoting the shift was the growing demand for nonfat dry milk solids for human consumption. The shift was accelerated during the early war years when the demand for whole milk products and for nonfat dry milk solids was greatly expanded. As a result of these changes in marketing milk, a larger proportion of the milk solids-not-fat is dried or used in other ways for human consumption instead of being fed to livestock or wasted. 1/

The quantity of milk marketed by farmers (including the milk equivalent of cream and butter) has increased by about 14 percent since 1940. This increase has resulted from a rise in production and from selling a larger proportion of the milk produced. The quantity of milk produced on farms was about 10 percent larger in 1950 than in 1940, and in 1950 farmers sold 83 percent of the milk produced compared with 80 percent in 1940. A smaller quantity now is used on the farms where it is produced.

### Larger Proportion of Milk Sold Now Used for Fluid Consumption

About 46 percent of the milk sold by producers in 1950 was used as fluid milk and cream compared with 37 percent in 1940 (table 3). Between 1940 and 1950 the quantity of fluid milk and cream sold to consumers increased by 37 percent. Sales expanded rapidly during the war and reached a peak in 1946 when approximately 47 billion pounds were sold. That quantity represented 47 percent of all milk sold. Sales declined to 44.5 billion pounds in 1948 but increased in 1949 and 1950. In the first three quarters of 1951, sales of fluid milk and cream have apparently been larger than in the same period of 1950. Sales of fluid milk and cream included those made by farmers direct to consumers. Retail sales by farmers declined from approximately 6.1 billion pounds in 1940 to 4.4 billion pounds in 1950. As a proportion of total sales of milk for fluid use, retail sales by farmers declined from 18 percent in 1940 to less than 10 percent in 1950.

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1/ See "Trends in Utilization of Milk and in Consumption of Margarine in the United States," in The Dairy Situation, Bur. Agr. Econ., June 1950.

Table 3.- Utilization of milk products, milk-equivalent basis, sold by producers, 1930, 1940, and 1950

Product	1930		1940		1950 <sup>1/</sup>	
	Quantity	Percent- age of total	Quantity	Percent- age of total	Quantity	Percent- age of total
	Million pounds	Percent	Million pounds	Percent	Million pounds	Percent
Farm butter.....	2,497	3.2	1,441	1.6	757	0.7
Creamery butter .....	32,162	40.8	36,801	41.1	27,980	27.7
Total butter .....	34,659	44.0	38,242	42.7	28,737	28.4
Cheese .....	5,061	6.4	7,862	8.8	11,680	11.5
Evaporated and con- densed milk .....	3,828	4.9	5,880	6.6	6,940	6.9
Ice cream .....	2,880	3.7	3,730	4.2	6,270	<sup>2/</sup> 6.2
Other <sup>3/</sup> .....	186	.2	277	.3	1,560	1.5
Total manufactured products .....	46,614	59.2	55,991	62.6	55,187	54.5
Fluid milk and cream <sup>4/</sup> .....	32,066	40.8	33,519	37.4	46,000	45.5
Grand total <sup>5/</sup> ...	78,680	100.0	89,510	100.0	101,187	100.0

<sup>1/</sup> Preliminary.

<sup>2/</sup> Includes milk equivalent of milk sherbet and ice milk, not estimated prior to 1943.

<sup>3/</sup> Includes dry whole milk, dry cream, malted milk powder, part-skim dry milk, dry and concentrated ice cream mix, and, after 1945, cream cottage cheese.

<sup>4/</sup> These totals include small quantities of milk produced by nonfarm cows, part of which was not sold.

<sup>5/</sup> These totals include the milk equivalents of milk, cream, and butter sold by farmers and by nonfarm producers, but do not include milk or milk equivalent of products used on farms where produced.

Smaller Quantity of Milk  
Now Used to Make Butter

Butter is the only major dairy product whose manufacture took a smaller quantity of milk in 1950 than in 1940. This reduction began after 1941 when a record quantity of milk, estimated at 38.8 billion pounds, was used to make creamery butter and butter sold by farmers. Between 1941 and 1950, the quantity of milk used for these products was reduced by about 26 percent. Milk used to make creamery butter and butter sold by farmers represented 28 percent of all the milk (or its equivalent) sold by producers in 1950 compared with 43 percent in 1940.



Other Manufactured Dairy Products  
Now Take More Milk

Between 1940 and 1950, the quantity of milk used in the production of cheese increased nearly 50 percent. It represented about 12 percent of the total quantity of milk sold by producers in 1950 compared with 9 percent in 1940. The quantity of milk that was evaporated increased from about 5.3 billion pounds in 1940 to 6.2 billion pounds in 1950, and the quantity condensed increased from 614 million pounds in 1940 to 750 million pounds in 1950. The combined quantity of milk used in evaporated and condensed milk was about the same proportion of the total milk sold in 1950 as in 1940. Production of evaporated milk rose to a record high in 1945 when a considerable quantity was exported. Since the war, production has remained above prewar levels, although it was down rather sharply in 1949 and 1950 from earlier postwar levels. About 63 percent more milk was used in the commercial production of ice cream in 1950 than in 1940. It represented 4 percent of the total quantity of milk sold by producers in 1940 and 6 percent in 1950.

The quantity of milk used in dry whole milk expanded nearly fivefold between 1941 and 1945, but by 1950 it had shrunk to about three-fifths of the 1945 volume. Increases also occurred in the quantities of whole milk used in various minor milk products such as malted milk and dry ice cream mix, but the total quantity used for these products has remained small. Together with dry whole milk, they took less than 2 percent of the total milk sold by producers in 1950.

Production of nonfat dry milk solids increased from 322 million pounds in 1940 to 845 million pounds in 1950. The 1950 output required about 9 billion pounds of skim milk compared with 3.5 billion pounds required to produce the 1940 output.

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SELECTED NEW PUBLICATIONS

1. "Bibliography on the Marketing of Livestock, Meat, and Meat Products," by Donald W. Gooch, U. S. Dept. Agr., Bibliog. Bul. 15, June 1951.
  2. "Farm-to-Mill Margins for Cottonseed and Cottonseed Products in Tennessee, September 1946-July 1950," by A. R. Sabin, Bur. Agr. Econ., U. S. Dept. Agr., Agr. Inform. Bul. 61, June 1951.
  3. "Farm-to-Retail Margins for Fluid Milk," by Louis F. Herrmann and Mordecai Baill, Bur. Agr. Econ., Nov. 1951. (Processed.) (RMA.)
  4. "Marketing Dry Edible Beans and Peas." A report of Alderson & Sessions under Research and Marketing Act contract, prepared for publication by Reed A. Phillips and D. B. DeLoach, Bur. Agr. Econ., U. S. Dept. Agr., Tech. Bul. 1044, June 1951. (RMA.)
  5. "Pattern of Distribution of Livestock, Meat, and Products Shipped by Railroad, 1939, 1948 and 1949, and Transportation Charges, 1948 and 1949," by Edward Schneider, Bur. Agr. Econ., Oct. 1951. (Processed.) (RMA.)
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Table 4.- Price spreads between farmers and consumers - food products: Retail price, farm value of equivalent quantities sold by producers, byproduct adjustment, marketing charges, and farmer's share of retail price, September 1951 1/

Commodity	Farm equivalent	Retail unit	Retail	Gross	Byproducts	Net	Margin	Government	Marketing	Farmer's
			price	farm value	allowances	farm value	adjusted for byproducts	marketing taxes (-) and payments (+)	charges 2/	share
			Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Percent
Market basket .....			710.89	—	—	356.77	354.12	-0.34	353.78	50
Meat products .....			225.87	158.37	9.23	149.14	76.73	—	76.73	66
Dairy products .....			134.36	74.26	—	74.26	60.10	—	60.10	55
Poultry and eggs .....		1935-39 annual average	59.21	39.40	—	39.40	19.81	—	19.81	67
Bakery and other cereal products:	Farm produce equivalent of annual family purchases	quantities purchased, per family of three average consumers								
All ingredients .....			103.93	—	—	27.52	76.41	- .04	76.37	26
Grain .....			—	26.55	5.23	21.32	—	—	—	21
Other cereal products .....			37.96	17.68	3.60	14.08	23.88	—	23.88	37
All fruits and vegetables .....			142.48	50.62	—	50.62	91.86	—	91.86	36
Fresh fruits and vegetables ...			106.89	41.78	—	41.78	65.11	—	65.11	39
Fresh vegetables .....			61.17	21.07	—	21.07	40.10	—	40.10	34
Canned fruits and vegetables ..			23.25	4.41	—	4.41	18.84	—	18.84	19
Miscellaneous products .....			45.04	—	—	15.83	29.21	- .30	28.91	35
			Cents	Cents	Cents	Cents	Cents	Cents	Cents	Percent
Beef (Choice grade) 3/.....	2.16 lb. Choice grade cattle	Pound	84.9	472.9	7.9	65.0	19.9	—	19.9	77
Lamb .....	2.16 lb. lambs	Pound	78.1	64.4	9.3	55.1	23.0	—	23.0	71
Pork (including lard) .....	1.41 lb. hogs	Pound	45.6	27.8	.4	27.4	18.2	—	18.2	60
Butter .....	Butterfat and farm butter	Pound	78.1	56.0	—	56.0	22.1	—	22.1	72
Cheese, American .....	10.06 lb. milk	Pound	62.6	36.7	—	36.7	25.9	—	25.9	59
Evaporated milk .....	1.95 lb. milk	14-oz. can	14.9	7.10	—	7.10	7.8	—	7.8	48
Fluid milk .....	Farm retail and wholesale	Quart	22.1	12.89	—	12.89	9.2	—	9.2	58
Ice cream .....	1.8 lb. milk	Pint	31.2	7.70	—	7.70	23.5	—	23.5	25
Eggs .....	1.03 doz.	Dozen	75.9	56.6	—	56.6	19.3	—	19.3	75
Chicken .....	1.136 lb.	Pound	55.0	28.6	—	28.6	26.4	—	26.4	52
White bread .....	.912 lb. wheat	Pound	16.2	3.15	.60	2.55	13.7	—	13.7	16
Corn flakes .....	1.05 lb. corn	8-oz. pkg.	13.7	3.40	1.23	2.17	11.5	—	11.5	16
Corn meal .....	1.343 lb. corn	Pound	7.8	3.96	.66	3.30	4.5	—	4.5	42
Flour, white .....	1.41 lb. wheat	Pound	8.9	4.86	.93	3.93	5.0	—	5.0	44
Rice .....	1.68 lb. rough	Pound	16.9	6.72	.96	5.76	11.1	—	11.1	34
Boiled oats .....	2.05 lb. oats	Pound	14.4	4.97	1.00	3.97	10.4	—	10.4	28
Apples .....	.0224 bu.	Pound	10.4	4.50	—	4.50	5.9	—	5.9	43
Oranges .....	.0613 box - fresh use	Dozen	51.9	25.5	—	25.5	26.4	—	26.4	49
Beans, snap .....	.0375 bu.	Pound	19.7	8.62	—	8.62	11.1	—	11.1	44
Cabbage .....	1.10 lb.	Pound	5.3	1.60	—	1.60	3.7	—	3.7	30
Carrots .....	.0222 bu.	Bunch	13.1	4.11	—	4.11	9.0	—	9.0	31
Lettuce .....	.0185 crt.	Head	13.8	4.72	—	4.72	9.1	—	9.1	34
Onions .....	1.06 lb.	Pound	7.5	2.13	—	2.13	5.4	—	5.4	28
Potatoes .....	.0174 bu.	Pound	4.6	2.14	—	2.14	2.5	—	2.5	47
Sweetpotatoes .....	.0204 bu.	Pound	12.1	5.85	—	5.85	6.2	—	6.2	48
Tomatoes .....	.0251 bu.	Pound	15.4	6.02	—	6.02	9.4	—	9.4	39
Peaches, canned .....	1.89 lb. Calif. cling	No. 2 1/2 can	34.0	6.42	—	6.42	27.6	—	27.6	19
Corn, canned .....	3.03 lb. sweet	No. 2 can	22.4	3.16	—	3.16	19.2	—	19.2	14
Peas, canned .....	.89 lb.	No. 2 can	15.3	3.92	—	3.92	11.4	—	11.4	26
Tomatoes, canned .....	2.41 lb.	No. 2 can	18.2	3.48	—	3.48	14.7	—	14.7	19
Prunes .....	1 lb. dried, California	Pound	28.1	12.25	—	12.25	15.9	—	15.9	44
Navy beans .....	1 lb. Mich. and N. Y. pea beans	Pound	14.9	5.41	—	5.41	9.5	—	9.5	36
Beet sugar .....	7.15 lb. sugar beets	Pound	10.7	4.08	.21	3.87	6.8	- .54	6.3	36
Cane sugar .....	12.29 lb. sugar cane	Pound	10.4	4.79	.77	4.02	6.4	- .54	5.9	39
Margarine .....	Cottonseed, soybeans, and skim milk	Pound	33.5	—	—	10.87	22.6	—	22.6	32
Vegetable shortening .....	Cottonseed and soybeans	Pound	34.7	—	—	12.78	21.9	—	21.9	37

1/ Full details concerning the calculation of price spreads for commodity groups and individual items are presented in Agr. Inform. Bul. No. 4, "Price Spreads Between Farmers and Consumers," Nov. 1949, and Misc. Pub. No. 576, "Price Spreads Between Farmers and Consumers for Food Products, 1913-44," Sept. 1945 (out of print). Commodity-group estimates are derived from data more inclusive than the individual items listed in this table. For example, the meat-products group includes veal and mutton, farm sales of lower grade cattle, allowance for retail value of byproducts and processed meats, in addition to lamb, pork (including lard), and carcass beef of Choice grade.

2/ Marketing charges equal margin adjusted for byproduct allowances minus Government marketing taxes plus Government payments to marketing agencies.

3/ Name of grade was changed from Good to Choice on Dec. 29, 1950.

4/ Gross farm value before adjusting for Choice grade premium was 63.7 cents.



Table 6.- Price spreads between farmers and consumers - food products: Marketing charges and farmer's share of retail price, September 1951 compared with the 1935-39 average, September 1950 and August 1951 <sup>1/</sup>

Commodity	Retail unit	Marketing charges <sup>2/</sup>						Farmer's share			
		1935-39 average	Sept. 1950	Aug. 1951	Sept. 1951	Percentage change from Sept. 1950 to Aug. 1951		1935-39 average	Sept. 1950	Aug. 1951	Sept. 1951
		Dollars	Dollars	Dollars	Dollars	Percent	Percent	Percent	Percent	Percent	Percent
Market basket		204.47	3/337.53	3/357.96	353.78	+ 5	- 1	40	49	50	50
Meat products		45.88	3/ 79.83	3/ 74.63	76.73	- 4	+ 3	47	63	67	66
Dairy products		33.89	3/ 55.70	3/ 61.06	60.10	+ 8	- 2	50	3/ 54	55	55
Poultry and eggs	1935-39 annual average	8.90	19.90	20.28	19.81	4/	- 2	66	62	65	67
Bakery and other cereal products:	quantities purchased per family of three consumers										
All ingredients		42.80	3/ 71.79	3/ 76.32	76.37	+ 6	4/	21	27	27	26
Grain		---	---	---	---	---	---	16	---	---	---
Other cereal products	average	12.10	3/ 22.36	23.68	23.88	+ 7	+ 1	32	3/ 38	38	37
All fruits and vegetables		53.81	3/ 82.85	3/ 96.90	91.86	+ 11	- 5	31	36	34	36
Fresh fruits and vegetables		37.48	3/ 59.73	3/ 69.26	65.11	+ 9	- 6	35	39	37	39
Fresh vegetables		21.68	3/ 35.58	42.75	40.10	+ 13	- 6	35	33	33	34
Canned fruits and vegetables		12.21	3/ 15.58	19.47	18.84	+ 21	- 3	14	3/ 21	18	19
Miscellaneous products		19.19	3/ 27.46	28.77	28.91	+ 5	4/	25	3/ 36	36	35
			Cents	Cents	Cents	Percent	Percent	Percent	Percent	Percent	Percent
Beef (Choice grade) <sup>5/</sup>	Pound	12.9	3/ 24.7	3/ 20.9	19.9	- 19	- 5	56	68	75	77
Lamb	Pound	13.6	3/ 25.3	23.0	23.0	- 9	0	49	64	70	71
Pork (including lard)	Pound	10.3	3/ 17.0	16.2	18.2	+ 7	+ 12	52	3/ 64	65	60
Butter	Pound	11.1	20.7	3/ 22.3	22.1	+ 7	- 1	68	71	72	72
Cheese, American	Pound	12.3	3/ 24.6	3/ 27.0	25.9	+ 5	- 4	53	3/ 56	57	59
Evaporated milk	14-oz. can	4.6	7.5	7.9	7.8	+ 4	- 1	38	44	47	48
Fluid milk	Quart	5.1	8.4	9.4	9.2	+ 10	- 2	55	58	57	58
Ice cream	Pint	6/	5/	23.7	23.5	---	- 1	6/	6/	24	25
Eggs	Dozen	6.7	17.2	20.7	19.3	+ 12	- 7	77	71	71	75
Chicken	Pound	13.1	28.5	25.5	26.4	- 7	+ 4	56	49	54	52
White bread	Pound	7.9	12.7	13.7	13.7	+ 8	0	12	17	16	16
Corn flakes	8-oz. pkg.	7.1	9.6	11.3	11.5	+ 20	+ 2	11	24	17	16
Corn meal	Pound	1.6	5.1	4.5	4.5	- 12	0	47	37	42	42
Flour, white	Pound	2.1	3/ 4.7	5.0	5.0	+ 6	0	43	3/ 45	44	44
Rice	Pound	4.7	9.3	3/ 10.1	11.1	+ 19	+ 10	39	41	41	34
Rolled oats	Pound	5.6	9.6	10.5	10.4	+ 8	- 1	24	28	27	28
Apples	Pound	2.9	6.0	6.7	5.9	- 2	- 12	41	47	40	43
Oranges	Dozen	19.3	24.9	3/ 27.4	26.4	+ 6	- 4	36	48	3/ 46	49
Beans, snap	Pound	6.8	8.7	9.5	11.1	+ 28	+ 17	40	49	47	44
Cabbage	Pound	2.6	3/ 3.5	3.6	3.7	+ 6	+ 3	24	3/ 23	31	30
Carrots	Bunch	3.7	3/ 7.0	8.2	9.0	+ 29	+ 10	31	3/ 27	36	31
Lettuce	Head	5.8	3/ 8.7	8.9	9.1	+ 5	+ 2	33	3/ 32	40	34
Onions	Pound	3.2	5.2	5.4	5.4	+ 4	0	29	21	31	28
Potatoes	Pound	1.3	2.5	2.9	2.5	0	- 14	50	43	42	47
Sweetpotatoes	Pound	2.4	4.4	8.4	6.2	+ 41	- 26	41	47	40	48
Tomatoes	Pound	6/	3/ 7.5	11.1	9.4	+ 25	- 15	41	3/ 41	35	39
Peaches, canned	No. 2 1/2 can	16.2	25.8	27.4	27.6	+ 7	+ 1	14	15	19	19
Corn, canned	No. 2 can	10.6	3/ 15.2	19.3	19.2	+ 26	- 1	12	3/ 16	13	14
Peas, canned	No. 2 can	13.3	3/ 11.5	11.5	11.4	- 1	- 1	15	3/ 24	25	26
Tomatoes, canned	No. 2 can	7.9	3/ 11.9	15.8	14.7	+ 24	- 7	16	3/ 20	16	19
Prunes	Pound	7.0	3/ 16.7	16.0	15.9	- 5	- 1	30	3/ 33	43	44
Navy beans	Pound	3.5	7.8	10.2	9.5	+ 22	- 7	46	46	34	36
Beet sugar	Pound	3.6	3/ 6.4	6.4	6.3	- 2	- 2	30	3/ 34	36	36
Cane sugar	Pound	3.4	3/ 6.1	3/ 6.0	5.9	- 3	- 2	32	3/ 36	3/ 38	39
Margarine	Pound	13.2	22.1	22.0	22.6	+ 2	+ 3	24	33	35	32
Vegetable shortening	Pound	14.2	19.6	21.3	21.9	+ 12	+ 3	27	40	39	37

<sup>1/</sup> Full details concerning the calculation of price spreads for commodity groups and individual items are presented in Agr. Inform. Bul. No. 4, "Price Spreads Between Farmers and Consumers," Nov. 1949, and Misc. Pub. No. 576, "Price Spreads Between Farmers and Consumers for Food Products, 1913-44," Sept. 1945 (out of print). Commodity-group estimates are derived from data more inclusive than the individual items listed in this table. For example, the meat-products group includes veal and mutton, farm sales of lower grade cattle, allowance for retail value of byproducts and processed meats, in addition to lamb, pork (including lard), and carcass beef of Choice grade.

<sup>2/</sup> Marketing charges equal margins (difference between retail cost and net farm value, table 5) minus processor taxes plus Government payments to marketing agencies.

<sup>3/</sup> Revised.

<sup>4/</sup> Less than 0.5 percent.

<sup>5/</sup> Name of grade was changed from Good to Choice on Dec. 29, 1950.

<sup>6/</sup> Price data not available.

Table 7.- Farm products: Indexes of prices at several levels of marketing, 1935-39 = 100

Year and month:	Foods			Fibers			Whole-			Prices received by farmers for all farms
	Prices paid by city and families for all commodities	Retail prices of farm food products	Whole-sale prices of all food products	Prices received by farmers	Retail prices of cloth	Whole-sale prices of textile	Prices received by farmers for cotton and wool	Prices received by farmers for all farms		
1913 :	71	77	81	91	69	81	110	94	95	81
1916 :	78	94	96	106	78	99	131	111	111	93
1918 :	108	134	151	172	128	193	279	195	192	141
1920 :	143	166	174	181	201	232	284	198	197	171
1929 :	122	128	126	136	115	127	167	138	138	121
1932 :	98	83	77	67	91	77	54	63	61	82
1935 :	98	102	106	99	97	100	109	104	101	99
1936 :	99	103	104	104	98	101	114	106	106	99
1937 :	103	106	108	112	103	107	111	114	114	105
1938 :	101	96	93	94	102	94	80	90	90	98
1939 :	99	93	89	90	100	98	87	86	88	98
1940 :	100	93	90	94	102	104	98	89	93	98
1941 :	105	102	105	114	106	119	131	108	115	105
1942 :	117	120	126	145	124	136	178	139	147	120
1943 :	124	135	135	175	130	137	190	161	179	133
1944 :	126	132	133	173	139	139	194	162	182	140
1945 :	129	135	134	183	146	141	201	169	192	145
1946 :	140	155	165	207	160	164	260	196	218	159
1947 :	160	189	213	249	186	200	296	238	256	186
1948 :	172	202	226	260	198	209	296	248	265	202
1949 :	170	189	204	229	190	198	272	218	232	194
1950 :	172	189	210	228	188	208	7/314	224	238	198
1950:										
Sept. :	175	193	224	238	190	223	372	237	253	203
Oct. :	176	192	218	235	193	230	7/365	234	250	204
Nov. :	176	193	221	239	194	235	386	242	257	206
Dec. :	179	200	226	250	196	241	383	247	266	207
1951:										
Jan. :	182	208	230	265	198	251	401	256	279	211
Feb. :	184	213	237	276	202	255	411	267	291	215
Mar. :	184	212	236	272	203	258	425	268	290	219
Apr. :	185	211	235	269	204	257	425	266	288	220
May :	185	212	237	266	204	256	415	263	284	219
June :	185	212	236	264	204	250	409	261	280	219
July :	186	212	235	262	203	244	377	255	274	219
Aug. :	186	209	237	264	204	7/236	333	251	272	219
Sept. :	187	208	238	265	209	230	321	249	271	219

1/ Bureau of Labor Statistics, "Consumer Price Index for Moderate-Income Families in Large Cities."

2/ Calculated from "Retail cost" of market basket (p. 2).

3/ Bureau of Labor Statistics, converted from 1926 = 100 base.

4/ Calculated from "Farm value" of market basket (p. 2).

5/ Cotton and wool prices weighted by production in 1935-39.

6/ Based on figures published by the Crop Reporting Board.

7/ Revised.

Table 8.- Indexes of consumer income and of hourly earnings in marketing, 1935-39 = 100

Year	Nonagri- cultural income payments 1/	Monthly earnings per employed factory worker 2/	Hourly earnings in marketing enterprises			
			Class I steam railways 3/	Food processing 4/	Food marketing 5/	Cotton processing 6/
1940	115	110	105	108	104	106
1941	138	130	106	114	110	119
1942	176	161	119	127	122	139
1943	217	188	121	140	131	152
1944	242	201	134	149	141	162
1945	250	195	135	154	149	176
1946	255	191	154	173	171	213
1947	275	218	168	197	195	253
1948	301	236	184	213	213	282
1949	303	240	203	223	226	287
1950	332	259	223	233	236	297
1950						
Aug.	335	263	219	231	235	292
Sept.	342	265	224	231	237	295
Oct.	344	271	221	236	239	314
Nov.	346	272	224	239	241	316
Dec.	359	279	227	244	244	317
1951						
Jan.	356	278	224	248	247	318
Feb.	358	279	235	248	248	318
Mar.	362	282	237	249	249	318
Apr.	366	283	243	250	250	319
May	368	282	244	250	251	319
June	370	285	247	6/ 254	6/ 253	6/ 319
July	6/ 370	282	250	6/ 252	252	6/ 317
Aug.	372	282	246	252	252	313

1/ United States Department of Commerce estimates. Adjusted for seasonal variation.

2/ Prepared in the Bureau of Agricultural Economics from data of the Bureau of Labor Statistics, not adjusted for seasonal variation. Revised series.

3/ Compiled from data published by the Interstate Commerce Commission.

4/ Bureau of Labor Statistics.

5/ Weighted composite of earnings in steam railways, food processing, wholesaling, and retailing.

6/ Revised.

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