

Developments in
**MARKETING SPREADS FOR
AGRICULTURAL PRODUCTS
in 1974**

ABSTRACT

Reflecting strong inflationary forces in the economy, charges for processing and distributing food products rose an extraordinary amount in 1974 and accounted for most of the rise in retail food prices. These food marketing charges, as measured by the spread between the retail cost and farm value of a market basket of farm foods, rose 20 percent in 1974, three times greater than any previous annual rise. Returns to farmers for commodities equivalent to market basket foods averaged 6 percent higher than in 1973. The retail cost of the market basket rose 14 percent. Estimates of cost and profit components of margins for 22 foods reveal that labor and packaging account for the largest share of the processing and retailing margins for most products.

Keywords: . Price spreads, food marketing, costs.

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SUMMARY

Marketing charges for moving food from the farm to the consumer rose an extraordinary amount in 1974 and were the principal cause of a 14-percent increase in the retail cost of a market basket of foods originating on U.S. farms. Retail prices made their biggest jump in the first quarter. Drops in prices of livestock products at the farm level contributed to a more moderate pace of price increases during the balance of the year. Prices of beef, eggs, and broilers were lower in December than at the beginning of the year.

Marketing charges, or the farm-retail spread, for all of 1974 averaged 20 percent higher than a year earlier. This increase was three times greater than any previous annual increase, and significantly greater than the rise in the general price level. Galloping inflation significantly raised nearly all costs of food processing and distribution. Fuel, power, and light rates averaged 45 percent higher than a year earlier. Prices of packaging materials were up 23 percent. Labor costs were pushed higher by an increase of over 10 percent in hourly earnings of employees in food retailing and manufacturing.

Returns to farmers for food products, particularly livestock products, fell sharply last spring, but a modest recovery in the summer and fall contributed to an overall increase of 6 percent in the farm value of market basket foods in 1974. Returns for most crop-based foods rose substantially, reflecting the effects of much smaller than expected grain crops in 1974 caused by poor weather.

Consumer expenditures for foods produced on U.S. farms rose nearly \$20 billion in 1974 to an estimated \$154 billion. Returns to farmers for these foods amounted to \$54 billion, about \$4 billion more than in 1973. The food marketing bill, representing total charges for transporting, processing, and distributing farm foods, amounted to \$100 billion last year, \$16 billion more than in 1973. Contributing most to the increase in the marketing bill were labor costs, which represented nearly half of the bill, transportation, and packaging costs. Profits earned by firms from marketing farm foods also increased significantly in 1974 in response to higher sales and improved profit margins.

Breaking down 1973 retail prices of 22 foods by marketing function and items of expense showed wide variation in costs and margins among products. The more work that must be done to change the form of a product, the greater are the costs for processing. Thus, processing margins were found to be less than a fifth of the retail price for meat and poultry products, but around half the retail price of applesauce and canned tomatoes. Retail margins were found to be highest for perishable products, averaging about two-fifths of the retail price of fresh oranges, apples, and lettuce, about double the overall retail store margin. Among expense items, labor is the largest component of the retail and processing margins for most products, followed by packaging costs.

DEVELOPMENTS IN MARKETING SPREADS FOR AGRICULTURAL PRODUCTS IN 1974

Rapid escalations in food prices over the past couple of years have greatly increased public concern about the level of food costs. A good idea of what has been happening to prices can be obtained by looking at two major components of the food dollar--returns to farmers for food products and the farm-to-retail price spread. Since the mid-1950's Congress has appropriated funds for research specifically for deriving price spreads and analyzing food costs. The Economic Research Service develops estimates of retail costs, returns to farmers, and farm-to-retail spreads for a fixed market basket of foods and 65 individual food products. These data are published quarterly by the Economic Research Service in the Marketing and Transportation Situation and monthly in a 2-page supplement.

MARKET BASKET STATISTICS

Retail Food Costs

Food prices the past 2 years rose by the largest amount in over a quarter century. The retail cost of a market basket of farm foods rose about 14 percent in 1974, just slightly less than the increase for 1973 when unusually strong demand and reduced food supplies combined to push up prices. Last year, retail prices rose even though food supplies rose and per capita consumption of food increased to new highs. However, retail food prices in 1974 made their biggest jump in the first quarter of the year, largely reflecting a continuation of the abnormal supply-demand conditions of 1973. Prices were relatively stable during the spring and early summer but advanced again, although at a slower rate, in the latter half of the year.

Retail costs of most food groups averaged higher in 1974 than in 1973, but there was considerable movement in prices during the year and wide price variation among food products. In general, prices for livestock products rose much less than prices for crop-based foods last year, a sharp reversal from the previous year. Prices of dairy products, which spurted toward the end of 1973, stayed at the higher level during 1974 and averaged 19 percent higher than a year earlier. Average meat prices in 1974 were only 2 percent higher in 1973, and beef prices in December were 1.6 percent lower than a year earlier, due mainly to a large increase in beef supplies. Poultry and egg prices declined sharply during the first half of last year but rose in the fall as output declined because of rising production costs. For the year, poultry prices averaged 5 percent lower than in 1973, and egg prices 1 percent higher. Fats and oils recorded the largest price increase --52 percent--in 1974, followed by 30 percent for bakery and cereal products, and 23 percent for processed fruits and vegetables. The cost of the miscellaneous food group, including sugar, rose more than a third. Sugar prices more than doubled.

Food prices last year rose more than the average for all consumer goods and services for the third consecutive year. In earlier years they generally rose less than other prices. Since 1967, the retail cost of the market basket

of farm foods has risen 62 percent, compared with an increase of 44 percent in the Consumer Price Index for all goods and services excluding food.

Farm Value

Returns to farmers for food commodities were quite volatile in 1974 in response to tight supplies of grains and oilseeds. Higher prices for soybeans and other oilseeds nearly doubled the farm value of fats and oils used in margarine and other oil products. The farm value of bakery and cereal products averaged 45 percent higher, reflecting higher wheat and sugar prices. Returns to growers for processed fruits and vegetables also were substantially higher last year than in 1973 (table 1).

In contrast to higher returns for most crop products, the farm value of meat products and poultry averaged 10 percent lower last year than for 1973. Cattle prices fell sharply from February highs through spring, rose modestly during the summer, but declined again in the fourth quarter in response to much larger supplies of lower grade beef. Cattle feeders were in a loss position most of last year as a result of high feed prices and lower cattle prices. The farm value of dairy products rose substantially in 1974 and averaged 17 percent above 1973. Overall, the farm value of all foods in the market basket averaged about 6 percent higher in 1974 than in 1973, largely reflecting the higher returns for grain, oilseed, sugar, and dairy products. The increase in farm value accounted for about a fifth of the increase in the retail cost of the market basket last year.

Farmers received an average of 43 cents of each dollar spent by consumers for market basket foods in 1974. This was 3 cents less than the 46-cent share received in 1973, the highest farmer's share in more than 20 years. Except for the last 2 years, the farmer's share of the food dollar has ranged between 37 and 41 cents since the mid-1950's. The farmer's share of the food dollar varied widely for groups of products. It ranged from 68 percent for eggs and 56 percent for meat and poultry to less than 25 percent of the retail cost of bakery and cereal products and processed fruits and vegetables (figures 1 and 2).

Farm-Retail Spread

The farm-to-retail spread is the difference between an average retail price per unit sold and the farm value of a quantity of farm product equivalent to the retail unit, less any value of byproducts. Thus, the farm-retail spread is a measure of the charges for assembling, transporting, processing, and distributing activities that occur between the "farm gate" and consumer purchase of the product at retail. Each activity involves costs for labor, energy, capital, business taxes, and depreciation of buildings and equipment. All such costs, plus profits earned by marketing firms, are represented in the price spread. Long-run changes in marketing spreads generally reflect changes in costs and profits incurred by marketing firms. Short-term changes are often associated with larger changes in prices at the farm level than at retail.

Widening farm-retail spreads accounted for four-fifths of the rise in the retail cost of market basket foods in 1974. The spread between the retail cost and the farm value of foods increased 20 percent in 1974 over 1973. This

Table 1.--Market basket of farm foods by product group: Retail cost, farm value and farm-retail spread, annual 1974 and 1973 ^{1/}.

Items	1974	1973	Change 1974 from 1973	
	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Percent</u>
Retail cost				
Market basket	1749.56	1537.30	212.26	13.8
Meat products	532.71	523.35	9.36	1.8
Dairy products	296.45	248.95	47.50	19.1
Poultry	68.43	72.12	-3.69	-5.1
Eggs	56.93	56.39	.54	1.0
Bakery and cereal products	276.95	213.52	63.43	29.7
Fresh fruits	73.30	66.86	6.44	9.6
Fresh vegetables ..	118.75	109.42	9.33	8.5
Processed fruits and vegetables ..	166.04	135.22	30.82	22.8
Fats and oils	75.72	50.02	25.70	51.4
Miscellaneous products	84.28	61.45	22.83	37.2
Farm value				
Market basket	744.26	700.78	43.48	6.2
Meat products	299.22	331.29	-32.07	-9.7
Dairy products	145.04	124.25	20.79	16.7
Poultry	38.05	42.43	-4.38	-10.3
Eggs	38.67	39.27	-.60	-1.5
Bakery and cereal products	69.23	47.64	21.59	45.3
Fresh fruits	22.11	22.13	-.02	-.1
Fresh vegetables ..	40.22	38.20	2.02	5.3
Processed fruits and vegetables ..	35.14	25.90	9.24	35.7
Fats and oils	35.32	18.52	16.80	90.7
Miscellaneous products	21.26	11.15	10.11	90.7
Farm-retail spread				
Market basket	1005.30	836.52	168.78	20.2
Meat products	233.49	192.06	41.43	21.6
Dairy products	151.41	124.70	26.71	21.4
Poultry	30.38	29.69	.69	2.3
Eggs	18.26	17.12	1.14	6.7
Bakery and cereal products	207.72	165.88	41.84	25.2
Fresh fruits	51.19	44.73	6.46	14.4
Fresh vegetables ..	78.53	71.22	7.31	10.3
Processed fruits and vegetables ..	130.90	109.32	21.58	19.7
Fats and oils	40.40	31.50	8.90	28.3
Miscellaneous products	63.02	50.30	12.72	25.3

^{1/} The market basket contains the average quantities of domestic, farm-originated food products purchased annually per household in 1960 and 1961 by wage-earners and clerical worker families and workers living alone. Its retail cost is calculated from retail prices published by the Bureau of Labor Statistics. The farm value is the gross return to farmers for the farm products equivalent to foods in the market basket. The farm-retail spread--difference between the retail cost and farm value--is an estimate of the total gross margin received by marketing firms for assembling, processing, transporting, and distributing the products in the market basket.

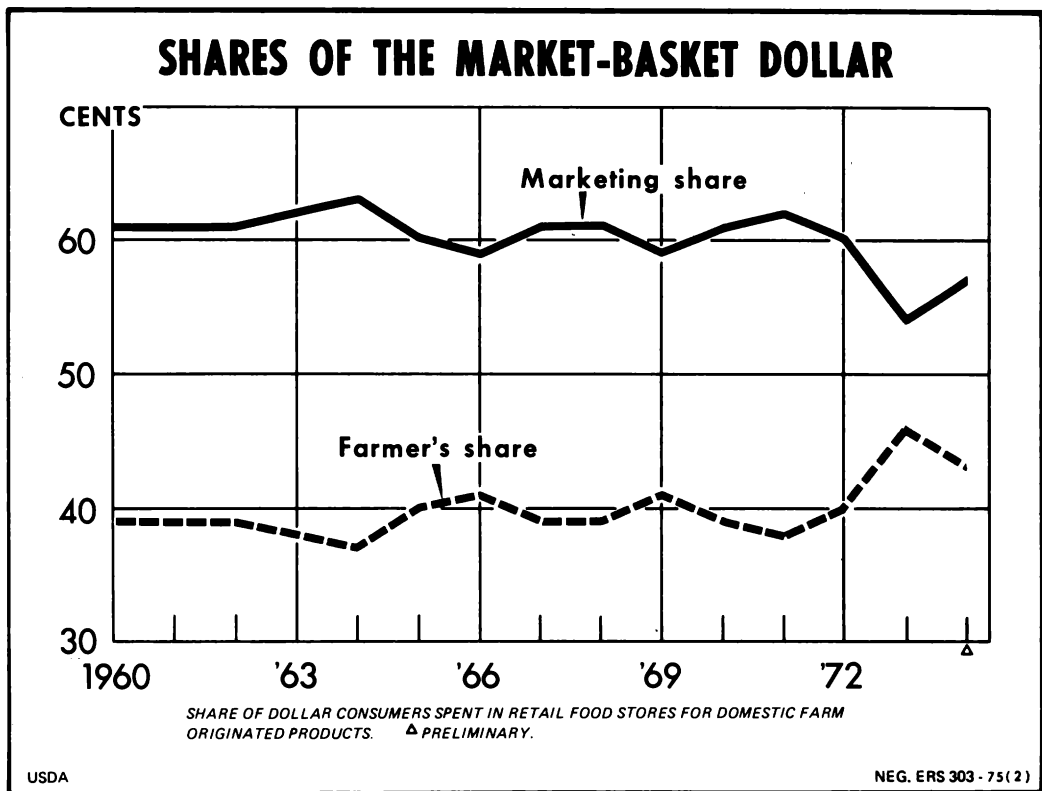


Figure 1

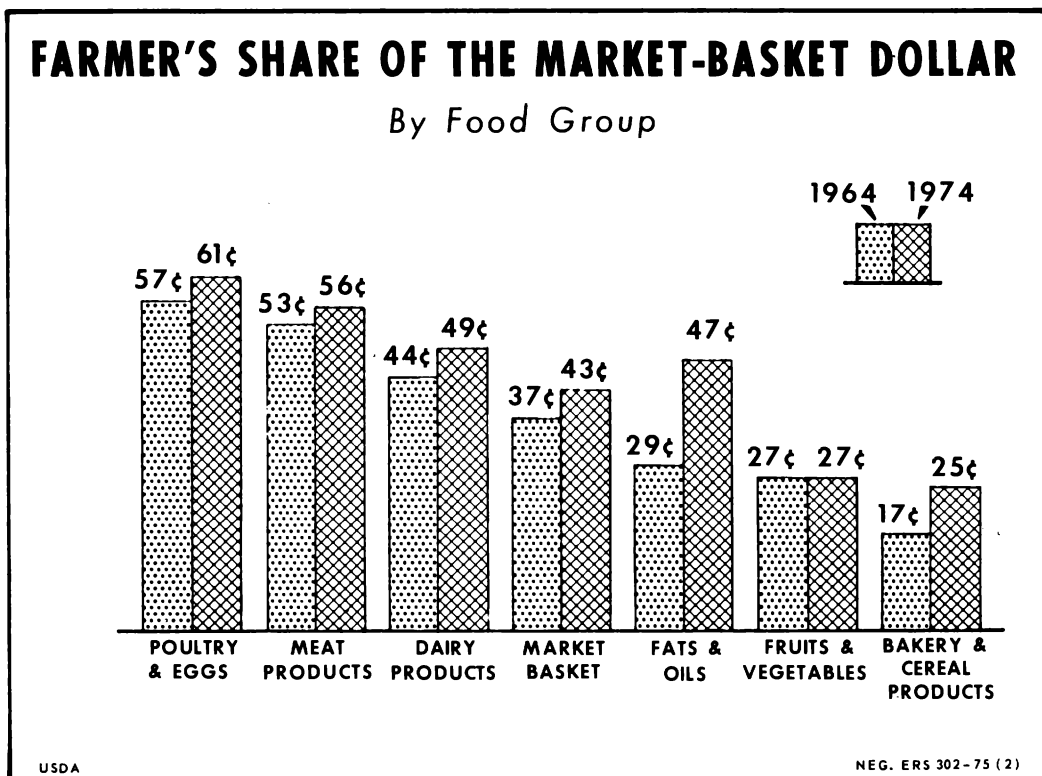


Figure 2

increase was nearly three times larger than any other previous annual rise. Spreads widened nearly every month during the year and in December were at the highest level of the year (fig. 3).

Marketing spreads vary widely for food groups since products require different handling and processing methods. Nevertheless, price spreads for all food groups widened in 1974. The spread, or gross margin, for bakery and cereal products, which made up three-fourths of their retail cost, increased 25 percent and for fats and oils averaged 28 percent higher than a year earlier. Meat spreads averaged 22 percent higher in 1974, with most of the increase occurring from February to June as farm prices of both beef and pork declined sharply. Spreads for dairy products and processed fruits and vegetables were up about 20 percent. Fresh fruit and vegetable price spreads averaged 12 percent above 1973.

The upward surge in margins in the past year reflects an accelerated increase in costs of marketing inputs over the past year and cost increases that could not be passed through during economic controls.

From the time controls were imposed in mid-1971 until ceilings were lifted in mid-1973, the farm-retail spread increased far less than the increase in labor costs and inputs purchased by marketing agencies. For instance, from 1971 to 1973, unit labor costs in food marketing rose 20 percent and intermediate goods and services (packaging materials, fuel, power, light, rents, insurance, etc.) rose over 12 percent while the farm-retail spread increased 9½ percent.

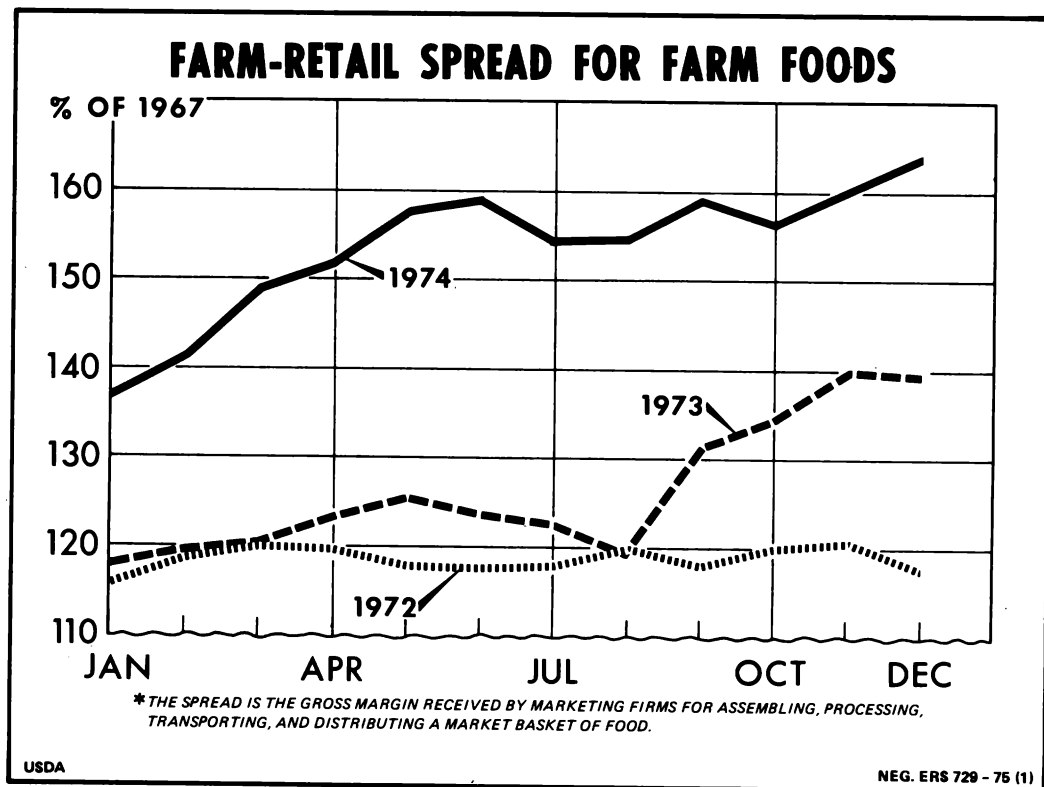


Figure 3

Since price ceilings were removed in the summer of 1973, economic conditions have permitted firms to pass through cost increases, and improve upon relatively low earnings of the control period.

This past year, almost every expense incurred in processing and distributing foods has shown sharp increases. Fuel, power, and light rates were up most, averaging 45 percent higher than a year earlier. Hourly earnings of food marketing employees averaged about 9 percent higher than a year earlier, a significantly larger annual increase than for other recent years. Data for the national economy indicate that labor compensation greatly outran productivity, causing further substantial increases in labor costs per unit of output the past year.

Packaging material costs rose 23 percent in the past year, reflecting higher costs of basic raw materials, particularly petroleum products, and higher profits of packaging manufacturers. Profits of 16 packaging manufacturers averaged 5.6 percent of sales in the first half of 1974 compared with 4.4 percent a year earlier.

Several increases in transportation costs occurred in 1974. Railroads were granted rate increases to cover rising fuel costs and employee pension costs, and a 10 percent general rate increase. Regulated truckers were granted a 6 percent fuel surcharge and exempt truck rates also rose because of increased fuel costs and a reduced hauling capacity.

After-tax profits of retail food chains were severely squeezed during 1972 and 1973 both as a percentage of stockholders' equity and as a percentage of sales. Profits averaged 0.5 percent of sales in 1972 and 0.7 percent in 1973. With widening spreads in 1974, profit margins of leading food chains for the first 9 months of the year recovered to 0.9 percent of sales, the same level as in 1971. Although complete data are not available, these data suggest that returns on stockholders' equity increased substantially from the 8.2 percent in 1973.

Profit rates of food manufacturers, which have increased as a percent of equity, but have been relatively stable as a percentage of sales since 1971, averaged 3.0 percent of sales in the third quarter of 1974 and 15.5 percent of stockholders' equity, according to data published by the Federal Trade Commission. Because of significant changes in accounting methods, a comparison of these ratios cannot be made with prior years.

Most economic forecasts point to further substantial increases in the general price level this year of around 9 1/2 percent depending on the impact of the energy crisis and recession. Historically, the trend in the farm-retail price spread for food has tended to parallel rather closely movements in the general price level. This parallel is not surprising since the operating needs of food marketing firms are fairly similar to those of firms in the nonagricultural sector. Because of this relationship and the expected rise in the general price level, farm-retail spreads are expected to increase substantially in 1975, but much less than in 1974.

Long-term movements in the farm-retail spread and the farm value have been quite different. Marketing spreads have risen nearly every year the last 20 years. On the other hand, farm values have moved up and down and have only in the last 5 years achieved the level of 1952. The farmer's share of the consumer's dollar after achieving a peak of around 50 cents at that time declined to as little as 37 cents in 1964.

During the last 10 years, prices at all market levels have trended up but in recent years changes in market basket statistics have differed dramatically (fig. 4). Between 1971 and 1974, the retail cost of the market basket of farm foods increased 40 percent, or \$499. Slightly more than half of this rise in retail cost was due to a 55 percent increase in the farm value of food products. The remainder was due to a 30-percent rise in the farm-retail spread.

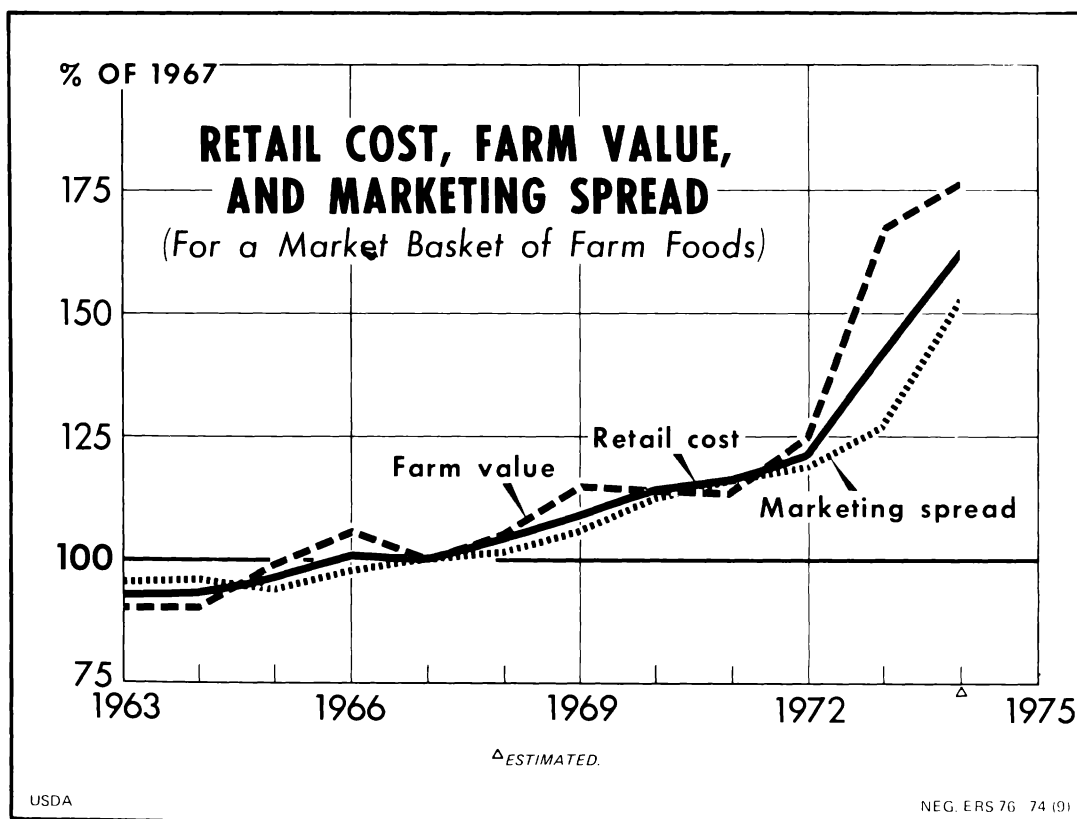


Figure 4

COMMODITY HIGHLIGHTS

Beef and Pork

Price spreads for meat widened late in the third quarter of 1973 following the end of the price freeze, and remained at record high levels during most of 1974 (figures 5 and 6). Farm-retail spreads for beef in the first half of 1974 averaged 24 percent higher than a year earlier. The farmer's share of the consumer's beef dollar dropped from 68 cents to 62 cents. The marketing spread dropped in July and August when live cattle prices rebounded, but widened again in September as cattle prices and retail meat prices fell. For the year, the farm-retail spread averaged 15 percent higher than for 1973 but farm value averaged 4 percent lower. Retail Choice beef prices averaged about 2 percent higher in 1974 but prices in December were slightly less than a year earlier.

The situation was much the same for pork, but the increase in price spreads was greater. The farm-retail spread averaged 38 percent higher in the first half of 1974 than a year earlier while the farmer's share of the consumer's pork dollar dropped from 64 cents to 53 cents. Pork marketing spreads widened in September following a decline in July and August, and for the year averaged 24 percent higher than for 1973. Although the farm value of pork declined 15 percent in 1974, this decrease resulted in only a slight decrease in the average retail price.

Changes between years in price spreads generally reflect changes in costs and profits incurred by marketing firms. Short-term changes within years are often associated with the larger changes in prices at the farm level than at retail--particularly for red meats and other foods which are not highly processed. The abrupt widening of red meat price spreads late in 1973, following more gradual increases in earlier years, came after price ceilings were lifted. Removal of price ceilings for beef and pork in September 1973 had followed many earlier months of economic controls, when price spreads had been relatively stable although operating costs for marketing firms had continued to rise.

A study of beef and pork price spreads by a special task force concluded that, among several factors contributing to wider price spreads for red meat, the most important had been sharp increases in costs of labor and other services and supplies required by marketing firms. Recommendations for improving performance and lowering costs in red meat marketing and distribution set forth in the task force report included suggestions for increasing efficiency; revising grade standards; and improving market information, media interpretation, and public understanding of prices and price spreads for meat.

To provide more timely public information, a continuing weekly report on red meat prices and spreads has been released since the fall of 1974. In addition, special reports were prepared in 1974 for hearings held by several subcommittees on both the Senate and the House of Representatives because of wide interest and concern over developments in red meat marketing spreads. Earlier, two special reports were prepared, one for a syndicated television program and the other as an article in the USDA periodical, Farm Index, that summarized consumers' concerns about meat prices and middlemen costs as expressed in their letters to USDA. In both reports, the effect of the

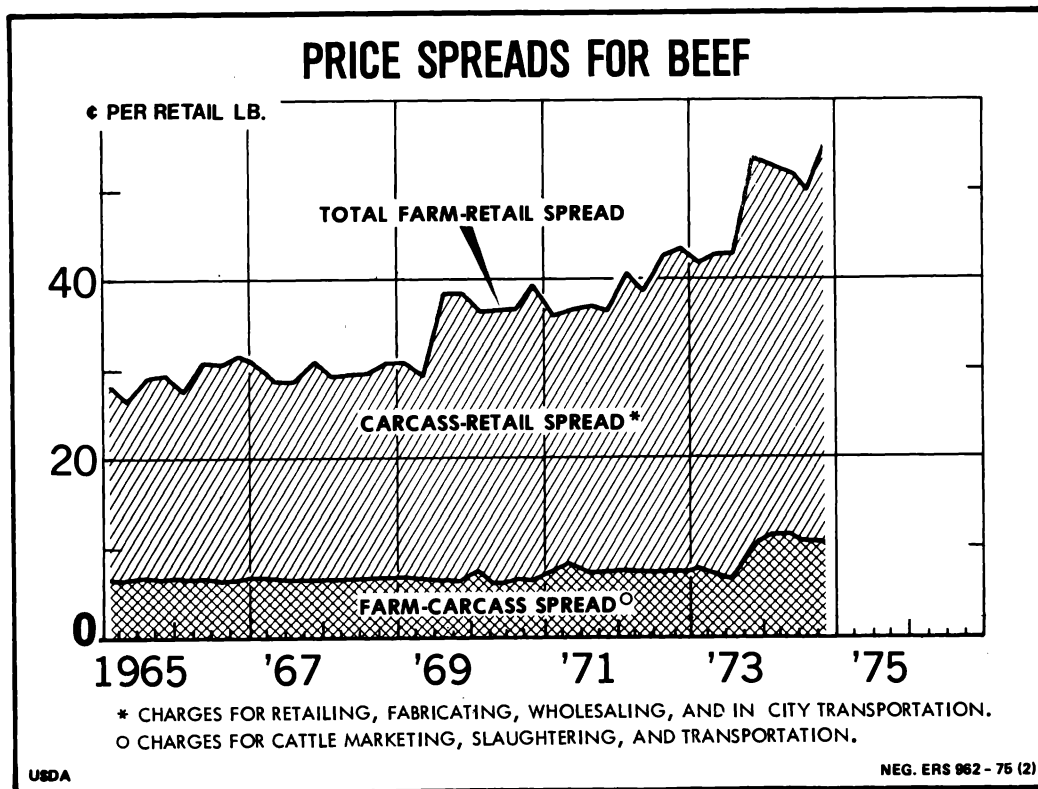


Figure 5

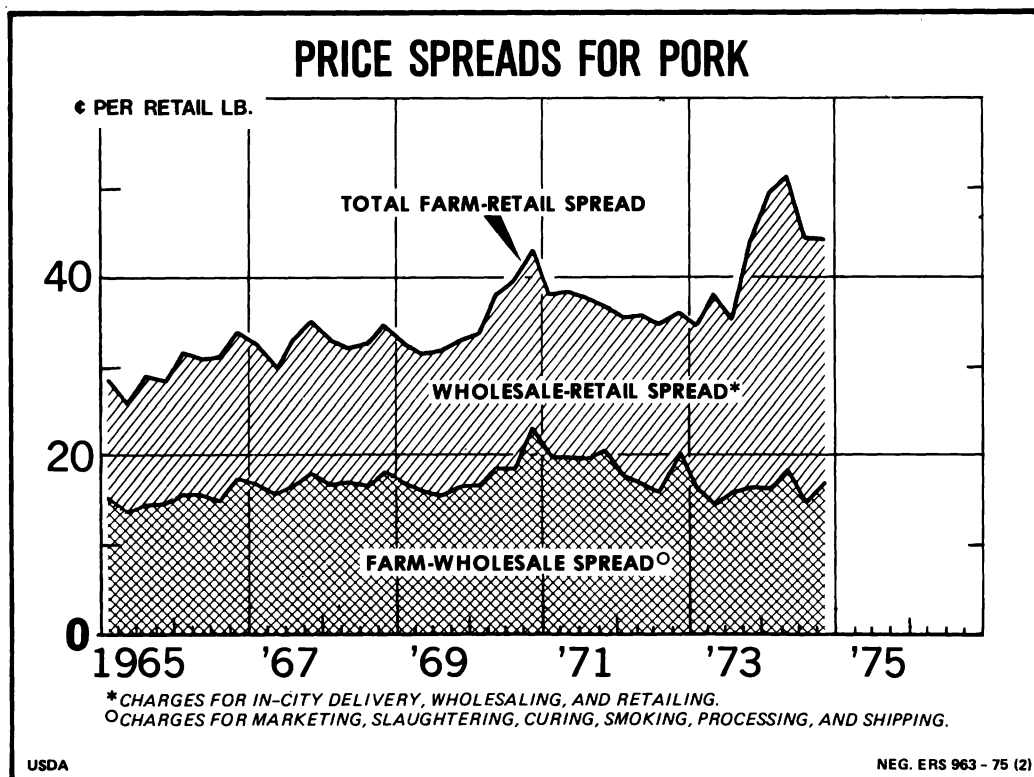


Figure 6

cost-price squeeze that had confronted livestock producers and feeders for many months were discussed--pointing out that the continued operating losses of livestock producers caused changes in their production planning and subsequent changes in red meat supplies and prices.

New data showing increases in hauling and shipping costs for livestock and meats in recent years led to moderate revisions in beef and pork spreads. The revision slightly increased the farm-retail spread. Data were also developed for marketing spreads expressed as dollars per head for the live animal. These data are more widely used by farmers, feeders, and processors than the cents-per-retail-pound data more widely used and understood by retailers and consumers.

Operating costs and profits comprising realized margins for meat packers and for food retailers are important elements for analyzing farm-retail spreads. Special studies were made of beef and pork operating costs and profits for typical meat processors and food retailers, along with other important farm foods, and reported in the November issue of the Marketing and Transportation Situation. Labor costs were the major component in margins for both packer-processing and retailing. Other findings of these special studies are discussed elsewhere in this report.

Eggs and Poultry

The demand for eggs and poultry continued strong during 1974, although not quite as strong as during 1973. Increased supplies of red meat, especially beef, exerted some downward pressure on prices of eggs and poultry during the last several months of 1974. In addition, storage holdings of frozen turkey were large as the heavy marketing season began.

Prices of most inputs purchased by poultry and egg producers increased during 1974. For example, the average cost of laying feed was \$154 per ton in 1974 compared to \$137 for 1973, and the broiler ration cost \$169 per ton in 1974, up from \$152. Consequently, producer returns were below production costs for most of 1974.

Cost for assembling, processing and packing, long distance hauling, and local distribution of poultry and eggs also rose substantially in 1974. Some of these increases began in 1973. Higher wage rates and packaging material prices, along with higher utility and fuel prices, have increased costs of processing. Retail margins, too, have widened over the last 2 years, reflecting in part increased factor costs.

Eggs: The price of Grade A large eggs sold in retail stores in 12 major U.S. cities averaged 77 cents per dozen during 1974, down 1 cent from 1973. Marketing costs for eggs increased by about 1 cent per dozen during 1974, averaging 26 cents. The farm-to-retailer component of the spread for Grade A large eggs decreased by about 0.5 cent per dozen in 1974, averaging 13.7 cents per dozen. But the retail spread increased about 2 cents per dozen to 12.6 cents.

The farm price of eggs for 1974 was 51 cents per dozen, 2 cents less than for 1973. The farmer's share of the consumer's dollar spent for Grade A large eggs decreased slightly during 1974, averaging 66 percent.

Frying Chickens: The retail price of frying chickens sold in 12 major cities during 1974 averaged 56 cents per pound, about 4 cents per pound less than the record in 1973. The farm-to-consumer spread for frying chickens averaged 26 cents per pound in 1974, almost the same as in 1973. The farm-to-retailer component of the margin averaged 12 cents per pound during 1974, down 0.5 cent from 1973. The retail margin of 14 cents in 1974 was slightly higher than for 1973.

The farm equivalent value of frying chickens sold in 12 major cities declined from 34 cents per pound in 1973 to 30 cents per pound in 1974. The farmer's share of the consumer's dollar spent for frying chicken averaged 56 percent in 1973 compared with 53 percent in 1974.

Fresh Milk

Prices of fresh milk sold in retail stores averaged 78.4 cents per half-gallon in 1974, 13 cents higher than for 1973 when prices were controlled for most of the year. The lifting of controls coupled with the relatively tight supply-demand situation which prevailed early in 1974 led to a 20 percent increase, which was greater than the rise in overall food prices. But during 1971-73, the percentage increase in milk prices was much less than the increase in overall food prices.

Higher milk prices in 1974 reflected both higher farm prices and marketing charges which each make up about one-half of the retail price. Prices received by farmers for milk averaged 40.4 cents per half-gallon in 1974, slightly over 6 cents higher than in 1973. Similarly, the farm-to-retail spread averaged 38 cents, about 7 cents higher. The increases in farm prices and in the spread during late 1973 and early 1974 were almost equal to the total increases during the preceding decade.

These unusual price increases were brought about by a combination of circumstances. Milk production dropped sharply from 1972 to 1973 and continued low during 1974. This drop in production, coupled with very tight feed supplies, rapidly rising production costs, and a high degree of uncertainty about the prospects for dairying, all contributed to higher farm prices. Prior to last year, marketing margins had been unusually stable for milk, gaining more slowly than for most foods, while costs of milk processing and distribution have been rising.

Fruits and Vegetables

Retail prices for most major fresh and processed fruits and vegetables increased in 1974. Higher retail prices were generally the result of much higher marketing costs, short supplies of certain items, and a strong demand boosted by higher prices of other foods.

Supplies of apples and most other deciduous fruits were larger in 1974 than a year earlier, but retail and grower prices remained firm to moderately above year-earlier levels, reflecting strong domestic and foreign demand. Fresh supplies of all citrus increased in 1974 but, except for fresh grapefruit, retail and grower prices of fresh citrus were moderately above 1973. The marketing spread for fresh fruit in 1974 increased more than the grower price and the farmer's share of the retail price dropped slightly.

With the major exception of potatoes and sweetpotatoes, grower prices of most fresh vegetables in 1974 were generally lower than in 1973. However, increased marketing costs resulted in higher retail prices for many fresh vegetables. Extremely small potato supplies from the fall 1973 crop combined with continued heavy use by processors resulted in record high fresh potato prices at all marketing levels during the first half of 1974. Fresh potato prices in the late summer and fall moderated as increased potato supplies became available. Fresh onion prices in 1974, at both farm and retail levels, were sharply below record high prices in 1973 as much larger onion supplies were available in 1974. The farmer's share of the retail price of fresh vegetables averaged 34 percent in 1974, slightly less than in 1973.

Considerably higher raw product prices, increased processing and other marketing costs, smaller supplies, and strong demand contributed to much higher retail prices for almost all canned and frozen fruits and vegetables in 1974. Retail prices for most items increased steadily all year. For the first time, retail prices changed more for processed items than for the usually more volatile fresh items.

Supplies of canned deciduous fruit were extremely short in the first half of 1974. Although more abundant supplies became available in the second half of the year, higher raw product prices and much higher processing costs, including increases for labor, sugar, containers, and machinery, resulted in an increase in retail prices of most products. Retail prices of processed citrus products also rose in 1974, primarily the result of higher processing and distribution costs, but increases were usually smaller than for noncitrus products.

Canned and frozen vegetable supplies for most of 1974 were slightly larger than the relatively light supplies a year earlier but increased processing costs and continued strong demand resulted in higher retail prices. Both the farm value (raw product price) and the total marketing spread for most processed fruits and vegetables were higher in 1974 than a year earlier. In many cases the farm value increased more than the marketing spread. The farmer's share of the retail price of processed fruits and vegetables averaged about 21 percent in 1974, up slightly from 1973.

Oilseed Products

Manufacturers of margarine, cooking and salad oils, and shortening use over four-fifths of the U.S. production of soybean and corn oils and almost three-fifths of the cottonseed oil. Soybean oil is the leading fat or oil used in the manufacture of these products. It accounts for about 80 percent of the fats and oils used in making margarine, over 70 percent of the oils

used in cooking and salad oil, almost 60 percent of the fats and oils going into the manufacture of shortening.

Prices of food oils were record high in 1974 due to several factors. The U.S. supply of oil was tight partly because the 1974 soybean crop was 20 percent less than the 1973 crop, lard and butter production decreased, and a drought in the Philippines restricted coconut oil imports. This was coupled with a strong demand for oil to build up supplies.

Soybean farmers received an average of \$5.57 a bushel for their soybeans for the 1973/74 crop year. This was the highest price on record and was \$1.20 more a bushel than the record set in 1972/73. Country shippers received an average of \$6.12 a bushel, 10 cents a bushel less than the previous year. The country shipper's margin dropped from a record high of 30 percent in 1972/73, which resulted from the steep rise in prices shortly after farmers sold their soybeans, to 9 percent in 1973/74 which was still higher than that received in most years. Soybean mills realized their second largest margin in the last 20 years--10.5 percent for the 1973/74 crop year, compared with 8.7 percent for the previous year.

Farmers received an average price of \$100 a ton for cottonseed during the 1973/74 crop year, double the price received the previous year. The value of the cottonseed products after crushing (oil and meal) was \$184, the highest in 20 years. However, the milling margin declined from 59 to 46 percent of the value of products after crushing.

Retail prices of fats and oils products rose sharply in 1974 reflecting higher oil prices and marketing spreads. For instance, the U.S. average retail price of a pound of margarine was 57.4 cents in 1974, almost 20 cents a pound higher than in 1973. Margarine prices changed little during the 1960's but they have more than doubled in the past 5 years. The farm-to-retail spread was 29.8 cents in 1974, up 6.4 cents from 1973. There was little change in the spread during the 1960's but it has increased in 4 of the last 5 years. The farm value of fats and oils fluctuates from year to year in response to changing supplies and prices of fats and oils. Returns to farmers for the fats and oils and a small amount of dry milk solids used in margarine ranged between 25 and 30 percent of the retail price up to 1973, when the farmer's share increased to 37 percent of the retail price. In 1974, the farmer's share of the retail price jumped to 48 percent.

Bread

Because the cost of the wheat in a loaf of bread represents only a small share of the retail price, the retail price is strongly influenced by changes in marketing costs. In 1974, the retail price of a 1-pound loaf of white pan bread averaged 34.5 cents, a record 6.9-cent annual increase over 1973 (fig. 7). This large year-to-year increase reflected a sharp rise in prices in late 1973 and the early part of 1974 after the easing of economic controls. Prices continued to rise during the year and in December averaged 36.4 cents per 1-pound loaf.

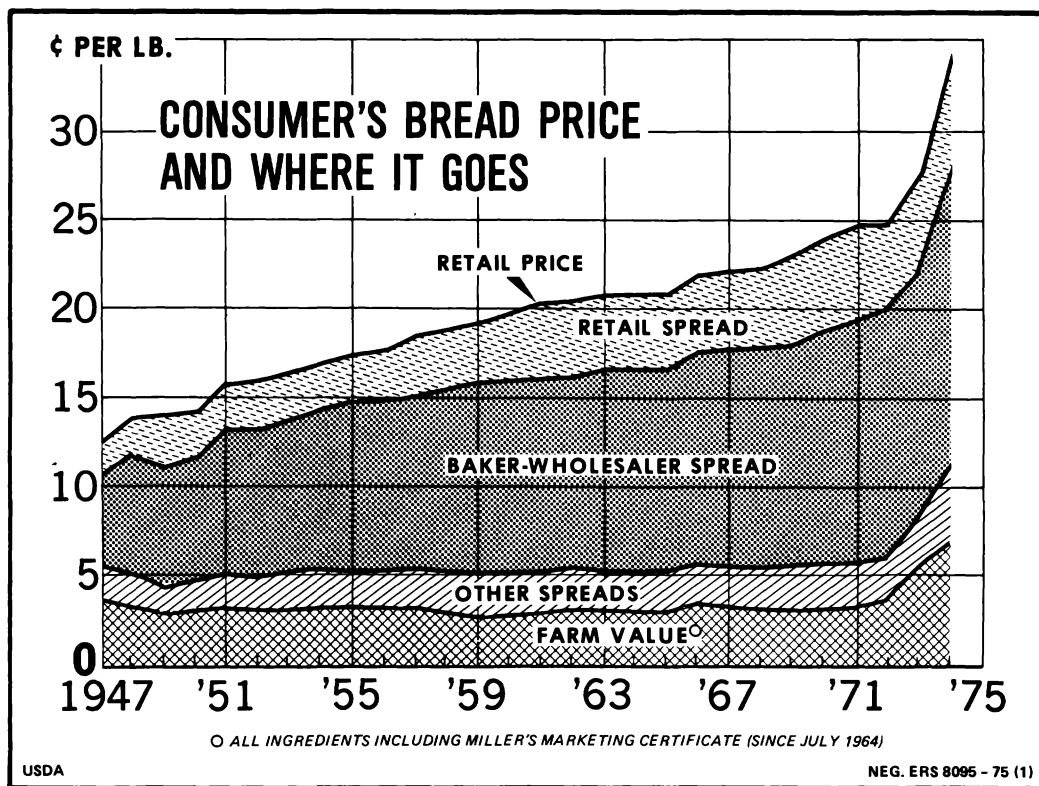


Figure 7

Most of the increase in bread prices in 1974 was due to widening marketing spreads. The baker-wholesaler spread, which accounts for about half of the retail price, increased the most--about 3 cents per loaf of bread. The retail price spread, which makes up slightly less than a fifth of the retail price, rose 0.4 cent. The miller's spread of 1 cent was the same as in 1973.

The farm value of wheat and other ingredients averaged 7.9 cents in 1974, more than double the average of any previous year except 1973. Unprecedented world demand and reduced supplies resulted in record-high wheat prices last year. The farmer's share of the price of bread increased from 20 percent in 1973 to 23 percent last year.

Sugar

Sugar prices rose faster than most other farm commodity prices during 1974 as the world supply progressively tightened. The retail price for sugar more than doubled, and for the year averaged \$1.62 for 5 pounds. The farm value for 5 pounds of domestically produced sugar nearly tripled, rising from 33 cents in 1973 to 97 cents last year. Consequently, the farmer's share of the retail price rose from 44 to 60 percent. The farm-retail spread increased from 42 cents to 65 cents. Prices rose throughout most of the year and in the fourth quarter the retail price for 5 pounds of sugar averaged \$2.52, with returns for farmers averaging \$1.50. Rising sugar prices hiked prices for many sugar-using products in the market basket, including ice cream and bakery products.

MARKETING COSTS AND MARGINS FOR SELECTED FOODS

The food dollar pays for all the services involved in producing, processing, and distributing food. A major factor in widening marketing margins and rising food prices in recent years has been large cost increases in nearly all phases of food production and marketing. For 1972 and 1973, special estimates of marketing costs and margins have been made for a number of major food items purchased by consumers in retail stores. These estimates help us to better understand the uses to which our food money is put and to analyze the cause of rising food costs. Data for the estimates of margins and costs for most items were provided by a small number of firms and obtained from various industry studies and other secondary sources, updated by cost indexes where necessary.

Distribution of Food Dollar by Function

The retail prices of 22 foods broken down by function--retailing, wholesaling, processing, assembly, and farm value--are shown in table 2. Margins for various functions represent the spread between two market values or the sum of estimated costs of a function, and do not necessarily represent the actual margins of an individual firm or group of firms performing the function.

Among the products shown, the farmer's share and margins for different functions vary widely (fig. 8). There are many reasons for this variation. To a large degree, differences in the size of margins reflect complexity of the marketing job that must be performed and the characteristics of the product.

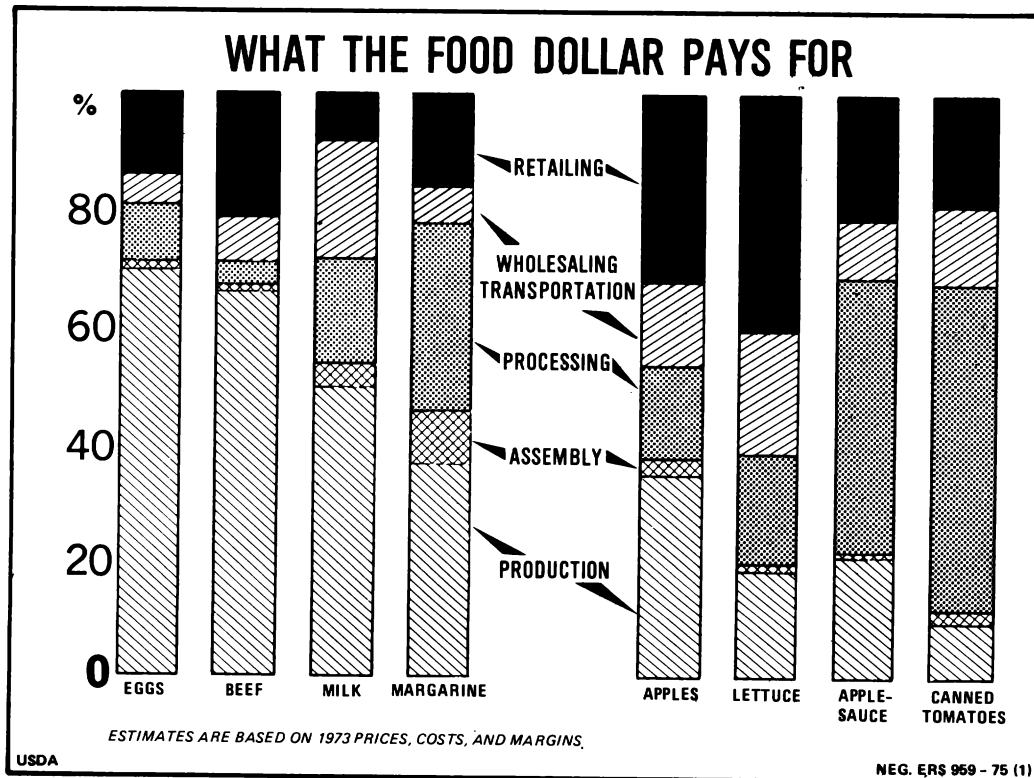


Figure 8

Table 2.--Distribution of retail price according to farm value and marketing function, 22 farm food products, 1973

Food item	Farm value 1/	Marketing functions					Retail price
		Assembly and pro- curement	Process- ing	Intercity transpor- tation	Wholesale- ing	Retail- ing 2/	
		Cents					
Beef, Choice (pound)	89.9	1.5	5.8	1.1	8.9	28.3	135.5
Pork, (pound)	71.5	1.8	12.9	1.1	2.4	20.1	109.8
Broilers, (pound)	35.3	1.2	6.7	1.1	2.9	12.4	59.6
Eggs, grade A or AA large (dozen) ..	54.4	.9	8.1	1.2	2.8	10.7	78.1
Milk, sold in stores (½ gallon) ..	33.2	2.5	11.6	3/	13.0	5.1	65.4
Butter, (pound)	62.9	3.2	5.1	1.4	2.0	17.0	91.6
Apples (3 pound bag)	30.4	2.9	14.2	5.8	5.9	28.1	87.3
Oranges, Calif. (dozen)	32.9	1.5	16.8	10.3	6.9	57.0	125.4
Tomatoes, Florida (pound)	13.6	.5	4.8	3.0	11.0	16.6	49.5
Lettuce, Calif. (head)	7.8	.3	7.9	6.1	2.9	16.8	41.8
Potatoes (10 pound bag)	49.8	4/	22.1	12.6	3.9	34.1	122.5
Applesauce (303 can)	5.3	.3	12.2	.9	1.8	5.4	25.9
Orange juice (46-ounce can).....	13.0	.9	19.1	6.8	5/	9.5	49.3
Orange juice, frozen (6-oz. can) ..	8.2	.5	6.5	1.1	3.2	5.6	25.1
Tomatoes, Calif. whole (303 can) ..	2.4	.5	13.9	2.2	1.1	4.6	24.7
Tomato catsup, Calif. (14-oz. bot.)	3.6	.7	15.6	2.9	3.5	5.4	31.7
Potatoes, fr. fr. (9-oz. package) ..	4.3	4/	8.5	1.0	1.0	2.4	17.2
Bread, white (pound)	4.1 6/	.3	8.4 7/	.3 8/	9.1	5.4	27.6
Rice, long grain (pound)	16.9	4/	9.2 9/	-	-	4.7	30.8
Salad and cooling oil (24-oz.) ...	21.9	6.2	31.3	1.6	3.5	6.1	70.6
Margarine, (pound)	14.0	3.5	11.8	.4	1.8	5.9	37.4
Vegetable shortening (3 pounds) ..	48.8	13.0	36.4	1.6	5.5	5.3	110.6

1/ The farm value is the gross return to farmers for the quantity of farm products equivalent to the unit sold at retail minus imputed value of byproducts. Because of losses from processing, waste, and spoilage the farm value represents larger quantities than the retail unit. 2/ In-store costs only. Headquarters and warehousing expenses are included in wholesaling. 3/ Included in wholesaling. 4/ Included in farm value. 5/ Implicitly included in costs of other functions. 6/ Wheat only, other ingredients included in processing. 7/ Flour milling and bread baking. 8/ Flour only. 9/ Milling, packaging, transportation and wholesaling combined.

For most products, the more work that must be done in changing the form of a product and providing service to satisfy the consumer, the greater the costs for processing. The processing or packing margins are less than a fifth of the retail price for meat and dairy items, broilers, eggs, and fresh produce items which undergo relatively little change in form. In contrast, they are around half the retail price of applesauce, canned tomatoes, and catsup.

The bulkiness and weight of products in relation to value account for differences in transportation costs among products. Costs of shipping meat, dairy, and poultry products, which are relatively dense in volume and of high value, account for only 2 or 3 percent of the retail price. But shipping costs for fresh produce and most canned and bottled products are much higher, ranging up to 10 percent or more of the selling price.

Marketing perishables is usually more costly than marketing other products, partly because of a comparatively high amount of spoilage and waste, and selling space occupied in the retail store. Of the items studied, the retail margin was highest for oranges, apples, lettuce, and tomatoes, averaging about two-fifths of the retail price, about double the retail margin for most other products.

The complexity of the various marketing functions explains in part the farmer's share of the retail price. Among the products shown, the farmer's share ranges from about 10 percent for canned tomatoes to 70 percent for eggs. Much of this great difference reflects the relative amounts of processing of the products, perishability and bulk, and overall amount of marketing services performed. In addition, the farmer's share reflects the amount of resources used up in farm production in relation to the marketing functions performed. Thus, the farmer's share of the retail price is generally greater for animal products than for crop-based foods. Because of the many factors that affect the way margins break down among marketing agencies and farm production, the size of the various shares usually does not mean greater or less return or efficiency of one activity over another.

Dollar margins of most items increased at all levels of marketing in 1973 over a year earlier, reflecting higher retail prices. Increases in both processing and retailing margins varied widely among products. For example, processing margins of nine items rose between 4 and 9 percent, and four items rose around 15 percent. While dollar margins rose, increases in farm value accounted for most of the increase in retail prices between 1972 and 1973 and the farmer's share of the retail prices of 13 items increased.

Distribution of Marketing Margins by Expense Item

Marketing margins of 10 items, broken down by cost item such as labor and packaging, are shown in table 3. The largest portion of the total marketing margin for most items is attributed to combined labor costs at each level of marketing. For beef, pork, broilers, apples, and potatoes, labor costs account for around two-fifths of the margin. This figure actually understates the importance of labor because assembly and wholesaling costs for most products could not be allocated into labor and expense items because of lack of data.

Table 3.--Distribution of consumer's dollar according to cost items, 10 leading farm food products, 1973

Item	Beef, Choice (pound)	Pork (pound)	Broiler (pound)	Eggs, grade A or AA large (dozen)	Fresh milk sold in stores ($\frac{1}{2}$ gallon)	Apples (3- pound bag)	Frozen conc. orange juice, Florida (6-ounce can)	Canned orange juice, Florida (46-ounces)	Fresh potatoes (10-pound bag)	White bread (1-pound loaf)
	<u>Cents</u>									
Retail price	135.5	109.8	59.6	78.1	65.4	87.3	25.1	49.3	122.5	27.6
Farm value	89.9 ^{1/}	71.5	35.3	54.4	33.2	30.4	8.2	13.0	49.8	4.1 <u>1/</u>
Marketing margin	45.6	38.3	24.3	23.7	32.2	56.9	16.9	36.3	72.7	23.5
Labor	17.9	16.1	10.4	7.6	14.1	22.4	4.5	7.7	27.2	11.0
Packaging	3.1	1.6	1.4	3.8	3.1	5.4	2.4	10.7	6.5	1.2
Transportation	1.7	1.7	2.3	2.1	3.6	6.2	1.6	7.7	12.9	.3
Business taxes	1.1	.9	.6	.7	1.2	1.3	.2	.4	1.6	.4
Depreciation .....	.8	1.1	.6	.5	1.4	.9	.3	.8	1.8	.6
Rent .....	.9	1.1	.5	.1	.5	.9	.3	1.3	1.2	.2
Repairs .....	.5	.8	.5	.2	1.3	.6	.3	.6	1.1	.2
Advertising	2.2	1.9	.9	1.3	1.7	1.3	.8	1.5	2.0	1.2
Interest .....	.6	.5	.2	.3	.2	.8	.2	.4	.7	.2
Energy .....	.8	1.5	.8	.4	.7	1.1	.4	.5	1.9	.2
Other	3.2	4.7	1.8	2.1	2.1	4.1	.9	2.5	4.4	6.6 <u>2/</u>
Profit	2.4	2.2	1.4	1.8	2.3	3.5	1.8	2.2	3.9	1.4
Unallocated <u>3/</u>	10.4	4.2	2.9	2.8	-	8.4	3.2	-	7.3	-
	<u>Percent</u>									
Share of marketing margin:										
Labor	39	42	43	32	44	39	27	21	38	46
Packaging	7	4	6	16	10	10	14	30	9	5
Transportation	4	5	10	9	11	11	9	21	18	1
Business taxes	2	2	2	3	4	2	1	1	2	2
Depreciation	2	3	2	2	4	2	2	2	2	2
Rent	2	3	2	1	2	2	2	4	2	2
Repairs	1	2	2	1	4	1	2	2	1	1
Advertising	5	5	4	5	5	2	5	4	3	5
Interest	1	1	1	1	1	1	1	1	1	1
Energy	2	4	3	2	2	2	2	1	3	1
Other	7	12	7	9	6	7	5	7	6	28 <u>2/</u>
Profit	5	6	6	7	7	6	11	6	5	6
Unallocated <u>3/</u>	23	11	12	12	-	15	19	-	10	-
Total	100	100	100	100	100	100	100	100	100	100

^{1/} Cost of wheat only.^{2/} Includes cost of non-flour ingredients to the baker of 2.5 cents.^{3/} Consists mainly of assembly, storage and wholesaling charges which could not be allocated to cost components because of lack of data.

With labor cost so important throughout the marketing system, the large increases in wages and salaries of workers over the years have been a major cause of rising margins and food prices. Gains in productivity of labor partially offset rising wages and salaries in most years, but increases in output per unit of labor the past several years have not been sufficient to keep labor costs in marketing from rising substantially.

After labor, transportation and packaging are the major cost of marketing most foods. For eggs, the cost of the carton and other materials accounted for 16 percent of the total margin. Packaging costs vary widely among products depending on the container used and the share of packaging costs at retail allocated to the product. Costs ranged from 5 to 10 percent of marketing margins for beef, pork, apples, and bread to 30 percent for canned orange juice. Transportation costs also varied widely among items, ranging from around 5 percent of beef and pork margins to around 20 percent for canned orange juice and potatoes, which are more bulky and lower in value relative to their weight. Most other individual items of marketing expense, including advertising, capital costs, and repairs, are relatively small items of expense accounting for less than 5 percent of the margin. Similarly, profit taken by marketing firms before taxes accounted for around 5 percent.

THE MARKETING BILL

Another measure of food marketing costs is our marketing bill statistics. The marketing bill is an estimate of the total charges by marketing firms for transporting, processing, and distributing U.S. farm foods. It is the difference between total consumer expenditures for farm foods, including foods consumed away from home, and total payments to farmers for food products. Unlike the market basket statistics, the marketing bill statistics are affected by changes in volume and type of products marketed as well as price changes. The marketing bill accounts for two-thirds of consumer food expenditures, and is almost double the amount received by farmers for food products (fig. 9).

In 1974, consumers spent an estimated \$154 billion for foods originating on U.S. farms, \$20 billion more than the previous year. The marketing bill was \$100 billion, up \$16 billion from 1973. In 1974, farmers received \$54 billion for food products bought by civilian consumers, \$4 billion more than in 1973. Increases in crop prices accounted for much of this rise in farm value.

The marketing bill is the sum of charges made by various marketing agencies, including processors, wholesalers, retail stores, and away-from-home eating places (fig. 10). Food processing costs account for the largest proportion, about 34 percent of the total bill. Retail food store charges account for around 29 percent. Charges connected with preparing and serving food in eating places, including institutions such as schools and hospitals, make up around 23 percent of the total food marketing bill. Assemblers and wholesalers divide the remaining 14 percent. Over the past 10 years, processing costs as a proportion of the marketing bill have declined while the share taken by distribution agencies increased.

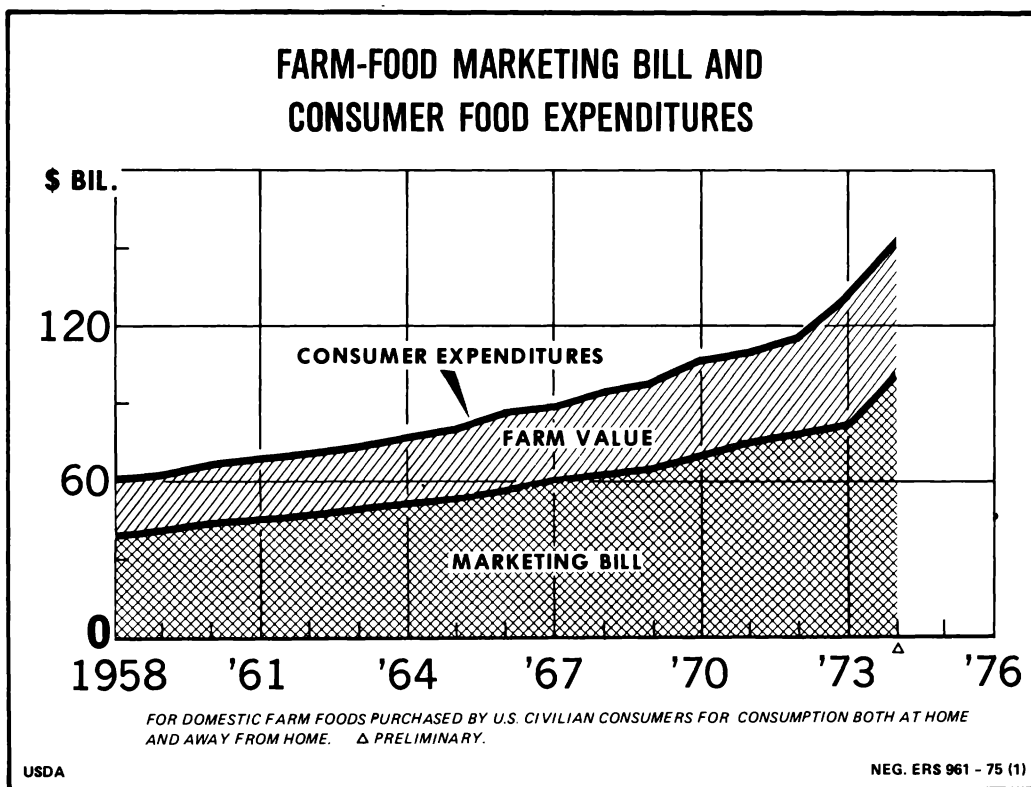


Figure 9

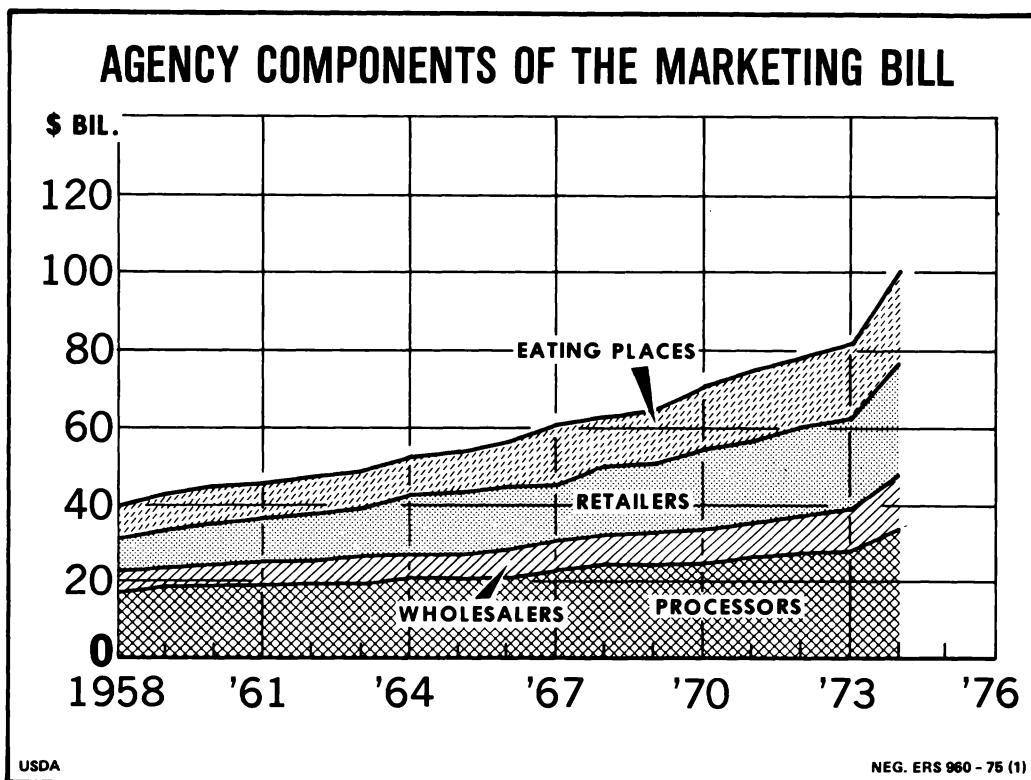


Figure 10

Among commodity groups, marketing charges are the largest for meat products, amounting to \$25 billion, or slightly less than \$1 out of every \$2 spent by consumers for meat products. Marketing charges for fruit and vegetable products are nearly as large but account for a greater proportion, roughly \$3 out of every \$4 of consumer fruit and vegetable expenditures. Marketing charges for most other foods are substantially larger than the return to farmers for these products and therefore account for the major portion of the food dollar.

Factors in the Rise of the Marketing Bill

In the last decade, the food marketing bill rose \$47 billion, an annual average of 6.7 percent. Last year the bill increased 22 percent, due mainly to increases in prices of inputs and labor bought by marketing firms, and increased profits.

Over the past decade, increases in marketing costs per unit of product were responsible for three-fifths of the total increase in the marketing bill. Most of the increase in cost occurred in the last 5 years, as labor and other costs rose sharply. In recent years there has been little increase in the food marketing bill attributable to more processing and preparation of food, and other services per unit of product marketed. Costs of these added services accounted for less than one-eighth of the increase in the bill for marketing food in the past decade. Costs of marketing a growing volume of food--between 1 and 2 percent more each year--caused slightly more than one-fourth of the increase in the marketing bill.

At-Home Versus Away-From-Home Eating

A large and expanding part of the marketing bill is the cost associated with food eaten away from home. Expenditures for food consumed in restaurants and other eating places, including institutions, were \$44 billion in 1974, or 29 percent of total food expenditures.

The marketing bill for away-from-home eating is larger relative to consumer expenditures than that for at-home eating. The at-home marketing bill amounted to \$65 billion in 1974 and accounted for about three-fifths of consumer expenditures for food bought for use at home. In contrast, the away-from-home marketing bill of \$35 billion accounted for 78 percent of away-from-home expenditures for food. The larger proportion for restaurants and institutions reflects the added cost of preparing and serving food.

Paralleling the growth in away-from-home eating, the largest rate of increase in food marketing costs has been in the away-from-home bill. Between 1964 and 1974, marketing charges associated with food bought in restaurants and institutions more than doubled. In contrast, the costs of marketing farm foods that are purchased in retail food stores rose about 72 percent.

The away-from-home market has grown slightly more as a market for farm products than the food store market. The value of farm products moving through away-from-home channels increased 121 percent--from \$4.2 to \$9.3 billion--between 1964 and 1974. In comparison, the dollar value of products going through food stores rose 117 percent, from \$20.7 billion to \$45 billion.

Cost Components

Labor: Labor is the largest cost incurred by firms processing and distributing farm food products, accounting for close to half the marketing bill in recent years (fig. 11). In 1974, labor costs amounted to over \$46 billion, 14 percent more than in 1973. Food processing, retailing, and eating place labor costs were between \$13 and \$14 billion each. Wholesalers spent over \$5 billion for labor. Labor costs of all agencies have been rising but in the last 10 years the increase in distribution costs--retailing, wholesaling, and away-from-home eating--has been about a third greater than the increase in processing costs.

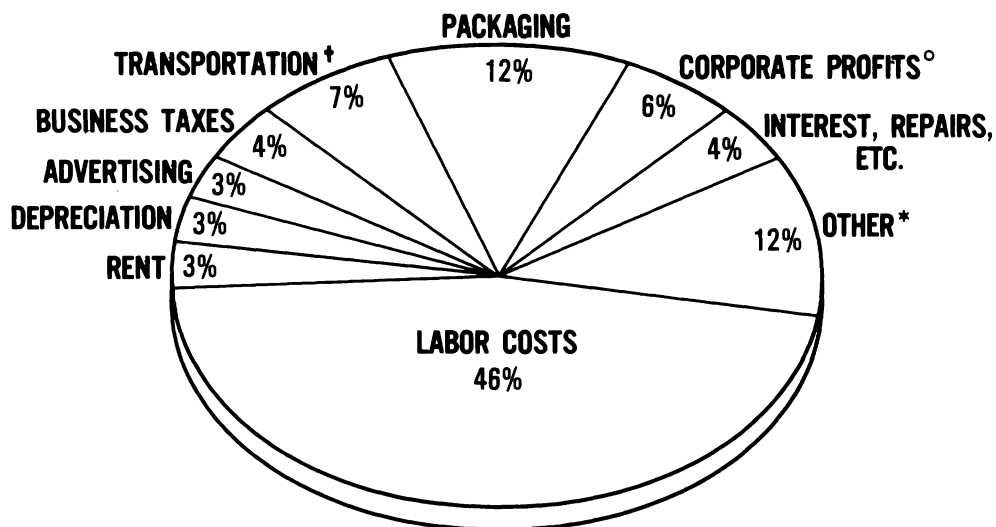
Changes in the labor component of food marketing costs are closely linked to trends in wages and salaries, and in productivity. Hourly earnings of food marketing employees in 1974 rose at a much faster rate than in other recent years (fig. 12). Employees of food marketing firms earned an average of \$4.14 per hour in November 1974, 10.6 percent more than in November 1973. This compares with annual increases of between 6 and 7 percent in both 1973 and 1972. Increases in hourly earnings of employees last year averaged 11.3 percent in retailing, 10.3 percent in wholesaling, and 9.7 percent in food manufacturing. Wage settlements this past year appear to reflect attempts to "catch up" with the general trend in wages and living costs. Food marketing wages rose less than the average of wage increases in the private economy in 1972 and 1973.

Over the years, increases in productivity (output per unit of labor) have partially offset rising wages and salaries of food marketing workers. Thus, while hourly labor costs have risen by 64 percent since 1967, increases in productivity have limited the rise in per unit labor costs to 50 percent. Unit labor costs rose about 12 percent in 1973 because total output and output per man-hour fell while employee compensation went up sharply. Although complete data are not available, the increase in unit labor costs in 1974 was probably smaller than in 1973.

Containers and Packaging: Food containers and packaging materials are the second largest cost component of the marketing bill. The cost of these materials for marketing farm foods probably amounted to between \$12 and \$13 billion in 1974.

Prices of packaging materials rose substantially in 1974, reflecting rising costs of basic raw materials, particularly petroleum products, and tight supplies of some materials. Much of the rise in prices occurred after price controls were ended in April.

COMPONENTS OF BILL FOR MARKETING FARM FOODS, 1974^Δ



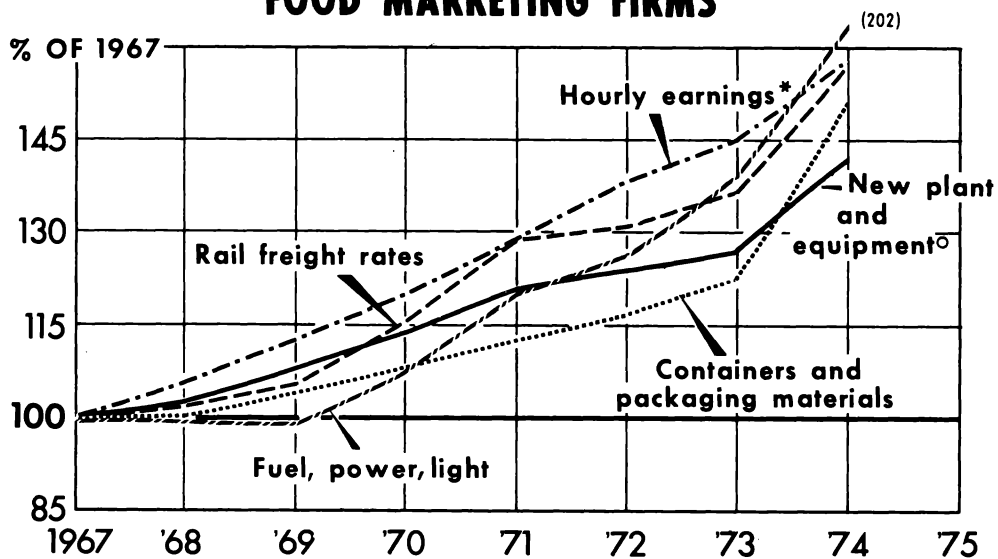
*RESIDUAL INCLUDES SUCH COSTS AS UTILITIES, FUEL, PROMOTION, LOCAL FOR-HIRE TRANSPORTATION, INSURANCE.
 °BEFORE TAXES. †INTERCITY RAIL AND TRUCK. ΔPRELIMINARY DATA.

USDA

NEG. ERS 8452 - 75 (1)

Figure 11

PRICES OF INPUTS USED BY FOOD MARKETING FIRMS



*PRODUCTION WORKERS IN FOOD PROCESSING AND NONSUPERVISORY WORKERS IN FOOD WHOLESALING AND RETAILING.
 °GNP IMPLICIT PRICE DEFLATOR FOR PRODUCERS' DURABLE EQUIPMENT AND NONRESIDENTIAL CONSTRUCTION.

USDA

NEG. ERS 8456 - 75 (2)

Figure 12

Prices of retail containers, which account for about one-fourth of all food packaging, increased 25 percent from April to August 1974, nearly 3 times the increase in prices for the prior 12-month period during price controls. Prices of paper products, which represent nearly two-fifths of all packaging materials, increased 13 percent from April to August, nearly equaling the prior 12-month increase. Plastic containers and wraps experienced one of the largest price increases last year. For instance, prices of polyethylene film rose 40 percent from January to August. Prices of glass containers generally increased less than prices of other major food packaging materials.

Transportation: Truck and rail transportation costs are the third largest component of the food marketing bill. These transportation costs increased nearly 20 percent in 1974, to \$7.3 billion. This increase of \$1.2 billion was considerably larger than any previous year-to-year change. However, there were some unusual cost increases for inputs into transportation not previously encountered, and the increase came after 2 years of virtually no change in food transportation costs.

Prior to late 1973, wage rate increases were the principal justifications for all rail rate increase proposals. In 1973, Congress increased the railroads' contributions to employees' pension fund, and beginning about mid-1973, fuel costs escalated very rapidly. Several rate increases were authorized by the Interstate Commerce Commission to cover these cost increases. The impacts of these increases occurred mostly in 1974. These were in large measure one-time increases and, except for any new cost effects resulting from energy conservation measures that may be taken, comparable increases in food transport costs are not expected to accrue in 1975.

Another one-time increase was a 10-percent increase in rail rates authorized in June 1974. The revenues generated by this increase were earmarked by the Commission for deferred maintenance and other property improvements intended to improve service for shippers.

Truckers' operating costs also have been increasing as a result of higher fuel costs and reduced speed limits. Fuel availability also was uncertain during most of the winter of 1973-74. A special 6-percent rate increase was granted in February 1974 to cover the increased fuel costs. Limited data suggest that exempt truck rates also increased over the period.

The Federal Highway Amendment of 1974 included a permanent speed limit of 55 miles per hour but authorized an increase in the weight of trucks to be allowed on interstate highways, from 73,000 to 80,000 pounds. Since some rate increases in addition to those already granted may be justified by the reduction in speed limits, the provision for making the 55 miles per hour speed limit permanent may result in some rate increases in 1975. The increased truck weight limits will not immediately result in reduced trucking costs in all cases. Laws on truck sizes and lengths limit the loads carried for some low-density commodities that fill the available space before reaching the weight limit. Some agricultural commodities are sufficiently heavy that the new weight limit will prove beneficial. Among these are most of the grains, soybeans, some fruits and vegetables, and boxed meats.

Corporate Profits

Before-tax profits earned by corporate firms from marketing U.S. farm foods in 1974 are expected to total nearly \$6 billion, up from \$4.6 billion in 1973. The increase reflects both higher sales and larger profit margins.

Profits of leading food chains, which were squeezed in 1972 and 1973, averaged 0.9 percent of sales in the first 9 months of 1974, up from 0.6 percent a year earlier. Although complete data are not available, this increase in profit margins suggests that returns on stockholders' equity increased substantially from the 8.2 percent in 1973.

Profit of food manufacturers as a percentage of sales have been relatively stable over the years, based on data compiled by the Federal Trade Commission, averaging 2.6 percent of sales in nearly every year since 1967. However, returns on stockholders' equity have increased gradually in recent years, from 10.8 percent in 1970 to 12.8 percent in 1973. This upward trend parallels the trend in returns on investment by all manufacturing industries. Although changes in accounting methods by the FTC make the data imperfectly comparable with earlier years, profits of food manufacturers averaged 15.5 percent of stockholders' equity and 3 percent of sales in the third quarter of 1974.

CONCEPTS AND PROCEDURES FOR ESTIMATING FARM-RETAIL PRICE SPREADS

Because ERS provides much of the basic information for monitoring and interpreting current changes in food prices and marketing costs and margins, ERS is often asked how it arrives at these estimates. At congressional hearings on food prices in the fall of 1974, retailers and processors presented information on margins which in some instances differed from ERS price spreads, particularly for beef and pork. Questions that arose demonstrated a need for more information about methods and procedures used by ERS in computing price spread statistics. Some of the major points and issues are summarized here.

Measurement

ERS measures and publishes farm-retail price spreads for a market basket of farm-originated foods and for 65 individual foods such as beef and pork. The market basket contains the average quantities of domestic farm-originated foods purchased annually by an urban household in a base period in retail food stores. Foods that consumers buy in away-from-home eating establishments are not included. The following information is computed: (1) retail cost to consumers; (2) farm value; (3) farm-retail spread; and (4) the farmer's share of the consumer's food dollar.

For a variety of reasons, including minimizing costs of data collection, and ensuring objectivity of procedures and reliability of information over time, an effort is made to make the greatest possible use of published prices and other available statistical information for computing estimates of price spreads. However, it is sometimes necessary to obtain additional information through surveys to fill data gaps, such as the effect of sales at special prices on average retail beef and pork prices. The prices used in computing

price spreads are the best available. These include the Bureau of Labor Statistics retail prices collected monthly in 56 cities, and USDA farm prices reported by the Statistical Reporting Service and the Agricultural Marketing Service (Market News). These data are supplemented with price information from other Government sources and the trade. The farm-retail spread is only as accurate as the retail prices and farm values from which they are derived. While retail prices are subject to sampling and reporting errors, they are considered to be quite accurate.

Uses of Estimates

The major purpose of price spread statistics is to measure variations over time in prices--changes in retail prices, farm prices, and prices of (or charges for) services associated with marketing. These data enable changes in retail prices of farm foods to be disaggregated into changes in marketing charges and farm prices. Analyzing price spreads over time provides some insights into the nature and causes of the changes that have occurred.

Price spread statistics have been computed by the U.S. Department of Agriculture since the early 1930's as a result of strong and continuing congressional interest in the distribution of the consumer's food dollar. Over the years these data have contributed to better public enlightenment regarding changes in food prices and their causes. These statistics provide basic intelligence and frequently are the best information available for answering scores of requests from producers, retailers, processors, public agencies, and consumers. These data are regularly reviewed and periodically revised to ensure that the best procedures and all available information are employed in estimating price spreads.

Farm-retail price spreads measure approximate charges for various marketing functions. They are not designed to measure actual margins as defined and reported by retailers or processors for their specific business activities.

Following is a discussion of some principal points regarding price spread calculations for meat, particularly Choice beef:

1. Farm-carcass and carcass-retail price spreads are not actual packer and retailer margins.

ERS price spread series for Choice beef and pork are often mistakenly considered to be only the packer and retailer margin. In fact, as the term implies, ERS price spreads are the differences between the value of the product at selected points or prices in the channel from the farm to consumer. Price spreads for beef and pork include costs for various other marketing, transportation, and distribution functions in addition to packing and retailing costs. Other reasons for differences in price spreads and actual margins for firms may include the mix of cuts and grade of meat handled, the gradual decline in breaking beef carcasses at the retail store, and amount of carcass trimming and waste.

2. Price spreads are computed from estimated U.S. average retail prices, adjusted for sales at special prices.

USDA price spreads are calculated from BLS prices and data obtained from an ERS weekly retail meat price survey of 40 chain divisions throughout the country. BLS prices for Choice beef are used because they are collected from a large representative sample of stores. However, BLS prices represent only seven major cuts. Price information provided by the 40 chainstores is used for obtaining a composite value of all cuts in a carcass. Cuts are selected to represent the entire carcass and to represent the large number and variation in cuts which are handled by most firms. The 40-chain data also are used to adjust the absolute level of the BLS prices to reflect sales at special prices and to obtain an average price for the month. A study is now underway to check the accuracy of procedures and coefficients used to reflect the effect of specials and, if possible, to improve these procedures. The full cooperation of retailers is needed and has been requested for this important research.

3. Price spreads are computed from only Choice grade beef prices.

Choice beef prices are used in estimating price spreads because most beef sold is Choice grade. To measure price changes, prices must be for a uniform product such as Choice grade. The recent appearance of larger quantities of lower grade beef is a result of high feed grain prices and a change in the relationship between fed cattle prices and feeder cattle prices. It may be a short-term phenomenon. Whether it will continue will depend on consumer acceptance, grade changes, as well as feed grain prices. Movements in the costs of handling Choice beef and lower grades of beef should be similar over the long run.

4. Dressing and cutting conversion factors are based on typical market weights and standardized rather than actual yields for Choice beef.

A dressing yield of 62 percent for live animals and a cutting yield of 74.6 percent for Choice carcasses are used in deriving carcass and retail values needed to estimate price spreads. A 5-percent retail shrink factor to cover spoilage, shrinkage, refacing and pilferage lowers the cutting yield from 74.6 to 70.9 percent. Yield factors and other procedures are held constant over a period of time so that the spread estimates measure price changes for relatively comparable meat slaughtering, processing, transportation, and retailing services. Otherwise, spreads would show variations that could not necessarily be interpreted as price changes. The larger proportions of heavy cattle and hogs marketed in 1974, which tend to have lower average yields, may not have been fully reflected in price spreads.

As a part of a general revision of procedures to take account of changing industry practices, changes were made in 1969 in the yield of salable retail products per 100 pounds of Choice carcass based on data reported to ERS by retail chains. Future revision of yield conversion factors will be largely influenced by the extent of changes in the average product moving through the system, and the availability of accurate data on dressing and cutting yields from a representative group of retail chains and packers.

5. Most price spreads are based on prices for about the same time period at all market levels.

Most price spread estimates are based on approximately concurrent farm and retail prices. Since some time elapses between sale of products by farmers and purchase by consumers, it may be contended that retail price should be compared with farm value at an earlier date, resulting in lagged price spreads. However, this time span varies widely among products and geographic area. Information is not adequate for estimating the average time span for most market basket foods. In addition, monthly retail and farm prices which are used in calculating spreads for most products would allow a lag too long for many perishable products and too short for many processed ones.

It is known that the lag from the time cattle leave the farm until the consumer purchases the meat is about 2 weeks for beef and from 2 to 4 weeks for pork, depending on whether the cut is fresh or processed. The price, however, does not necessarily follow the meat during its movement through the channel. Farm and carcass price changes usually occur during the same week. Retailers tend to set prices at the end of the week prior to week of sale. Analysis of lagging prices by various amounts indicates that lagging prices by 1 week may reduce the weekly variation in the carcass-to-retail or wholesale-to-retail price spreads for beef and pork, but monthly or quarterly price lagging does not appear to change the results. Inclusion of lags in the price spread procedures, using weekly prices presently obtained from 40 retail chain divisions, is under consideration.

6. Carcass beef prices used in price spread procedures are only for Chicago and West Coast markets, and wholesale pork prices are only for Chicago.

While wholesale prices of meat tend to move similarly throughout the United States, plans are being made to expand the geographic coverage to obtain more representative prices. Use of price quotes from various areas will also eliminate the need for the transportation differential now used to correct price quotes from the cities used to a U.S. average. Meanwhile, transportation differentials are being updated to reflect transportation cost increases.

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