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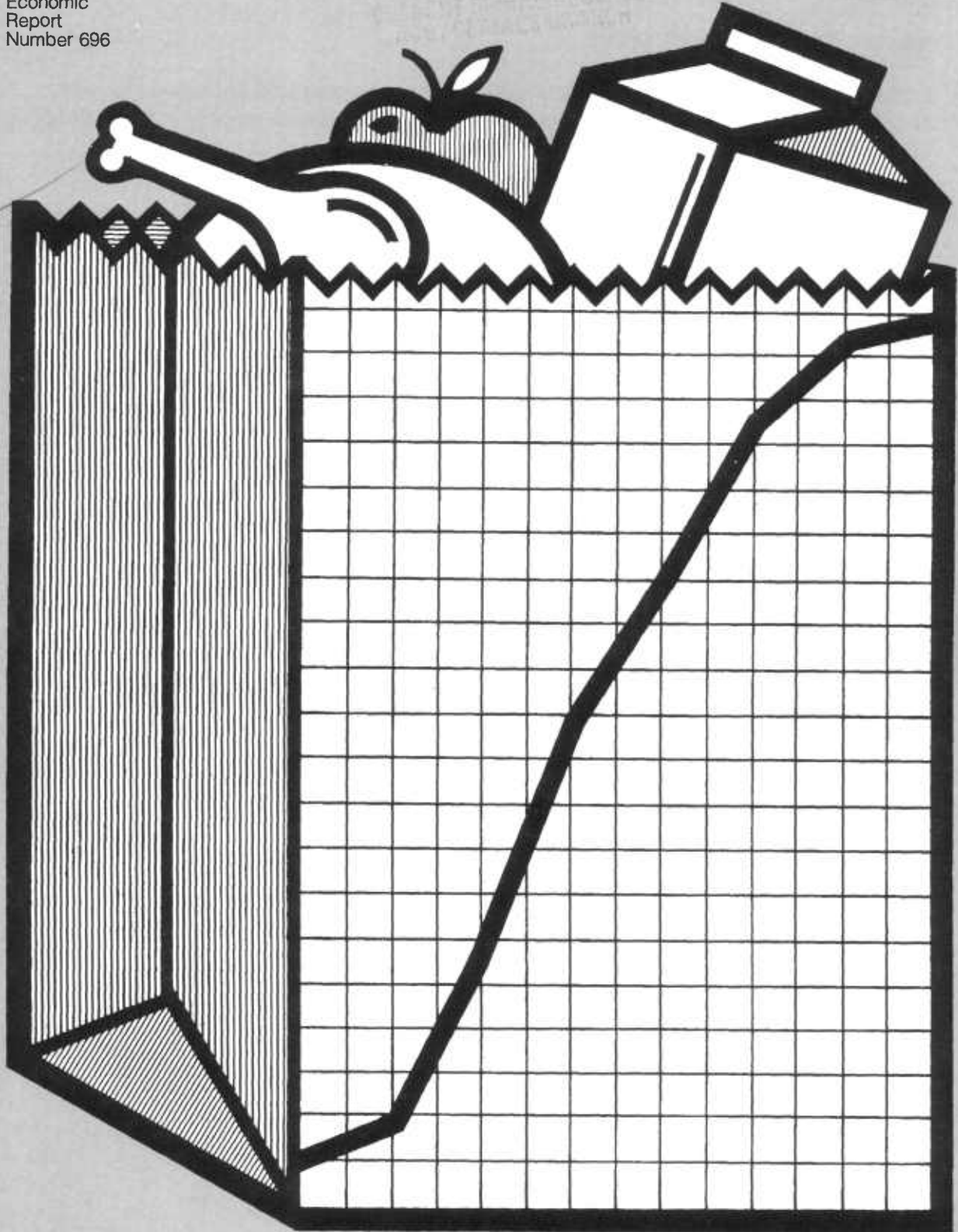
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Food Cost Review, 1993

Denis Dunham



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Abstract

Food prices, as measured by the Consumer Price Index (CPI), increased 2.2 percent in 1993. This increase was less than the overall increase in the CPI for the third consecutive year. Higher charges for processing and distribution mainly accounted for the 1993 increase. The prices farmers received for commodities, as measured by the farm value of USDA's market basket of foods, rose 1.6 percent. The farm value share of the food dollar spent in grocery stores in 1993 was 26 percent, the same as in 1992. The farm-to-retail price spread of USDA's market basket of foods rose 2.9 percent, partly reflecting higher prices of inputs, such as labor.

Keywords: Retail food prices, farm-to-retail price spread, farm value share, food marketing costs, food spending, profits, productivity.

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Summary

Consumers paid 2.2-percent higher prices for food in 1993, as measured by the Consumer Price Index (CPI). This percentage increase, following 1992's 25-year record low rise of 1.2 percent, was still modest compared with a 3-percent advance in the CPI for all goods and services in 1993. Grocery store food prices rose the most, advancing 2.4 percent in 1993, up from 0.7 percent in 1992. Restaurant meal prices went up 1.8 percent, down from 2.0 percent a year earlier.

The farm value of USDA's market basket of foods, based on prices farmers received for commodities, rose 1.6 percent, largely reflecting higher prices for livestock, poultry, and fresh fruit. Even with this increase, the 1993 farm value of food was only about 8 percent higher than a decade earlier.

The 1993 farm value averaged 26 percent of the retail cost for a market basket of food purchased in grocery stores, the same as in 1992. The share has declined over time as a result of abundant food supplies that held down farm prices, while rising processing and distributing charges boosted retail prices. These opposing forces have lowered the average farm share from 37 to 26 percent since 1980.

The farm-to-retail price spread rose 2.9 percent in 1993, partly reflecting higher prices of marketing inputs, including labor and advertising. The increase in the farm-to-retail spread in 1993 was moderately greater than in 1992, but was similar to the rise in prices of inputs used by food-marketing firms. Increases in farm-to-retail price spreads occurred for most all food groups and had more effects on retail prices of foods than did farm values, primarily because the marketing spread is the largest share of the food dollar.

Consumers spent \$491 billion for food produced on U.S. farms in 1993, about 3.5 percent more than in 1992. This amount includes purchases of farm foods in grocery stores, about 60 percent of total consumer food expenditures, and at away-from-home eating places. About 22 percent of last year's food spending went back to farmers, who received about \$109 billion for food commodities. This share is lower than the 26-percent farm value share for the market basket of foods, because it includes the much lower 16-percent farm share for away-from-home food spending.

For food--	<u>1992</u>	<u>1993</u>
	<u>Billion dollars</u>	
Consumers spent...	474	491
Marketing bill was...	369	382
Farmers got...	105	109

The remaining \$382 billion--the marketing bill--went to the food industry for handling, processing, and retailing foodstuffs after they left the farm. The marketing bill rose \$13 billion in 1993, a larger increase than the previous year, due partly to a relatively large increase in away-from-home food purchases. Direct labor costs for food marketing represented 46.5 percent of the marketing bill. Other principal costs were packaging and containers, transportation, advertising, and energy.

Although the dollar amount spent for food continues to rise, food spending as a percentage of disposable personal income has declined over the past decade. In 1993, personal expenditures for food, as estimated by the Economic Research Service, were 11.2 percent of personal disposable income, down from 11.8 percent 5 years earlier and 13 percent in 1983.

Food Cost Review, 1993

Denis Dunham*

Introduction

Consumers, farmers, and legislators want to know what causes food prices to change. These concerned parties are also interested in the farm-to-retail price spread, which measures the difference between what farmers get for the food they sell and how much consumers pay for that food. To answer these concerns, Congress has directed the U.S. Department of Agriculture (USDA) to measure price spreads for food originating on U.S. farms.

This report presents USDA's findings for 1993, including answers to the following questions:

- How much did food prices rise in 1993? Why?
- How much of the retail food price does the farm value represent?
- How did farm-to-retail price spreads change last year, both for a market basket of foods and for such food groups as meat and dairy products?
- How have recent developments affected food industry costs, profit margins, and productivity?
- Finally, how much did Americans spend for farm-produced food, and how were these dollars divided among costs of producing and marketing food?

Retail Food Prices

Retail food prices in 1993, as measured by the Consumer Price Index (CPI), averaged 2.2 percent above those in 1992 (table 1). This increase, following 1992's 25-year record low rise of 1.2 percent, was still modest compared with the 3-percent advance in the CPI for all goods and services in 1993. Food price inflation in 1993 was substantially less than the overall increase in the CPI for the third consecutive year.

Food prices in 1993 rose more at supermarkets and other grocery stores than at eating places. Food prices in grocery stores rose 2.4 percent, and prices for restaurant meals advanced by only 1.8 percent. Prices of restaurant meals increased less in 1993 than they had the year before, and by the smallest amount since 1964. Grocery store prices of foods advanced more strongly in 1993 than in 1992, led by higher prices for fresh vegetables, red meats, and poultry (table 2). Higher grocery store food prices resulted in part from cold, wet weather that cut meat and vegetable production early in the year.

A variety of factors kept food price increases moderate in 1993. Continued lackluster growth in the economy and heightened competitive challenges in most food business segments played important roles. Slow growth in personal disposable real income and weak consumer confidence held down food spending and opportunities to raise prices. Food businesses, responding to competitive pressures and consumer resistance to higher prices, had to hold down costs.

The marketing spread, the difference between the farm value and retail price of food, consistently contributes more to food price increases than do volatile farm prices. Higher costs for labor, packaging, and other marketing inputs push the spread wider nearly every year. The 1993 rise in the farm-to-retail price spread was 2.9 percent, only slightly more than in the previous year. This modest rise in the spread can be attributed partly to a moderate increase in labor costs, which were held down by a relatively high level of unemployment in the economy.

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Table 1--Consumer Price Indexes for food and percentage changes from previous years

Year	Food		Food at home		Food away from home	
	Index	Change	Index	Change	Index	Change
	1982-84=100	Percent	1982-84=100	Percent	1982-84=100	Percent
1973	48.2	14.5	49.7	16.4	44.2	7.8
1974	55.1	14.3	57.1	14.9	49.8	12.7
1975	59.8	8.5	61.8	8.2	54.5	9.4
1976	61.6	3.0	63.1	2.1	58.2	6.8
1977	65.5	6.3	66.8	5.9	62.6	7.6
1978	72.0	9.9	73.8	10.5	68.3	9.1
1979	79.9	11.0	81.8	10.8	75.9	11.1
1980	86.8	8.6	88.4	8.1	83.4	9.9
1981	93.6	7.8	94.8	7.2	90.9	9.0
1982	97.4	4.1	98.1	3.5	95.8	5.4
1983	99.4	2.1	99.1	1.0	100.0	4.4
1984	103.2	3.8	102.8	3.7	104.2	4.2
1985	105.6	2.3	104.3	1.5	108.3	3.9
1986	109.0	3.2	107.3	2.9	112.5	3.9
1987	113.5	4.1	111.9	4.3	117.0	4.0
1988	118.2	4.1	116.6	4.2	121.8	4.1
1989	125.1	5.8	124.2	6.5	127.4	4.6
1990	132.4	5.8	132.3	6.5	133.4	4.7
1991	136.3	2.9	135.8	2.6	137.9	3.4
1992	137.9	1.2	136.8	.7	140.7	2.0
1993	140.9	2.2	140.1	2.4	143.2	1.8

Source: U.S. Department of Labor, Bureau of Labor Statistics.

Table 2--Consumer Price Index changes for food eaten at home, by food group

Food group	1988	1989	1990	1991	1992	1993
	Percentage change from year earlier					
Cereal and cereal products	7.6	9.2	5.5	4.5	3.9	3.0
Bakery products	5.9	8.0	5.9	4.0	3.9	3.5
Beef and veal	-3.0	6.4	8.0	2.8	-.1	3.6
Pork	-3.0	.6	14.7	3.3	-4.7	3.1
Other meat	2.6	2.8	9.3	3.7	.2	1.6
Poultry	7.2	9.9	-.2	-.8	-.1	4.2
Eggs	2.3	26.6	4.7	-2.3	-10.6	8.1
Fish and seafood	5.8	4.5	2.2	1.1	2.3	3.2
Dairy products	2.4	6.6	9.4	-1.1	2.7	.7
Fresh fruit	8.3	6.6	12.1	13.5	-5.0	2.5
Fresh vegetables	6.3	10.7	5.6	2.2	2.3	6.6
Processed fruit	10.3	3.2	8.7	-3.7	4.5	-3.9
Processed vegetables	4.8	10.7	2.7	.8	.2	1.6
Fats and oils	4.6	7.2	4.2	4.3	-1.4	.2
Sugar and sweets	2.7	4.7	4.4	3.7	2.9	.2
Nonalcoholic beverages	0	3.5	2.0	.5	.2	.3
Other prepared food	3.7	6.4	4.5	4.5	2.2	2.6

Source: U.S. Department of Labor, Bureau of Labor Statistics.

Upward pressure on food prices in 1993 also resulted from higher farm prices of some commodities, particularly hogs and some fresh vegetables. Overall, the farm value of food commodities increased 1.6 percent in 1993, the first yearly increase in 3 years. The effect of higher commodity prices on retail prices was relatively small, however, because the average farm value share of retail dollars spent at grocery stores in 1993 was 26 percent.

Food prices in 1993 rose less than prices for most other consumer products and services (fig. 1). Among major items in the CPI, housing prices, the largest component, went up 2.7 percent, and transportation went up 3.1 percent, but apparel and upkeep prices rose only 1.4 percent. The largest gain was in medical costs, which climbed 5.9 percent.

Consumer Price Index

The Consumer Price Index for urban consumers (CPI-U), published by the U.S. Department of Labor's Bureau of Labor Statistics (BLS), is the most widely accepted measure of changes in retail food prices. Prices used to develop the food CPI-U are collected in about 2,300 foodstores located in 85 urban areas.

After collecting the prices, the BLS summarizes them, weights them by their importance, and reports the prices as index numbers for about 70 food groups. The weights, reflecting the purchasing patterns of urban households, are periodically revised. The BLS made the latest revision in January 1987 for changes in purchasing patterns between 1972-73 and 1982-84.

The food component of the overall CPI-U has a weight of about 15.8 percent. Housing is the largest expenditure category, with 41 percent of the CPI-U weight, followed by transportation, with 17 percent. The food category of the CPI-U has two major components: food purchased in foodstores for consumption at home, which has a weight of about 9.9 percent, and food consumed away from home, weighted at about 5.9 percent (table 3).

Figure 1

Consumer price indexes

The nonfood price increase was larger than the food price increase in 1993 for the third consecutive year.

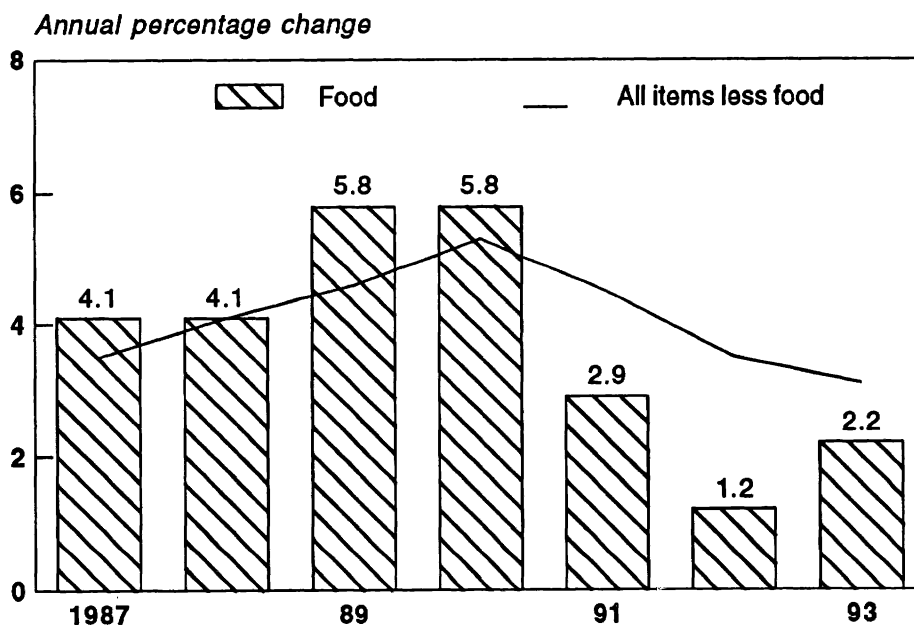


Table 3--Relative importance of food groups in Consumer Price Index for urban consumers (CPI-U), December 1993

Food group	Weight in CPI-U	Weight in food CPI-U	Weight in food- at-home CPI-U
		<u>Percent</u>	
All food	15.799	100.0	NA
Food at home	9.853	62.4	100.0
Cereal and bakery products	1.454	9.2	14.7
Cereal products	.468	3.0	4.8
Bakery products	.986	6.2	9.9
Meat	2.014	12.8	20.5
Beef and veal	1.038	6.6	10.5
Pork	.573	3.6	5.8
Other meats	.403	2.6	4.2
Poultry	.442	2.8	4.5
Fish and seafood	.370	2.3	3.7
Eggs	.159	1.0	1.6
Dairy products	1.186	7.5	12.0
Fresh milk and cream	.602	3.8	6.1
Processed dairy products	.585	3.7	5.9
Fresh fruit and vegetables	1.298	8.2	13.1
Fresh fruit	.703	4.4	7.0
Fresh vegetables	.595	3.8	6.1
Processed fruit and vegetables	.611	3.9	6.3
Processed fruit	.348	2.2	3.5
Processed vegetables	.263	1.7	2.7
Sugar and sweets	.331	2.1	3.4
Fats and oils	.246	1.6	2.6
Nonalcoholic beverages	.712	4.5	7.2
Other prepared food	1.030	6.5	10.4
Food away from home	5.946	37.6	NA

NA = Not applicable.

Source: U.S. Department of Labor, Bureau of Labor Statistics.

Knowing the importance of CPI-U components helps one understand how price changes for various food groups influence the overall change in the CPI-U for food. For instance, in the food-at-home CPI-U, beef and veal products are 10.5 percent of the index. In 1993, the CPI-U for beef and veal went up 3.6 percent, accounting for about a 0.4-percent increase in the food-at-home CPI-U.

Retail Prices of Food Groups

The principal factors affecting retail food prices, marketing costs and commodity prices, seldom have the same effects on all food products in the market basket. Price changes among food groups created a moderate overall rise in food prices. But within the range of price changes, egg prices rose 8.1 percent, fresh whole chicken prices rose 4.6 percent, cereal prices went up 4.5 percent, and milk prices increased 1.2 percent, but processed fruit prices dropped 3.9 percent. The following identifies the factors that probably most influenced retail price changes of the major food categories in 1993.

Meat

Beef and veal prices averaged 3.6 percent higher in 1993 than a year earlier. Higher prices reflected a decline in per capita beef and veal supplies of about 2.2 percent, resulting in higher cattle prices. Beef production in 1993 was held down by reduced cattle weights in the first half year due to cold, wet weather. The farm-to-retail price spread also widened in 1993, following a decline in 1992, accounting for some of the rise in beef prices. Retail pork prices rose 3.1 percent in 1993, as pork production declined. All the increase in retail pork prices was in farm value; the farm-to-retail spread narrowed for the second consecutive year. With smaller production, pork consumption declined to 52 pounds (retail weight) per capita in 1993, about 1.5 percent less than in 1992.

Poultry and Eggs

Retail poultry prices rose 4.2 percent in 1993, the first increase in 4 years. Prices went up, despite larger supplies of poultry, because of strong domestic and export demand for broilers and turkeys. Broiler chicken production increased about 5 percent in 1993, extending a long-term expansion, but turkey production changed little. As a consequence of greater broiler use, poultry consumption increased to 88 pounds (retail weight basis) per capita in 1993, about 1.7 percent more than in 1992.

Eggs recorded the largest price gain among food groups in the CPI for 1993, up 8.1 percent. Table egg production was about 1 percent more in 1993. Higher prices despite the production increases indicates that demand was slightly stronger than it has been in recent years. Typically, prices have dropped 5 percent for every 1-percent increase in production. Per capita egg consumption, which declined about 14 percent during the 1980's, has been more stable during the 1990's. Consumption totaled 234 eggs per capita in 1993, only 1 egg per capita less than in 1990. Increasing use of processed egg products, a fourth of total consumption, and changes in consumer perception of eggs' nutritional value have probably been most responsible for the more stable consumption.

Dairy Products

Retail prices of milk and other dairy products averaged only 0.7 percent higher in 1993. Price increases were largest for fresh milk and cream (1.3 percent). Prices for cheese and other processed products were steady. Farm value for dairy products averaged 2.9 percent lower in 1993, although milk production declined slightly. Increases in the farm-to-retail spread outweighed the effects of lower farm value on retail product prices. Generally weak demand held down dairy prices in 1993. Although retail prices were relatively stable, growth in cheese use was slower than normal, and fluid milk sales declined. However, butter sales rose significantly, reflecting lower prices.

Fish and Seafood

Fish and seafood prices increased 3.2 percent in 1993, the largest increase in 4 years. Higher fresh and frozen seafood prices accounted for most of the rise. Price increases were much larger during the 1980's, as consumption of seafood grew about 30 percent to peak at 16.1 pounds per capita in 1987. However, consumption had fallen to 14.7 pounds in 1992, resulting in much smaller price increases in recent years.

Cereal and Bakery Products

Retail prices for cereal and bakery products, which typically rise more than prices for most other food groups, averaged 3.4 percent higher in 1993. The cereal category led the increase, up by 4.5 percent. However, consumers may not have paid the full price increase because of the increased face value and use of coupons. Roughly 44 percent of cereal buyers used coupons in 1993, compared with 31 percent 2 years earlier. The 1993 farm value of commodities, such as wheat flour, used in cereals and bakery products averaged 5 percent lower than that of 1992. Rising retail prices mainly reflected higher charges by bakers and cereal manufacturers for processing and marketing functions, which make up about 90 percent of the retail price.

Fresh Fruit and Vegetables

Fresh fruit prices averaged 2.5 percent higher in 1993, due mostly to less orange production in California, but price changes varied widely among fruits. Orange prices increased 7.9 percent in 1993, while apple prices fell 5.8 percent, reflecting a record large 1992 crop. Prices of bananas, the most popular fresh fruit, declined 3.1 percent.

Prices of fresh vegetables averaged 6.6 percent higher in 1993, partly because excess rains in California early in the year caused a gap in lettuce and tomato supplies. Lettuce prices in 1993 rose from 60 cents per pound in February to 85 cents per pound in April, and for the year averaged 14.5 percent above those in 1992. Retail prices for fresh potatoes averaged 9.3 percent higher in 1993, reflecting unusually high spoilage of the potato crop and greater use of potatoes for processing to meet rising export demand. The 1993 crop was slightly smaller, causing a fourth-quarter rise in potato prices.

Processed Fruit and Vegetables

Processed fruit and vegetable prices declined 1.6 percent in 1993. Prices for processed vegetables were up slightly, but processed fruit prices fell by 3.9 percent. Lower processed fruit prices in 1993 were attributed mainly to substantially lower (13.8 percent) prices for frozen concentrated orange juice (table 4). Prices of frozen concentrated orange juice in 1993 were the lowest in 6 years, reflecting a record-large 1992/1993 Florida orange crop.

Fats and Oils

The fats and oils component of the food CPI averaged only 0.2 percent higher in 1993, due in part to sluggish demand for peanut butter. Peanut butter prices dropped 6 percent. Margarine prices rose only 0.7 percent, despite higher prices for refined soybean oil, the major ingredient of margarine.

Nonalcoholic Beverages

Nonalcoholic beverage prices rose a scant 0.3 percent in 1993, which considerably moderated the overall increase in grocery store food prices. Coffee prices were 0.8 percent lower. Failure of coffee-producing countries to agree on shipment quotas resulted in large coffee supplies that depressed prices. Carbonated drink prices rose 0.9 percent. Annual carbonated drink price increases averaged slightly above 1 percent over the past decade, due to price competition for market share among soft drink companies and industry labor productivity gains that annually averaged about 7 percent.

Food Consumption

In 1993, consumption of most food groups, including poultry and dairy products, increased slightly (table 5). Food consumption data are derived from information on supply and use of farm products and, therefore, are not direct measures of consumption. Rather, they measure disappearance of food from commercial channels.

Beef and veal consumption declined 2 pounds to 62 pounds per person on a boneless-weight basis in 1993. Pork consumption went down about 1 pound to 49 pounds per person. But, per capita poultry consumption continued its long upward trend, increasing 1 pound to 61 pounds boneless weight. The use of dairy products was up to 572 pounds on a milk-equivalent basis, as growth in the use of butter and some other high-milkfat products offset lower consumption of some fluid milk products. Per capita consumption of fresh fruit fell in 1993, due in part to smaller citrus supplies. In 1993, consumption of flour and cereals and sugar and sweeteners increased, continuing an upward trend.

Table 4--Average retail food prices, selected items

Item	Unit	1989	1990	1991	1992	1993	Item	Unit	1989	1990	1991	1992	1993
<u>Dollars</u>						<u>Dollars</u>							
Flour, white	Pound	0.24	0.25	0.23	0.24	.23	Apples, red delicious	Pound	0.72	0.88	0.88	0.89	.83
Rice, white, uncooked	do.	.50	.50	.50	.53	.51	Bananas	do.	.45	.46	.48	.46	.44
Spaghetti and macaroni	do.	.86	.85	.87	.86	.83	Oranges, navel	do.	.52	.58	.78	.57	.54
Bread, white	do.	.67	.70	.71	.75	.75	Oranges, Valencia	do.	.60	.56	.92	.56	.65
Bread, French	do.	1.17	--	1.25	--	--	Cherries	do.	1.15	1.75	2.26	--	--
Cookies, chocolate chip	do.	2.38	2.61	2.70	2.78	2.46	Grapefruit	do.	.52	.66	.62	.61	.53
Ground beef	do.	1.44	1.59	1.60	1.53	1.57	Grapes, Thompson						
Chuck, ground	do.	1.83	1.97	1.97	1.91	1.94	seedless	do.	1.20	1.26	1.40	1.29	1.47
Chuck roast, bone-in	do.	1.88	2.09	2.09	2.10	2.10	Lemons	do.	1.00	1.07	1.23	1.01	1.08
Round roast, boneless	do.	2.76	2.93	3.02	3.06	3.06	Peaches	do.	.84	.88	.96	.89	.95
Rib roast	do.	4.17	4.49	4.70	4.64	4.84	Pears, Anjou	do.	.73	.76	.84	.83	.86
Round steak, boneless	do.	3.12	3.32	3.41	3.38	3.40	Strawberries	12 oz.	1.04	1.14	1.11	1.14	1.12
Sirloin steak, bone-in	do.	3.58	3.67	3.74	3.81	3.91	Potatoes, white	Pound	.34	.37	.33	.30	.35
T-bone steak	do.	5.07	4.99	5.38	5.37	5.66	Lettuce, iceberg	do.	.60	.58	.60	.58	.66
Bacon, sliced	do.	1.77	2.12	2.22	1.92	1.93	Tomatoes, field-grown	do.	.91	1.08	1.01	1.09	1.08
Chops, center-cut	do.	2.85	3.26	3.26	3.15	3.24	Beans, green	do.	1.02	--	--	--	--
Ham, rump	do.	--	--	1.67	1.61	1.58	Cabbage	do.	.36	.40	.41	.36	.41
Ham, shoulder picnic	do.	1.10	1.28	1.30	1.22	1.16	Carrots	do.	.40	.39	.45	.47	.43
Sausage	do.	2.00	2.35	2.40	2.20	2.11	Celery	do.	.53	.49	.52	.51	.60
Ham, canned	do.	2.67	2.77	3.19	3.17	--	Cucumbers	do.	.66	.60	.65	.67	.62
Frankfurters	do.	2.06	2.29	2.35	2.24	2.11	Onions, yellow	do.	.36	.39	.43	.42	.48
Bologna	do.	2.28	2.51	2.59	2.47	2.38	Peppers, sweet	do.	.96	1.13	1.11	1.06	1.15
Chicken, fresh, whole	do.	.93	.90	.88	.87	.89	Orange juice,						
Chicken breast	do.	2.09	2.07	2.06	2.04	2.08	frozen concentrated	16 oz.	1.82	1.86	2.15	1.89	1.63
Chicken legs	do.	1.21	1.19	1.16	1.12	1.10	Potatoes, frozen,						
Turkey, frozen	do.	.99	.99	1.00	.97	1.00	french-fried	Pound	.75	.84	.85	.87	.86
Tuna, canned	do.	2.08	2.06	2.07	2.02	1.97	Tomatoes, canned	do.	--	--	--	--	--
Eggs, Grade A, large	Dozen	1.00	1.01	.99	.86	.91	Margarine, tub	do.	1.17	--	1.29	1.30	1.18
Milk, fresh, whole	1/2 gal.	1.27	1.42	1.37	1.39	1.39	Margarine, stick	do.	.82	.84	.87	.85	.80
Milk, low-fat	1/2 gal.	--	--	1.31	1.36	--	Shortening	do.	.93	.92	.87	.83	.80
Butter	Pound	2.13	1.99	1.94	1.83	1.66	Peanut butter	do.	1.81	1.89	2.15	1.94	1.79
Ice cream	1/2 gal.	2.60	2.60	2.58	2.58	2.53	Potato chips	do.	2.86	2.96	2.96	2.90	2.88
Yogurt	1/2 pt.	--	--	.65	.61	.59	Sugar, white	do.	.40	.43	.43	.42	.41
Cheese, cheddar	Pound	3.20	--	3.55	3.57	3.34	Coffee, roasted	do.	3.07	2.97	2.81	2.58	2.47
Cheese, processed	do.	2.93	--	3.43	3.32	3.09	Cola, nondiet, cans	16 oz.	--	--	.44	.46	--

-- = Not available.

Source: U.S. Department of Labor, Bureau of Labor Statistics.

Consumers have been altering their consumption of major food groups, such as meat and poultry. Since 1980, red meat consumption has dropped 14 pounds per person, boneless weight. Beef and veal consumption fell 11 pounds per person from 1980 to 1993, and per capita pork consumption fell 3 pounds. Egg consumption has declined 5 pounds per capita, but poultry consumption has jumped 20 pounds per capita since 1980. While this change in consumption patterns may result partly from health concerns, low prices and greater use of poultry in fast-food outlets remain major causes for these consumption trends.

Beef consumption began falling in the mid-1970's, and growth in poultry consumption began to accelerate. The change in meat consumption patterns was partly a response to changes in relative prices. From 1976 to 1980, when the sharpest decline in beef consumption occurred, the ratio of retail beef prices to retail broiler prices rose from about 2.4 in 1976 to a peak of 3.3 in 1980. Since then, beef prices have risen about the same amount as broiler prices, leaving the beef-to-broiler ratio at 3.3 in 1993. Beef prices have gone up less than pork prices since 1980. As a result, the price ratio of beef to pork fell from 1.7 in 1980 to 1.5 in 1993.

Although beef became less expensive relative to pork, and remained even compared with broiler chicken, beef consumption fell 15 percent from 1980 to 1993, pork consumption dropped 6 percent, and poultry consumption rose 49 percent. Consumers may have reduced beef purchases simply because retail beef prices remained higher than prices for other meats, particularly poultry. However, other factors, such as consumer tastes, nutritional awareness, product forms, and changing marketing channels also affected meat consumption. For example, the growth of poultry products in the menus of fast-food chains was one reason for greater poultry consumption.

Dairy product consumption rose in the mid-1980's, reflecting declining real prices and expanding promotion. But consumption of dairy products declined in 1988-89, mainly because of reduced milk production and smaller Government donations of dairy products. In 1993, dairy product consumption was still below the mid-1980's level, but was about 5 percent higher than in 1980.

Among other foods, per capita consumption of fresh fruit rose 9 pounds during the 1980's, mainly due to expanded consumption of such noncitrus fresh fruit as grapes and bananas. Consumption of commercial fresh vegetables rose 21 pounds per person from 1980 to 1989, mainly reflecting rising consumption of fresh tomatoes, lettuce, onions, and broccoli, but has declined slightly since then.

Consumption of fats and oils has edged up in recent years and is higher than a decade ago, despite health concerns about the level of fat in the diet. Caloric sugar and sweetener consumption rose from 124 pounds per person in 1980 to 147 pounds in 1993, mainly reflecting greater use of corn sweeteners in soft drinks.

Table 5--Annual food consumption¹

Food group	1980	1988	1989	1990	1991	1992	1993 ²
<u>Pounds per capita</u>							
Red meat, boneless and trimmed	126	120	116	112	112	114	112
Beef and veal	73	70	66	65	64	64	62
Pork	52	49	48	46	47	50	49
Poultry, boneless	41	52	54	56	58	60	61
Eggs	35	32	30	30	30	30	30
Fish and shellfish, boneless	12	15	16	15	15	15	15
Dairy products, milk-equivalent	543	583	565	570	565	565	572
Flour and cereal products	145	175	175	183	186	187	189
Fats and oils, including butter	57	63	60	62	64	66	
Fresh fruit	84	94	93	89	87	95	
Fresh vegetables ³	85	102	106	103	101	105	104
Potatoes, fresh and processed	73	76	79	76	77	80	83
Sugars and sweeteners, caloric	124	135	137	140	141	144	147

¹ Data are on a retail-weight basis, except as noted. ² Preliminary. ³ Data are for lettuce, tomatoes, onions, carrots, celery, corn, broccoli, asparagus, artichokes, cabbage, cucumbers, eggplant, garlic, green beans, green peppers, and cauliflower.

Source: U.S. Department of Agriculture, Economic Research Service, *Food Consumption, Prices, and Expenditures, 1970-92*, SB-867, September 1993, and updates.

Market Basket Prices

To better understand why grocery store food prices increased last year, we consider separately what happened to the prices that farmers received for food commodities and what happened to the charges for marketing services. USDA uses its market basket concept to separate these two components of food prices. The market basket contains the average quantities of food that mainly originate on U.S. farms and are purchased for consumption at home in a base period. The market basket does not include fish and seafood or nonalcoholic beverages. Changes in retail prices of the market basket are components of the CPI-U for food consumed at home.

USDA divides the retail cost for a market basket of food into the farm value and the farm-to-retail price spread (table 6). The farm value represents prices farmers receive for raw commodities equivalent to foods in the market basket. The farm-to-retail price spread represents the difference between the retail price and the farm value. The price spread includes the charges for assembling foods from farms, and for processing, distributing, and retailing foods. In each of the past 10 years, a rise in the farm-to-retail price spread contributed more to the rise in food prices than did changes in the farm value.

Farm Value

Farm value is a measure of the return, or payment, farmers received for the farm product equivalent of retail food sold to consumers. The market basket farm value serves as an index of prices farmers receive for products later used for food. Farm values for individual food items are expressed in dollar amounts for comparison with the item's retail price. Farm value is calculated by multiplying farm price times the quantity of farm product equivalent of food sold at retail. An allowance is made in farm values if byproducts are obtained in processing. The farm value usually represents a larger quantity than the retail unit, because the foodstuffs that farmers produce lose weight through storage, processing, and distribution.

The farm product equivalent varies among foods. Only a slight amount of raw milk is lost, for example, as it is handled and processed for sale in cartons to consumers. Therefore, the farm value per retail half-gallon of milk is a little more than the price that milk producers receive per half-gallon. In contrast, nearly 2.4 pounds of live animal yield 1 pound of Choice beef on the meat counter. The payment the cattle producer receives for that larger quantity of live animal is the gross farm value in the price of 1 pound of retail beef.

The average farm value (what farmers receive) of USDA's market basket of foods was 1.6 percent higher in 1993, the first annual increase in 3 years (table 7). But with last year's increase, the 1993 farm value of foods was only 8 percent higher than the value a decade earlier. Since that time, there have been few increases in farm value, except for a significant rise in 1989 induced by the previous year's drought, and a rise in 1990 (fig. 2).

Red meat accounts for about 36 percent of the farm value of USDA's market basket. Farm value of red meat rose about 2.5 percent in 1993, mainly reflecting a 7-percent rise in hog prices. For 1 pound of pork selling at retail for \$1.98 in 1993, hog producers received 72.5 cents for the equivalent quantity of live animal (1.7 pounds), nearly 5 cents more than in 1992. Steer cattle prices averaged slightly higher in 1993, causing a small increase in the farm value of beef. For 1 pound of Choice grade beef selling for an average retail price of \$2.93, cattle producers received \$1.64 for the equivalent quantity of live animal (2.4 pounds) in 1993, up 2 cents from in 1992.

Poultry producers increased broiler and turkey output in 1993 at nearly the same growth rate as in recent years. Yet, with poultry production up about 4.5 percent for the year, farm value of poultry rose 7.2 percent. Record exports of broilers and turkeys strengthened poultry prices. Broiler chicken producers received 48 cents of the average retail price of 89 cents per pound of whole frying chicken in 1993, about 3 cents more than in 1992.

Table 6--Indexes of retail price, farm value, and the farm-to-retail price spread, and farm value as a share of the retail price¹

Year	Retail price	Farm value	Farm-to-retail price spread	Farm value share of retail price
	-----1982-84 = 100-----			<u>Percent</u>
1950	30	40	25	47
1951	33	46	26	49
1952	34	44	28	47
1953	32	41	28	45
1954	32	39	28	43
1955	31	36	29	41
1956	32	36	29	40
1957	33	37	30	40
1958	35	40	32	41
1959	34	37	32	39
1960	34	38	32	39
1961	34	37	33	39
1962	34	38	33	39
1963	34	36	33	38
1964	34	36	34	36
1965	35	40	33	38
1966	37	43	34	39
1967	37	40	35	39
1968	38	42	36	38
1969	40	46	37	39
1970	42	46	40	37
1971	43	46	41	37
1972	45	50	42	38
1973	52	68	45	44
1974	60	73	53	42
1975	64	76	58	40
1976	65	72	61	38
1977	66	72	63	37
1978	74	83	68	38
1979	82	92	77	38
1980	88	97	84	37
1981	95	100	92	36
1982	98	99	98	35
1983	99	97	100	34
1984	103	104	103	35
1985	104	96	108	32
1986	106	95	112	31
1987	112	97	120	30
1988	116	100	125	30
1989	125	107	134	30
1990	134	113	144	30
1991	137	106	154	27
1992	138	103	157	26
1993 ²	142	105	162	26

¹ For a market basket of foods bought in foodstores in a base period, currently 1982-84. The retail price index is derived from data from the U.S. Department of Labor, Bureau of Labor Statistics. Farm value is based on prices farmers received for commodities. The spread between the retail price and farm value represents charges for processing and marketing. ² Preliminary.

Table 7--Price changes for market basket of foods¹

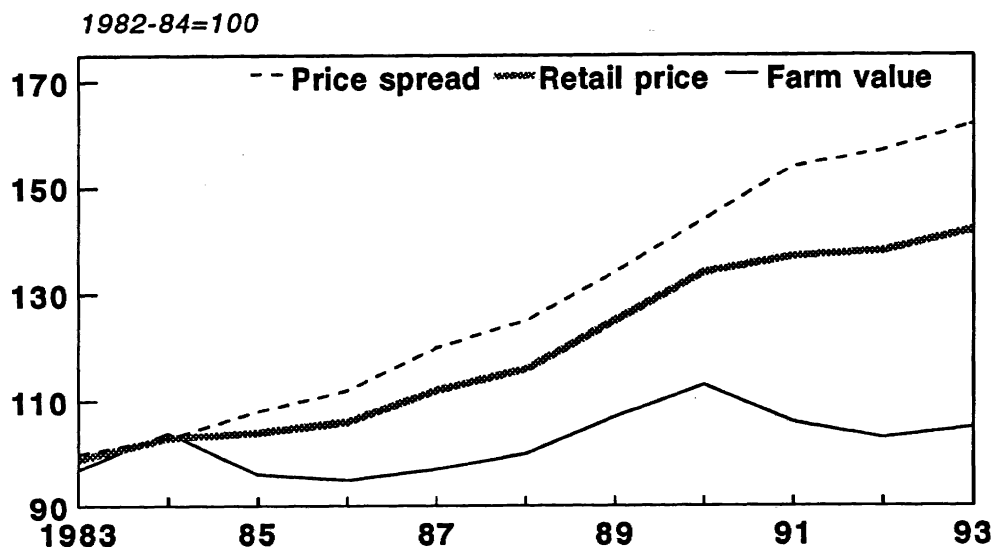
Item	1988	1989	1990	1991	1992	1993 ²
	<u>Annual percentage change</u>					
Market basket:						
Retail price	4.4	7.0	7.1	2.9	0.7	2.6
Farm value	3.8	6.5	5.7	-6.3	-2.7	1.6
Farm-to-retail spread	4.7	7.2	7.8	6.7	2.1	2.9
Meat products:						
Retail price	2.4	4.0	10.1	3.1	-1.4	3.0
Farm value	-1.6	3.8	12.8	-5.8	-5.0	2.5
Farm-to-retail spread	5.8	4.2	7.9	10.9	1.2	3.4
Dairy products:						
Retail price	2.4	6.7	9.4	-1.1	2.7	.7
Farm value	-2.9	9.3	2.6	-11.5	6.5	-2.9
Farm-to-retail spread	6.1	4.9	14.2	5.3	.7	2.7
Poultry:						
Retail price	7.2	9.9	-2	-8	-1	4.2
Farm value	17.5	6.3	-8.1	-4.8	1.5	7.2
Farm-to-retail spread	-1.1	13.3	6.9	2.3	-1.2	2.0
Eggs:						
Retail price	2.3	26.6	4.7	-2.3	-10.6	8.1
Farm value	-2	41.3	.4	-6.6	-22.9	14.3
Farm-to-retail spread	5.0	10.6	10.9	2.9	3.5	2.8
Cereal and bakery products:						
Retail price	6.4	8.4	5.7	4.1	3.9	3.4
Farm value	30.6	9.8	-11.0	-5.7	10.4	-3.0
Farm-to-retail spread	4.4	8.3	7.4	5.0	3.4	3.9
Fresh fruit:						
Retail price	7.2	6.4	12.8	14.6	-5.2	3.3
Farm value	2.3	-6.8	18.2	34.7	-29.1	10.1
Farm-to-retail spread	8.9	10.9	11.3	8.5	3.7	1.5
Fresh vegetables:						
Retail price	6.3	10.7	5.6	2.2	2.3	6.6
Farm value	-3.5	16.9	.9	-11.0	8.8	6.4
Farm-to-retail spread	10.7	8.3	7.6	7.2	.2	6.7
Processed fruit and vegetables:						
Retail price	7.9	6.3	6.1	-1.9	2.7	-1.6
Farm value	23.0	-3.1	8.8	-15.3	5.4	-17.3
Farm-to-retail spread	3.2	9.8	5.3	2.9	1.9	3.0
Fats and oils:						
Retail price	4.6	7.1	4.3	4.6	-1.4	.2
Farm value	38.5	-7.2	12.0	-8.5	-4.9	15.4
Farm-to-retail spread	-3.0	11.8	2.2	8.1	-.6	-3.5
Other prepared food:						
Retail price	3.7	6.4	4.5	4.5	2.2	2.6
Farm value	4.8	9.6	2.2	-9.8	-4.1	5.2
Farm-to-retail spread	3.5	5.9	4.8	6.5	2.9	2.3

¹ Changes in retail prices are from the Consumer Price Index published by the U.S. Department of Labor, Bureau of Labor Statistics. The farm value is based on prices farmers received for commodities equivalent to food at retail. The spread between the retail price and farm value represents charges for processing and marketing. ² Preliminary.

Figure 2

Food price components

Farm value of food products rose for the first time in 3 years, but the 1993 value was only 8 percent higher than the value a decade earlier.



- 1/ Retail prices based on the Consumer Price Index for food eaten at home.
- 2/ Farm value based on prices received by farms. Price spread represents processing and distribution charges.

Farm value of eggs rose sharply in 1993 from the depressed levels of the previous year, reflecting stronger demand for eggs for use as liquid egg products. Farm value in 1993 averaged 53 cents for a dozen eggs, with an average price of 91 cents at grocery stores.

Lower producer prices for milk decreased the farm value of dairy products by an average of 2.9 percent. A half gallon of fluid milk retailing for \$1.39 returned the producer about 58 cents in 1993, 2 cents less than in 1992.

The farm value of cereals and baked goods fell 3 percent in 1993, mainly reflecting lower prices of wheat. Farmers received 4.1 cents in 1993 for the wheat in a 1-pound loaf of white bread selling for 75 cents in supermarkets, 0.3 cent less than in 1992. The 1993 farm value of other bread ingredients, mainly shortening and sweeteners, was 0.7 cent, up slightly from in 1992, reflecting higher soybean oil prices.

Farm value of fruit averaged 10 percent higher in 1993, due mainly to higher grower prices for oranges, lemons, and grapes. Lower apple prices, reflecting ample supplies from the 1992 fall crop, moderated the rise in farm value of fresh fruit. Farm value of fresh vegetables averaged 6.4 percent higher in 1993, mainly on the strength of 30-percent higher grower prices for potatoes for fresh market. Although the 1992 fall potato crop was record large, demand during 1993 was strong, and losses were higher than the previous year.

Farm Value Share of Food Dollar

Farm value averaged 26 percent of the retail price of all foods in the market basket in 1993, unchanged from in 1992 (table 6). The farm value share reflects relative changes in farm and retail food prices. The 1993 farm value share did not change because there was a moderate rise in both farm and retail prices. This contrasts with the trend over time, when abundant food supplies depressed farm prices while rising food processing and distributing charges boosted retail prices. These opposing forces lowered the farm value share from 37 percent in 1980 to 30 percent in 1987. The farm value share remained stable until a sharp decline in 1991, reflecting a large decline in farm prices.

Farm value share varies greatly among foods (table 8). In 1993, farm value share for a sample group of 41 foods varied from 58 percent for eggs to 3 percent for corn syrup. Generally, the more highly processed the product is, the smaller the farm share. For instance, wheat is the principal ingredient of both flour and bread, but the additional manufacturing processes required for bread result in a lower farm value share of its retail price. Foods derived from animal products tend to have a higher farm value share than do those derived from crops, because farm inputs are greater for animal products

Table 8--Retail price, farm value, and farm value share for selected foods

Food	Retail price			Farm value			Farm value share of retail price ¹		
	1993	1992	1991	1993	1992	1991	1993	1992	1991
	-----Dollars-----						-----Percent-----		
Animal products:									
Eggs, Grade A large, 1 doz.	0.91	0.86	0.99	0.53	0.46	0.59	58	54	60
Beef, choice, 1 lb.	2.93	2.85	2.88	1.64	1.62	1.60	56	57	56
Chicken, broiler, 1 lb.	.89	.87	.88	.48	.45	.44	54	51	49
Milk, 1/2 gal.	1.39	1.39	1.37	.58	.60	.54	42	43	40
Pork, 1 lb.	1.98	1.98	2.12	.73	.68	.78	37	34	37
Cheese, natural cheddar, 1 lb.	3.34	3.57	3.55	1.15	1.17	1.09	34	33	31
Fruit and vegetables:									
Fresh--									
Lemons, 1 lb.	1.08	1.01	1.23	.31	.23	.38	29	23	31
Apples, red delicious, 1 lb.	.83	.89	.88	.19	.25	.24	23	28	27
Potatoes, 10 lbs.	3.48	3.05	3.30	.81	.62	.69	23	20	21
Oranges, California, 1 lb.	.59	.57	.89	.13	.10	.36	21	18	40
Grapefruit, 1 lb.	.53	.61	.62	.09	.12	.13	18	20	21
Lettuce, 1 lb.	.66	.58	.61	.12	.10	.09	18	18	14
Frozen--									
Orange juice conc., 12 fl. oz.	1.22	1.42	1.38	.40	.57	.53	33	40	38
Broccoli, cut, 1 lb.	1.15	1.17	1.17	.26	.26	.26	22	22	22
Corn, 1 lb.	1.06	1.06	1.08	.13	.13	.13	12	13	12
Peas, 1 lb.	.90	.91	.94	.13	.14	.14	15	15	15
Green beans, cut, 1 lb.	.95	.96	1.00	.11	.11	.11	12	11	11
Canned and bottled--									
Peas, 303 can (17 oz.)	.45	.46	.48	.10	.10	.09	21	20	19
Corn, 303 can (17 oz.)	.44	.43	.46	.09	.09	.09	21	21	19
Applesauce, 25-oz. jar	.98	1.00	.96	.16	.17	.18	17	17	19
Pears, 2-1/2 can	1.22	1.25	1.20	.22	.22	.22	18	18	18
Peaches, cling, 2-1/2 can	1.15	1.18	1.12	.18	.18	.18	15	15	16
Apple juice, 64-oz. bottle	1.49	1.69	1.54	.34	.44	.36	23	26	23
Green beans, cut, 303 can	.42	.42	.44	.06	.06	.06	14	14	14
Tomatoes, whole, 303 can	.47	.48	.53	.04	.05	.05	9	10	10
Dried--									
Beans, 1 lb.	.63	.59	.64	.20	.19	.17	32	33	26
Raisins, 15-oz. box	1.52	1.47	1.43	.48	.47	.44	32	32	30
Crop products:									
Sugar, 1 lb.	.38	.39	.40	.14	.14	.15	36	37	37
Flour, wheat, 5 lbs.	1.17	1.22	1.17	.33	.36	.28	28	29	24
Shortening, 3 lbs.	2.40	2.50	2.61	.70	.57	.61	29	23	23
Margarine, 1 lb.	.80	.85	.87	.19	.16	.17	24	19	20
Rice, long grain, 1 lb.	.51	.53	.50	.08	.10	.10	16	19	20
Prepared foods:									
Peanut butter, 1 lb.	1.84	1.88	2.15	.48	.48	.51	26	26	24
Pork and beans, 303 can (16 oz.)	.38	.38	.40	.06	.06	.06	16	16	14
Potato chips, regular, 1-lb. bag	1.96	1.93	1.97	.29	.24	.31	15	12	14
Chicken dinner, fried, frozen, 11 oz.	1.14	1.15	1.20	.16	.15	.15	14	13	12
Potatoes, french fried, frozen, 1 lb.	.86	.87	.85	.10	.09	.10	12	10	12
Bread, 1 lb.	.75	.75	.71	.05	.05	.04	6	7	6
Corn flakes, 18-oz. box	1.54	1.56	1.66	.09	.09	.09	6	6	6
Oatmeal regular, 42-oz. box	2.58	2.58	2.58	.17	.16	.14	7	6	5
Corn syrup, 16-oz. bottle	1.55	1.48	1.41	.05	.05	.05	3	3	4

¹ Computed from unrounded farm values.

than for crops. For example, the 1993 farm value share was 56 percent for Choice beef, 54 percent for chicken, but only 6 percent for bread. Meat and poultry production require two production enterprises: one for the animal feed and the other for the livestock or poultry. Most other foods entail only one production enterprise. Other factors influencing the farm value share among foods include costs of transporting from farm to consumer, product perishability, and charges for retailing. These factors partly explain why the farm value share for fresh fruit and vegetables is relatively low.

The farm value of most foods that come from grains and oilseeds represents a small share of the retail price. In 1993, farmers received about 7 percent of retail bakery and cereal prices and 19 percent of retail prices of processed fruit and vegetables (table 9). Because the farm value of these foods is small, the rise in retail prices in 1993, as in most other years, resulted mostly in a widening of the farm-to-retail price spread. For example, the farm value of cereal and bakery products declined in 1993. But this decline did not cause the retail price to drop, because there was a 3.9-percent increase in the farm-to-retail price spread.

Farm-to-Retail Price Spread

The farm-to-retail price spread is the difference between the farm value and the retail price. It represents payments for all assembling, processing, transporting, and retailing charges added to the value of farm products after they leave the farm. The farm-to-retail price spread, a much larger proportion of food prices than is the farm value of commodities, also has grown at a greater annual rate than the farm value nearly every year of the past decade. The spread, therefore, has consistently contributed much more to rising food prices than has farm value.

The farm-to-retail spread for the market basket of foods averaged 2.9 percent higher in 1993. This moderate increase reflected a relatively low general inflation rate (3 percent) that prevented a significant rise in costs of processing and distributing food. Moreover, weak sales growth and consumer price sensitivity have sparked food industry efforts to improve efficiency and minimize costs. Efforts have been made to improve labor use, conserve energy, and increase the use of technology for inventory management and other tasks.

The market basket farm-to-retail price spread attempts to measure charges for performing services connected with a fixed quantity of foods of a constant type and quality. However, the types of services incorporated into food sold in grocery stores have changed over time, a result of new product introductions and greater food preparation, such as boneless meat and poultry products, and fruit and vegetables sold at salad bars. Prices for these new and usually higher value foods are incorporated into the market basket retail price calculations over time, thus changing the type and quality of foods in the market basket. These changes in foods marketed with added services may increase price spreads.

Price spreads increased for almost all 10 food groups in the market basket in 1993, with increases ranging from 2 to 4 percent for most food groups. The farm-to-retail price spread for red meats widened 3.4 percent, following a very small increase in 1992. Tighter supplies of meat in 1993 and stronger demand enabled retailers to increase meat prices more than farm value, resulting in an increase in the price spread. Some of the overall increase in the spread for meat occurred for Choice beef. The farm-to-retail spread for Choice beef averaged more than 5 percent higher, due mainly to a sharp decline in cattle prices in the second half of the year that was not fully passed through in retail beef prices. In contrast, the farm-to-retail price spread for pork decreased for the second consecutive year, averaging about 4 percent lower in 1993. Thus, retail pork prices remained steady despite an increase in farm value.

Cereals and bakery products accounted for 21 percent of the farm-to-retail spread of the market basket. The spread for this food category widened 3.9 percent in 1993, coinciding with a decrease in the farm value of ingredients (table 7). In addition, demand for white bread, which is the least expensive type, was stimulated by the desire of consumers to economize. White bread prices rose 4.1 percent in 1993. For the cereal industry, profit margins generally continued to expand because of price increases, which averaged 4.5 percent at retail. Cereal consumption likely remained almost level, probably in response to rising retail prices and subsiding consumer response to the positive nutritional claims that are credited with increasing cereal consumption during the past decade.

Table 9--Market basket of food products originating on U.S. farms by food group: Indexes of retail cost, farm value, and farm-to-retail price spread, and farm value share of retail cost¹

Year	Meat products				Poultry				Eggs			
	Retail cost	Farm value	Farm-to-retail spread	Farm value share	Retail cost	Farm value	Farm-to-retail spread	Farm value share	Retail cost	Farm value	Farm-to-retail spread	Farm value share
	-----1982-84 = 100-----			Percent	-----1982-84 = 100-----			Percent	-----1982-84 = 100-----			Percent
1965	36	41	30	59	50	51	49	57	55	53	60	62
1966	38	44	34	58	52	53	53	53	63	65	50	66
1967	37	41	34	56	49	45	54	49	52	48	60	59
1968	38	42	33	54	51	48	54	51	56	54	61	61
1969	42	48	35	56	54	51	57	51	66	69	61	67
1970	43	47	40	53	53	46	61	46	66	64	69	63
1971	43	46	40	52	54	47	60	47	57	50	68	57
1972	48	55	42	56	54	48	60	49	56	50	68	57
1973	60	74	46	60	77	84	68	59	84	90	71	70
1974	61	67	55	54	73	76	69	56	84	89	76	68
1975	66	78	56	57	80	88	71	59	82	84	78	66
1976	66	70	63	51	77	79	75	55	91	97	81	68
1977	65	70	60	53	78	80	74	56	88	87	90	64
1978	77	85	69	54	85	93	76	58	82	83	81	65
1979	90	97	84	52	89	92	86	55	90	93	85	66
1980	93	97	89	51	94	96	92	54	89	88	89	64
1981	96	97	95	49	98	95	101	52	96	99	90	66
1982	101	104	98	52	96	91	101	51	93	91	97	63
1983	99	97	102	49	97	96	98	53	98	99	95	65
1984	100	99	100	50	107	113	101	56	109	110	107	65
1985	99	91	107	47	106	106	107	53	91	86	100	61
1986	102	94	110	47	114	115	113	54	97	92	106	61
1987	110	101	118	47	113	94	134	45	92	77	118	54
1988	112	100	125	45	121	110	133	49	94	77	124	53
1989	117	104	130	45	133	117	151	47	118	108	138	58
1990	128	117	140	46	132	108	161	44	124	108	153	56
1991	132	110	157	42	132	102	165	42	121	101	158	54
1992	131	104	158	41	131	104	163	42	108	78	163	46
1993	135	107	163	40	137	112	166	44	117	89	168	49

See footnotes at end of table.

--Continued

Table 9--Market basket of food products originating on U.S. farms by food group: Indexes of retail cost, farm value, and farm-to-retail price spread, and farm value share of retail cost¹--Continued

Year	Dairy products ²				Fats and oils ³				Fresh fruit			
	Retail cost	Farm value	Farm-to-retail spread	Farm value share	Retail cost	Farm value	Farm-to-retail spread	Farm value share	Retail cost	Farm value	Farm-to-retail spread	Farm value share
	-----1982-84 = 100-----			Percent	-----1982-84 = 100-----			Percent	-----1982-84 = 100-----			Percent
1965	36	33	40	44	35	41	34	31	29	35	27	31
1966	38	37	40	47	37	44	34	32	31	38	28	32
1967	40	38	42	47	37	38	37	28	31	37	28	31
1968	41	40	42	47	36	35	36	26	36	48	32	35
1969	42	42	43	48	36	35	36	26	34	40	32	31
1970	45	44	45	48	38	43	37	30	34	37	33	28
1971	46	44	47	47	42	49	39	32	37	42	35	30
1972	47	46	48	48	43	42	43	27	39	44	37	30
1973	51	52	50	50	47	66	40	38	44	56	40	33
1974	60	61	60	49	71	124	52	47	49	55	46	30
1975	62	63	61	50	77	97	69	34	50	58	47	30
1976	67	71	64	52	65	79	60	26	50	54	48	28
1977	69	72	68	50	71	95	62	26	58	65	55	29
1978	74	78	71	51	78	98	70	34	71	87	66	32
1979	83	88	78	52	84	106	75	34	80	89	77	29
1980	91	96	86	52	89	96	87	29	84	84	84	26
1981	97	102	93	51	99	100	98	27	88	87	89	26
1982	99	100	97	49	96	80	102	22	100	106	97	33
1983	100	100	100	48	97	96	98	27	94	80	100	27
1984	101	99	103	47	107	124	100	31	107	114	103	34
1985	103	95	110	44	109	104	111	26	118	111	122	30
1986	103	93	113	43	106	76	118	19	120	104	128	27
1987	106	93	118	42	108	74	120	18	136	114	146	26
1988	108	91	125	40	113	103	117	24	145	117	159	25
1989	116	99	131	41	121	96	131	21	155	109	176	22
1990	126	102	150	39	126	107	133	23	175	128	196	23
1991	125	90	157	34	132	98	144	20	200	173	213	27
1992	128	96	159	36	130	93	143	19	190	122	221	20
1993	129	93	163	34	130	108	138	22	196	135	224	22

See footnotes at end of table.

--Continued

Table 9--Market basket of food products originating on U.S. farms by food group: Indexes of retail cost, and farm value, farm-to-retail price spread, and farm value share of retail cost¹--Continued

Year	Fresh vegetables ⁴				Processed fruit and vegetables				Bakery and cereal products			
	Retail cost	Farm value	Farm-to-retail spread	Farm value share	Retail cost	Farm value	Farm-to-retail spread	Farm value share	Retail cost	Farm value	Farm-to-retail spread	Farm value share
	-----1982-84 = 100-----			Percent	-----1982-84 = 100-----			Percent	-----1982-84 = 100-----			Percent
1965	34	41	31	35	35	37	35	21	32	5130	17	
1966	33	38	31	34	36	36	36	20	33	56	31	18
1967	33	38	31	32	36	33	37	18	34	54	32	17
1968	35	40	33	33	38	38	38	20	35	52	33	16
1969	36	42	35	33	39	39	38	21	36	52	34	16
1970	39	43	38	32	39	37	40	19	38	56	36	16
1971	40	46	38	33	41	38	42	18	40	57	38	16
1972	43	47	41	32	42	40	42	19	40	60	37	17
1973	53	64	48	35	44	43	44	19	44	90	38	22
1974	58	67	54	34	54	60	53	22	57	130	48	25
1975	55	67	51	35	61	66	60	21	63	106	57	18
1976	58	67	55	33	62	63	62	20	62	86	59	15
1977	65	74	62	33	65	59	66	18	63	72	61	12
1978	70	75	69	30	71	88	67	25	68	83	66	13
1979	73	71	73	28	77	91	74	24	75	95	73	14
1980	79	73	81	27	83	97	79	23	84	111	81	14
1981	94	104	90	32	92	106	89	23	92	110	90	13
1982	94	95	94	34	97	100	97	24	97	96	97	12
1983	98	97	98	34	98	93	100	23	100	101	99	12
1984	108	108	108	34	104	107	103	24	104	103	104	12
1985	104	93	109	31	107	118	104	26	108	94	110	11
1986	108	90	117	28	105	102	106	23	111	76	116	8
1987	122	110	128	31	109	111	108	24	115	71	121	8
1988	129	106	141	28	118	137	112	28	122	93	126	9
1989	143	123	153	29	125	132	123	25	132	102	137	9
1990	151	124	165	28	133	144	129	26	140	91	147	8
1991	154	111	177	24	130	122	133	22	146	85	154	7
1992	158	121	177	26	134	129	135	23	152	94	160	8
1993	168	128	189	26	132	106	139	19	157	91	166	7

¹See table 6 for aggregated market basket data and explanations. ²Includes butter. ³Excludes butter and includes peanut butter. ⁴Includes potatoes.

The price spread for poultry, which narrowed slightly in 1992, widened by only 2 percent in 1993. Estimates of broiler processing and wholesaling costs show a rise of 1.2 cents per pound from 1987-92, or about 1.5 percent per year. The price spread for eggs rose 2.8 percent in 1993, about the same increase as in the previous 2 years. The increase in retail egg prices in 1993 was due mainly to higher farm egg prices.

The average farm-to-retail price spread for dairy products increased 2.7 percent in 1993. With the exception of 1990, when it grew more than at any time since 1980, the price spread for dairy products has risen less than that for most foods in most years of the past decade. For 1993, a decrease in the farm value of milk probably facilitated the increase in the price spread. The farm-to-retail price spread for a half-gallon of whole milk retailing for \$1.39 was 81 cents in 1993, up 2 cents from in 1992.

The farm-to-retail price spread increased only 1.5 percent for fresh fruit in 1993, but widened 6.7 percent for fresh vegetables. Retail fruit prices increased mainly because of a sharp rise in farm value. Vegetable prices rose because of the increase in the price spread and higher farm value. A 5-year average of price changes reveals that increases in farm-to-retail price spreads had the most significant effects on retail prices.

Price Spreads for Selected Foods

Higher prices for meat, poultry, and eggs heavily contributed to the rise in the CPI for food in 1993. The rise in prices came from both higher farm prices and increases in the farm-to-retail price spread.

Choice Beef

Retail Choice beef prices increased in 1993 following a slight decline in 1992 (table 10). The 1993 weighted average price of Choice beef was \$2.93 per pound, 9 cents higher than in 1992, and 5 cents higher than in 1991. Prices at retail were highest in May because of adverse winter weather that delayed marketings and slowed cattle weight gains. Prices of individual cuts ranged from an annual average of \$1.57 per pound for ground beef to more than \$6.00 per pound for the most expensive steaks.

Farm value of beef increased about 2 cents in 1993, considerably less than the retail price. Thus, the farm value share declined, averaging 56 percent of the retail price of beef in 1993. Farm value is computed using the USDA Agricultural Marketing Service's five-region direct market price series for live slaughter steers, 65- to 80-percent Choice. Prices per pound of slaughter steers are multiplied times 2.4 pounds, the quantity of live animal required to sell 1 pound of Choice beef at retail. We then estimate the value of byproducts, principally the hide obtained from the slaughtered animal. We subtract this byproduct value to obtain the farm value of the meat alone.

The farm-to-retail price spread for Choice beef last year increased 6 cents to an average of \$1.29 per pound. The spread varied from a low of \$1.17 in March to a high of \$1.39 in July. The price spread for beef has increased over time. With the increase in 1993, the price spread for Choice beef was 33 percent higher than in 1983. This is an average of about 2.9 percent per year, about 1 percentage point less than the rate of inflation.

The farm-to-retail price spread pays for various marketing functions, all of which cost more in 1993. The estimated cost of slaughtering and boxing beef was 14.6 cents in 1993, up from 14.1 cents in 1992 (table 11). Transportation of beef from the packer to the retail marketing area cost 3.8 cents per retail pound in 1993, up slightly mainly because of higher wages. Warehousing and store delivery were estimated to cost 17 cents per pound at retail. This estimate is based on data in the *1987 Census of Wholesale Trade*, published by the U.S. Department of Commerce, which indicated that these costs represented 7.3 percent of gross sales by meat wholesalers.

Cutting and merchandising of Choice beef cost 94 cents per pound in 1993. The cost was up about 5 cents from in 1992, and accounted for most of the increase in the spread. This cutting and merchandising cost represents the difference between the total of all other spreads and the retail price. Data for 1987-92 indicate an upward trend in both warehousing and store delivery and in cutting and merchandising the beef. The increases reflect the effects of inflation on marketing costs. In contrast, slaughtering and boxing costs have been lower in recent years than in 1987.

Table 10--Choice beef and pork: Retail price, farm value, price spreads, and the farm value share of the retail price

Item	Retail price ¹	Wholesale value ²	Net farm value ³	Price spreads			Farm value share ⁶
				Farm-to-retail	Wholesale-to-retail ⁴	Farm-to-wholesale ⁵	
----- Cents per retail pound -----							Percent
Choice beef:							
1980	233.6	171.1	145.7	87.9	62.5	25.4	62
1981	234.7	164.4	139.1	95.6	70.3	25.3	59
1982	238.4	165.9	141.1	97.3	72.5	24.8	59
1983	234.1	160.1	136.8	97.3	74.0	23.3	58
1984	235.5	162.5	140.7	94.8	73.0	21.8	60
1985	228.6	148.8	127.4	101.2	79.8	21.4	56
1986	226.8	146.5	125.0	101.8	80.3	21.5	55
1987	238.4	160.0	138.7	99.7	78.4	21.3	58
1988	250.3	169.4	148.3	102.0	80.9	21.1	59
1989	265.7	176.8	157.6	108.1	88.9	19.2	59
1990	281.0	189.6	168.4	112.6	91.4	21.2	60
1991	288.3	182.5	160.2	128.1	105.8	22.3	56
1992	284.6	179.6	161.8	122.8	105.0	17.8	57
1993	293.4	182.5	164.1	129.3	110.9	18.4	56
Pork:							
1980	139.4	98.0	63.2	76.2	41.4	34.8	45
1981	152.4	106.7	70.3	82.1	45.7	36.4	46
1982	175.4	121.8	88.0	87.4	53.6	33.8	50
1983	169.8	108.9	76.5	93.3	60.9	32.4	45
1984	162.0	110.1	77.4	84.6	51.9	32.7	48
1985	162.0	101.1	71.4	90.6	60.9	29.7	44
1986	178.4	110.9	82.4	96.0	67.5	28.5	46
1987	188.4	113.0	82.7	105.7	75.4	30.3	44
1988	183.4	101.0	69.4	114.0	82.4	31.6	38
1989	182.9	99.2	70.4	112.5	83.7	28.8	38
1990	212.6	118.3	87.2	125.4	94.3	31.1	41
1991	211.9	108.9	78.4	133.5	103.0	30.5	37
1992	198.0	98.9	67.8	130.2	99.1	31.1	34
1993	197.6	102.8	72.5	125.1	94.8	30.3	37

¹ Composite of all cuts. ² For quantity equivalent to 1 retail pound: beef, 1.142 pounds of wholesale cuts; pork, 1.06 pounds of wholesale cuts.

³ For quantity of live animal equivalent to 1 retail pound, minus byproduct allowance: beef, 2.4 pounds; pork, 1.7 pounds. ⁴ Includes retailing, meat fabricating, wholesaling, and intracity transportation. ⁵ Charges for livestock processing and transporting of meat to city where consumed.

⁶ Percentage of retail price.

Pork

Retail pork prices in 1993 averaged \$1.98 per pound, unchanged from in 1992. Prices in 1993 were only 16 percent above prices in 1983 (table 10), a much smaller increase than the 1983-93 increase in overall food prices. Per capita pork supplies on a retail weight basis in 1993 were 52 pounds, about 1 pound less than in 1992. The farm value in 1993 increased about 5 cents from that in 1992, averaging 72.5 cents per retail pound equivalent. The farm value share increased to 37 percent in 1993, 3 percent above that in 1992.

Farm value is computed from the average price of barrows and gilts at six midwestern markets. This average price is then multiplied times 1.7 pounds, the quantity of live animals needed to sell 1 pound of pork at retail. A value for lard and other byproducts is then subtracted to obtain the net farm value.

The farm-to-retail price spread for pork decreased to \$1.25 per pound in 1993. Among components of the farm-to-retail spread for pork, the slaughtering and processing functions cost about the same in 1993 as in recent years (table 11). This spread represents charges for cutting the carcass into primals and for processing hams, bacon, and other products. We estimated this spread by deducting the farm value and intercity transportation costs from a composite wholesale price of pork. The transportation portion of the price spread for pork between the packer and retail marketing area was unchanged in 1993, as was the warehousing and store delivery spread.

The cutting and merchandising costs of 83 cents made up the largest component of the farm-to-retail price spread for pork in 1993. This figure was 4 cents lower than pork's cutting and merchandising cost in 1992, but was 19 cents higher than in 1987. The cutting and merchandising component is a residual between the total of all other functions and the retail price. Inflation and the time lag between changes in farm, wholesale, and retail prices may partly explain the 1987-93 increase.

Broilers

Retail prices rose 2.1 cents per pound for whole, ready-to-cook chicken in 1993, but farm value rose 3.6 cents. Thus, the marketing spread narrowed 1.5 cents in 1993, the second consecutive yearly decline. The spread was stable from 1981 to 1986, averaging 33.5 cents per pound (table 12). From 1986 to 1991, the marketing spread trended up to average 44.5 cents per pound in 1991. Broiler processing costs have increased little in recent years, reflecting gains in labor productivity that have offset rising labor and other input costs.

Much of the demand for broilers is for further processed products. Broiler producers are cutting chicken into parts, and most producers are further processing chicken into fillets, nuggets, and other value-added products according to buyers' specifications. The processor generally realizes a more favorable gross margin and increased volume from this further processing. Most of these products are served through fast-food and institutional outlets, but considerable volumes of chicken parts are sold through retail stores for home consumption. These further processed products are not included in farm-to-retail price spread computations, but they represent a source of market strength that supported prices in 1993 while consumption sharply rose.

Table 11--Choice beef and pork: Farm value, retail price, and estimated marketing costs by function

Item	1987	1988	1989	1990	1991	1992	1993
	<u>Cents per retail pound</u>						
Beef:							
Farm value	138.7	148.3	157.6	168.4	160.2	161.8	164.1
Slaughtering and boxing carcass	17.5	17.4	15.5	17.4	18.5	14.1	14.6
Intercity transportation	3.8	3.7	3.7	3.8	3.8	3.7	3.8
Warehousing and store delivery	13.8	14.5	15.4	16.3	16.7	16.5	17.0
Cutting and merchandising	64.6	66.4	73.5	75.1	89.1	88.5	93.9
Retail price	238.4	250.3	265.7	281.0	288.3	284.6	293.4
Pork:							
Farm value	82.7	69.4	70.4	87.2	78.4	67.8	72.5
Slaughtering and processing	26.8	28.2	25.4	27.6	27.0	27.7	26.9
Intercity transportation	3.5	3.4	3.4	3.5	3.5	3.4	3.4
Warehousing and store delivery	10.9	10.6	10.6	12.3	12.3	11.5	11.4
Cutting and merchandising	64.5	71.8	73.1	82.0	90.7	87.6	83.4
Retail price	188.4	183.4	182.9	212.6	211.9	198.0	197.6

Table 12--Broilers and eggs: Farm value, marketing costs by function, and retail price

Item	Farm value ¹	Marketing costs					Retail price
		Assembly and procurement	Processing	Intercity transportation	Wholesaling	Retailing	
<u>Cents</u>							
Broilers, ready-to-cook, whole (pound):							
1975	37.0	1.4	7.5	1.4	3.9	12.0	63.2
1976	32.6	1.1	7.8	1.3	3.7	13.2	59.7
1977	33.0	1.1	8.0	1.4	3.7	12.9	60.1
1978	36.8	1.2	8.7	1.4	3.8	14.6	66.5
1979	36.8	1.3	9.6	1.6	4.2	14.5	68.0
1980	39.4	1.4	9.8	1.7	4.3	14.3	70.9
1981	39.4	1.6	10.3	1.7	4.3	15.9	73.2
1982	37.8	1.6	10.4	1.7	4.3	15.6	71.4
1983	41.2	1.6	10.5	1.7	4.3	13.2	72.5
1984	46.7	1.6	10.8	1.7	4.4	15.8	81.0
1985	42.4	1.6	9.3	1.7	4.4	16.9	76.3
1986	49.0	1.6	9.1	1.7	4.4	17.7	83.5
1987	40.2	1.6	9.1	1.7	4.4	21.5	78.5
1988	48.1	1.6	9.1	1.7	4.4	20.5	85.4
1989	50.8	1.7	9.9	1.8	4.6	23.9	92.7
1990	46.3	1.7	10.4	1.9	4.8	24.8	89.9
1991	43.6	1.8	10.6	2.0	4.8	25.0	88.1
1992	44.6	1.8	11.0	2.0	4.8	22.7	86.9
1993	48.2	1.8	11.0	2.0	4.8	21.2	89.0
Eggs, Grade A, large (dozen):							
1975	50.8	1.2	9.3	1.5	3.7	10.5	77.0
1976	58.0	.9	9.6	1.4	3.5	11.5	84.9
1977	53.8	.9	10.3	1.5	3.5	12.3	82.3
1978	49.7	.9	10.5	1.6	3.4	12.4	78.5
1979	53.7	1.1	11.7	1.8	3.9	13.7	85.9
1980	51.0	1.2	12.4	1.9	4.1	13.7	84.3
1981	56.9	1.2	12.2	1.9	4.1	13.6	89.9
1982	54.5	1.2	12.2	1.9	4.1	12.8	86.7
1983	59.5	1.0	11.6	1.7	3.5	12.1	89.4
1984	66.0	1.0	12.1	1.5	3.7	16.2	100.5
1985	51.4	1.0	11.0	1.5	3.7	11.8	80.4
1986	55.4	1.0	11.0	1.5	3.7	14.4	87.0
1987	46.0	1.0	11.0	1.5	3.7	15.1	78.3
1988	46.0	1.0	11.2	1.5	3.7	15.6	79.0
1989	64.4	1.0	11.4	1.6	3.7	17.7	99.8
1990	64.7	1.1	11.4	1.7	3.9	18.6	101.4
1991	59.1	1.1	12.0	1.7	4.0	21.0	98.9
1992	46.3	1.1	12.0	1.7	4.0	20.9	86.0
1993	53.1	1.1	12.0	1.7	4.0	19.2	91.1

¹ Farm values are derived from U.S. average broiler and market egg prices that USDA's National Agricultural Statistics Service publishes monthly for farmers. Broiler prices are multiplied times 1.41 to convert to retail equivalent. The egg price is multiplied times 1.03 to allow for marketing loss.

Eggs

Following the largest drop in egg prices in years in 1992, egg prices rebounded in 1993 due in large measure to increasing use of liquid and other processed egg products. For 1993, retail shell egg prices averaged 91 cents per dozen of grade A large, 5 cents higher than the 1992 price (table 12). All of the 1993 increase was in the farm value of eggs, which averaged 53 cents per dozen. The price spread between the farm value and the retail price declined to 38 cents per dozen. The price spread for eggs has trended up since 1985, mainly reflecting apparent increases in the retailer margin, which was 19 cents per dozen in 1993.

Fluid Milk

The retail price of fluid whole milk was steady in 1993. Since the early 1980's, retail milk prices have tended to rise less than broader measures of consumer prices. The 1993 average retail price for a half-gallon of whole milk was \$1.39, which was 23 percent higher than in 1983 (table 13). This compares with a 41-percent average increase in grocery store food prices.

Lower farm milk prices and a moderate expansion in the farm-to-retail price spread shaped milk prices in 1993. The farm-to-retail price spread for fluid milk increased 1.7 cents to 81.2 cents in 1993. Farmers received an average of 58.2 cents for milk equivalent to a half-gallon at retail in 1993, 1.5 cents less than in 1992.

Table 13--Fluid whole milk: Farm value, marketing costs by function, and retail price per half-gallon

Year	Farm value 1	Marketing costs				Retail price 5
		Assembly and procurement 2	Processing 3	Wholesaling 3	Retailing 4	
<u>Cents</u>						
1974	40.9	2.7	10.7	13.6	8.9	76.8
1975	41.2	2.8	11.4	13.6	7.9	76.9
1976	46.2	2.8	10.6	12.1	9.3	81.0
1977	45.1	2.9	13.2	12.6	8.3	82.1
1978	47.0	3.1	14.6	14.3	7.1	86.1
1979	52.2	3.8	15.1	16.6	8.3	96.0
1980	55.8	4.5	15.6	18.9	10.2	104.9
1981	59.5	4.7	16.0	19.1	12.4	111.7
1982	59.2	4.5	16.5	19.3	13.0	112.4
1983	59.5	4.3	16.6	17.8	14.6	112.8
1984	58.2	4.4	17.3	17.3	15.5	112.7
1985	56.1	4.8	18.6	17.8	16.1	113.4
1986	54.8	4.7	19.1	18.2	14.6	111.4
1987	56.1	4.9	19.1	18.0	15.6	113.7
1988	54.2	5.6	19.3	18.2	19.1	116.4
1989	59.0	5.5	19.2	18.4	24.8	126.9
1990	63.6	5.6	19.1	20.2	33.9	142.4
1991	54.0	6.0	19.4	20.5	36.9	136.8
1992	59.7	5.8 ⁶	19.1 ⁶	19.6 ⁶	35.0	139.2
1993	58.2	--	--	--	--	139.4

-- = Not available.

¹ Prices farmers received are normally quoted for 3.5-percent butterfat at plant of first receipt. This price has been adjusted for transportation from farm to first plant to get the farm price, then adjusted to get the value of milk containing 3.3-percent butterfat, the usual butterfat content at retail. There are approximately 23.3 half-gallons of milk per 100 pounds. ² Nonfarm costs of supplying milk to processors, including laboratory and onfarm field service to assure quality, pickup at farms, transportation, receiving and reloading as necessary, and management of raw milk reserves. ³ Data for processing and wholesaling represent costs for 30 fluid milk processor-distributor firms that represent moderate-sized, single-plant operations throughout the country. Very small plants and plants that retail food chains operated are not included. ⁴ May include some wholesaling formerly performed by processors. ⁵ Average of Bureau of Labor Statistics monthly prices. ⁶ Preliminary estimate.

The average retailing margin for fluid milk in 1992, the latest available data, was 35 cents. The retailing margin constituted 25 percent of the retail price. In 1982, the retailing margin made up only about 12 percent of the retail price.

The same firm typically performs the processing and wholesaling of milk. The combined processing and wholesaling margin was about 39 cents in 1992. Processing costs have remained nearly stable since 1986, after rising 16 percent from 1982 through 1986. The processing and wholesaling margin constituted 28 percent of the retail price in 1992.

Fluid milk processors earned 94 cents before taxes per hundredweight (cwt) of raw milk processed in 1990, the latest data available (table 14). Net returns had not been nearly that high since 1985. Processors reduced their operating costs 18 cents per cwt during 1990, and container costs fell 15 cents to \$1.93 in 1990 after peaking at \$2.08 in 1989. Operating costs of processor-distributors increased 50 cents per cwt from 1983 to 1990. The increase was mainly due to higher container, rent, depreciation and repair, and insurance costs.

Fruit and Vegetables

The price spread for fresh fruit and vegetables increased about 4 percent in 1993, slightly more than the average of all foods. Much of the increase occurred for lettuce (table 15). In 1993, the farm-to-retail price spread for lettuce rose about 12 percent, reflecting in part a weather-induced drop in lettuce production that caused a dramatic price increase at all market levels. Farm value of lettuce went up about 20 percent. In contrast, the farm-retail price spread for California oranges was nearly stable in 1993, because the rise in retail prices of oranges was about the same amount as the rise in farm value.

Table 14--Net sales, costs, and margins for 30 fluid milk processor-distributors

Item	1983	1984	1985	1986	1987	1988	1989	1990
	<u>Dollars per cwt of volume processed</u>							
Net sales receipts ¹	25.53	25.19	25.29	24.91	24.76	24.56	25.85	26.87
Raw materials and other product costs:								
Milk and cream	13.66	13.38	12.90	12.38	12.25	11.81	12.78	13.56
Finished	2.03	1.96	1.95	2.03	2.17	2.20	2.29	2.38
Other ²	1.40	1.43	1.52	1.37	1.39	1.44	1.58	1.47
Total	17.09	16.76	16.38	15.78	15.81	15.45	16.64	17.41
Gross margin	8.44	8.43	8.92	9.13	8.95	9.11	9.21	9.46
Operating costs:								
Salaries, wages, and commissions ³	3.65	3.52	3.50	3.67	3.60	3.63	3.61	3.57
Containers	1.71	1.74	1.80	1.81	1.82	1.95	2.08	1.93
Operating supplies	.60	.59	.56	.50	.48	.50	.52	.56
Rent, depreciation, and repairs	.99	.96	1.03	1.12	1.11	1.13	1.11	1.12
Taxes	.12	.12	.13	.13	.12	.14	.15	.13
Insurance	.08	.08	.10	.16	.17	.17	.17	.16
Services	.58	.62	.56	.62	.61	.61	.66	.62
Advertising	.14	.13	.14	.15	.15	.14	.14	.15
General	.15	.18	.23	.22	.23	.21	.26	.28
Total	8.02	7.93	8.06	8.38	8.29	8.48	8.70	8.52
Net margin ⁴	.41	.50	.85	.74	.66	.62	.51	.94

¹ Gross sales receipts less discounts, allowances, and damaged product returns. ² Ingredients other than milk, cream, and skim milk used to make cottage cheese, ice cream, orangeade, and other products. ³ Includes costs of fringe benefits, such as State and Federal unemployment, Federal old-age benefits, workers' compensation, and pensions. ⁴ Net returns to owners before income tax.

Table 15--Selected fruit and vegetables: Farm value, marketing costs by function, and retail price

Item	Farm value ¹	Marketing costs				Retail price ³
		Packing or processing	Intercity transportation ²	Wholesaling	Retailing	
<u>Cents</u>						
Oranges, California						
(pound):						
1982	17.1	4.0 ⁴	5.2	5.5	15.8	47.6
1983	5.3	8.6 ⁴	5.2	5.9	13.7	38.7
1984	17.2	5.8 ⁴	5.4	4.9	16.6	49.9
1985	12.4	9.4 ⁴	5.4	6.8	19.4	53.4
1986	8.2	9.9 ⁴	5.7	6.0	17.8	47.6
1987	10.0	9.9 ⁴	6.2	9.0	19.9	55.0
1988	11.8	8.0 ⁴	5.4	8.2	23.0	56.4
1989	11.3	8.3 ⁴	5.4	9.0	22.1	56.1
1990	11.3	8.4 ⁴	5.8	4.3	26.8	56.6
1991	33.6	7.2 ⁴	6.0	13.2	29.2	89.2
1992	10.0	--	--	--	--	56.9
1993	12.6	--	--	--	--	58.6
Iceberg lettuce, California (pound):						
1982	8.5 ⁵	6.4 ⁶	5.7	5.2	30.4	56.2
1983	6.8 ⁵	6.4 ⁶	5.7	5.3	31.2	55.5
1984	5.1 ⁵	6.4 ⁶	5.7	4.4	28.8	50.4
1985	8.2 ⁵	6.4 ⁶	5.6	5.1	27.3	52.6
1986	6.8 ⁵	6.8 ⁶	6.0	6.1	28.2	53.9
1987	11.1 ⁵	6.8 ⁶	6.4	4.6	30.6	59.5
1988	10.1 ⁵	7.4 ⁶	5.6	4.3	32.9	60.3
1989	10.0 ⁵	7.3 ⁶	6.1	2.1	35.1	60.6
1990	9.3 ⁵	7.3 ⁶	5.6	4.5	32.9	59.6
1991	8.7 ⁵	7.3 ⁶	5.8	4.7	34.6	61.1
1992	10.1 ⁵	--	--	--	--	57.7
1993	12.1 ⁵	--	--	--	--	65.6
Orange juice, frozen concentrated (12-oz. can):						
1982	46.3	18.7	3.4	13.6	24.1	106.1
1983	44.0	20.1	3.5	13.3	23.5	104.4
1984	49.0	32.7	3.5	13.2	23.2	121.6
1985	61.9	18.5	3.5	17.2	30.5	131.6
1986	39.6	23.2	3.8	17.6	31.4	115.6
1987	42.5	32.2	3.9	13.0	23.2	114.8
1988	51.9	38.1	3.9	15.4	27.4	136.7
1989	56.0	29.0	4.0	18.1	32.3	139.4
1990	55.4	45.7	4.1	20.5	36.4	162.1
1991	53.1	25.7	4.2	19.8	35.1	137.9
1992	57.2	--	--	--	--	141.5
1993	40.2	--	--	--	--	122.2

-- = Not available.

¹ Payment for the quantity of farm product equivalent to the retail unit minus imputed value of byproducts, computed from average grower prices.

² Costs are for truck shipment. ³ U.S. average retail prices. Prices of fresh produce weighted by quantities marketed, except in 1992. ⁴ Includes picking costs. ⁵ Value in the field. ⁶ Contract price for cutting, packing, hauling, cooling, and selling.

Retailing accounts for the largest share of the marketing expense for fresh produce items. Retailing expenses for oranges averaged 55 percent of the farm-to-retail spread during 1989-91 (latest data available). The retailing share averaged 67 percent for lettuce. Produce margins generally exceed the average margin of the typical supermarket, and produce is the most profitable and fastest growing department of the typical store. While gross margins alone do not reflect actual profitability, the percentage of storewide gross profit dollars that fresh produce contributed has been much greater than their contribution to store sales would suggest. Produce accounts for 8.7 percent of total sales of the typical supermarket, but yields about 20 percent of net profits dollars, according to a survey by the Produce Marketing Association.

Over the 1989-91 period, packing costs made up the second-largest share of the farm-to-retail price spread for lettuce, averaging 14 percent. Intercity transportation cost were the third-largest share, accounting for 11 percent of the price spread. For oranges, wholesaling was the second-largest share, averaging 18 percent, followed closely by packing costs.

The price spread for processed fruit and vegetables rose 3 percent in 1993. The principal item in this food group is frozen concentrated orange juice, for which the retail price of a 12-ounce can fell sharply in 1993, decreasing 19 cents to \$1.22. The price drop mainly resulted from lower farm value, reflecting about a 33-percent increase in the 1992/93 Florida orange crop. The farm-to-retail price spread rose slightly. Over 1989-91, charges for retailing made up 38 percent of the farm-to-retail price spread for frozen concentrated orange juice, and processing equaled 37 percent of the price spread. Packaging represents a major cost of processing, but automated operations minimized the labor cost of concentrated orange juice processing. Wholesaling charges were about 21 percent, and transportation costs were about 4 percent of the price spread.

Bread

The average retail price of white bread in 1993 was 75 cents per pound, unchanged from in 1992 (table 16). This price is the average of monthly prices reported by the U.S. Bureau of Labor Statistics. The farm value of wheat, at 4.1 cents, was 0.3 cent lower in 1993 than in 1992. The farm value represents the payment to farmers for the quantity of wheat (approximately 0.86 pound) required to produce the flour for a 1-pound loaf of bread. The payment is computed from the average farm price for all wheat. A deduction is made for the value of millfeed, a byproduct of milling the wheat. The value of the millfeed ranges from 15 percent to 20 percent of the value of the wheat, depending on the flour-milling extraction rate, the price of flour, and the price of millfeed.

Other farm-derived ingredients, including lard, soybean oil, high-fructose corn syrup, and soy-whey blend, contributed 0.7 cent to a total farm value of 4.8 cents for all ingredients. The farm value share of all ingredients was 6 percent of the retail price in 1993, down 1 percent from that in 1992. Thus, the farm-to-retail spread--consisting of wheatmilling, breadbaking, and distribution costs--was nearly all of bread's retail price.

Sugar

Because of the stability that the price-support program for sugar provided, retail sugar prices, together with the farm value and price spreads, change relatively little from year to year. In crop year 1992/93, the domestic raw sugar price rose about 0.1 cent per pound, and the wholesale refined sugar price fell about 0.7 cent per pound. On balance, farm values fell.

The 1992/93 farm value of a pound of sugar was 13.7 cents, about 3 percent lower than that of a year earlier (table 17). The farm value is based on the season average prices growers received in the United States for sugarcane and sugar beets, based on raw and refined sugar prices. The farm value accounted for 36 percent of the retail price of sugar in 1993, down 1 percentage point from the previous year.

The farm-to-retail price spread for sugar was 24.2 cents in 1992/93, practically unchanged from the previous year. The processing and refining component of the spread was down slightly, at 17.5 cents. This component is the difference between the farm value and an average effective wholesale price for sugar packed in 5-pound bags. The processing and refining component covers all the functions of transporting sugarcane and sugar beets to processing plants, processing sugarcane and refining raw cane sugar, processing sugar beets, and selling sugar to wholesalers.

The wholesaling and retailing spread, the difference between the average retail price and the average wholesale price for sugar, was estimated at 6.7 cents per pound in 1992/93, the same as the previous year. Retail and wholesale sugar prices both fell by about 0.7 cent per pound. The wholesaling and retailing spread includes intercity transportation and wholesaling and retailing charges.

Table 16--White bread: Retail price, farm value of ingredients, farm-to-retail price spread, and farm value share of retail price per 1-pound loaf

Year	Retail price	Farm value of ingredients			Farm-to-retail spread	Farm value share	
		Wheat ¹	Other farm ingredients ²	All ingredients		Wheat	All ingredients
-----Cents-----					-----Percent-----		
1970	27.7	2.6	0.8	3.4	24.3	9	12
1971	28.5	2.6	.9	3.5	25.0	9	12
1972	28.2	2.9	.9	3.8	24.4	10	13
1973	31.5	4.1	1.4	5.5	26.0	13	17
1974	39.3	5.4	2.5	7.9	31.4	14	20
1975	41.0	4.5	2.3	6.8	34.2	11	17
1976	40.2	3.8	1.7	5.5	34.7	9	14
1977	40.5	2.7	.7	3.4	37.1	7	8
1978	41.7	3.3	.7	4.0	37.7	8	10
1979	46.7	4.1	.8	4.9	41.8	9	10
1980	50.9	4.5	.8	5.3	45.6	9	10
1981	52.5	4.7	.8	5.5	47.0	9	10
1982	53.2	4.4	.6	5.0	48.2	8	9
1983	54.2	4.5	.7	5.2	49.0	8	9
1984	54.1	4.3	.8	5.1	49.0	8	9
1985	55.3	4.1	.7	4.8	50.5	7	9
1986	56.5	3.5	.5	4.1	52.5	6	7
1987	54.7	3.3	.5	3.8	50.9	6	7
1988	61.3	4.1	.7	4.8	56.5	7	8
1989	66.6	4.8	.7	5.5	61.1	7	8
1990	69.5	3.7	.7	4.4	65.1	5	6
1991	71.1	3.4	.6	4.0	67.1	5	6
1992	75.0	4.4	.6	5.0	70.0	6	7
1993	75.2	4.1	.7	4.8	70.4	5	6

¹ Payment to farmers for the quantity of wheat (approximately 0.86 pound) required to produce the flour for a 1-pound loaf of white bread, minus the value of millfeed byproducts. Based on average farm prices for hard winter and spring wheat in 11 States producing these wheats through 1982; all wheat prices used beginning in 1983. ² Value for lard, shortening, granulated sugar, and nonfat dry milk through 1976. Value for 1977 forward is for lard, soybean oil, high-fructose corn syrup, corn syrup, and soy-whey blend.

Table 17--Sugar: Farm value, price spreads, and retail price

Item	Crop year beginning October					
	1987/88	1988/89	1989/90	1990/91	1991/92	1992/93
<u>Cents per pound</u>						
Farm value ¹	14.0	14.6	14.9	15.0	14.2	13.7
Processing and refining spread ²	14.1	16.9	18.0	17.5	17.7	17.5
Wholesaling and retailing spread ³	6.0	5.9	6.7	7.6	6.7	6.7
Retail price ⁴	34.1	37.4	39.6	40.1	38.6	37.9

¹ Based on season average prices U.S. sugar producers received for sugarcane and sugar beets. ² Difference between the farm value and an average of effective wholesale prices. ³ Difference between the retail price and the wholesale price. ⁴ Average of Bureau of Labor Statistics' monthly retail prices for sugar sold in 33- to 80-ounce packages.

Food Industry Costs, Profits, and Productivity

Many factors influence how much the food industry charges for its services. Food industry input costs, profits, and productivity largely determine the price of food products when they reach the consumer.

Prices of Marketing Inputs

Increases in farm-to-retail price spreads mainly reflect rising costs that food industry firms face. These costs include wages and salaries of workers and prices of many supplies and services that marketing firms bought from other parts of the economy. ERS maintains a food marketing cost index (FMCI) for monitoring and analyzing changes in variable operating costs incurred in processing, wholesaling, and retailing foods. The FMCI consists of hourly earnings of workers and price indexes of various marketing inputs, weighted by the share of each input in total operating costs. The FMCI is not a substitute for more conventional measures of marketing costs. However, the behavior of the index at least partially indicates changes in operating costs of the food marketing sector. The index does not account for changes in productivity and profits.

The largest component of the index (45 percent) is labor costs. Food containers and packaging materials (15 percent), transportation rates (11 percent), and energy costs (8 percent) complete the list of leading cost components of the index. Other cost components include advertising, maintenance and repair services, insurance, short-term interest, rent, and miscellaneous supplies and services.

In 1993, the FMCI rose 2.3 percent, a slightly larger increase than in 1992. A 3.1-percent rise in the labor component and higher prices for business services contributed most to the increase. Prices of food containers and packaging were stable. Interest rates on short-term credit fell 13 percent, moderating the rise in the overall index (table 18). Because businesses attempt to recover increases in variable costs, the relatively small rise in the FMCI likely moderated the observed increases in the farm-to-retail price spread and food prices at retail. But the rise in the FMCI was slightly smaller than the rise in the farm-to-retail spread in 1993. Thus, other factors likely were affecting marketing charges. These factors could include: greater use of some inputs, such as labor, per unit of output; rising fixed costs, such as asset depreciation and interest on long-term debt; higher profits; and lower productivity.

Profits

Two financial ratios are useful in evaluating the profitability of the food industry: profit margin and return on stockholder equity. The profit margin is net income as a percentage of sales. It measures the portion of the sales dollar left after paying all expenses, including the cost of food products. The profit margin helps explain the importance of profits compared with costs that, together, make up the consumer food dollar. Return on stockholder equity, which reflects the earning power of the owner's investment, shows food industry profitability compared with that of other industries.

The after-tax profit margin of food and tobacco manufacturers averaged 3.7 percent of sales in 1993, down from 4.4 percent in 1992, based on data that the U.S. Bureau of the Census compiled. Returns on stockholders' equity decreased to 13.5 percent in 1993 (table 19). Profits were limited by consumers' continued concern about the economy that has reduced their spending and in some cases changed food buying habits and preferences. Consumers have been increasing their purchases of less costly private-label foods, cutting into sales and profits of the manufacturers of branded food products. Returns on equity for the food and tobacco industry still were higher than the 10.1-percent average for all manufacturers of nondurable products.

Profit margins of retail food chains averaged 0.8 percent of sales in 1993, down from 1.0 percent a year earlier. Most of the decline was due to the write-off of non-operating expenses against income in the first quarter of 1993. The expenses reflected the cumulative effect of a change in accounting methods pertaining to employee post-retirement benefits other than pensions. In the second and third quarters of 1993, profit margins for supermarket chains were substantially higher than in 1992. Profit margins of some major food chains improved in 1993, mainly reflecting the gradual improvement in the economy and changing consumer buying habits (table 20). Retailers last year also continued to make greater use of technology, including scanning, satellite communications, and more sophisticated merchandising and labor scheduling systems to control labor costs, their largest operating expense.

Table 18--Price indexes of food marketing costs¹

Year	Labor-- Hourly earnings and benefits				Packaging and containers							
	Total	Process- ing	Wholesale- ing	Retail- ing	Total	Paper boxes and con- tainers	Metal cans	Paper bags and sacks	Plastic packag- ing	Glass con- tainers	Metal foil	Transpor- tation services
<u>1967 = 100</u>												
1968	106.5	105.9	106.7	107.0	96.3	95.9	104.4	101.0	78.4	107.5	100.2	102.0
1969	113.7	112.7	113.5	114.8	99.5	99.4	107.1	103.6	79.9	114.7	105.5	105.0
1970	122.5	121.2	125.1	122.6	103.6	101.1	113.1	108.0	86.0	120.3	106.3	114.3
1971	131.9	130.9	131.9	133.0	106.6	102.4	123.8	109.7	81.8	131.6	106.4	128.5
1972	143.3	134.0	143.7	146.4	110.4	105.5	131.8	113.6	82.9	135.1	106.1	132.5
1973	154.2	151.3	153.7	157.3	117.3	115.1	138.5	121.6	86.4	138.9	106.0	135.2
1974	168.7	164.3	167.4	173.7	149.7	152.2	170.3	144.9	129.6	155.5	113.0	156.3
1975	187.4	184.1	182.3	192.9	174.4	170.3	200.2	161.6	170.8	181.8	116.6	176.9
1976	203.8	200.1	197.6	210.3	184.8	176.2	212.1	170.0	188.1	195.4	127.1	194.4
1977	222.4	217.6	217.8	229.4	192.8	176.5	231.4	176.7	193.6	214.4	140.0	205.1
1978	244.4	237.7	239.3	254.0	204.7	179.6	263.8	186.5	192.1	244.4	159.3	220.5
1979	265.8	257.9	260.4	276.1	228.4	202.1	293.0	209.7	216.9	261.1	175.6	251.3
1980	292.6	283.3	283.5	306.4	261.5	234.6	325.7	236.5	238.5	292.7	184.1	296.8
1981	321.3	309.2	309.5	338.6	280.9	258.2	345.8	258.9	262.5	328.6	203.3	345.9
1982	342.7	330.0	335.1	359.3	275.1	254.9	363.6	264.4	200.0	355.7	213.2	371.1
1983	356.8	341.9	358.1	371.1	280.7	251.0	374.3	265.4	226.2	352.4	214.0	374.5
1984	365.5	350.2	371.1	378.3	303.5	264.0	397.3	290.9	273.1	360.8	226.9	391.7
1985	363.0	357.9	373.5	363.5	312.1	271.6	416.9	294.7	274.4	380.0	213.8	393.9
1986	359.4	363.4	376.3	347.9	317.4	269.1	430.1	307.9	274.8	398.0	209.3	391.7
1987	361.2	370.2	384.2	341.7	329.8	288.0	433.0	331.3	280.2	402.0	222.1	385.0
1988	370.5	381.4	398.6	347.2	350.7	308.1	442.3	372.2	305.7	398.9	266.9	403.5
1989	382.2	392.1	415.2	357.8	364.6	323.7	443.2	409.2	313.2	409.9	274.4	404.9
1990	395.7	405.8	428.7	371.2	367.6	323.9	455.0	413.0	307.1	427.3	258.4	411.3
1991	405.8	421.4	444.1	373.4	371.2	320.3	470.5	410.9	310.7	446.0	251.6	422.6
1992	418.8	436.7	458.5	383.4	370.1	324.8	478.1	387.8	309.9	444.4	241.0	426.1
1993	431.9	448.9	475.2	395.7	371.8	322.9	490.9	387.3	307.9	446.8	238.8	425.7

See footnote at end of table.

--Continued

Table 18--Price indexes of food marketing costs¹--Continued

Year	Adver- tising	Fuel and power			Natu- ral gas	Communi- cations, water, and sewage	Rent	Mainte- nance and repair	Busi- ness serv- ices	Sup- plies	Property taxes and in- surance	Inter- est, short- term	Total market- ing cost index
		Total	Elec- tric	Petro- leum									
<u>1967 = 100</u>													
1968	102.5	99.7	100.9	101.9	92.7	100.8	104.4	105.8	105.0	102.1	109.2	115.5	103.5
1969	107.5	100.5	101.8	102.4	93.2	102.8	109.4	113.7	109.9	102.8	118.3	153.2	109.2
1970	109.6	106.1	105.8	106.5	103.6	105.1	115.4	122.3	115.6	106.5	130.4	150.9	116.1
1971	108.7	112.3	113.6	110.3	108.0	111.3	121.7	131.5	123.5	108.7	141.9	100.0	123.0
1972	113.2	118.4	121.5	113.3	114.1	117.8	126.3	137.9	128.2	119.9	153.3	92.6	130.5
1973	118.2	133.1	129.3	139.7	126.7	120.8	131.1	146.7	133.3	113.4	158.4	159.5	139.4
1974	124.2	198.9	163.1	272.2	162.2	126.3	145.9	164.3	146.8	145.1	162.9	192.6	159.8
1975	136.9	236.1	193.4	309.4	216.7	131.8	167.0	182.2	159.6	169.9	180.1	123.7	178.8
1976	152.8	264.5	207.7	336.9	286.8	138.4	174.9	196.1	171.3	181.3	194.5	104.7	193.6
1977	166.3	310.6	232.9	384.1	388.0	142.6	185.0	209.2	182.5	188.9	219.0	109.8	209.2
1978	181.3	331.7	250.6	398.1	428.7	147.5	199.2	226.9	195.2	197.8	237.3	156.4	227.0
1979	197.4	418.2	270.3	574.6	544.8	148.7	216.4	249.7	211.0	224.3	246.9	213.5	252.2
1980	214.5	563.2	321.6	850.6	724.8	153.9	235.0	277.1	230.6	259.3	270.2	240.3	286.0
1981	234.9	669.2	367.9	1,056.2	826.3	168.7	255.0	304.0	254.2	283.8	294.0	288.8	317.5
1982	260.1	705.1	406.1	1,012.1	990.3	186.7	264.3	325.1	277.1	289.1	309.9	232.6	334.0
1983	280.2	705.1	417.9	895.9	1,155.6	199.6	260.6	338.2	291.9	286.5	327.5	174.0	343.0
1984	300.5	712.5	440.0	880.4	1,162.6	215.5	261.3	350.3	306.1	288.3	343.7	498.4	356.2
1985	320.2	700.0	453.5	821.5	1,158.2	224.9	262.9	360.3	321.9	287.9	362.0	157.2	358.6
1986	339.7	590.2	457.9	499.8	1,096.9	236.1	267.0	368.5	334.1	282.7	382.3	125.1	354.9
1987	361.1	596.7	450.5	561.4	1,049.0	238.4	262.3	382.6	346.1	286.8	399.6	132.9	360.4
1988	384.0	578.2	453.3	502.0	1,042.1	241.3	265.3	395.9	371.4	305.6	419.9	150.3	372.4
1989	409.1	619.4	468.9	592.1	1,070.9	247.3	269.9	410.7	388.4	321.4	439.7	172.1	386.0
1990	433.0	671.4	477.7	744.8	1,071.0	253.1	280.0	426.7	399.5	321.1	462.2	155.4	398.7
1991	460.1	655.7	508.3	649.8	1,065.0	261.7	282.7	442.7	425.4	319.3	480.5	114.5	407.6
1992	484.0	654.6	514.0	639.9	1,061.1	266.8	278.3	454.8	441.9	318.1	496.7	74.4	415.8
1993	507.6	671.7	522.3	638.9	1132.9	270.0	273.1	465.2	459.9	321.3	512.9	64.7	425.3

¹ Indexes measure changes in employee wages and benefits and in prices of supplies and services used in processing, wholesaling, and retailing U.S. farm food purchased for consumption at home.

Table 19--Profit margins of food manufacturers and retail food chains, industry averages

Year and quarter	Food manufacturers ¹			Retail food chains ²		
	After-tax profits as a percentage of--					
	Sales	Stockholder equity	Assets	Sales	Stockholder equity	Assets
	<u>Percent</u>					
1980	3.4	14.7	7.1	0.9	13.7	4.5
1981	3.1	13.6	6.5	1.0	13.9	4.7
1982	3.1	13.0	6.3	.9	12.7	4.4
1983	3.3	13.3	6.0	1.1	13.6	4.9
1984	3.3	13.3	6.0	1.4	17.3	6.0
1985	4.1	15.3	6.6	1.3	14.5	5.3
1986	4.2	16.2	6.3	1.1	11.9	4.4
1987	4.6	17.5	6.8	.9	12.8	3.6
1988	5.5	20.9	8.1	.9	13.6	3.2
1989	4.2	17.1	5.5	.8	20.7	2.9
1990	4.0	16.1	5.2	1.1	22.8	3.8
1991	4.8	17.5	6.0	1.1	18.8	3.8
1992	4.4	15.4	5.4	1.0	14.6	3.2
1993	3.7	13.5	4.6	.8	11.7	2.5
1988:						
I	5.2	19.1	7.5	.7	8.6	2.5
II	6.5	25.0	9.9	1.5	20.7	5.2
III	5.6	21.9	8.6	.8	11.5	2.9
IV	4.7	17.9	6.7	.6	14.3	2.0
1989:						
I	4.1	15.6	5.2	.8	19.1	2.6
II	4.0	16.5	5.4	.9	23.4	3.3
III	3.4	13.9	4.4	.8	18.9	2.7
IV	5.3	22.2	7.0	.9	21.5	3.1
1990:						
I	3.7	14.7	4.7	1.0	20.7	3.2
II	5.2	21.2	6.9	1.2	25.4	4.2
III	5.1	19.6	6.6	.9	17.9	3.0
IV	2.2	9.0	2.9	1.3	27.1	4.7
1991:						
I	5.0	18.5	6.1	1.1	20.0	3.6
II	5.0	18.7	6.4	1.4	24.0	4.7
III	5.2	19.1	6.7	1.0	16.3	3.5
IV	3.9	13.8	5.0	1.0	15.5	3.4
1992:						
I	3.2	10.9	3.9	1.1	16.0	3.5
II	5.8	20.4	7.3	.8	11.6	2.6
III	4.4	15.6	5.4	.7	10.4	2.3
IV	4.0	14.6	5.0	1.4	20.0	4.4
1993:						
I	3.4	11.9	4.1	-.4	-6.9	-1.4
II	4.6	16.4	5.6	1.3	19.4	4.2
III	4.2	15.1	5.2	1.0	14.1	3.1
IV	3.3	12.2	4.2	1.3	19.1	4.3

¹ Data represent aggregate estimates for corporations, based on a sample of company reports. Beginning in 1985, data are not comparable with earlier years because the tobacco industry was combined with food manufacturers. ² Data are based on reports from all food retailing corporations having at least \$1 billion in annual sales, at least 70 percent of which are derived from supermarket operations. Beginning in 1990, data reflect a larger sample of firms. Source: U.S. Department of Commerce.

Table 20--After-tax profits of selected supermarket food chains per dollar of sales, fiscal year or four calendar quarters

Firm	1988	1989	1990	1991	1992	1993
	<u>Percent of sales</u>					
Ahold NV	0.95	1.10	1.38	1.33	1.41	1.27
Albertson's	2.40	2.65	3.12	2.97	2.65	3.10
American Stores	.53	.54	.77	.65	1.25	1.24
Great Atlantic & Pacific Tea Co.	1.27	1.32	1.33	.61	.15	.04
Bruno's	2.15	2.35	2.58	2.48	1.24	1.25
Foodarama Supermarkets	.71	-.20	.16	-.08	.10	-1.74
Food Lion	2.95	2.96	3.09	3.19	2.47	1.50
Giant Food	3.28	3.34	3.55	2.50	2.35	2.56
Hannaford Bros. Co.	2.29	2.46	2.50	2.16	2.38	2.66
Ingles Markets	1.81	1.76	.89	.57	.60	1.12
Kroger	1.20	-.18	.36	.47	-.03	-.05
Marsh Supermarkets	.91	1.09	1.27	.79	.93	.65
Penn Traffic Co.	-.77	-1.08	-.87	-.16	-.24	-.56
Safeway	-.12	.02	.59	.88	.74	.87
Vons Companies	-.61	-.48	.93	1.24	1.47	1.77
Winn-Dixie	1.41	1.67	1.60	1.54	2.22	2.17

Source: The American Institute of Food Distribution Inc., Food Institute Reports, Fair Lawn, New Jersey.

Labor Productivity

Productivity in business rose moderately in 1993. Labor productivity rose 1.7 percent during 1993 in the Nation's total business sector, excluding farming, reflecting a larger increase in output than in hours worked. Food industry productivity estimates for 1993 were not available at press time, but productivity of foodstores posted a small gain in 1992, reversing a downward trend of the past decade. In 1993, only slightly higher output, as measured by food sales adjusted for inflation, and a probable increase in labor input may have prevented much further increases in productivity.

Labor productivity in food manufacturing industries has improved moderately over the years. The average annual increase in output per unit of labor in seven food manufacturing industries for which data are available ranged from 1-4 percent over the 1980-91 period (table 21). These increases, in most instances, resulted from increased output and a small decline in hours worked. Labor productivity among food manufacturers has increased most in grain milling and fluid-milk processing. Productivity has grown erratically for most industries, partly because of fluctuating output and business conditions.

Output per unit of labor among supermarkets declined each year between 1985 and 1991. In 1992, output per employee hour rose 0.7 percent. But over the past decade, some store operations have become more efficient because of computer-assisted checkouts and data processing systems and new store formats, such as warehouse stores with a limited assortment of products. Warehouse stores provide reduced services and, thus, cut labor requirements, or they foster higher sales per unit of labor. On the other hand, supermarkets have expanded service-oriented operations, such as delicatessens, salad bars, and in-store bakeries, in response to consumer demand for saving time in food buying and preparation. Providing the products and shopping convenience that consumers want has added to industry employment and has made productivity gains more difficult. However, in 1992, output of foodstores rose about 1.6 percent, exceeding a rise in hours worked, which resulted in the small increase in productivity.

Productivity among eating and drinking places has risen slightly since 1985. But in 1992, labor productivity in eating places posted a decline of 1.4 percent. Productivity declined because hours worked rose about 1.8 percent, while output was up only 0.4 percent.

Table 21--Indexes of output per employee hour in selected food manufacturing industries, retail food stores, and eating and drinking places

Year	Food manufacturing							Retail food stores	Eating and drinking places
	Meat packing plants	Poultry dressing and processing	Fluid milk	Preserved fruit and vegetables	Grain mill products	Bakery products	Sugar		
	<u>1987 = 100</u>								
1980	82.2	77.8	74.7	83.7	70.4	81.5	84.7	107.5	106.5
1981	86.0	85.5	77.2	82.4	74.2	83.7	83.6	104.2	103.9
1982	90.2	92.4	81.6	89.6	80.9	89.8	76.6	102.2	103.5
1983	94.1	96.9	86.1	92.1	83.7	93.4	82.3	102.1	102.5
1984	96.7	96.1	89.4	93.4	88.6	93.9	82.5	102.4	98.9
1985	101.1	98.2	92.2	94.6	93.8	95.5	85.9	102.4	96.2
1986	99.2	93.9	96.4	98.6	94.5	101.1	88.5	102.0	99.2
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	100.6	95.3	104.0	98.7	100.0	92.7	97.4	98.1	103.0
1989	91.5	100.1	106.8	97.9	99.8	92.4	92.7	95.4	102.9
1990	91.1	106.1	108.0	97.7	104.1	93.8	93.9	94.6	104.6
1991	94.6	112.5	110.8	99.9	104.6	90.5	97.0	93.8	106.1
1992 ¹	97.3	--	112.5	--	--	89.9	101.9	94.5	104.6
Average annual change:	<u>Percent</u>								
1980-91	1.3	3.4	3.6	1.6	3.7	0.9	1.2	-1.2	-0.1

-- = Not available.

¹ Preliminary. Some historical data were revised.

Source: U.S. Department of Labor, Bureau of Labor Statistics.

Food Spending: How It Was Distributed

Food spending for domestically produced food in 1993 represents the retail market value of food purchased by or for civilian consumers. Both the quantities of food bought and the prices paid affected spending levels. The expenditures reported in this section include spending at grocery stores, eating places, and institutions. These estimates are smaller than the amount consumers spent for all food because expenditures for imported food and fishery products are excluded. In this section, food expenditures are broken into two components:

- The farm value is a measure of the payments farmers received for the raw commodities equivalent to food purchased by consumers at foodstores and eating places.
- The marketing bill is the difference in dollars between the farm value and consumer expenditures for food produced on U.S. farms.

Changes in last year's bill can be evaluated by : (1) dividing the total marketing bill into the costs of several principal marketing functions, such as processing and retailing, and (2) breaking down the bill into costs of principal inputs, such as labor and packaging.

Most of these estimates are based on secondary data, and are not direct measures of consumer expenditures or actual marketing costs. The limited accuracy of the data reported in this section makes them general indicators, and not precise measures, of levels and yearly changes.

Food Expenditures

Consumers spent \$491 billion for food originating on U.S. farms in 1993 (fig. 3 and table 22). About 60 percent of consumers' food expenditures was spent at retail grocery stores on food for use at home. The remaining 40 percent represented the retail value of food served in public eating places, hospitals, schools, and other institutions. Market shares in 1993 were about the same as in 1992.

Consumer expenditures for domestic farm foods in 1993 rose about 3.5 percent, about 1 percent more than 1992's smallest increase of the last decade, and roughly the same as in 1991. Spending for food away from home grew much more than food purchases at grocery stores. Sales data reported by the U.S. Census Bureau suggest that consumers are purchasing greater quantities of food in restaurants. Sales at eating places rose 5.7 percent in 1993, and when adjusted for the rise in prices, 1993 sales were still 3.9 percent higher than those in 1992. Meanwhile, spending for domestic farm foods at grocery stores increased 2.6 percent in current dollars, but were unchanged in real dollars. Therefore, consumers purchased roughly the same quantities of food at grocery stores in 1993 as in 1992. Shoppers actively sought value at grocery stores by increasing their purchases of private brand labels and using more coupons, thereby restraining the rise in expenditures.

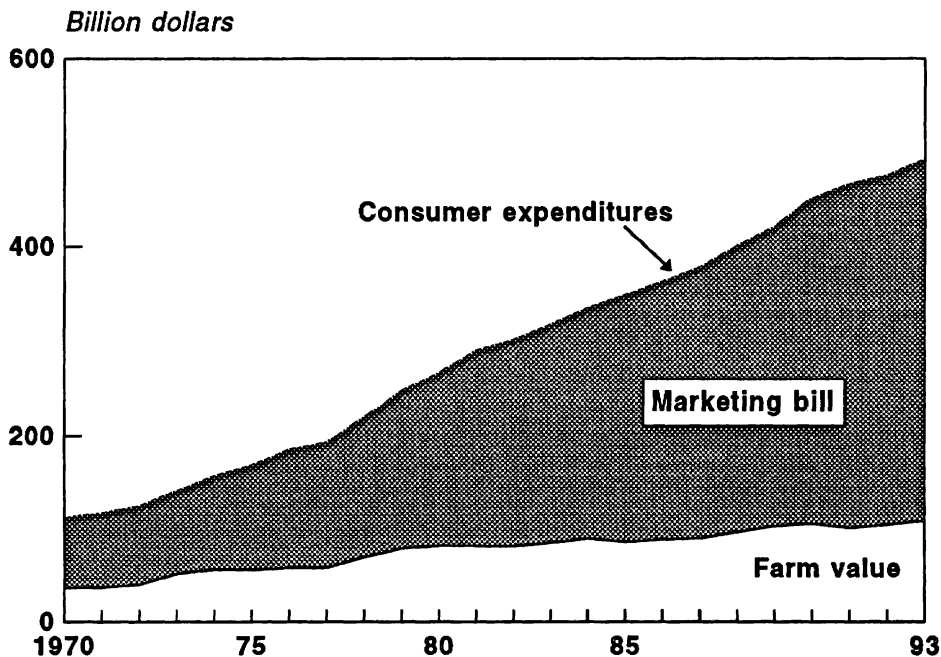
Several explanations can be offered for the larger real growth in away-from-home sales. First, menu prices posted the smallest increases in 29 years. Moreover, fast food chains are offering value meals, which have increased sales. Second, higher employment levels have increased household income and reduced the amount of time available to prepare food at home. Therefore, consumers purchased a higher percentage of their meals at restaurants. The stronger economy has encouraged consumers to substitute purchases of meals in restaurants for meals at home--a return to the spending pattern that was prevalent prior to the recession.

Meat products represent the largest share of total consumer food expenditures. Expenditures for meat in 1993 were 29 percent of total food expenditures, compared with 23 percent for fruit and vegetables, the next largest expenditure group (table 23). Because food consumption changes slowly, the proportion of expenditures that meat products and other food groups accounted for has changed little from year to year.

Figure 3

Distribution of food expenditures

The marketing bill was 78 percent of 1993 food expenditures.



Data for foods of U.S. farm origin purchased by or for consumers for consumption both at home and away from home.

Table 22--Marketing bill and farm value components of consumer expenditures for domestically produced farm foods

Year	Consumer expenditures			Marketing bill	Farm value	Farm value share of expenditures
	Total	At home ¹	Away from home ²			
-----Billion dollars-----						Percent
1950	44.0	--	--	26.0	18.0	41
1951	49.2	--	--	28.7	20.5	42
1952	50.9	--	--	30.5	20.4	40
1953	51.0	--	--	31.5	19.5	38
1954	51.1	--	--	32.3	18.8	37
1955	53.1	--	--	34.4	18.7	35
1956	55.5	--	--	36.3	19.2	35
1957	58.3	--	--	37.9	20.4	35
1958	61.0	--	--	39.6	21.4	35
1959	63.6	--	--	42.4	21.2	33
1960	66.9	--	--	44.6	22.3	33
1961	68.7	--	--	45.7	23.0	33
1962	71.3	--	--	47.6	23.7	33
1963	74.0	56.0	18.0	49.9	24.1	33
1964	77.5	58.5	19.0	52.6	24.9	32
1965	81.1	60.2	20.9	54.0	27.1	33
1966	86.9	64.0	22.9	57.1	29.8	34
1967	91.6	66.8	24.8	62.4	29.2	32
1968	96.8	69.5	27.3	65.9	30.9	32
1969	102.6	73.1	29.5	68.3	34.3	33
1970	110.6	78.2	32.4	75.1	35.5	32
1971	114.6	80.6	34.0	78.5	36.1	32
1972	122.2	85.4	36.8	82.4	39.8	33
1973	138.8	98.5	40.3	87.1	51.7	37
1974	154.6	109.5	45.1	98.2	56.4	36
1975	167.0	116.2	50.8	111.4	55.6	33
1976	183.3	127.2	56.1	125.0	58.3	32
1977	190.9	130.8	60.1	132.7	58.2	30
1978	216.9	149.2	67.7	147.4	69.5	32
1979	245.2	169.4	75.8	166.0	79.2	32
1980	264.4	180.1	84.3	182.7	81.7	31
1981	287.7	194.0	93.7	206.0	81.7	28
1982	298.9	196.7	102.2	217.5	81.4	27
1983	315.0	204.6	110.4	229.7	85.3	27
1984	332.0	213.1	118.9	242.2	89.8	27
1985	345.4	220.8	124.6	259.0	86.4	25
1986	359.6	226.0	133.6	270.8	88.8	25
1987	375.5	230.2	145.3	285.1	90.4	24
1988	398.8	242.1	156.7	301.9	96.8	24
1989	419.4	255.5	163.9	315.6	103.8	25
1990	449.8	276.2	173.6	343.6	106.2	24
1991	465.1	286.1	179.0	363.5	101.6	22
1992	474.5	289.6	184.9	369.4	105.1	22
1993 ³	491.3	297.0	194.3	382.1	109.2	22

-- = Not available.

¹ Includes food purchased primarily at retail food stores. ² Includes food purchased at restaurants, fast-food outlets, and other public eating places, and food served in institutions, such as hospitals, schools, and rest homes. ³ Preliminary. Some historical data have been revised.

Table 23-Consumer expenditures and farm value for major food groups

Item and year	Meat	Fruit and vegetables ¹	Dairy products	Bakery products	Poultry	Grain mill products ²	Eggs	Other foods ³	Total
<u>Billion dollars</u>									
Consumer expenditures:									
1975	48.0	35.6	23.3	18.2	8.6	5.9	4.1	23.3	167.0
1976	55.2	38.8	26.4	18.8	9.1	6.1	4.8	24.1	183.3
1977	59.0	40.8	27.8	18.1	9.6	6.3	4.4	24.9	190.9
1978	69.5	46.3	30.1	21.1	10.9	6.4	4.3	28.3	216.9
1979	80.2	52.5	33.5	23.8	12.6	7.8	4.8	30.1	245.3
1980	83.3	55.5	37.8	26.8	13.3	8.4	5.0	34.3	264.4
1981	86.6	62.8	41.4	29.0	14.7	8.9	5.2	39.1	287.7
1982	91.9	66.7	42.0	30.6	15.1	9.0	5.2	38.4	298.9
1983	97.9	70.0	45.0	31.0	16.3	9.6	5.4	39.8	315.0
1984	101.7	74.7	47.4	33.0	18.4	10.3	5.8	40.7	332.0
1985	103.2	78.5	49.4	34.6	19.9	10.9	6.1	42.8	345.4
1986	106.3	81.6	51.4	36.6	21.2	11.7	6.4	44.4	359.6
1987	110.0	84.7	54.0	37.8	22.8	12.1	6.6	47.5	375.5
1988	117.6	89.3	55.8	41.5	24.7	13.2	6.6	50.1	398.8
1989	121.5	96.0	58.1	43.1	27.4	14.6	6.5	52.2	419.4
1990	128.4	103.7	62.5	47.2	29.9	16.1	6.7	55.3	449.8
1991	133.4	107.9	63.0	49.2	31.1	16.8	6.6	57.1	465.1
1992	135.5	111.7	63.5	50.6	31.9	17.3	6.1	57.9	474.5
1993	139.3	116.5	65.5	52.9	33.2	18.0	6.0	59.9	491.3
Farm value:									
1975	20.6	8.4	10.0	3.0	4.1	1.1	2.2	6.2	55.6
1976	21.6	8.8	11.3	2.6	4.0	1.0	2.6	6.4	58.3
1977	22.0	8.6	11.5	2.3	4.2	.9	2.3	6.4	58.2
1978	28.0	10.0	12.7	2.8	5.1	1.0	2.2	7.7	69.5
1979	31.5	10.9	14.6	3.4	5.5	1.4	2.6	9.3	79.2
1980	30.8	11.7	16.0	3.5	5.9	1.6	2.5	9.8	81.7
1981	31.1	11.8	17.0	3.4	6.1	1.5	2.7	8.1	81.7
1982	31.5	11.5	16.7	3.4	6.0	1.4	2.5	8.4	81.4
1983	31.4	12.9	18.0	3.5	6.6	1.4	2.7	8.8	85.3
1984	32.4	13.5	18.1	3.7	8.0	1.4	3.0	9.7	89.8
1985	30.5	13.3	17.7	3.4	7.9	1.3	2.3	10.0	86.4
1986	30.9	14.6	17.8	2.9	9.0	1.1	2.5	10.0	88.8
1987	32.7	14.3	18.2	2.8	8.1	1.0	2.2	11.1	90.4
1988	33.5	16.2	17.9	3.6	9.9	1.3	2.2	12.2	96.8
1989	34.0	17.8	19.6	4.3	11.4	1.6	2.8	12.3	103.8
1990	36.9	16.5	20.5	3.7	11.1	1.4	2.8	13.3	106.2
1991	34.7	17.0	18.4	3.3	11.2	1.3	2.7	13.0	101.6
1992	34.4	17.7	20.1	3.7	12.0	1.4	2.3	13.5	105.1
1993	35.3	18.4	20.1	3.8	13.1	1.4	2.6	14.5	109.2

¹ Also includes soup, baby foods, condiments, dressings, spreads, and relishes. ² Includes flour, flour mixes, cereal, rice, and pasta. ³ Includes fats and oils, sugar, tree nuts, peanuts, and miscellaneous foods.

Farm Value

The farm value of food commodities originating on U.S. farms rose about \$4 billion in 1993 to \$109 billion. This 3.9-percent increase was slightly larger than the increase posted in 1992. Much of the farm value increase in 1993 was due to higher prices for broilers and fats and oils and larger cash receipts for fruit, vegetables, and tree nuts. The largest share of the money farmers received for domestic food sales was for meat products. In 1993, the farm value of meat was about 32 percent of the total value of farm food. The next largest share, 18 percent, was for dairy products. Livestock and dairy farmers garnered about half of the total farm value, but they bought substantial amounts of grain from crop farmers.

The farm value of food commodities represented 22 percent of consumer expenditures in 1993, the same as in 1992, but down from 24 percent in 1990. The farm value is a much smaller part of expenditures for food eaten away from home than for food bought at stores, because the cost of preparing and serving food is a major part of the cost of food eaten away from home. The 1993 farm value accounted for about 16 percent of expenditures for food consumed away from home, compared with about 26 percent of expenditures for farm food in food stores.

Marketing Bill

The marketing bill, the difference between what consumers spent for food and the farm value of the food, amounted to \$382 billion in 1993, \$13 billion more than in 1992. This increase in the marketing bill accounted for 76 percent of last year's \$17 billion rise in consumer expenditures.

The marketing bill rose 3.4 percent in 1993, more than in 1992, but less than the 5.2-percent annual average of the last 10 years. This increase was the result of only small to moderate price increases for most principal categories of inputs purchased by the food industry. Higher labor costs accounted for most of last year's increase in the marketing bill. Other inputs, such as packaging, energy, and transportation, rose modestly, while profits dropped slightly.

Marketing costs continued to be the most persistent source of rising food expenditures in 1993. In 1993, the marketing bill added about \$13 billion to consumer food spending, while farm value accounted for about \$4 billion. Consumer expenditures for farm foods have increased \$176 billion since 1983. About \$152 billion of this increase consists of marketing charges. Farm value has increased only \$24 billion since 1983.

What the Marketing Bill Bought

Last year's marketing bill increase can be analyzed by looking first at four broad functions that the food industry performs--processing, wholesaling, transporting, and retailing--and then at the specific cost items that add up to the marketing bill.

Costs of the functions performed are different for food bought in food stores than for meals and snacks purchased for consumption away from home (table 24). About 26 cents of each dollar spent in food stores paid for the farm value in 1993. Thus, 74 cents paid the marketing bill for food eaten at home.

Of each dollar spent for food in food stores, 33 cents paid for processing. Between the processor and the retailer, another 10 cents was spent for wholesaling and 6 cents for intercity transportation. Finally, retailing charges added the last 25 cents (fig. 4). These shares have remained fairly constant over the years.

For each dollar spent for food away from home, 16 cents covered the farm value. Processing costs accounted for 15 cents, transportation charges for 3 cents, and wholesaling for 6 cents. The remaining 60 cents covered the cost of food service or the preparation and serving of food eaten away from home.

The food processing and marketing industry is an important part of the American economy. The \$382 billion the industry received from consumers in 1993 paid the wages and salaries of millions of employees and paid for all the other costs of doing business. The food processing and marketing industry represents 6 percent of total gross domestic product.

Table 24--Marketing function components of consumer expenditures

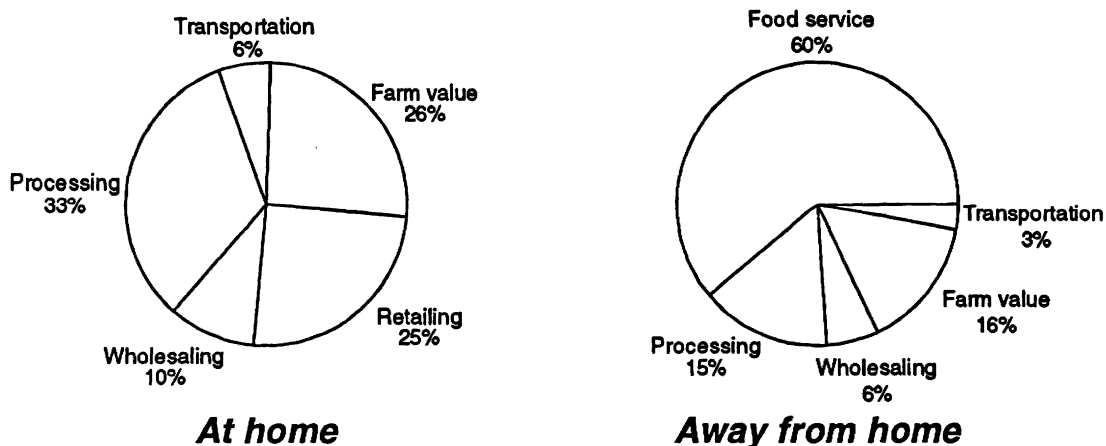
Expenditures and components	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993 ¹
	<u>Billion dollars</u>										
Expenditures at food stores	204.6	213.1	220.8	226.0	230.2	242.1	255.5	276.2	286.1	289.6	297.0
Farm value	66.5	69.5	66.6	67.6	67.5	72.5	77.9	80.2	76.7	76.9	78.9
Marketing bill	138.1	143.6	154.2	158.4	162.7	169.6	177.6	196.0	209.4	212.7	218.1
Processing	62.2	64.1	69.5	70.2	72.1	75.6	79.2	87.4	93.2	94.8	97.2
Intercity transportation	12.3	12.8	13.3	13.4	14.0	13.8	14.3	15.0	15.8	15.8	16.2
Wholesaling	20.5	21.5	22.3	22.5	23.2	24.3	25.3	28.5	29.0	29.4	30.1
Retailing	43.1	45.2	49.1	52.3	53.4	55.9	58.8	65.1	71.4	72.7	74.6
Expenditures for eating away from home	110.4	118.9	124.6	133.6	145.3	156.7	163.9	173.6	179.0	184.9	194.3
Farm value	18.8	20.3	19.8	21.2	22.9	24.3	25.9	26.0	24.9	28.2	30.3
Marketing bill	91.6	98.6	104.8	112.4	122.4	132.4	138.0	147.6	154.1	156.7	164.0
Processing	15.6	16.7	18.9	20.8	21.8	24.1	24.6	26.0	27.9	27.8	29.1
Intercity transportation	3.1	3.2	3.3	3.4	3.6	3.9	4.3	4.6	4.7	4.7	4.9
Wholesaling	6.6	7.1	7.5	8.0	8.6	9.5	9.9	10.5	11.1	11.1	11.6
Food service	66.3	71.6	75.1	80.2	88.4	94.9	99.2	106.5	113.7	113.1	118.4

¹ Preliminary. Data for 1992 have been revised.

Figure 4

Marketing functions of the food dollar in 1993

Processing remained the most expensive marketing function for food eaten at home.



Labor costs

Labor costs overshadow all other cost components of the marketing bill. Rising labor costs have accounted for nearly half of the total increase in the marketing bill over the last decade. Higher labor costs are primarily responsible for the 3.4-percent increase in the marketing bill from 1992 to 1993. Direct labor costs amounted to about \$177.6 billion in 1993, or 36 percent of food expenditures (fig. 5 and table 25). Labor costs consist of wages and salaries, employee benefit costs, such as group health insurance, estimated earnings of proprietors and family workers, and tips for food service. Direct labor costs do not include the costs of labor engaged in for-hire transporting of food or in manufacturing and distributing supplies that food industry firms used.

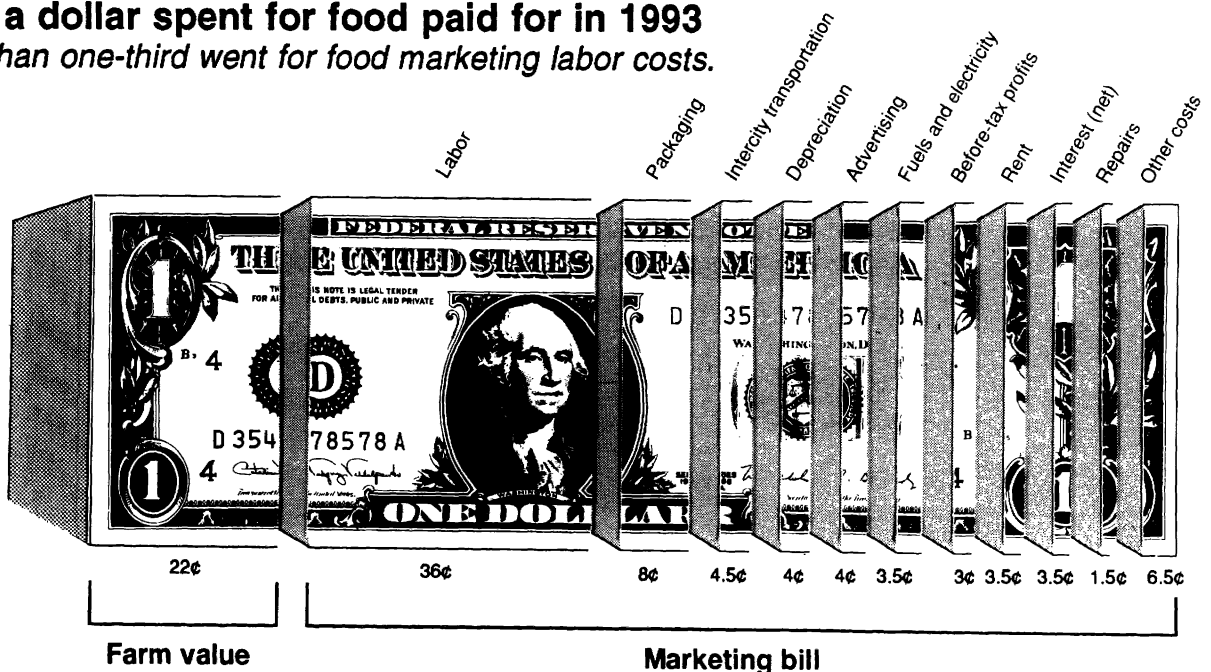
Labor costs in the food industry rose about 5.5 percent in 1993, greater than the increase recorded in 1992. The increase reflected higher wages and benefit costs. Hourly earnings of workers increased 2.4 percent in food manufacturing and 3.5 percent in food wholesaling (table 26). Hourly earnings of foodstore workers rose 3.2 percent, a larger increase than the 2.2-percent wage hike recorded in 1992. The earnings rise for manufacturing employees was less in 1993 than in the previous year. Wages at eating and drinking places rose only 1.1 percent in 1993, almost half the 2.1-percent increase recorded in 1992.

Wage supplements increased because of rising health insurance premiums and pensions. Health insurance benefit costs, which have skyrocketed in recent years, increased because of the rising cost of medical care. For the past several years, health benefits have been the number one issue in collective bargaining discussions between workers and food companies. These benefits can take up anywhere from 10 to 30 percent of the cash available in union contracts. Money that could be directed toward wage increases is instead being directed toward health care packages. The CPI for medical services increased 6.5 percent in 1993, smaller than the 7.3-percent average annual increase of the last 10 years.

The Employment Cost Index (ECI), a quarterly series published by the Bureau of Labor Statistics, can also be used to track labor cost changes. The ECI has several advantages over average hourly earnings. Changes in wages and salaries are based on wage rates, rather than on average earnings. This procedure eliminates the effects of shifts in the occupational employment mix. Changes in the proportion of full-time and part-time workers in food retailing probably have caused average earnings both to increase at a slower rate than the ECI series and to understate the change in the price of labor. The ECI includes employers' cost of employee benefits and lump-sum payments to workers.

Figure 5

What a dollar spent for food paid for in 1993
More than one-third went for food marketing labor costs.



Includes food eaten at home and away from home. Other costs include property taxes and insurance, accounting and professional services, promotion, bad debts, and many miscellaneous items.

The ECI for food stores rose 2.9 percent in 1993 (table 27). This rise in worker compensation costs was smaller than the 1992 gain of 3.8 percent. The 1993 compensation cost increase included a wage and salary gain of 2.4 percent, a smaller rate of increase than the 3.3-percent rise for 1992. Compensation costs rose more than wages and salaries in 1993 because benefit cost increases were greater than gains in wage rates. Although not reported separately, the increase in benefit costs was probably about 4.5 percent in 1993, or 1.8 times the rise in the wage rate of food-store workers.

Food retailing employment rose about 1 percent in 1993, reflecting flat retail sales and managerial efforts to restrain cost increases. Many food retailing employees are part-time workers. Part-time employees lower labor costs in several ways. They are often paid less and receive fewer benefits than full-time employees. Part-timers also cut labor costs by reducing overtime work by full-time employees. Greater use of part-time workers has likely held down the rise in hourly earnings in food retailing. Employment jumped nearly 4 percent in eating places and declined 0.3 percent in the food manufacturing

Table 25--Components of the marketing bill for domestically produced farm food

Year	Labor ¹	Packaging materials	Intercity rail and truck transportation	Fuels and electricity	Corporate profits before taxes	Other ²	Total marketing bill ³
<u>Billion dollars</u>							
1967	25.9	7.3	4.3	--	3.4	21.5	62.4
1968	28.0	7.6	4.5	--	3.6	22.2	65.9
1969	30.4	7.9	4.6	--	3.6	21.8	68.3
1970	32.2	8.2	5.2	2.2	3.6	23.7	75.1
1971	34.5	8.5	6.0	2.4	3.9	23.2	78.5
1972	36.6	8.9	6.1	2.5	4.0	24.3	82.4
1973	39.7	9.4	6.4	2.8	5.4	23.4	87.1
1974	44.3	11.8	7.5	3.7	6.1	24.8	98.2
1975	48.3	13.3	8.4	4.6	7.1	29.7	111.4
1976	53.8	14.5	9.1	5.0	7.7	34.9	125.0
1977	58.3	15.1	9.7	6.0	8.0	35.6	132.7
1978	66.2	16.6	10.5	7.1	9.9	37.1	147.4
1979	75.2	18.6	11.8	8.2	10.0	42.3	166.1
1980	81.5	21.0	13.0	9.0	9.9	48.3	182.7
1981	91.0	22.6	14.3	10.0	9.7	58.4	206.0
1982	96.6	23.7	14.7	11.0	9.4	62.1	217.5
1983	102.4	24.7	15.4	11.7	9.6	65.9	229.7
1984	109.3	26.2	15.9	12.5	9.6	68.7	242.2
1985	115.6	26.9	16.5	13.1	10.4	76.5	259.0
1986	122.9	27.7	16.8	13.2	10.3	79.9	270.8
1987	130.0	29.9	17.2	13.6	11.1	83.3	285.1
1988	137.9	32.6	17.8	14.1	12.0	87.5	301.9
1989	145.1	35.2	18.6	14.8	12.9	89.0	315.6
1990	154.0	36.5	19.8	15.2	14.8	103.3	343.6
1991	160.9	38.1	20.4	16.3	15.9	111.9	363.5
1992	168.4	39.2	20.6	16.7	15.7	108.8	369.4
1993	177.6	40.5	21.1	17.3	15.3	110.3	382.1

-- = Not available.

¹ Includes employee wages or salaries and their health and welfare benefits. Also includes estimated earnings of proprietors, partners, and family workers not receiving stated remuneration. ² Includes depreciation, rent, advertising and promotion, interest, taxes, licenses, insurance, professional services, local for-hire transportation, food service in schools, colleges, hospitals, and other institutions, and miscellaneous items. Data for 1967-69 also include fuels and electricity. ³ The marketing bill is the difference between the farm value and consumer expenditures for these foods at both food stores and away-from-home eating places. Thus, it covers processing, wholesaling, transportation, retailing costs, and profits. Some historical data were revised.

industry. The total number of persons employed in the food industry rose 2.5 percent in 1993, when 12.6 million workers were employed in processing and distributing food. This was the largest increase since 1988. More than half, or 6.8 million people, were employed in away-from-home eating places in 1993. Food stores employed 3.2 million people, food processors employed 1.7 million people, and food wholesalers employed about 870,000 people.

Most major food industry collective bargaining agreements--those that cover at least 1,000 employees--provided wage increases in 1993. Because the agreements are usually in effect for 3 to 4 years, the terms of the settlements serve as important barometers of future changes in labor costs. A discussion of several major contracts negotiated during 1993 can illustrate the broad range of wage increases and other terms among groups of workers in food retailing and manufacturing.

In the largest retailing contract, 80,000 grocery clerks and meat department workers employed at southern California supermarkets agreed to a 3-year contract providing for lump sum payments of \$1,000 for full-time employees and \$500 for part-time workers in the first year of the contract, and 45-cents-an-hour wage increases during each of the next 2 years of the contract. In addition, the monthly pension was increased by 6.7 percent. Other terms provided for increases in orthodontic benefits, maximum medical and life insurance benefits, as well as the establishment of employer contributions to an education and housing fund.

The second-largest retail contract of 1993 was a 4-year contract negotiated between four metropolitan New York chains and 23,000 employees at 248 stores. This agreement ended a 22-day work stoppage that resulted from a dispute over health care issues, especially employee cost-sharing, limits on the choice of physicians, and health care benefits for retirees. The contracts provided wage increases of \$15 per week for full-time employees at the top of the wage progression, retroactive to June, 1993. Employees are to receive additional raises of \$15 per week in 1994 and 1996, and \$20 per week in 1995. Part-timers will receive wage increases of 30 cents per hour in the first year of the contract, 25 cents per hour in the second and third years, and 30 cents per hour in the final year. The contract provided for a two-tiered wage scale that requires new hires to work an additional year before they can reach a slightly reduced maximum weekly pay rate. The agreement substituted managed care/point of service health care plans for the current indemnity reimbursement plans. While participants in the plan will not be required to share premium costs, they will be required to pay a greater share of their medical expenses, with higher maximum payments. Employer contributions to the pension and the monthly pension rate were both raised. The negotiating parties also agreed to maintain the current level of health care benefits for retirees.

Table 26--Average hourly earnings of production and nonsupervisory employees of food industries

Year	Manufacturing, food and kindred products	Wholesale trade, groceries, and related products	Food stores	Eating and drinking places
	<u>Dollars per hour</u>			
1977	5.37	5.43	4.77	2.93
1978	5.80	5.92	5.23	3.22
1979	6.27	6.39	5.67	3.45
1980	6.85	6.96	6.24	3.69
1981	7.44	7.57	6.85	3.95
1982	7.92	8.25	7.22	4.09
1983	8.19	8.70	7.52	4.27
1984	8.39	9.03	7.64	4.26
1985	8.57	9.22	7.35	4.33
1986	8.75	9.30	7.06	4.35
1987	8.93	9.53	6.95	4.42
1988	9.10	9.79	7.00	4.57
1989	9.38	10.16	7.15	4.75
1990	9.61	10.45	7.36	4.97
1991	9.90	10.77	7.41	5.18
1992	10.19	11.09	7.57	5.29
1993	10.43	11.48	7.81	5.35

Source: U.S. Department of Labor, Employment and Earnings, March 1994.

Table 27--Employment Cost Index for workers in food stores and all private industry

Period	Employment Cost Index for--				
	Food stores		Private industry		
	Total compensation costs	Wages and salaries	Total compensation costs	Wages and salaries	Benefits
	<u>Annual percent change</u>				
1989	3.6	2.5	4.7	4.2	5.8
1990	4.4	4.0	5.0	4.2	6.9
1991	4.5	4.2	4.4	3.8	6.1
1992	3.8	3.3	3.7	2.9	5.5
1993	2.9	2.4	3.6	2.9	5.4
	<u>Indexes, June 1989=100</u>				
1988:					
March	96.3	97.3	94.5	95.0	93.4
June	96.8	97.8	95.7	96.1	94.7
September	97.1	98.2	96.6	97.0	95.7
December	98.2	99.0	97.6	98.0	96.7
Average	97.1	98.1	96.1	96.5	95.1
1989:					
March	99.8	100.0	98.8	99.0	98.4
June	100.0	100.0	100.0	100.0	100.0
September	100.8	100.4	101.2	101.2	101.4
December	101.7	101.7	102.3	102.0	102.6
Average	100.6	100.5	100.6	100.6	100.6
1990:					
March	103.2	102.8	103.9	103.2	105.5
June	104.6	104.3	105.2	104.5	106.9
September	105.7	105.1	106.2	105.4	108.3
December	106.4	105.8	107.0	106.1	109.4
Average	105.0	104.5	105.6	104.8	107.5
1991:					
March	107.5	106.9	108.5	107.3	111.6
June	109.3	108.7	109.8	108.4	113.5
September	110.3	109.4	111.0	109.3	115.2
December	111.7	110.4	111.7	110.0	116.2
Average	109.7	108.9	110.3	108.8	114.1
1992:					
March	112.6	110.9	113.1	110.9	118.6
June	113.6	112.3	113.9	111.6	119.7
September	114.2	112.9	114.8	112.2	121.2
December	115.1	113.7	115.6	112.9	122.2
Average	113.9	112.5	114.4	111.9	120.4
1993:					
March	115.9	114.6	117.1	113.9	125.2
June	117.2	115.4	118.0	114.6	126.7
September	117.1	114.9	119.1	115.7	127.7
December	118.3	115.9	119.8	116.4	128.3
Average	117.1	115.2	118.5	115.2	127.0

Source: U.S. Department of Labor, Bureau of Labor Statistics.

The largest food manufacturing contract was a 3-year agreement covering two major food manufacturers and 4,800 workers at approximately 20 plants nationwide. The master contract only covered benefits, with wages and working conditions to be determined at the local level. Severance pay, monthly pensions, disability, accident and sickness benefits, and life insurance coverage were increased. Both contracts maintained health care coverage without employee contributions to premiums. However, one of the companies offered employees the option of remaining in the current medical plan, or choosing one of two other options. The first option offered lower out-of-pocket costs and a higher lifetime maximum payment in exchange for a higher deductible than the current plan. The other option offered employees a payment of \$75 per month if they were exclusively covered under their spouses' medical plan. Finally, a new 401(k) plan was implemented, under which employees were permitted to invest up to 10 percent of their gross earnings, with a company match of 10 cents for each dollar invested, up to 3 percent of an employee's earnings.

The second-largest food manufacturing contract was a 3-year agreement signed between a major cereal manufacturer and 3,839 workers in several States. Wages were to be increased 26 cents an hour on October 3, 1993, with additional increases of 1.5 percent on October 3, 1994, and 1 percent on October 2, 1995. A quarterly cost-of-living-adjustment (COLA) provided for a wage increase of 1 cent for each 0.3-percent increase in the CPI for urban wage earners and clerical workers. Wages will have increased an average of 15 percent over the life of the contract. Wages were further augmented by 2 cents per hour for workers in the second and third shifts. A stock sharing option was established, while service pension benefits and the employee early retirement supplement were to be increased. Other terms called for establishment of a comprehensive managed health care plan requiring no employee premium payments or co-payments. The monthly disability pension and life insurance were both increased. The company established a supplemental unemployment fund to be jointly administered with the union. Finally, the company will not permanently dismiss employees who had been on layoff for 18 consecutive months during the duration of the contract.

The Bureau of Labor Statistics reports that 29 major contracts (BLS defines major contracts as those that cover at least 1,000 workers) covering 235,700 workers were negotiated in the foodstore industry (Standard Industrial Code (SIC) 54) in 1993. Average wage adjustments were 1.5 percent in the first year and 2.3 percent over the life of the contract. Of these contracts, 15 provided for lump sum payments. Most of these contracts were back-loaded. Back-loaded contracts provide lower wage increases in the first year of contract, compared with subsequent years. Back-loaded contracts dampen wages by basing increases in the latter years of a contract on a lower initial wage. By contrast, front-loaded contracts provide the largest wage adjustment in the first year of a contract. These settlements compound the amount of the percentage increases in the first year of a contract, compared with subsequent years.

Food processing firms (SIC 20) entered into 11 contract settlements covering 18,153 employees. Most of these contracts were front-loaded, in contrast to the agreements covering the food retailing sector. Average wage increases for these settlements were 3 percent in the first year and 2.6 percent over the life of the contract. Only a few of these agreements provided for lump sum payments.

Overall, labor settlements in food retailing and manufacturing provided pay raises and benefits to most workers that will probably boost labor costs. However, labor agreements with workers that provide small wage increases, measures to contain costs of medical benefits, and rising labor productivity have all tempered labor costs for the food industry in recent years.

Packaging Costs

Packaging is the second-largest component of the marketing bill, accounting for 8 percent of the food dollar. Costs of these materials rose about 3.3 percent last year, about the same as the marketing bill. Packaging costs increased mainly because of increased use of shipping boxes, food containers, and plastic materials. The aggregate price of packaging materials rose only 0.5 percent in 1993.

Paperboard boxes and containers are the largest packaging cost. The food industry spent approximately \$16.2 billion, or about 40 percent of total packaging expenses, on paper and paperboard products in 1993. Fiber (cardboard) boxes, the primary container used to ship nearly all processed foods, represented about 33 percent of total packaging expenses. Sanitary food containers, including those for such products as fluid milk, margarine and butter, ice cream, and frozen food, also totaled almost 33 percent of paperboard packaging expenses. The third-largest paperboard item was folding boxes used for such dry foods as cereal and perishable bakery products. Prices of paperboard shipping boxes and other paper products declined 0.6 percent in 1993. The price of paper bags and sacks dropped 0.1 percent in 1993. These decreases reflected large paperboard supplies stemming from excess production and large inventory levels.

Metal containers are the second-largest packaging expense, making up about 20 percent of total food packaging costs. Prices of metal cans averaged 2 percent higher in 1993, the largest increase of any packaging material. Cans have become less important for food packaging because of the increased popularity of glass and plastic bottles, the year-round availability of fresh fruit and vegetables, and the increased use of microwavable dishes for frozen foods. The price of glass containers, which are largely used to enhance product image, rose 0.5 percent in 1993.

Costs of plastic containers and wrapping materials account for nearly 20 percent of food packaging costs. Plastic is an important source of trays for meat and produce, bottles for milk and fruit juices, jars and tubs for cottage cheese and other dairy products, and flexible wrapping materials, such as polyethylene film for protective covering of baked goods, meat, and produce. Plastic is an oil derivative and became cheaper to produce due to lower crude oil prices, resulting in a 0.6-percent fall in the price of plastic containers in 1993.

Transportation Rates and Costs

The transportation cost index, representing railroad freight rates, advanced 0.9 percent in 1993, slightly more than the gain recorded in 1992. The new BLS index of agricultural trucking rates showed a similarly small increase of 1.5 percent. Most foods shipped by railroad are canned and bottled products. Some meat and fresh fruit and vegetables are shipped in truck trailers on flat cars (TOFC), but information on charges for these products is not available. TOFC shipments of fresh fruit and vegetables decreased 10.2 percent in 1993, but still accounted for nearly 3 percent of all produce shipped. A larger quantity of produce--4.6 percent--was shipped in rail cars in 1993, a slightly smaller proportion than in 1992, but the market share accounted for by this transportation mode also decreased slightly.

Approximately 93 percent of fresh produce was transported by truck in 1993. Operating costs of trucks hauling produce, as reported by USDA's Agricultural Marketing Service, increased 2.4 percent in 1993 (table 28). Truckers experienced a decrease in fuel costs of 2.9 percent, while wages rose 3.4 percent. Fuel and labor accounted for half of total operating costs. Other expense items rose an average of 3.6 percent. The increase in trucking costs pushed up truck rates for shipping fresh produce in most corridors. Intercity truck and rail transportation for farm foods amounted to \$20.6 billion in 1993, or about 4.5 percent of retail food expenditures.

Table 28--Annual average trucking costs and rates for fresh fruit and vegetables, by selected items and routes

Year	Truck cost for fleet operators ¹	Truck rates by commodity, origin, and destination ²		
		Lettuce, ³ California to New York City	Citrus and vegetables, southern California to New York City	Apples, Washington State to New York City
	Dollars per mile	Dollars per box		
1980	0.96	3.36	2.77	3.09
1981	1.08	3.45	2.77	3.25
1982	1.11	3.62	2.91	3.20
1983	1.13	3.62	2.98	3.41
1984	1.15	3.65	3.18	3.19
1985	1.17	3.62	3.06	3.20
1986	1.14	3.75	3.16	3.21
1987	1.16	3.83	3.23	3.28
1988	1.18	3.69	3.14	3.30
1989	1.23	3.76	3.20	3.31
1990	1.31	3.74	3.23	3.36
1991	1.26	3.77	3.22	3.36
1992	1.24	3.95	3.38	3.36
1993	1.27	4.25	3.60	3.37
		<u>Percent</u>		
Change, 1980-93	32.3	26.5	30.0	9.1

¹ Truck costs developed by the Agricultural Marketing Service, USDA. ² Truck rates are the average rates reported by Agricultural Marketing Service, Market News Service, USDA, for the first week of the month. Rates per truck were converted for 1980 to 1983 at: Lettuce, 800 boxes/load; citrus fruit and vegetables, 1,000 boxes/load; and apples, 900 boxes/load. Beginning in 1984, rates were converted at 850 boxes/load of lettuce from Salinas, CA; 860 boxes/load for lettuce from Imperial Valley, CA; and 1,000 boxes/load for apples. ³ January to April: Imperial Valley, CA to New York City; May to December: Salinas, CA to New York City.

Energy Costs

Last year's energy bill for food marketing came to about \$17.3 billion, making up about 3.5 percent of retail food expenditures. Energy costs rose 3.6 percent last year, slightly greater than the rate of increase for the marketing bill. The energy bill included only the costs of electricity, natural gas, and other fuels used in food processing, wholesaling, retailing, and foodservice establishments. Transportation fuel costs, except for those incurred for food wholesaling, were excluded.

Higher 1993 energy costs resulted largely from higher prices of energy inputs. Natural gas and electricity prices primarily affected the energy costs of processing and retailing food. Oil prices have little effect on the costs of direct energy required to market food. Natural gas prices jumped 6.8 percent and were largely responsible for higher energy costs.

Public eating places and other foodservice facilities incur nearly 40 percent of fuel and electricity costs for food marketing. Their energy expenses have risen because of large growth in the away-from-home food market. Also, away-from-home food service has the highest energy costs per dollar of sales, about 3.1 percent. About 85 percent of this cost comes from the use of electricity. Energy costs of food retailers are the second largest, at about 26 percent of the energy bill, also mainly for electricity. The food processing sector is responsible for another 20 percent of the total energy bill. Electric power accounts for 56 percent of food manufacturing energy costs, with natural gas making up the remaining 44 percent.

Other Costs Added Up

The major costs just discussed total about 67 percent of the 1993 food marketing bill. The rest of the bill included a variety of other costs (about 29 percent of the total) and profits (about 4 percent). These other costs added to \$110 billion, and included depreciation, rent, advertising and promotion, repairs, bad debts, contributions, property taxes and insurance, interest, and the nonfood costs of providing food service in schools, hospitals, and other institutions. Some of these costs are estimated using data from trade publications, the Internal Revenue Service, and the Census Bureau. The largest of these costs are rent and depreciation on plants and equipment (about 7.5 percent of total consumer expenditures), media--radio, television, and newspaper--advertising expenditures (about 4 percent), net interest (about 3.5 percent), and repairs (1.5 percent).

Sufficient data are not available for estimating many individual smaller costs, such as taxes and insurance, for-hire local truck transportation, professional services, and food service in schools and institutions. Together, these costs account for about 6 percent of the food dollar.

Corporate Profits

Food industry firms earned approximately \$15.3 billion in pre-tax profits from marketing U.S. farm foods, a 2.5-percent drop from 1992 pre-tax profits. Lower profit margins per dollar of sales for food retailers were primarily responsible for the decline in profits. Most of the decline was due to the write-off of non-operating expenses against income in the first quarter of 1993. The expenses reflected the cumulative effect of a change in accounting methods pertaining to post-retirement benefits other than pensions. Manufacturing profits rose slightly in response to modest price increases and nearly stable raw material costs. Food manufacturers have also been able to hold down costs with labor productivity gains for major industries such as poultry processing and grain milling.

The profit estimate was developed by a two-step procedure. First, profit ratios per dollar of sales were derived from IRS corporate income tax returns. This estimate was then multiplied by the annual sales of food retailers, wholesalers, manufacturers, and public eating places. Last year's food industry profits made up about 3 percent of food spending.

Food Spending in Relation to Income

Food spending has increased considerably over the years, but the increase has not matched the gain in disposable income. As a result, the percentage of income spent for food has declined (table 29). In 1929, the first year data of this type were recorded, 23.7 percent of disposable income was spent for food. This percentage has since tapered off fractionally almost every year. By 1970, the percentage had dropped to 13.9. During the 1970's, the percentage held fairly constant because of high food-price inflation. By 1980, food spending was still 13.5 percent of disposable income, but has since declined steadily to reach a low of 11.2 percent in 1992.

Table 29--Food expenditures by families and individuals as a share of disposable personal income

Year	Disposable personal income	Expenditures for food			Proportion of income spent for food		
		At home ¹	Away from home ²	Total ³	At home	Away from home	Total ³
----- Billion dollars -----				----- Percent -----			
1929	82.3	16.9	2.6	19.5	20.6	3.2	23.7
1939	70.1	13.0	2.3	15.2	18.5	3.3	21.7
1949	188.7	33.8	7.8	41.5	17.9	4.1	22.0
1959	346.5	49.3	12.1	61.4	14.2	3.5	17.7
1961	376.2	51.1	13.1	64.2	13.6	3.5	17.1
1962	398.7	52.0	13.9	65.9	13.0	3.5	16.5
1963	418.4	52.4	14.5	66.9	12.5	3.5	16.0
1964	454.7	54.5	15.7	70.2	12.0	3.4	15.4
1965	491.0	57.4	16.9	74.3	11.7	3.5	15.1
1966	530.7	59.9	18.6	78.5	11.3	3.5	14.8
1967	568.6	60.3	19.8	80.0	10.6	3.5	14.1
1968	617.8	63.5	21.7	85.2	10.3	3.5	13.8
1969	663.8	68.0	23.4	91.3	10.2	3.5	13.8
1970	722.0	74.2	26.4	100.6	10.3	3.7	13.9
1971	784.9	78.1	28.1	106.2	9.9	3.6	13.5
1972	848.5	84.4	31.3	115.8	10.0	3.7	13.6
1973	958.1	93.1	34.9	128.0	9.7	3.6	13.4
1974	1,046.5	105.4	38.5	143.9	10.1	3.7	13.8
1975	1,150.9	115.2	45.9	161.1	10.0	4.0	14.0
1976	1,264.0	123.1	52.6	175.7	9.7	4.2	13.9
1977	1,391.3	131.8	58.5	190.3	9.5	4.2	13.7
1978	1,567.8	145.3	67.5	212.8	9.3	4.3	13.6
1979	1,753.0	162.2	76.9	239.1	9.3	4.4	13.6
1980	1,952.9	179.1	85.2	264.4	9.2	4.4	13.5
1981	2,174.5	190.0	95.8	286.8	8.8	4.4	13.2
1982	2,319.6	198.4	104.5	302.9	8.6	4.5	13.1
1983	2,493.7	209.0	114.2	323.2	8.4	4.6	13.0
1984	2,759.5	220.9	122.5	343.4	8.0	4.4	12.4
1985	2,943.0	230.7	129.4	360.1	7.8	4.4	12.2
1986	3,131.5	239.3	138.3	377.6	7.6	4.4	12.1
1987	3,289.5	248.4	147.0	395.4	7.6	4.5	12.0
1988	3,548.2	261.9	157.5	419.4	7.4	4.4	11.8
1989	3,787.0	280.9	164.6	445.5	7.4	4.3	11.8
1990	4,050.5	306.4	172.4	478.8	7.6	4.3	11.8
1991	4,230.5	319.4	174.9	494.3	7.6	4.1	11.7
1992	4,500.2	320.7	181.4	502.1	7.1	4.0	11.2
1993	4,707.4	330.5	197.5	528.1	7.0	4.2	11.2

¹ Food purchased from grocery stores and other retail outlets, including purchases with food stamps and food produced and consumed on farms, because the value of these foods is included in personal income. Excludes Government-donated foods. ² Purchases of meals and snacks by families and individuals and food furnished to employees, because it is included in personal income. Excludes food paid for by government and business, such as food donated to schools, meals in prisons and other institutions, and expense-account meals. ³ May not add due to rounding.

The decline in the percentage of income spent for food is the result of the inelastic nature of the aggregate demand for food: as income rises, the proportion of income spent for food declines, and the proportion spent for nonfood items increases. A decline in the percentage of income spent for food generally reflects a highly developed economy in which there is money to spend for personal services and other discretionary items. Some of these additional services ordinarily are purchased along with food, which largely explains why the percentage of income spent for food away from home has not fallen as has the percentage of income spent for food at home.

The percentage of income spent for food varies widely among households of different sizes and income. For instance, data from the 1992 Consumer Expenditure Survey that the U.S. Department of Labor conducted showed that the share of after-tax income spent for food was 14 percent for households with incomes of \$30,000-\$39,999, but was about 29 percent for households with incomes of \$5,000-\$9,999. The average for all households was 14.2 percent. This figure, based on the consumer survey data, is higher than the estimates using total food expenditures and disposable personal income. Some reasons for this are: 1) that households may not have fully accounted for income from all sources; 2) household income does not include pension and welfare funds, such as insurance premiums paid by employers; and 3) the reported income is capped to protect the privacy of some survey households. All these factors would cause the estimated percentage of income spent for food to be higher.

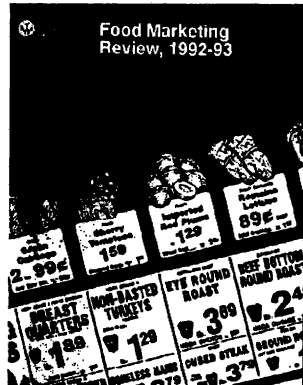
ERS developed the estimates of food expenditures in table 29, which differ from the U.S. Department of Commerce estimates of personal consumption expenditures (PCE). The trend in food expenditures is similar, but the ERS series shows a lower level of spending for food than does the PCE series, particularly for food purchased at grocery stores and other retail outlets for consumption at home. The ERS estimates of at-home expenditures are lower partly because they exclude pet food, ice, and prepared feeds, which are included in PCE estimates. ERS estimates also deduct more from grocery store sales for nonfoods, such as drugs and household supplies, in estimating food purchases for at-home consumption.

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- * Merger and leveraged buyout activity rose in 1992, following 3 years of sharp declines. Recorded mergers and leveraged buyouts (LBO's) amounted to \$3 billion in 1991 and \$5.7 billion in 1992.
- * Debt levels rose in 1992 for food processors and retailers.
- * Common stock prices of food marketing firms underperformed other sectors of the economy for the first time in a decade in 1992 and kept falling in 1993.
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SUMMARY OF REPORT AER-689

Food Assistance Programs Play Complementary Roles in Serving Needy

June 1994

Contact: Bill Levedahl, 202-219-0865

The Emergency Food Assistance Program, a commodity-based program, and the Food Stamp Program, a coupon-based program, can, for a given level of expenditure for food assistance, serve more needy households than either program can serve alone, according to a new report by USDA's Economic Research Service, *Comparing the Emergency Food Assistance Program and the Food Stamp Program*.

TEFAP is a U.S. Department of Agriculture program that distributes surplus commodities and purchased foods directly to low-income households through State and local organizations. Following TEFAP's introduction in 1982, annual expenditures reached \$1 billion at the program's peak in 1984, then steadily declined and have remained under \$250 million per year since 1989. Although TEFAP expenditures are small compared with Food Stamp Program expenditures (\$23.6 billion in FY 1993), TEFAP can serve a complementary role to food stamps, because TEFAP's direct food donations are more acceptable to some needy households than are food stamps and it uses local food support organizations.

TEFAP Complements Food Stamps in Two Key Respects

The Food Stamp Program generally is viewed as a better program than TEFAP for providing food Assistance because the Food Stamp Program uses the efficient transportation and distribution systems of the commercial food sector, offers recipients a wider choice of food items, and is not affected by the availability of surplus commodities. However, only about 60 percent of the households eligible for the FSP are enrolled. A commodity-based program, such as TEFAP, can complement food stamps in two key respects.

First, TEFAP appeals to individuals who are unwilling to apply for food stamps. Some recipients appear to perceive foods that are directly donated to them through TEFAP as less of a welfare benefit than food stamps. This is especially true among elderly households, who tend not to enroll in the Food Stamp Program, in part due to

complicated application procedures and the stigma they perceive to be attached to the program.

Second, TEFAP relies on local volunteers and other charitable organizations to help identify needy individuals, many of whom may not be aware of their eligibility for food stamps and other Federal benefits. The U.S. General Accounting Office has estimated that one-half of the households eligible but not participating in the FSP are not aware of their eligibility. Along with donating food, TEFAP has the potential of increasing awareness of food stamps and other Federal assistance.

TEFAP and Food Stamps Differ in Their Effects on Food and Nonfood Markets

When TEFAP distributes commodities from Government-owned surpluses which are acquired through price-support programs, it reduces the market prices of these commodities. This benefits both recipient and nonrecipient consumers, but displaces some retail food sales of the donated commodities.

To Order This Report...

The information presented here is excerpted from *Comparing the Emergency Food Assistance Program and the Food Stamp Program: Recipient Characteristics, Market Effects, and Benefit/Cost Ratios*, by J. William Levedahl, Nicole Ballenger, and Courtney Harold. The cost is \$9.00 (\$11.25 to foreign addresses, including Canada).

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