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Food Costs. . . From Farm to Retail in 1991

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How much are food costs changing? Why? How much of the consumer food dollar goes to the farmer and how much to food processors and marketers? Because of great interest in these questions, Congress directed the U.S. Department of Agriculture (USDA) to regularly study them and to report its findings. This bulletin provides the answers, focusing on developments in 1991.

Food Prices Rose the Least in 6 Years

The rise in retail food prices slowed dramatically in 1991 under the pressure of large food supplies and recession-weakened consumer demand. Food prices in 1991, as measured by the Consumer Price Index (CPI), averaged 2.9 percent above those in 1990, half the 1990 price increase of 5.8 percent. Moreover, the 1991 increase was the lowest since that in 1985.

Food prices in 1991 rose more slowly at supermarkets and other grocery stores than at eating places, reversing the trend during the prior 4 years. Food prices in grocery stores went up 2.6 percent, and prices for restaurant meals advanced by 3.4 percent. In both cases, prices increased more slowly than they had the year before. For restaurant meals, the 1991 price increase was the smallest since that in 1965.

There were two principle reasons for the slowdown. Production of livestock increased, generating record meat supplies. At the same time, the recession cut into consumer buying power and, thus, food spending. Per capita disposable income, adjusted for inflation, fell about 1 percent in 1991. This drop forced food marketers to either limit price increases or watch already weak sales erode. Even so, grocery store sales, adjusted for inflation, declined about 1 percent in 1991. Meanwhile, the cost of doing business in 1991 for firms in the food industry rose a little more slowly than in recent years. Food industry charges for food processing and distributing services consequently increased more slowly in 1991 than they had in 1990.

Food shoppers were the beneficiaries of the slower rise in food prices. Grocery store prices of most foods in 1991 were only moderately higher than the year before, and some prices, including those for dairy products, poultry, and eggs, fell slightly. Starting in August, increasing pork supplies caused monthly drops in retail pork prices.

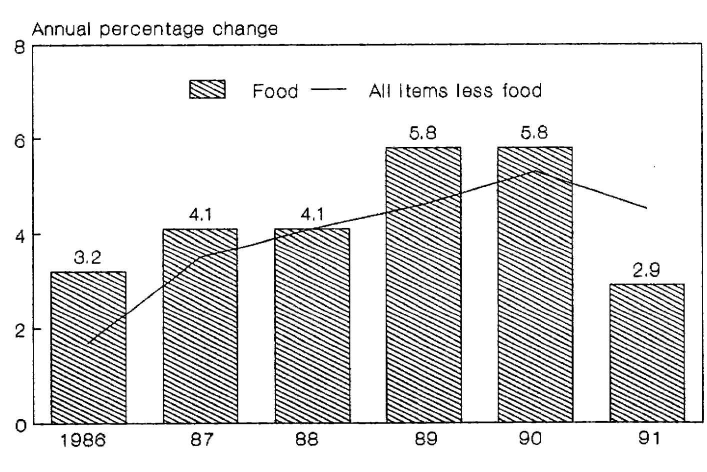
Farmers, however, saw prices of some of their products decline. Livestock and most grain and oilseed prices dropped in 1991. The farm value of foods sold in grocery stores, after rising 5.7 percent in 1990, fell 6.2 percent. Most of the decline reflected lower prices for milk and meat. Fruit was the only major commodity group whose farm value rose.

The rise in grocery store food prices in 1991 came mainly from a higher farm-to-retail price spread. The farm-to-retail price spread, or the difference between what farmers receive for food (the farm value) and its retail price, is the charge for processing, distributing, and retailing farm-produced foods. The 1991 rise in the farm-to-retail spread was 6.7 percent, slightly smaller than in 1990.

Food prices in 1991 rose by less than the CPI for all consumer products and services. Helped by the 2.9-percent rise in food prices, which make up 16 percent of the CPI, overall inflation averaged 4.2 percent in 1991, down from 5.4 percent in 1990. Among major items in the CPI, housing prices, the largest component, went up 4 percent, and apparel and upkeep prices rose 3.7 percent, but medical care costs climbed 8.7 percent in 1991.

Consumer price indexes

The food price increase was smaller than the price increase for nonfood items in 1991.



Price Changes Mixed Among Foods

Consumers had to pay moderately higher prices for most foods at the supermarket in 1991, but some foods were better buys. The exception was fresh fruit, mainly due to a short California orange crop that sharply raised orange prices.

Four food groups caused most of the rise in grocery-store prices in 1991: red meat retail prices rose 3.1 percent, cereal and bakery product prices went up 4.1 percent, prepared foods prices rose 4.5 percent, and prices of fresh fruit jumped 13.5 percent. Fresh fruit, which has a weight of only about 6 percent in the food-at-home index, accounted for about a third of the 2.6-percent price rise for food at home. The higher prices for meats, which have a weight of 21 percent in the food-at-home index, accounted for a fourth of the total price rise for food at home. Lower prices for dairy products, poultry, and eggs helped slow the rate of price increases in 1991.

Meat. Beef and veal prices averaged 2.8 percent higher in 1991 than a year earlier, the smallest price increase in 3 years. Prices peaked in the second quarter at a record high, reflecting lower beef production. Prices declined slightly in the last half of the year as beef production increased. Total 1991 beef production was nearly 1 percent larger than in 1990, the first increase in 3 years. Beef and veal consumption averaged about 68 pounds (retail weight) per capita in 1991, slightly less than in 1990, as population growth and larger beef exports offset the rise in production.

Retail pork prices also rose much more slowly in 1991 as pork production picked up about 4 percent. Retail pork prices averaged 3.3 percent higher in 1991 than in 1990. Prices peaked in July and then declined monthly the rest of the year. Prices in December 1991 were 6 percent lower than those a year earlier. With larger production, pork consumption rose to 50.5 pounds (retail weight) per capita in 1991, about 1 pound more than in 1990.

Poultry and eggs. Retail poultry prices declined slightly in 1991 for the second consecutive year. Prices reflected larger supplies of poultry and downward pressure on prices created by larger red meat supplies. Broiler chicken production increased about 6.5 percent in 1991, extending a long-term expansion, and turkey production was up about 2.5 percent. As a consequence, poultry consumption increased to 95 pounds (ready-to-cook weight) per capita in 1991, about 4 pounds more than in 1990.

Table egg production was only a fraction of a percent larger in 1991, but egg prices declined at the farm, wholesale, and retail levels. Retail egg prices averaged 2.3 percent lower in 1991 than in 1990. Per capita egg consumption declined slightly, continuing a long-term trend. Consumption totaled 232 eggs per capita in 1991, 2 eggs per capita less than in 1990, reflecting a 12-year decline in shell egg use. Use of processed egg products, nearly a fourth of total consumption, continued to grow. Processed egg consumption has grown about 40 percent per capita since 1980, due partly to greater manufacturing use in food products, such as pasta and baked goods.

Dairy products. Retail prices of milk and other dairy products averaged 1.1 percent lower in 1991. However, a 1990 increase in dairy prices that was the largest since 1980 preceded this small decline, sharply contrasting with the 1- or 2-percent annual increases during most of the 1980's. Price decreases in 1991 were limited to fresh milk and cream (3.2 percent). Prices for cheese and other processed products rose 1.1 percent. Cheese supplies tightened during the year due to the lack of milk shipments between butter/powder manufacturing plants and cheese plants, causing cheese prices to rise moderately in the third quarter. Milk production in 1991 was about even with the year before.

Fish and seafood. Fish and seafood prices increased 1.1 percent in 1991, the smallest increase in 8 years. Much larger supplies of canned salmon, larger imports of frozen blocks, and higher catfish production moderated prices. Consumption of seafood grew 30 percent during the mid-1980's, peaking at 16.1 pounds per capita in 1987. However, consumption has since plateaued at around 15.5 pounds. Fresh and frozen seafood accounted for most of the increase in consumption.

Cereals and bakery products. Retail prices for cereals and bakery products averaged 4.1 percent higher in 1991, the smallest rise since the 1988 drought-induced sharp price increases for wheat and other food grains. The 1991 farm value of commodities used in cereals and bakery products averaged about 6 percent lower than in 1990. Rising retail prices reflected higher charges by bakers and cereal manufacturers for processing and marketing functions. Cereal prices led the category, increasing by 6 percent. White bread prices advanced only 2.1 percent.

Annual cereal price increases have been larger than price increases for most other products in the food-at-home index in the past decade, reflecting higher manufacturing and selling charges and strong consumer demand. Per capita consumption of ready-to-eat cereals rose nearly 20 percent from 1982 to 1988.

Fresh fruits and vegetables. Fresh fruit prices averaged 13.5 percent higher in 1991, but price increases varied widely among fruits. Prices of bananas, the most popular fresh fruit, rose 4.9 percent. Apple prices averaged 17 percent higher, reflecting a 5-percent smaller 1990 harvest. However, orange prices soared 55 percent due to short fresh market supplies created by the December 1990 freeze in California that reduced the 1990/91 crop by 62 percent from the previous year. California lemon and grapefruit production also fell because of the freeze, and lemon prices rose sharply. Grapefruit prices, however, declined in 1991 because Florida production was much larger following a freeze the year before.

Prices of fresh vegetables averaged only 2.2 percent higher in 1991. Most of the increase was in the second quarter, resulting from unusual weather patterns that caused sporadic supplies of lettuce, tomatoes, peppers, and cucumbers. Retail prices for fresh potatoes averaged 11.1 percent lower in 1991, a downturn that reflected an 8-percent increase in the 1990 fall potato crop followed by a record-large crop in 1991. Domestic per capita use of all vegetables in 1991 likely remained near the 1990 total of 392 pounds per person (farm-weight basis). Higher use of potatoes and dry beans likely offset the lower use of fresh vegetables.

Processed fruits and vegetables. Processed fruit and vegetable prices declined 1.9 percent in 1991. Prices for processed vegetables rose slightly, but processed fruit prices fell by 3.7 percent. Lower fruit prices in 1991 were attributed mainly to a 43-percent increase in production of frozen concentrated orange juice following the freeze-reduced output the previous year. The freeze in December 1989 resulted in a 16-percent increase in frozen concentrated orange juice prices in 1990.

Fats and oils. The fats and oils component of the food CPI averaged 4.3 percent higher in 1991, nearly the same increase as the year before. Margarine prices rose only 1.8 percent, reflecting large supplies of soybean oil, the major ingredient of margarine. However, peanut butter prices rose nearly 14 percent, reflecting drought damage to the 1990 peanut crop.

Nonalcoholic beverages. Nonalcoholic beverage prices rose a scant 0.5 percent in 1991, which considerably moderated the overall increase in grocery store food prices. Coffee prices were 1.9 percent lower, the second consecutive annual decline. Carbonated drink prices rose only 0.8 percent. Annual price increases averaged slightly above 1 percent over the past decade due to price competition for market share among soft-drink companies and industry productivity gains that annually averaged 6.5 percent.

Price changes for food and nonfood items in 1991

Food prices rose less than prices of all other goods and services.

	Consumer Price Index				
Year	Food	Food at home	Food away from home	All items	All items less food
	Percent change				
1980	8.6	8.1	9.9	13.5	14.5
1981	7.8	7.2	9.0	10.3	10.9
1982	4.1	3.5	5.4	6.2	6.5
1983	2.1	1.0	4.4	3.2	3.5
1984	3.8	3.7	4.2	4.3	4.3
1985	2.3	1.5	3.9	3.6	3.8
1986	3.2	2.9	3.9	1.9	1.7
1987	4.1	4.3	4.0	3.6	3.5
1988	4.1	4.2	4.1	4.1	4.1
1989	5.8	6.5	4.6	4.8	4.6
1990	5.8	6.5	4.7	5.4	5.3
1991	2.9	2.6	3.4	4.2	4.5

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

Major food category annual price changes

The rise in prices of most principal food categories was much smaller in 1991 than in 1990.

Food	1989	1990	1991
	Percent change		
All food	5.8	5.8	2.9
Food at home	6.5	6.5	2.6
Meat	4.0	10.1	3.1
Beef and veal	6.4	8.0	2.8
Pork	.6	14.7	3.3
Poultry	9.9	-.2	-.8
Fish and seafood	4.5	2.2	1.1
Eggs	26.6	4.7	-2.3
Dairy products	6.6	9.4	-1.1
Fresh fruit	6.6	12.1	13.5
Fresh vegetables	10.7	5.6	2.2
Processed fruits and vegetables	6.3	6.2	-1.9
Cereals and bakery products	8.4	5.7	4.1
Sugar and sweets	4.7	4.4	3.7
Fats and oils	7.2	4.2	4.3
Nonalcoholic beverages	3.5	2.0	.5
Other prepared foods	6.4	4.5	4.5
Food away from home	4.6	4.7	3.4

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

Farm Value of Food Products Dropped

Lower livestock, milk, and other farm commodity prices accounted for the slower rise in retail food prices in 1991.

The average farm value (what farmers receive) of USDA's market basket of foods was 6.2 percent lower in 1991, more than offsetting the rise in 1990. With this large decline, the 1991 farm value of foods was only 6 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 the rise in 1990.

Lower commodity prices decreased the farm value of 9 of the 10 food groups. Decreases were largest for processed fruit and vegetables (16 percent), dairy products (11.5 percent), fresh vegetables (11 percent), and fats and oils (9 percent). Farm value was sharply higher for only fresh fruit.

Red meat accounts for about 36 percent of the farm value of USDA's market basket. Farm value for red meat declined about 6 percent in 1991, mainly reflecting 5-percent lower steer cattle prices and 10-percent lower hog prices. For 1 pound of Choice grade beef selling for an average retail price of $2.88, cattle producers received $1.60 for the equivalent quantity of live animal (2.4 pounds) in 1991, down 8 cents from 1990. This decrease partly reflected a 1-percent increase in beef production. A 4-percent increase in pork supplies caused a larger decrease in farm value for pork. For 1 pound of pork selling at retail for $2.12 in 1991, hog producers received 78 cents for the equivalent quantity of live animal (1.7 pounds), 9 cents less than in 1990.

Sharply lower producer prices for milk used in fluid products depressed the farm value of dairy products by an average of 11 percent. A half-gallon of fluid milk retailing for $1.37 returned the producer about 54 cents in 1991, 9 cents less than in 1990.

Poultry producers continued to increase broiler and turkey output in 1991 but at a slower rate than in recent years. Yet, with poultry production up about 5.5 percent for the year, farm value of poultry dropped about 5 percent. Larger supplies of red meat likely added pressure on poultry prices. Broiler chicken producers received 44 cents of the average retail price of 88 cents per pound of whole frying chicken in 1991, about 2 cents less than in 1990.

Farm value of eggs declined about 6.5 percent in 1991, reflecting a slight increase in output. Table egg output was cut sharply the prior 2 years, resulting in a substantial increase in farm value from 1988 to 1990. Farm value in 1991 averaged 59 cents for a dozen eggs with an average price of 99 cents at grocery stores.

The farm value of cereals and baked goods declined 6 percent in 1991, reflecting lower prices of wheat and rice. Farmers received 3.4 cents in 1991 for the wheat in a 1-pound loaf of white bread selling for 71 cents in supermarkets, 0.3 cent less than in 1990. The 1991 farm value of other bread ingredients, mainly shortening and sweeteners, was 0.6 cent, slightly lower than in 1990.

The Market Basket

USDA uses its market basket concept to track price changes for the commodities farmers sell and the food consumers buy in retail grocery stores. The market basket contains the annual average quantities of foods purchased per household in a base period. It excludes fish and seafood, nonalcoholic beverages, and bananas. Retail price indexes for the market basket are components of the CPI for food at home, and are broken into two components.

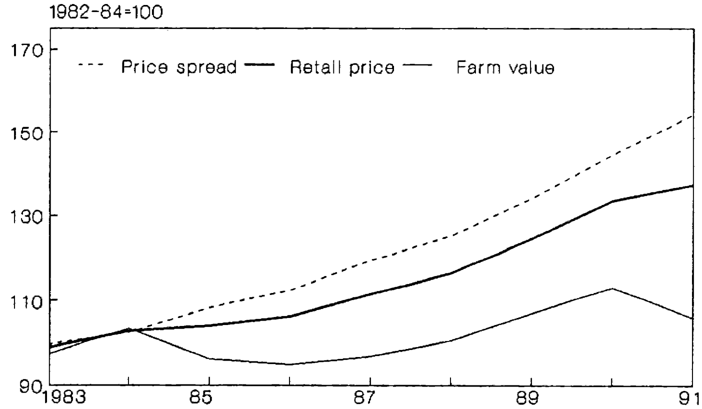
- **Farm value** is the return or payment farmers receive for raw commodities equivalent to foods in the market basket.

- **Farm-to-retail price spread** is the difference between the retail price and the farm value. The price spread is the charge for processing, wholesaling, and retailing foods.

The *farm value share*, a related concept, is the proportion farmers get from the amount consumers spend on the market basket of food purchased in retail grocery stores.

Food price components

The rise in food prices was due to the increasing price spread.



Retail prices based on the Consumer Price Index for food eaten at home. Farm value based on prices received by farmers. Price spread represents processing and distributing charges.

Farm Value Share of Food Prices Declined

The farm value for a market basket of foods averaged 27 percent of the retail price in 1991, down from 30 percent in 1990. Farm value shares varied widely among foods because farm production costs differ among commodities and some products require far more handling, transportation, and processing than others.

Over time, the farm value share has reflected changes in farm and retail food prices. The 1991 farm value share fell sharply due to the decrease in farm value while retail prices rose moderately. This contrast reflects the abundant food supplies that 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 share remained stable until the decline in 1991, reflecting the rise in farm prices during 1987-90.

Farm value shares vary greatly among foods. In 1991, farm value share of a retail dollar for a sample group of 41 products varied from 60 percent for eggs to 4 percent for corn syrup. The more highly processed the product, generally the smaller the farm share. For instance, in flour-wheat comparisons, wheat is the principal ingredient of each product, but additional manufacturing processes are required for bread. 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 than for crops. For example, the 1991 farm value share was 56 percent for Choice beef, but only 20 percent for margarine. Other factors affecting the farm share among foods include costs of transporting from farm to consumer, product perishability, and the amount of space the product occupies in retail food stores. These factors partly explain why the farm share for fresh fruit and vegetables is relatively low.

Farm value, price spread, and retail food prices

The widening farm-to-retail price spread boosted retail food prices in 1991.

Year	Market basket of foods sold in grocery stores: Farm value of food	Farm-to-retail price spread	Retail price	Farm value share of retail price
	Percent change			*Percent*
1981	3.2	10.3	7.6	36
1982	-.7	6.0	3.6	35
1983	-1.7	2.3	.9	34
1984	6.3	2.8	3.9	35
1985	-7.1	5.6	1.2	32
1986	-1.4	3.9	2.1	31
1987	2.3	6.1	5.0	30
1988	3.8	4.7	4.4	30
1989	6.5	7.2	7.0	30
1990	5.7	7.8	7.1	30
1991	-6.2	6.7	2.9	27

Farm value share differences, by foods

Farm value share was highest for animal products in 1991.[1]

Food	Retail price	Farm value	Farm value share of retail price[2]
	Dollars		*Percent*
Animal products:			
Eggs, Grade A large, 1 doz	0.99	0.59	60
Beef, choice, 1 lb	2.88	1.60	56
Chicken, broiler, 1 lb	.88	.44	49
Milk, 1/2 gal	1.37	.54	40
Pork, 1 lb	2.12	.78	37
Cheese, natural cheddar, 1 lb	3.55	1.09	31
Fruits and vegetables:			
Fresh--			
Oranges, California, 1 lb	.89	.36	40
Lemons, 1 lb	1.23	.38	31
Potatoes, Northeast, 10 lbs	2.66	.76	28
Apples, red delicious, 1 lb	.88	.24	27
Grapefruit, 1 lb	.62	.13	21
Lettuce, 1 lb	.61	.09	14
Frozen--			
Orange juice concentrate, 12 fl oz	1.38	.53	38
Broccoli, cut, 1 lb*	1.18	.26	22
Peas, 1 lb*	.99	.14	14
Corn, 1 lb*	1.00	.13	13
Green beans, cut, 1 lb*	1.02	.11	11
Canned and bottled--			
Apple juice, 64-oz bottle*	1.48	.34	23
Apple sauce, 25-oz jar*	.95	.18	19
Peas, No. 303 can (17 oz)*	.48	.09	19
Corn, No. 303 can (17 oz)*	.46	.09	19
Pears, No. 2-1/2 can*	1.19	.22	18
Peaches, cling, No. 2-1/2 can*	1.11	.18	16
Green beans, cut, No. 303 can*	.45	.06	14
Tomatoes, whole, No. 303 can*	.53	.05	10
Dried--			
Beans, 1 lb*	.65	.18	28
Raisins, 15-oz box*	1.41	.39	28
Crop products:			
Sugar, 1 lb	.40	.15	37
Flour, wheat, 5 lbs	1.17	.28	24
Shortening, 3 lbs	2.61	.61	23
Margarine, 1 lb	.87	.17	20
Rice, long grain, 1 lb	.50	.10	20
Prepared foods:			
Peanut butter, 1 lb	2.15	.51	24
Potato chips, regular, 1-lb bag	1.96	.31	16
Pork and beans, No. 303 can (16 oz)*	.41	.06	14
Chicken dinner, fried, frozen, 11 oz*	1.21	.15	12
Potatoes, french fried, frozen, 1 lb	.85	.10	12
Bread, 1 lb	.71	.04	6
Corn flakes, 18-oz box*	1.67	.09	5
Oatmeal, regular, 42-oz box*	2.58	.14	5
Corn syrup, 16-oz bottle*	1.38	.05	4

[1]January-June 1991 average for items noted with asterisk.
[2]Computed from unrounded data.

Farm-to-Retail Price Spread Widened

The 6.7-percent increase in the farm-to-retail price spread in 1991 was smaller than the increase in 1990, but it was responsible for pushing retail food prices higher.

Several factors widened the farm-to-retail price spread, including higher prices of inputs, such as labor employed by the food industry, and greater use of some inputs per unit of output. Declining farm values may not have been fully reflected at retail, providing food companies the opportunity to increase profit margins. Development of new products, such as microwavable foods, has increased the use of packaging materials, and more food preparation in supermarkets has added to labor costs.

Prices of inputs used in processing, wholesaling, and retailing foods increased by an average of 2.6 percent in 1991, as measured by an Economic Research Service food marketing cost index. A 3.5-percent rise in the labor component and higher prices for business services contributed most to the increase. Prices of packaging materials advanced by only 1 percent. Short-term interest rates declined about 26 percent, moderating the rise in the overall index.

The rise in the labor component reflected increases in average hourly earnings of workers (payroll divided by hours worked) and higher employer benefit costs, such as health insurance and Social Security payroll taxes. Hourly wages, particularly in food retailing, have risen very moderately in recent years, due partly to changes in the labor force, such as greater employment of part-time and entry-level workers who typically earn lower wages.

Price spreads increased for all 10 food groups in the market basket, presumably reflecting higher food industry labor costs, higher prices of some other inputs, and larger profit margins for some food companies.

The farm-to-retail price spread for red meats widened about 11 percent, the largest increase among the 10 food groups in the market basket, mainly reflecting increases for beef. The price spread for beef increased about 14 percent, a possible adjustment after several years of rising prices that made it difficult to increase margins without further cutting into consumer demand for beef. From 1986 to 1990, the price spread for beef had increased only about 11 percent, while the farm value rose 35 percent and retail beef prices rose 24 percent. The farm-to-retail price spread for pork increased about 6.5 percent in 1991, likely reflecting the sharp decline in farm value and the fact that there was a relatively small increase in the price spread in 1990 when farm value and retail pork prices rose sharply. Fluctuations in the marketing spread for beef and pork partly reflect retail merchandising practices designed to maximize total meat department sales and profits. Added revenues from one meat may offset lower revenues from another for a period, but may reverse over time due to changes in beef and pork sales, which, along with the margin, determine meat department profits. Retailers also may minimize price changes for customers by not fully adjusting margins with each change in commodity and marketing costs.

Cereals and bakery products account for 20 percent of the farm-to-retail price spread of the market basket, and the spread for this food category widened 5 percent in 1991. That was the smallest increase since 1988. The increase likely reflected small increases in processing and marketing costs, as well as the lower farm value of ingredients. For the cereal industry, profit margins generally continued to expand because of price increases, averaging 6 percent at retail, and lower ingredient costs. However, in 1991, cereal consumption remained almost level, likely 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.

The price spread for poultry, which increased 7 percent in 1990, widened only 2 percent in 1991. The small rise in the spread resulted from the downward pressure of large supplies on retail poultry prices. Similarly, the price spread for eggs rose only 3 percent in 1991, resulting from a decline in retail egg prices.

The average price spread for dairy products increased 5 percent in 1991. With the exception of 1990, when it grew more than at any time since 1980, the spread for dairy products has risen less than for most foods for most years of the past decade. For the first quarter of 1991, the spread was about 10 percent higher than a year earlier. But steady retail prices and some increase in farm value of milk caused the spread to narrow the second half of the year. In the fourth quarter, the spread was lower than a year earlier. In 1991, the farm-retail spread for a half gallon of whole milk retailing for $1.37 was 83 cents, up 5 cents from 1990.

The farm-to-retail price spread increased about 8 percent for fresh fruit and vegetables. The farm-to-retail price spread for fruits and vegetables tends to vary with farm values. When the farm values increase (as in 1991 for fresh fruit), the spread increases. Movement in the same direction suggests that retail pricing is based to a large extent on a constant percentage markup on costs rather than a constant absolute markup.

Producers and consumers tend to consider that price spreads are too high. As a matter of practical economics, however, price spreads are too high only if the same or a better job of marketing could be done for less money, or for the same money. On this basis, price spreads may be too high, but the practical questions are, why are they too high and what can be done to reduce them? This brief statement cannot answer this question. There are, however, remedies for some of the factors that could make marketing spreads more than necessary. For example, if price spreads are too high because processors or distributors are making undue profits, the answer would appear to lie in increased competition. If margins are too high because labor costs are too high, the answer would appear to lie in increasing labor efficiency. Or, if seasonal or cyclical fluctuations in the volume of products marketed and in farm prices increased price spreads, as appears to be true in the case of commodities such as hogs, a partial answer to the problem of high spreads may be to reduce such fluctuations in the volume marketed.

Market basket price components

The farm-to-retail price spread widened for all food groups in 1991.

Food group and price components	1981	1990	1991	Annual change 1981-91	Annual change 1990-91
	---Index, 1982-84 = 100---			*---Percent---*	
Market basket:					
Retail price	94.7	133.5	137.4	41.0	2.9
Farm value	99.8	113.1	106.1	13.3	-6.2
Farm-to-retail spread	92.1	144.5	154.2	56.9	6.7
Meats:					
Retail price	96.0	128.5	132.5	33.9	3.1
Farm value	97.0	116.8	110.0	20.4	-5.8
Farm-to-retail spread	95.1	140.4	155.6	47.6	10.8
Dairy:					
Retail price	97.4	126.5	125.1	29.9	-1.1
Farm value	101.9	101.7	90.0	-.2	-11.5
Farm-to-retail spread	93.2	149.5	157.5	60.4	5.4
Poultry:					
Retail price	97.5	132.5	131.5	35.9	-.8
Farm value	94.5	107.6	102.5	13.9	-4.7
Farm-to-retail spread	100.7	161.1	164.9	60.0	2.4
Eggs:					
Retail price	95.9	124.1	121.2	29.4	-2.3
Farm value	99.0	108.0	100.9	9.1	-6.6
Farm-to-retail spread	90.4	153.2	157.6	69.5	2.9
Cereal and bakery:					
Retail price	92.3	140.0	145.8	51.7	4.1
Farm value	109.6	90.5	85.3	-17.4	-5.7
Farm-to-retail spread	90.2	146.9	154.3	62.9	5.0
Fresh fruit:					
Retail price	88.3	174.6	200.1	97.7	14.6
Farm value	87.4	128.3	175.1	46.8	37.0
Farm-to-retail spread	88.6	195.9	211.3	121.1	7.9
Fresh vegetables:					
Retail price	93.7	151.1	154.4	61.3	2.2
Farm value	103.6	124.4	110.8	20.1	-10.9
Farm-to-retail spread	89.8	164.9	176.8	83.6	7.2
Processed fruits and vegetables:					
Retail price	92.5	132.7	130.2	43.5	-1.9
Farm value	105.6	144.0	120.6	36.4	-16.3
Farm-to-retail spread	89.2	129.1	133.2	44.7	3.2
Fats and oils:					
Retail price	98.9	126.3	131.7	27.7	4.3
Farm value	100.4	107.1	97.7	6.7	-8.8
Farm-to-retail spread	98.3	133.4	144.3	35.7	8.2
Other prepared food:					
Retail price	97.0[1]	131.2	137.1	35.3	4.5
Farm value	97.3[1]	117.1	104.7	20.3	-10.6
Farm-to-retail spread	96.9[1]	133.4	142.3	37.7	6.7

[1]Data for 1982.

Higher Food Prices Boosted Consumer Food Expenditures

While spending went up, the percentage of income spent for food declined, because food expenditures did not rise as much as disposable personal income.

Food expenditures by families and individuals totaled $486 billion in 1991, only 2.6 percent more than in 1990. The increase in spending was less than the rise in food prices and population growth, which implies that the quantity of food and marketing services purchased last year declined.

Spending for food eaten at home by families and individuals totaled $303 billion in 1991, 2.1 percent more than in 1990. Spending for meals and snacks eaten away from home rose slightly more, at 3.4 percent. In real terms (spending adjusted for price increases), however, spending at home declined slightly and spending for away-from-home eating was unchanged. However, in most recent years, there has been small real growth in spending from people eating more outside the home. Rising incomes among households with more than one wage earner are chiefly responsible for the increased spending for food away from home. The share of total food spending for away-from-home meals and snacks rose slightly from 36.8 percent in 1986 to 37.6 percent in 1991. During this period, price increases were smaller for food away from home than for at-home food spending.

Food spending by families and individuals accounted for 11.5 percent of total personal disposable income in 1991, slightly lower than in the previous year. This percentage has declined over the years because personal income has risen more than food expenditures. The 11.5-percent 1991 share of food spending compares with 13.2 percent in 1981 and 17.1 percent in 1961. The decline reflects the inelastic nature of the aggregate demand for food: as income rises, the proportion spent for food declines as the desire for nonfood items grows stronger compared with the desire for additional food.

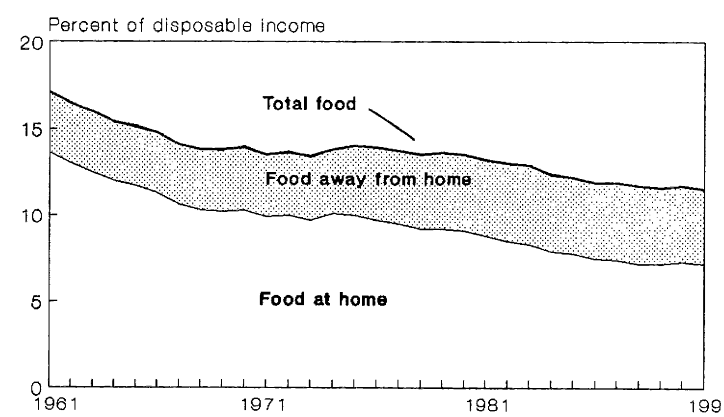
An annual Consumer Expenditure Survey by the U.S. Department of Labor reveals comprehensive information on how much average households spend for food and other products and services. The findings for 1990 show that annual food expenditures averaged $4,352 for all households, including single-person households.

Spending varies by households of differing size, income, and other characteristics. For example, married couples with children, where the oldest child is 6-17 years old, spent an average of $6,187 for food in 1990, or about $119 per week. Among major food categories, spending was highest for bakery products, beef, and dairy products.

The proportion of income spent for food varies widely by household income. For example, households with incomes, before taxes, of $5,000-$9,999 spent 32.6 percent of their after-tax income for food. Households with incomes of $15,000-$19,999 spent 21.1 percent of after-tax income for food. Households with incomes of $30,000-$39,999 spent 14.9 percent of after-tax income for food. The average for all households was 15 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 that households may not have fully accounted for income from all sources, household income does not include pension and welfare funds, such as insurance premiums paid by employers, and there is some capping of reported income to protect privacy of some survey households. All these factors would cause an upward bias in the estimated percentage of income spent for food.

Share of income spent for food

Food spending by families and individuals declined to 11.5 percent of disposable income in the last 30 years.



Income share spent for food

Food expenditures by families and individuals rose but continued their long-term decline as a share of income.

Year	Disposable personal income	Expenditures for food: At home[1]	Expenditures for food: Away from home[2]	Expenditures for food: Total[3]	Share of income: At home	Share of income: Away from home	Share of income: Total
	Billion dollars				Percent		
1960	360.5	50.6	12.6	63.1	14.0	3.5	17.5
1965	491.0	57.4	16.9	74.3	11.7	3.5	15.1
1970	722.0	74.2	26.4	100.6	10.3	3.7	13.9
1975	1,150.9	115.1	45.9	161.0	10.0	4.0	14.0
1980	1,952.9	178.5	85.4	263.9	9.1	4.4	13.5
1985	2,943.0	228.4	129.5	357.9	7.8	4.4	12.2
1988	3,548.2	256.4	158.1	414.5	7.2	4.5	11.7
1989	3,788.6	274.0	165.7	439.6	7.2	4.4	11.6
1990	4,058.8	296.4	177.1	473.6	7.3	4.4	11.7
1991	4,211.7	302.7	183.1	485.8	7.2	4.3	11.5

[1]Food purchases 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 donated foods to schools, meals in prisons and other institutions, and expense-account meals.

[3]Totals may not add due to rounding.

Average household food spending in 1990

Food expenditures increase as income rises, but incomes generally rise more rapidly than food spending, so the share of income spent for food declines.

Item	All households	Household income before taxes: $5,000 to $9,999	$15,000 to $19,999	$30,000 to $39,999
	Number			
Average persons per household	2.5	1.9	2.4	2.8
	Dollars			
Household income after taxes	28,937	7,394	16,323	31,417
Annual food expenditures	4,352	2,412	3,446	4,681
Food at home	2,509	1,698	2,186	2,744
Cereal products	130	92	113	131
Bakery products	241	158	206	263
Beef	220	177	187	245
Pork	130	98	122	137
Other meat	99	70	100	106
Poultry	107	79	95	120
Fish and seafood	81	44	63	78
Eggs	30	25	30	32
Fresh milk and cream	142	113	140	162
Other dairy products	159	98	128	178
Fresh fruit	128	86	109	135
Fresh vegetables	119	86	115	120
Processed fruit	94	65	84	98
Processed vegetables	71	51	55	81
Sugar and other sweets	95	66	89	106
Fats and oils	68	53	63	71
Miscellaneous food	377	199	271	435
Nonalcoholic beverages	218	138	216	246
Food away from home	1,843	714	1,260	1,937
	Percent			
Share of income spent for food	15.0	32.6	21.1	14.9

Source: U.S. Department of Labor, Bureau of Labor Statistics, Office of Prices, Consumer Expenditures in 1990, November 1991.

Where Consumer Food Dollars Went

More than three-fourths of last year's retail expenditures for food that originated on U.S. farms consisted of marketing charges.

Food expenditures can be divided into farm value and the marketing bill, which consists of the total charges by marketing firms for food processing, wholesaling, transportation, and retailing. In 1991, the marketing bill was $361 billion, $15 billion more than in 1990. The marketing bill was 78 percent of the $462 billion spent during 1991 for food that originated on U.S. farms. This expenditure figure includes food bought on business expense accounts, Government food donations, institutional feeding, and spending by families and individuals. About 22 percent, or $101 billion, of last year's food spending represents the farm value returned to farmers. This share is a weighted average of the 27-percent farm share of spending for food consumed at home and a much lower 14-percent share of spending for food consumed away from home.

About $9 billion of the $15-billion increase in the marketing bill in 1991 can be traced to higher labor costs. Energy, food packaging materials, and before-tax profits each added another $1 billion. Here is USDA's analysis of what happened to food industry costs and profits.

Labor. Total food industry labor costs were about $163 billion in 1991, or about 35 percent of total consumer food spending, and 61 percent larger than the farm value. Labor costs rose 5.8 percent last year, slightly less than in 1990, because of smaller increases in the number of workers employed and worker wages and benefits. Average weekly earnings of workers in food processing rose only 2.3 percent in 1991, about 0.5 percentage point less than in 1990. Weekly earnings in food retailing advanced 2 percent, also about 0.5 percent less than in 1990. However, weekly earnings in wholesaling rose 3.6 percent in 1991, slightly more than the year before. Food industry employment rose in food processing and distribution, but increases were much smaller than other recent years, particularly by eating places.

Labor agreements with workers (particularly in retailing) that provide small wage increases, reduced pay for holiday and evening work, and reduced medical benefits, and give management more flexibility in scheduling work have tempered labor costs for the food industry during most of the past decade.

Packaging. Costs for food containers and packaging materials rose about 4 percent in 1991. Costs increased mainly because of greater use of shipping boxes, food containers, and plastic materials. Prices of boxes and food containers were slightly lower, by about 1 percent. At $38 billion, packaging costs accounted for about 8.5 percent of total consumer expenditures for farm food.

Transportation. Costs of transporting food intercity by truck and railroad were nearly $20 billion in 1991, or 4.5 percent of consumer food expenditures. Railroad freight rates for hauling food products rose about 4 percent. Deregulation kept truck rates stable for most of the 1980's, but steadily rising wages and other costs likely increased truck rates for hauling produce and other food last year.

Energy. The energy bill for marketing foods from U.S. farms was $16 billion in 1991, 3.5 percent of consumer expenditures for farm foods. Natural gas prices declined slightly, but electric rates rose about 6 percent, boosting energy costs of food processing and distribution.

Marketing bill versus farm value

The 1991 marketing bill is more than triple the farm value of food expenditures.

Year	Food expenditures[1]	Marketing bill	Farm value	Farm value share of expenditures[2]
	Billion dollars			*Percent*
1970	110.6	75.1	35.5	32
1975	167.0	111.4	55.6	33
1980	264.4	182.7	81.7	31
1985	345.4	259.0	86.4	25
1987	375.5	285.1	90.4	24
1988	398.8	301.9	96.8	24
1989	419.4	315.6	103.8	25
1990	451.3	345.1	106.2	23
1991	461.8	360.6	101.2	22

[1]Includes foods bought on business expense accounts, Government donations, institutional feeding, and spending by consumers at grocery stores and eating places.
[2]Includes spending for food away from home and, thus, is lower than the share for the market basket.

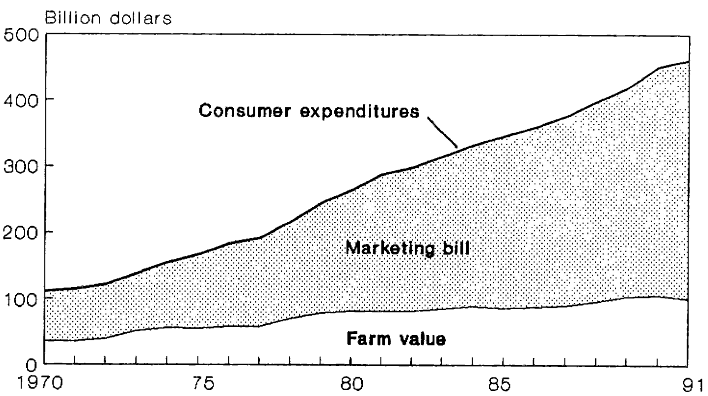
Food Industry Profits Higher

Dollar profits in the food industry rose in 1991. The higher profits reflected larger sales and profit margins in food manufacturing and retailing. Food industry profits, before taxes, from marketing foods of domestic origin were nearly $15.5 billion, or about 3.5 percent of consumer spending for farm foods.

Aftertax profits of 34 leading food product manufacturers were 5 percent of sales in the first 9 months of 1991, up from 4.8 percent in 1990. This increase reflects a larger increase in net income (12 percent) than in sales (9 percent). Profit margins were larger for most manufacturers due to modest price increases, declining raw material costs, and moderate increases in production and marketing costs, particularly advertising. Food manufacturers have been able to hold down costs with labor productivity gains, which averaged about 3 percent in recent years for major industries that include poultry processing and grain milling.

Distribution of food expenditures

Marketing bill was 78 percent of 1991 food expenditures.

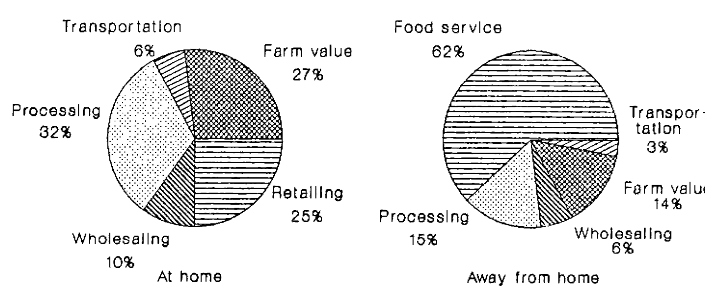


Data for foods of U.S. farm origin purchased by or for consumers for consumption both at home and away from home.

Although food sales increased little because of the recession, profit margins of the retail food industry held up well. Aftertax profits of 43 food chains averaged 1.18 percent of sales in the first 9 months of 1991, compared with 1 percent a year earlier. However, returns on stockholder equity declined slightly due to a large increase in equity. In 1990, the return on equity rose to the highest level ever, caused largely by a widespread shift from equity financing to debt financing in the previous 2 years. This change considerably decreased the denominator of this ratio (equity) in 1990, which had increased in 1991. The industry has recovered somewhat from the high debt and large interest payments that squeezed profit margins in the late 1980's. While the industry average was larger, profit margins of some food chains were squeezed in 1991 due partly to consumers' switching to lower priced products and increased price competition among supermarkets as sales lagged. Retailers last year 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.

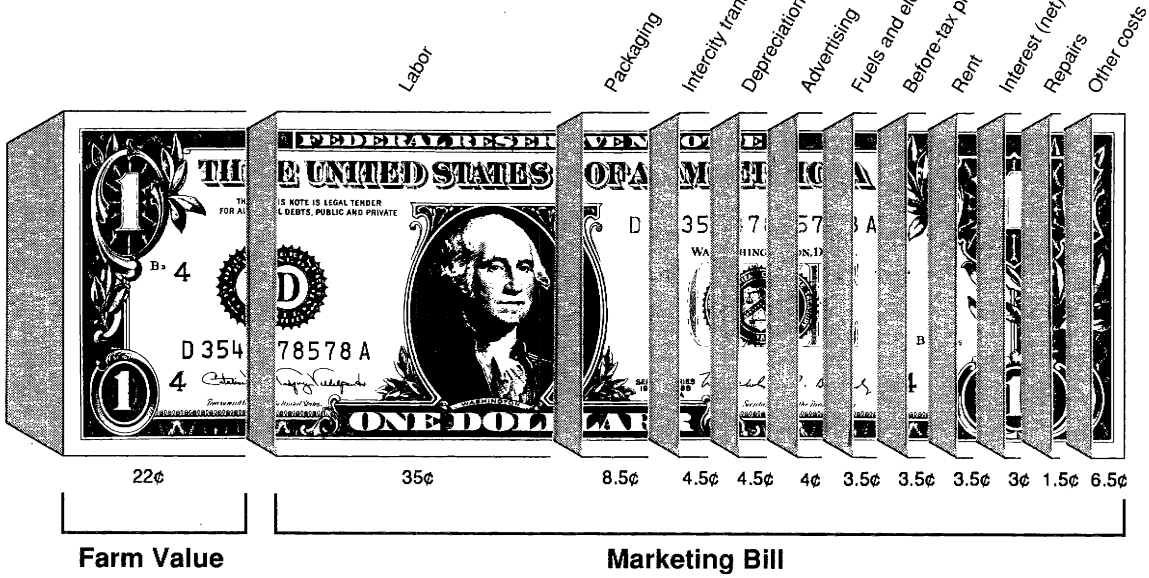
Marketing functions of the food dollar in 1991

Processing costs remain the largest marketing function for food eaten at home.



What a dollar spent on food paid for in 1991

About 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.

Would You Like More Information?

This report summarizes a more detailed report, *Food Cost Review, 1991*, to be published in the summer. In addition to reporting on recent developments in food prices, farm-to-retail price spreads, food spending, profits, and marketing costs in the food industry, the full report discusses price-spread changes for leading food items, such as Choice beef, milk, and bread. It also includes statistical tables and charts.

To receive ordering information when the report is issued, send your name and address to the Commodity Economics Division, Room 1137, Economic Research Service, USDA, 1301 New York Avenue, NW., Washington, DC 20005-4788. Call Denis Dunham at 1-202-219-0870 for information.

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