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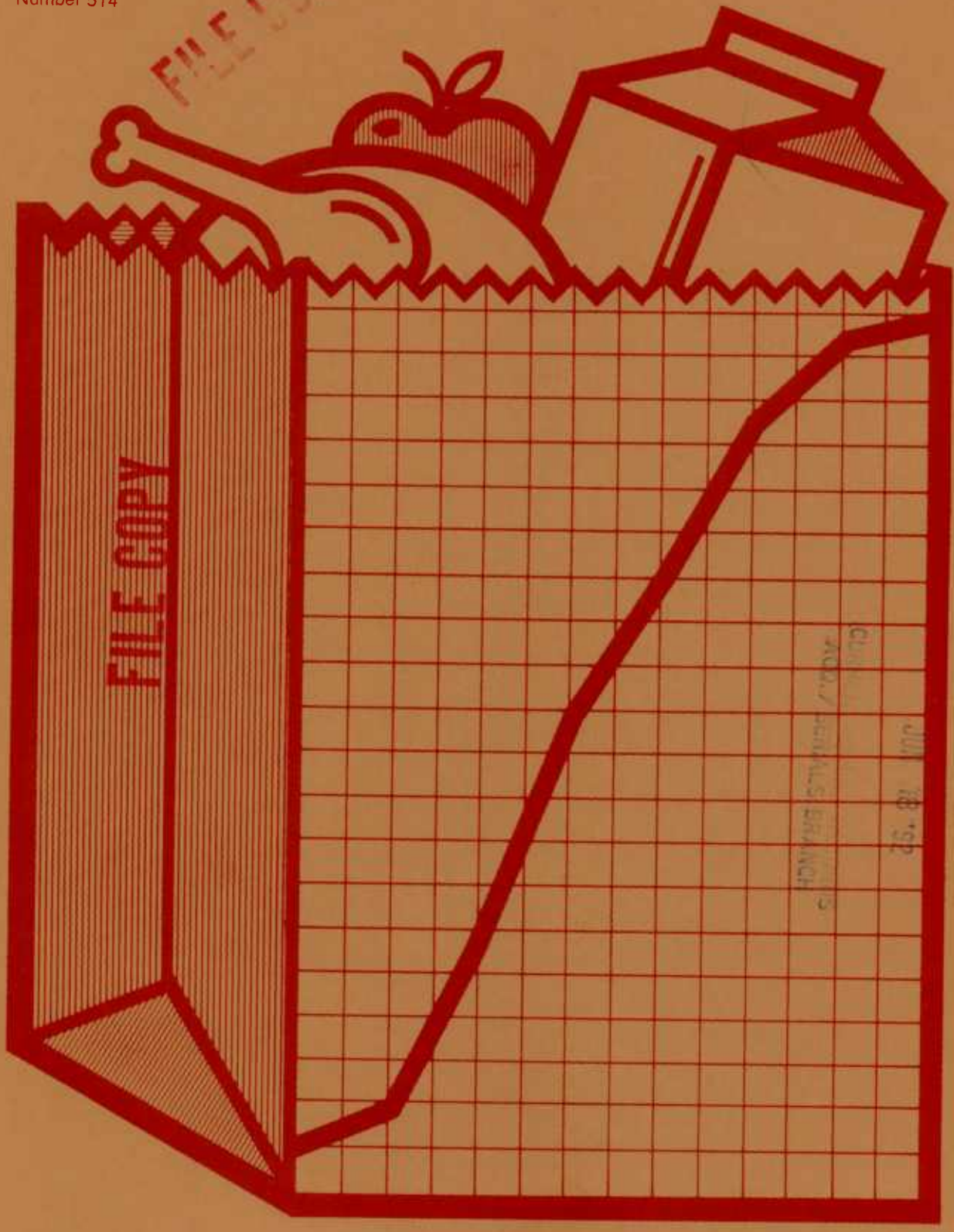
Food Cost Review, 1983



FOOD COST REVIEW, 1983. By Denis Dunham, National Economics Division, Economic Research Service, U.S. Department of Agriculture. Agricultural Economic Report No. 514.

ABSTRACT

Retail grocery food prices increased 2.1 percent in 1983, half the 1982 rate and the least in 16 years. The slowdown reflected abundant supplies of farm products, weak demand, and a smaller rise in processing and marketing costs. The farm value of USDA's market basket of foods declined 2.2 percent in 1983. Farm values for red meat products fell while farm values of poultry, eggs, and oilseed products rose. The farm-value share of a dollar spent at foodstores declined to 33 percent from 34 percent. The farm to retail price spread of USDA's market basket of foods rose by 2.5 percent, the least in 11 years. Food industry marketing costs increased at half their 1982 rate, largely because of a slower rise in wages.

Keywords: Retail food prices, farm to retail price spread, farm value, food marketing costs, food spending, profit, productivity

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SUMMARY

Food price inflation has slowed dramatically the past 4 years under the pressure of large food supplies and recession-weakened consumer demand. Food prices, as measured by the Consumer Price Index (CPI), rose only 2.1 percent in 1983, down from 4 percent in 1982 and 7.9 percent in 1981.

There were a number of reasons for the slowdown. Food supplies were abundant despite a severe summer drought that drastically reduced grain harvests. Production of livestock increased. The costs of food processing, distributing, and retailing rose more slowly than in recent years.

This was good news for food shoppers. Prices of most foods at the grocery store changed little from the year before, and some prices fell sharply.

For farmers, though, the news was mixed. Although livestock prices dropped, grain and oilseed prices strengthened. The farm value of foods sold in grocery stores, after rising only 1.2 percent in 1982, actually fell 2.2 percent. Most of the decline reflected lower prices for meat animals and fresh fruit. Farm values rose for poultry, eggs, and food products derived from grains and oilseeds.

Here's a wrapup of price changes at the supermarket last year, comparing average prices for all of 1983 with those of a year earlier.

Record large supplies and weak consumer demand kept red meat prices down. Retail beef prices averaged 1.5 percent less than those in 1982. Pork prices fell sharply during the year, but averaged only 1 percent lower for the year. Poultry prices rose 1 percent in response to a slight cutback in production of broilers late in the year. Egg prices averaged 5 percent higher, reflecting a cutback in production in response to higher feed costs.

Retail prices of milk and other dairy products rose only 1.2 percent, the least in a decade. Fresh milk prices have been stable for 3 years because there has been no increase in the farm price support for milk since 1980 and because milk production has been increasing.

Retail prices of most foods derived from crops averaged higher in 1983 partly because of a sharp jump in grain and soybean prices when the drought severely damaged crops in the summer. Retail prices of fats and oils averaged 1.3 percent higher. Prices of cereals and baked goods went up 3.2 percent, mainly due to a rise in the farm to retail price spread, representing charges for manufacturing and distributing cereals and baked goods, which account for most of their price.

Last year's fresh fruit prices averaged 4.3 percent less than those of 1982. Fruit prices dropped because of much larger supplies, particularly of oranges and apples.

Prices of many fresh vegetables, including lettuce, tomatoes, and potatoes, rose sharply at times during 1983, reflecting the effect of adverse weather on supplies. However, the cumulative effect of last year's aberrant weather on total fresh vegetable supplies was small. Vegetable prices averaged about 3.5 percent higher.

The farm value averaged 33 percent of the cost for a market basket of foods, down 1 percentage point from 1982, continuing a long downturn from a high of about 50 percent in the midforties. In recent years, abundant food supplies held down farm prices; retail prices rose faster because of rising charges for processing and marketing.

The farm to retail price spread rose 2.5 percent in 1983, the smallest amount in 11 years. Price spreads were higher for most food groups reflecting increases in food processing and distribution costs.

Consumer spending on domestically produced farm foods rose about 4 percent over 1982 to $312 billion in 1983. This amount included purchases of farm-produced foods both in foodstores, roughly two-thirds of the total, and at away-from-home eating places. Farmers received about 27 percent, or about $84 billion, of that $312 billion.

Of the $12 billion rise in the cost of marketing food, about 50 percent can be traced to labor costs. Packaging, transportation, and energy added another $2 billion.

The economic recovery that boosted food spending and lowered average commodity prices boosted profit margins of the food industry. Also, there were reduced labor, energy, and other cost pressures, and small gains in productivity.

Food expenditures are rising less than consumer income. In 1983, Americans spent about 15.9 percent of total personal disposable income on food. This share was slightly less than the 16.2 percent 10 years ago, and was substantially less than the 18.7 percent of 20 years ago. Much of this decline is attributable to a decline in the farm value component.

Food Cost Review, 1983

Dennis Dunham

INTRODUCTION

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

This report presents USDA's findings for 1983, including answers to the following questions:

- How much did food prices rise in 1983? 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 representative foods such as Choice beef or bread?
- How have recent developments affected food industry costs, profit margins, and productivity?
- Finally, how much did Americans spend for farm-produced foods and how were these dollars divided among costs of producing and marketing food?

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*This report was prepared by Denis Dunham of the National Economics Division, Economic Research Service (ERS), U.S. Department of Agriculture. Floyd Lasley, James Miller, Steve Raleigh, Lawrence Duewer, and L. D. Schnake provided cost data for individual commodities, David Harvey provided marketing bill data, and T. Q. Hutchinson provided transportation information. Appreciation is extended to Harry Harp for his helpful ideas and to Margaret Ashton and Patsy Nagel for producing the report.

RETAIL FOOD PRICE DEVELOPMENTS

Food price inflation in 1983 slowed dramatically for the fourth consecutive year. Retail food prices averaged 2.1 percent higher in 1983 than in 1982. That was about half the 1982 rise of 4 percent, and one-fourth of the 1981 rise of 7.9 percent. Moreover, it was the smallest year-to-year change in food prices since 1967.

The statistics just quoted came from the consumer price index (CPI) for urban consumers, published by the Labor Department's Bureau of Labor Statistics (BLS). The CPI is the most widely accepted measure of changes in retail food prices.

The 2.1-percent retail price rise for 1983 included both prices at foodstores and those paid at restaurants and other eating places. Prices of food at eating places rose by more than those at foodstores: 4.4 percent as opposed to 1.1 percent. However, both increases were less than in 1982 (table 1).

Abundant supplies of farm products, combined with weak demand, held back the pace of 1983 food prices. Hog production increased and marketings of cattle were accelerated due to the drought, creating record meat supplies. Meanwhile, the cost of food processing, distribution, and retailing rose more slowly than in recent years.

Table 1--Year-to-year increases in components of retail food prices

Item	1979	1980	1981	1982	1983
			Percent		
All food 1/	10.6	8.6	7.9	4.0	2.1
Food away from home	11.2	9.9	9.0	5.3	4.4
Food at home	10.8	8.0	7.3	3.4	1.1
Imported foods and fishery products	6.6	11.7	5.8	2.7	1.9
Domestically produced farm foods 2/	11.7	7.2	7.7	3.6	.9
Farm value	10.8	5.0	2.3	1.2	-2.2
Farm to retail price spread	12.2	8.6	10.8	5.0	2.5

1/ Data based on Bureau of Labor Statistics, consumer price index for urban consumers. 2/ Data based on USDA market basket statistics.

Why Foodstore Prices Increased

To get a better understanding of why the price of food in grocery stores increased so little last year, we consider separately what happened to the prices of foods that American farmers produce and what happened to prices of fishery products and imported foods. The first category accounts for over four-fifths of grocers' food sales. The second accounts for the rest.

The scant 1.1-percent rise in foodstore prices was the combined result of a 0.9-percent increase in prices of domestically produced foods and a larger rise of 1.9 percent in prices of imported foods and fish.

To study more closely the reasons for changes in prices of domestically produced foods, USDA separates these prices into one part representing the farm value of the commodities used to make the foods and the remaining part, or farm to retail price spread. This price spread represents all of the charges by companies in the business of assembling foods from farms, processing them, and marketing them to consumers. In 1983, the farm value of foods averaged 2.2 percent lower than in 1982. In contrast, the farm to retail price spread increased 2.5 percent, and thus accounted for all of the rise in prices of domestically produced foods.

The higher farm to retail price spread by far was the largest cause of the foodstore price increase, accounting for four-fifths of the 1.1-percent rise (table 2). The rise in prices of fish and imported foods was responsible for the remaining fifth. The lower farm value partially offset the price increase in the other two components of the retail price. In 9 of the past 10 years, rising farm to retail price spreads contributed more to the rise in food prices than did changes in either the farm value or in the price of imported foods and fish.

Prices Rose Slightly through Midyear, then Declined

Foodstore prices rose 1.8 percent between the fourth quarter of 1982 and the second quarter of 1983. Increases primarily reflected weather-related reductions in vegetable and meat supplies. Retail vegetable prices were boosted by cold, wet weather in late winter and spring that damaged many fresh vegetable crops and delayed plantings. Similar weather in the Midwest created muddy feedlots that slowed weight gains of cattle. Supplies of fed cattle for slaughter declined causing a rise in beef prices in the second quarter.

Foodstore prices went down 0.2 percent between the second and third quarters of 1983. Lower retail prices for fresh vegetables, beef, and pork were important factors contributing to the third quarter price decrease. Retail meat prices declined 3 percent, reflecting increased slaughter.

Then, in the fourth quarter, foodstore prices fell another 0.2 percent. Food supplies increased seasonally and prices of meats, poultry, and fresh fruit declined. Fourth quarter prices averaged only 1.3 percent above a year earlier.

Table 2--Contribution of food-price components to price increases at foodstores

Year	Change in foodstore prices due to--			Added up to a retail price increase of--
	Farm value of food	Farm to retail price spread	Fish and imported foods	
	- - - Percentage points - - -			Percent
1968	1.7	1.5	0	3.2
1969	3.0	1.7	.1	4.8
1970	-.2	4.0	1.3	5.1
1971	.1	1.5	.8	2.4
1972	3.0	1.3	.2	4.5
1973	11.6	3.7	1.0	16.3
1974	3.2	9.2	2.5	14.9
1975	1.3	5.1	1.9	8.3
1976	-1.8	2.7	1.2	2.1
1977	.1	1.8	4.1	6.0
1978	4.3	4.8	1.4	10.5
1979	3.3	6.3	1.2	10.8
1980	1.5	4.4	2.1	8.0
1981	.7	5.6	1.0	7.3
1982	.3	2.7	.4	3.4
1983	-.6	1.4	.3	1.1

Source: Derived from Bureau of Labor Statistics data and USDA market basket statistics.

Prices of some foods declined in 1983 while most others rose much less than in 1982 (fig. 1). Red meat prices, the largest expenditure category in the CPI, averaged 1.1 percent lower in 1983 than in 1982. The 1983 decline in meat prices was mainly a consequence of significantly larger supplies of pork. Following a sharp increase in hog prices in 1982, hog producers expanded production 7 percent last year. Pork prices consequently declined sharply throughout 1983 and averaged 0.9 percent lower than in 1982. Beef prices declined 1.5 percent, reflecting slightly larger supplies and the effects of the economy on consumer buying. The farm to retail price spread for meat increased 4 percent last year, a slightly higher rate than the year before (table 3).

Retail poultry prices averaged only 1.2 percent higher in 1983 than in 1982. Broiler producers increased their output, boosting total supplies of poultry meat. Egg prices averaged 4.7 percent higher in 1983, the largest price increase among major food groups. Prices rose because production was cut back

Figure 1

How Register Tapes Compared

Average Prices Paid at Foodstores

Item and unit size	1982	1983
Some prices fell . . .		
Ground chuck, 100% beef, 1 lb.	$1.78	$1.73
Round beef roast, boneless, 1 lb.	2.62	2.55
Bacon, 1 lb.	2.24	1.94
Pork chops, center cut, 1 lb.	2.38	2.37
Frankfurters, all meat, 1 lb.	1.82	1.81
Lettuce, 1 lb.	.56	.55
Apples, red Delicious, 1 lb.	.64	.59
Orange juice, frozen, 1 lb.	1.47	1.37
Tomatoes, canned, 1 lb.	.55	.53
Rice, long grain, uncooked, 1 lb.	.50	.47
Coffee, ground, 1 lb.	2.52	2.46
. . . Some prices rose . . .		
Chicken, 1 lb.	.71	.72
Eggs, Grade A large, 1 doz.	.87	.89
Bread, white pan, 1 lb.	.53	.54
Milk, one-half gal.	1.12	1.13
Ice cream, regular, 1/2 gal.	2.10	2.16
Tomatoes, 1 lb.	.74	.79
Grapefruit, 1 lb.	.36	.37
Sugar, white, 1 lb.	.33	.35
Shortening, veg. oil, blend, 1 lb.	.79	.82
Potato chips, 1 lb.	2.40	2.50
Cola, nondiet can, 16 oz.	.47	.48
. . . Others stayed the same		
Potatoes, 1 lb.	.21	.21
Pork & beans, canned, 1 lb.	.43	.43

Source: Bureau of Labor Statistics, Department of Labor

in response to rising feed costs, avian flu that destroyed some laying hens, and a dramatic drop in egg stocks.

Retail dairy product prices rose only 1.2 percent, the smallest annual increase since 1972. This small increase was partly the result of no increase in the price support for milk for the third straight year. Also, the farm to retail price spread for dairy products rose much less last year.

Among crop-based foods, retail prices in 1983 increased the most for fresh vegetables, up 3.6 percent, followed by cereal and bakery products, which averaged 3.2 percent higher. Prices for processed fruits and vegetable products were up 1.0 percent, due entirely to higher marketing costs. Prices for fats and oils rose 1.3 percent, reflecting a sharp rise in farm value.

Foodstore prices not only rose more slowly in 1983, they also rose much less than the overall inflation rate of 3.2 percent, as measured by the CPI for all items (fig. 2). This was the fifth consecutive year that food prices increased less than nonfood prices.

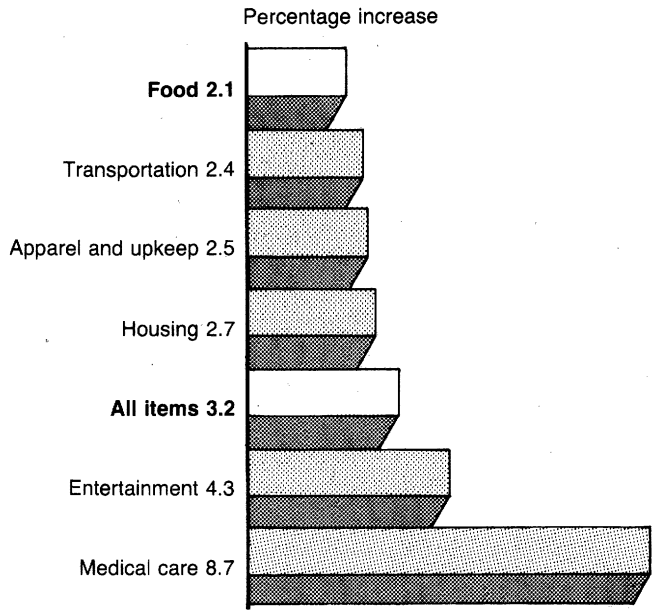
Table 3--Price changes for domestically produced foods 1/

Item	1979	1980	1981	1982	1983 2/
		Annual percentage change			
Market basket:					
Retail price	11.7	7.2	7.7	3.6	0.9
Farm value	10.8	5.0	2.3	1.2	-2.2
Farm to retail spread	12.3	8.6	10.7	5.0	2.5
Meat products:					
Retail price	17.0	2.9	3.6	4.8	-1.1
Farm value	13.7	-.2	.6	6.7	-6.2
Farm to retail spread	20.8	6.3	6.7	3.0	4.0
Dairy products:					
Retail price	11.6	9.9	7.1	1.4	1.2
Farm value	13.7	9.3	5.9	-1.5	.1
Farm to retail spread	9.4	10.5	8.4	4.4	2.3
Poultry:					
Retail price	5.0	5.1	4.1	-1.9	1.3
Farm value	-.7	4.0	-.8	-3.9	5.5
Farm to retail spread	13.0	6.5	10.0	.4	-3.0
Eggs:					
Retail price	9.5	-1.8	8.3	-2.8	4.7
Farm value	11.7	-5.1	12.0	-8.1	8.6
Farm to retail spread	5.5	4.7	1.5	7.8	-2.0
Cereal and bakery products:					
Retail price	10.2	11.9	10.0	4.5	3.2
Farm value	14.8	16.5	-1.1	-12.5	5.5
Farm to retail spread	9.4	11.3	11.6	7.1	2.9
Fresh fruits:					
Retail price	12.3	5.1	5.3	13.0	-6.1
Farm value	2.5	5.7	4.4	20.9	-23.6
Farm to retail spread	16.9	9.9	5.6	10.2	.6
Fresh vegetables:					
Retail price	2.9	8.9	18.7	.5	3.6
Farm value	-4.3	2.9	41.2	-8.5	2.3
Farm to retail spread	6.1	11.2	10.5	4.7	4.1
Processed fruits and vegetables:					
Retail price	8.6	7.0	12.0	5.3	1.0
Farm value	6.1	3.4	19.4	-7.4	-6.2
Farm to retail spread	9.2	7.8	10.3	8.4	2.5
Fats and oils:					
Retail price	8.0	6.6	10.7	-2.7	1.2
Farm value	8.0	-10.0	4.8	-20.8	20.8
Farm to retail spread	8.0	15.1	13.1	4.1	-4.3
Other foods:					
Retail price	9.6	13.3	10.7	4.2	3.1
Farm value	8.1	55.6	4.8	-7.6	4.5
Farm to retail spread	9.9	6.1	13.1	6.3	2.9

1/ The market basket consists of fixed quantities of domestically produced foods derived from data on consumer expenditures in foodstores between July 1972 and June 1974. Retail price data are derived from Bureau of Labor Statistics price indexes. The farm value is based on prices received by farmers for commodities equivalent to foods in the market basket. The spread between the retail price and farm value represents charges for processing and marketing functions. Some historical data have been revised. 2/ Preliminary.

Figure 2

Food Prices Rise Less Than Others



CPI, annual averages, 1983.

Food Consumption Rose

Last year's abundant supplies of food and small rise in food prices boosted food consumption about 1 percent. In total, food consumption in 1983 was about 1,400 pounds per person. Although it increased last year, food consumption has been relatively stable over time at near 1,400 pounds per person (table 4).

Consumption of animal products increased 11 pounds per person in 1983. With larger supplies, consumers' use of pork gained the most. Beef and poultry consumption rose modestly, and the use of dairy products also rose because of larger supplies and free cheese distribution.

Per capita consumption of crop products was nearly stable in 1983. However, there was a 3-percent rise in fruit and melon consumption. Fruit use rose because of 1982's large fall apple crop and plentiful orange harvest. On the other hand, fresh vegetable consumption dropped, a result of weather-related reductions in overall supplies earlier in the year and drought-stricken production from home gardens.

Over the years, consumers have altered their consumption of various meats partly in response to changes in the relative prices of beef and veal, pork, and poultry. Poultry prices have increased much less than beef, veal, and pork prices. During the 5-year period from 1978 to 1983, beef and veal prices increased 36 percent, pork increased 20 percent, while poultry prices went up 14 percent. Thus, relative to beef and pork, poultry prices declined. Reflecting these relative price changes, per capita consumption of poultry increased 10 pounds

Table 4--Annual per capita food consumption

Food group	1978	1981	1982	1983 1/
		Pounds		
Total food	1,393	1,396	1,385	1,395
Animal products	589	582	574	585
Red meat	159	157	151	156
Beef and veal	90	79	79	80
Pork	56	65	59	62
Other	13	13	13	14
Poultry	56	63	64	66
Eggs	35	34	33	34
Dairy products	315	304	302	305
Other	24	24	24	24
Crop products	804	814	811	810
Cereal and bakery products	145	151	150	151
Vegetable oils	46	48	49	50
Fruits and melons	158	163	156	160
Vegetables	288	283	287	280
Sugar and sweeteners	132	135	134	134
Other	35	34	35	35

1/ Preliminary.

from 1978 to 1983. In contrast, beef and veal consumption dropped 10 pounds. Pork consumption rose 6 pounds. Average per person consumption of meat was 7 pounds higher last year than 5 years earlier.

DEVELOPMENTS IN THE FARM VALUE

This section on farm value and the next one on the farm to retail price spread discuss changes in the two components of foodstore prices of domestically produced foods. The focus is on how these two components changed last year for all domestically produced food and for major groups of foods. The final section of this report explains how these components changed for particular food items such as a pound of pork, a loaf of white bread, or a can of tomatoes.

What Farm Value Means

The foodstuffs farmers produce lose some weight in storage, processing, or trimming. There is always some further loss for food spoiled before it can be sold in stores. To adjust for these factors, the farm value is the payment the farmer gets for the amount of raw commodity needed to produce a pound or other unit of food in the grocery store.

This amount 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 of the

retail price per half-gallon is just a little more than the price that milk producers received per half-gallon. In contrast, nearly 2.4 pounds of live animal are needed to 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 farm value in the price of 1 pound of retail beef.

The farm value of foods in the market basket is a measure of the prices farmers receive for the farm products equivalent to these foods.

1983 Developments

Last year, the worst drought in nearly 50 years hit the major production areas for corn and other feed grains and soybeans. As a result of the drought, as well as smaller plantings, the 1983 harvests of corn and soybeans were 50 and 30 percent smaller, respectively. Market prices of corn and soybeans consequently rose sharply. Although grain and oilseed prices did rise, the farm value of foods in the market basket averaged 2.2 percent less last year than in 1982, mainly because of declining livestock prices. This was the third year of depressed prices of farm commodities. Farm value of foods last year was only a scant 1 percent higher than in 1980. Farm value has not kept pace with the general price level in the economy for several years.

Farm prices were at their lowest level in more than 2 years at the beginning of 1983, reflecting the large harvests the previous fall, plentiful supplies of meat, and weak consumer demand. Prices rose slightly in the spring in response to cuts in beef and fresh vegetable supplies. By June, the farm value had risen about 4 percent.

After holding steady through the summer, the farm value of the market basket declined in the fall under the pressure of increasing supplies of meat. In December, a rise in livestock, poultry, and egg prices boosted the farm value to the highest level of the year.

Although the overall farm value averaged slightly lower in 1983, farm values of seven food groups rose, while the other three showed declines. The farm values of fresh fruit fell 24 percent. Red meat's farm value, which accounts for about one-half of the total farm value of the market basket, averaged 6 percent lower. Farm values of other animal products--poultry, eggs, and dairy products--all increased. Farm values of crop products rose the most for fats and oils, reflecting the combination of severe summer drought and acreage reductions that cut the 1983 soybean crop and boosted oilseed prices. Farm values of bakery and cereal products also rose, reflecting higher farm prices for grains and oilseeds that are the source of sweetener and shortening ingredients.

Last year's decline in the farm value was the first since 1976. However, it also was preceded by very small increases of 1.2 percent in 1982 and 2.3 percent in 1981. In contrast, during

the seventies, the farm value had increased, on average, by 7.7 percent a year, with some big year-to-year variations.

For most foods, the farm value makes up a relatively small part of the retail price. It averaged 33 percent for all foods in the market basket in 1983, compared with 34 percent in 1982 and 35 percent 2 years earlier (table 5). The drop in the farm-value share reflected the abundance of food supplies, which held down farm prices, while retail prices rose faster because of rising processing and marketing charges. Farm value share of the retail cost of food has trended down gradually since the midforties when the share was nearly 50 percent.

The percentage of the retail price change explained by the farm value was relatively large for some foods last year. Decreases in farm value accounted for all of the decline in retail prices of meat and fresh fruit. Higher farm values accounted for the rise in retail prices of poultry, eggs, and fats and oils. Higher retail prices for other foods resulted mainly from increases in farm to retail price spreads. Even though the farm value of bakery and cereal products rose 5.5 percent, four-fifths of the rise in retail prices of 3.2 percent resulted from an increase in the farm to retail spread.

The farm value as a share of the retail price varies greatly among foods, depending on the inputs used to make specific food products and the complexities of the marketing process. In general, animal products have the highest ratios of farm value to retail price; the more highly processed crop products have the lowest. Last year, the farm-value share of the retail price for major foods ranged from 64 percent for eggs to 9 percent for white bread (fig. 3).

Figure 3

Farm Value Share of Foodstore Prices

	1983 retail price	Farm value	Farm value share of retail price
Eggs, large, 1 doz.	$0.92	$0.58	64%
Choice beef, 1 lb.	2.38	1.36	57
Milk, 1/2 gal.	1.13	.59	53
Chicken, 1 lb.	.73	.38	52
Pork, 1 lb.	1.70	.76	45
Frozen orange juice, 12 oz.	1.04	.44	42
Sugar, 1 lb.	.35	.14	40
Potatoes, russet, 10 lbs.	2.46	.67	27
Oranges, Calif., 1 lb.	.38	.08	21
Tomatoes, 1-lb. can	.53	.05	9
White bread, 1 lb.	.54	.05	9
Lettuce, 1 lb.	.55	.05	9

Computed from unrounded data.

Table 5--Indexes of retail price, farm value, and the farm to retail price spread for a market basket of farm foods, and farm value as a share of retail price 1/

Year and quarter	Retail price	Farm value	Farm to retail spread	Farm value share of retail price
	- - - - - 1967 = 100 - - - - -			Percent
1968	103.6	105.3	102.6	38
1969	109.1	114.8	105.7	39
1970	113.7	114.0	113.5	37
1971	115.7	114.6	116.4	37
1972	121.3	125.1	119.1	38
1973	142.3	167.9	127.2	44
1974	161.9	181.5	150.4	42
1975	173.6	187.8	165.3	40
1976	175.4	178.0	173.9	38
1977	179.2	178.5	179.6	37
1978	199.4	204.3	196.5	38
1979	222.7	226.3	220.6	37
1980	238.8	237.6	239.6	37
1981	257.1	243.0	265.4	35
1982	266.4	245.8	278.6	34
1983 2/	269.1	240.3	286.0	33
1981:				
I	253.9	247.1	257.9	36
II	255.3	244.1	261.8	35
III	260.3	251.6	265.3	36
IV	258.9	229.2	226.4	33
1982:				
I	263.7	240.7	277.3	34
II	267.3	254.0	275.2	35
III	269.1	251.2	279.6	35
IV	265.6	238.8	282.3	33
1983 2/:				
I	267.0	237.3	284.4	33
II	270.0	242.6	286.1	33
III	269.3	241.1	285.9	33
IV	268.7	240.3	285.4	33

1/ The market basket, consisting of fixed quantities of domestically produced foods, is derived from data on consumer expenditures in foodstores between July 1972 and June 1974. Retail price indexes are derived from Bureau of Labor Statistics data. Farm value is based on prices received by farmers for commodities equivalent to foods in the market basket. The spread between the retail price and farm value represents charges for processing and marketing functions. Some historical data have been revised. 2/ Preliminary.

DEVELOPMENTS IN THE FARM TO RETAIL PRICE SPREAD

The farm to retail spread is the difference between the farm value of a food product and its retail price. It represents payments for all assembling, processing, transporting, and retailing charges added to the value of the farm product after it leaves the farm.

The farm to retail price spread for the market basket of foods averaged 2.5 percent higher in 1983. This was about half as large an increase as in 1982, and was less than the general inflation rate.

While the farm to retail price spread averaged slightly higher in 1983, it varied very little during the year, reflecting the moderating rate of inflation throughout the economy. For the first half of the year, the farm to retail price spread rose slightly but averaged only about 1 percent higher in June 1983 than in December 1982. From June to the end of 1983, the price spread declined a fraction of a percent. The farm to retail spread in December was only 0.6 percent above a year earlier.

Price Spreads Increased for Most Foods

The farm to retail price spread increased for most major food groups in 1983 (table 3). For most groups, increases were much smaller than in 1982, and did not vary as widely. However, the farm to retail spread for red meats registered a 4-percent increase in 1983, slightly more than the 1982 increase. However, the 1983 increase followed 2 years of smaller increases for meat than the average for all foods.

Farm to retail price spreads increased between 2 and 3 percent for bakery and cereal products, processed fruits and vegetables, and dairy products. The increases for these foods reflect their high degree of processing and therefore the relatively large use of all marketing inputs, particularly packaging and energy.

Farm to retail price spreads for fresh fruit were unchanged and those for fresh vegetables increased 4 percent. These spreads tend to vary with the change in farm value, since retail prices are established by a percentage markup on cost. Last year was somewhat of an exception for fresh fruit because the farm to retail price spread was stable although the farm value declined sharply.

Farm to retail price spreads for poultry and eggs declined about 3 percent in 1983 as prices strengthened at the farm level. Over time, increases in the price spread for these foods have been smaller than those for most others because poultry and egg processors have achieved greater economies of scale and have used more automation in processing and handling. Between 1978 and 1983, price spreads increased 18 percent for eggs and 29 percent for poultry compared with the average 46-percent increase for other farm foods.

The farm to retail price spread in 1983 rose at nearly the same rate as the prices that the food industry had to pay for inputs.

An index of labor costs and the prices paid for inputs by food processors, wholesalers, and grocery firms went up by 2.7 percent. This increase was much smaller than in 1982.

Farm Value Slows the Rise in Foodstore Prices since 1979

Relatively small increases in the farm value mainly slowed the rate of increase in retail food prices since 1979. Retail food prices in grocery stores rose 21.2 percent from 1979 through 1983. Prices rose less than did all other items in the CPI, which registered a 40-percent increase since 1979.

The slower rise in food prices than all retail prices can be traced to the farm value, which rose only 6.2 percent since 1979, less than a third as much as retail food prices. The farm to retail spread rose 29.4 percent, or more than retail prices. Retail prices of imported food and fishery products increased only 10.8 percent.

In 1980, larger meat production, particularly of pork, caused farm value of meat to decline. Very large crop production and rising meat supplies in 1981 again depressed farm values. As a result, retail food prices went up much less than inflation. In 1982, crop harvests were again large and while meat production declined slightly, the farm value increased less than in either of the previous 2 years. This was in large part the result of weaker domestic and foreign demand for agricultural commodities during the long recession. Last year, the farm value declined slightly because of a substantial increase in livestock production, particularly hogs, and continued large supplies and weak demand for most food commodities.

The farm value of food has not kept pace with prices paid by farmers for production items. Since 1979, the farm value has risen 6.2 percent, compared with an increase of 27 percent in prices of production inputs. This disparity between the payments farmers received for food products and prices paid for inputs depressed farm income the past several years.

The farm to retail price spread for the market basket of foods increased each year since 1979. Increases in the farm to retail spread usually were closer to the inflation rate than the farm value, and thus set the pace for retail food price increases.

The prices that the food industry must pay for such marketing inputs as labor, energy, or packaging materials drive up the farm to retail spread. USDA's marketing cost index for these inputs increased about 36 percent since 1979. The increase in marketing input prices, tempered by some gains in food industry productivity and other economies, pushed the farm to retail price spread up about 29 percent.

FOOD INDUSTRY COSTS, PROFITS, AND PRODUCTIVITY

There are many factors that influence how much the food industry charges for its services. Three food industry factors are: costs, profits, and productivity. Together, they determine how much is added to the price of food after it leaves the farm.

Prices of Marketing Inputs

Increases in farm to retail price spreads mainly reflect rising costs faced by food industry firms. These costs include both wages and salaries of workers and prices of many inputs bought by marketing firms from other parts of the economy. USDA's Economic Research Service developed a marketing cost index (MCI) for monitoring and analyzing changes in labor costs and prices of other inputs. The MCI measures price changes of supplies and services used in processing, wholesaling, and foodstore retailing of domestically produced foods. It does not cover input prices for doing business at eating places, however. The MCI represents all nonfarm food marketing costs except depreciation of buildings and equipment, long-term interest, and profits.

Prices in the index are weighted by the quantities used in the base period. That means that the price changes of the items that the food industry uses the most have the greatest effect on the index.

The largest component of the index (47 percent) is labor costs, which is comprised of hourly earnings of workers and employee benefits. Labor is followed in importance by food containers and packaging materials (15 percent), transportation rates (10 percent), and energy costs (8 percent). Other cost components include advertising, maintenance and repair services, insurance, short-term interest, rent, and miscellaneous supplies and services.

In 1983, the MCI rose 2.7 percent, only about half as much as the year before. Prices of marketing inputs tend to follow movements in the general price level of the economy, since these inputs include a broad range of goods and services. The general inflation rate slowed to 3.2 percent in 1983 from 6.1 percent in 1982.

Price increases slowed for nearly all principal categories of inputs bought by the food industry. A combined price index of fuels and electricity declined fractionally in 1982, following a 5-percent increase in 1982. Although prices of petroleum products (diesel fuel and fuel oil) fell about 12 percent, electric rates rose about 3 percent, and prices for natural gas and liquid propane gas, a principal energy source for food processing, rose about 17 percent (table 6).

The index of prices paid for food containers and packaging materials rose slightly in 1983. Much of the rise reflected a price rebound for polyethylene resin, the major material used in plastic containers and packages. Severe price cutting occurred for this material in 1982 because of weak demand in nonfood markets such as automobiles and housing. Prices of metal cans advanced by 3 percent. A small price decline occurred for

Table 6--Price changes in food marketing costs 1/

Cost item	1979	1980	1981	1982	1983 2/
			1967 = 100		
Labor 3/	265.8	292.6	321.3	342.7	356.1
Packaging materials	228.4	261.4	280.9	275.2	280.2
Paperboard boxes and containers	202.1	234.7	258.2	254.9	250.5
Metal cans	293.0	325.7	345.8	363.6	372.9
Transportation	251.3	297.9	345.9	371.0	374.5
Fuels and electricity	418.2	564.0	669.2	705.1	703.0
Electricity	270.3	320.1	367.9	406.0	418.0
Petroleum	574.6	850.8	1,056.2	1,012.4	889.5
Natural gas	544.8	733.7	826.3	990.3	1,154.6
Maintenance and repair	249.7	277.1	304.0	325.1	338.3
Supplies	224.3	258.8	283.8	289.1	286.6
Interest, short term	213.5	240.3	288.8	232.6	174.0
Total marketing cost index	252.2	286.2	317.5	333.8	342.9
			Annual percentage change		
Labor 3/	8.8	10.1	9.8	6.7	3.9
Packaging materials	11.6	14.4	7.5	-2.0	1.8
Paperboard boxes and containers	12.7	16.1	10.0	-1.3	-1.7
Metal cans	23.7	11.2	6.2	5.1	2.6
Transportation	14.0	18.5	16.1	7.3	.9
Fuels and electricity	26.1	34.9	18.7	5.4	-.3
Electricity	7.9	18.4	14.9	10.4	3.0
Petroleum	44.3	48.1	24.1	-4.1	-12.1
Natural gas	27.1	34.7	12.6	19.8	16.6
Maintenance and repair	10.0	11.0	9.7	6.9	4.1
Supplies	13.3	15.4	9.7	1.9	-.9
Interest, short term	36.5	12.6	20.2	-19.5	-25.2
Total marketing cost index	11.1	13.5	10.9	5.1	2.7

1/ Data measure changes in prices for fixed quantities of labor and other inputs used in processing, wholesaling, and retailing farm foods sold through foodstores. 2/ Preliminary. 3/ Hourly earnings and benefits.

paperboard products, such as shipping boxes and milk cartons, and for glass containers.

Labor costs, the principal component of the MCI, rose by 3.9 percent in 1983, compared with 6.7 percent for 1982. Labor costs include both hourly earnings of workers and wage supplements, principally social security and unemployment taxes, pensions, and health insurance.

Hourly earnings, over four-fifths of labor costs, contributed the most to the moderation in the labor cost index. The average increase in hourly earnings of food marketing workers declined 2.6 percentage points to 3.6 percent in 1983. The rise in hourly earnings of workers in food retailing slowed from 5.5 percent in 1982 to 3.6 percent in 1983. Earnings also increased at a slower rate in food manufacturing and in wholesaling (table 7). The increases reflected smaller new wage settlements, reduced cost of living adjustments (COLA's) to wages of many workers, and no change in the minimum wage.

Labor supplements, such as health insurance, private pension plans, and employer payments for social security and unemployment insurance, increased by an estimated 4 to 5 percent, slightly more rapidly than hourly earnings. The increase in these costs slowed in 1983 because the social security tax rate did not go up and the slack economy made it difficult for workers to negotiate better benefits.

Union contract settlements in food retailing during 1983 provided for the smallest wage and benefit gains for retail clerks and meatcutters in many years. In some markets, workers did not receive any wage increase the first year of their contracts. Other contract concessions included givebacks of previously negotiated wage increases, smaller overtime pay rates, reduced holidays, and smaller employer health and welfare contributions.

Table 7--Average hourly earnings of production and nonsupervisory employees of food industries

Year	Manufacturing	Wholesaling	Retailing
		Dollars per hour	
1977	5.37	5.43	4.77
1978	5.80	5.92	5.23
1979	6.27	6.39	5.67
1980	6.86	6.95	6.24
1981	7.43	7.57	6.87
1982	7.89	8.16	7.25
1983	8.16	8.52	7.51

Source: Employment & Earnings, U.S. Department of Labor.

Wages and benefits of many workers in the meat processing industry continued under intense pressure last year. One major development was a large cut in pay for 6,000 workers of the Nation's largest pork processor when the company filed for protection under the Federal Bankruptcy Code. The pay cut led to a 6-week strike that ended when the union and company agreed to a new pay rate of $8 an hour, compared with $10.69 prior to the decision by the company to cut wages. The new contract also includes a freeze on automatic cost of living pay adjustments, elimination of 2 weeks of vacation for long-service workers, reduction in the pension rate, and elimination of two paid holidays. In another industry development, a major beef processor cut the pay of 600 workers by $1.05 per hour to be more competitive with other firms.

Railroad and trucking freight rates for shipping food products rose very little last year. The transportation cost index, representing railroad freight rates, averaged about 1 percent higher, compared with 7 percent a year earlier.

Despite the stability in rates, rail transportation of foodstuffs in conventional box and refrigerated rail cars declined 26 percent to 7,335 cars. Railroad transportation of foodstuffs, however, declined less sharply than these data would indicate.

Many food items, including fresh fruits and vegetables, are shipped in truck trailers carried on railroad flat cars (TOFC) because TOFC service is more rapid and flexible than conventional rail, and lower cost than long-haul truck shipments. While transportation of fresh produce is primarily by truck, fresh produce shipments by TOFC soared 42 percent in 1983 to account for 6 percent of total shipments. This growth in TOFC shipments has been associated with the deregulation of railroad operating rates and practices by the Interstate Commerce Commission (ICC) in 1981. Following deregulation, a new marketing institution emerged consisting of transport brokers or shipper agents. These firms purchase TOFC space from railroads, often under relatively long-term contracts, to facilitate the use of TOFC service. These contracts establish somewhat stable rates for a fixed number of trailers on a train over a several-month period. The agent then sells the trailer space to produce packers and other shippers. In many cases, shipper agents own the trailers used and arrange for return hauls, lowering costs. Some agents provide delivery and pick up of trailers at both ends of the haul, and some offer credit to shippers. The National Association of Shipper Agents estimates that there are about 600 firms in operation.

Many railroads have instituted special programs to stay abreast and increase the demand for TOFC service. These include purchasing and refurbishing flat cars, reducing transit times, opening new routes, and offering promotional rates to attract traffic in areas where TOFC service had not been available.

Table 8--Average truck rates for shipments of lettuce from California to selected regions, 1981-83

Date	Destination region		
	Northeast	North Central	South
	Dollar per carton		
December 1981	3.45	2.58	2.76
December 1982	3.63	2.72	2.90
December 1983	3.67	2.63	2.87

Source: Agricultural Marketing Service, Market News Service.

The increasing trend toward rail consolidation through mergers has contributed to TOFC's growth. For example, the merger of the Union Pacific, Missouri Pacific, and Western Pacific Railroads has made single-line service, which is normally more rapid than joint-line service, available to Western shippers.

Data on freight rates charged by truckers are sketchy, but little, if any increase probably occurred in truck rates. For example, truck rates for fresh produce, such as lettuce, in 1983 averaged slightly below a year earlier (table 8).

The cost of operating trucks during 1983 averaged about the same as in 1982, thus lessening the pressure to increase rates. Last year, the average cost of operating trucks hauling produce over long distances was $1.12 per mile. Sharp drops in fuel prices and significant reductions in interest costs more than offset rises in other costs. Direct costs are believed to have been relatively stable for truckers hauling processed foods since they incur costs similar to truckers hauling produce. Although new State taxes exerted upward pressures on operating costs, rates appeared to have stabilized due in part to an increase in competition resulting from a substantial rise in the number of truck firms. By June 1, 1983, the ICC had granted operating rights to more than 4,700 new trucking firms. More than 25,300 carriers were operating in 1983, compared with 17,770 in 1980. With deregulation of trucking in 1980, shippers of processed foods have been better able to negotiate mutually beneficial agreements with truckers which are now able to tailor their service to an individual shipper's needs.

A price index of supplies used by food processors and retailers averaged 1 percent lower in 1983. This index is based on producer prices of motor supplies, chemicals, cleaning materials, and numerous other items. Prices for services, such as maintenance and repair, increased 4 percent.

Food Industry Profit Margins

Profit margins of food processors and retail food chains are small relative to labor and other costs, and therefore usually account for only a small part of the rise in marketing charges.

Profit margins of food chains typically average about 1.5 cents per dollar of sales, and about 1 cent after taxes. Profits per dollar of sales of food manufacturers are higher, averaging 5 to 6 cents before taxes and slightly over 3 cents after taxes, mainly because of their much larger capital investment per dollar of sales.

The profit margins of many food processors improved in 1983 as a result of lower agricultural raw material costs and the slow rise in operating costs. Food manufacturers' profit margins rose from 2.9 percent of sales in 1982 to 3.1 percent in 1983, based on data compiled by the Federal Trade Commission (FTC). Returns on stockholders' equity declined to 12 percent last year, compared with 12.4 percent a year earlier (table 9).

Profit margins of retail food chains also averaged higher in 1983. Profit margins in the first quarter were much higher than a year earlier because of a return to profitability of one supermarket chain. Industry profits were about the same as a year earlier in the second and the third quarters. For the first 9 months combined, profit margins of retail food chains averaged 1 percent of sales, up from 0.8 percent a year earlier. Supermarket profit margins are typically the highest in the fourth quarter due in part to holiday buying.

Food chains' profit margins improved last year because of reduced cost pressures, particularly labor and energy, and the elimination of many smaller, unprofitable stores. Retailers also have made some small gains in productivity.

Industrywide averages can be misleading because financial performance varies widely among food chains. Supermarket profits are changeable, for many reasons. Short-term events, like price wars or loss of business in some markets, can cause profits to dip. Food chains in the East Central and Northeast regions face some longstanding problems: regional population losses and too many older, relatively inefficient stores.

The profit picture for leading food chains was spotty (table 10). Allied Supermarkets operated at a loss for the first three quarters. In contrast, several firms, including American Stores, the Atlantic & Pacific Tea Company, Stop and Shop, Supermarkets General, and Winn-Dixie, bettered their profit margins per dollar of sales in 1983. Safeway, the largest food chain, earned the same profit margin but was below the industry average.

Food Industry Labor Productivity

The statistics measuring food industry productivity last year will not come out until July this year. For this reason, food industry productivity estimates for 1983 were not available at press time. Even so, there have been some early pointers. Looking at productivity in the Nation's business sector generally, excluding farming, we have estimates that there was about a 3-percent gain in productivity for the year (table 11). In the food industry's case, it is likely that productivity saw a slight improvement.

Table 9--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
	Percent					
1976	3.5	14.9	7.5	0.8	10.0	4.3
1977	3.1	13.2	6.7	.8	10.7	4.5
1978	3.3	13.8	6.8	.9	12.7	4.7
1979	3.3	14.7	7.2	.9	12.7	4.2
1980	3.4	14.7	7.1	.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
1980:						
I	3.0	12.8	6.2	.8	11.4	3.7
II	3.1	13.5	6.7	1.0	15.2	5.0
III	3.5	15.2	7.4	.8	11.2	3.6
IV	3.7	16.8	8.1	1.1	17.1	5.6
1981:						
I	3.0	13.4	6.3	.8	11.8	3.8
II	3.2	14.1	6.8	.9	13.2	4.5
III	3.2	13.8	6.6	.6	9.3	3.1
IV	3.3	14.6	6.9	1.5	21.0	7.2
1982:						
I	2.8	12.0	5.7	.1	.9	.3
II	3.2	13.7	6.6	1.2	16.5	5.7
III	2.7	11.5	5.5	1.0	13.5	4.6
IV	3.6	14.8	7.2	1.5	19.3	6.7
1983:						
I	2.3	8.9	4.4	.9	11.4	4.1
II	3.4	13.1	6.5	1.2	14.2	5.2
III	3.5	13.9	6.9	.9	11.2	4.0

1/ Data for food manufacturers represent aggregate estimates for corporations based on a sample of company reports. 2/ Data for food chains are based on reports from all food retailing corporations having more than $100 million in annual sales, at least 70 percent of which are derived from supermarket operations.

Source: Federal Trade Commission.

Table 10--After-tax profits of selected supermarket food chains per dollar of sales, first 9 months of 1981, 1982, and 1983

Firm	1981	1982	1983
	Percentage of sales		
Albertson's	1.3	1.7	1.5
Allied Supermarkets	.7	.7	-.1
American Stores	.6	1.0	1.2
Atlantic & Pacific Tea	-.5	-5.4	.5
First National	.4	.4	.4
Giant Food	.4	1.9	1.9
Jewel	1.3	1.4	1.2
Kroger	.9	1.2	.7
Lucky	1.1	.9	1.1
Safeway	.5	.8	.8
Stop & Shop	.3	.7	1.1
Supermarkets General	.7	.8	1.0
Winn-Dixie	1.5	1.5	1.6

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

First, retail food sales increased 2 to 3 percent in real terms last year, making it probable that productivity increased. That would follow very small productivity increases for foodstores 3 of the previous 4 years.

Second, it's reasonable to assume that a long uptrend in labor productivity of companies that manufacture food continued in 1983. Most of the seventies was marked by an uphill struggle to improve productivity in the food industry. Only food manufacturers realized small gains. Their productivity rose faster than that of businesses generally.

Output per unit of labor in food manufacturing showed a steady increase of between 2 and 3 percent per year over the past 15 years. These increases resulted from an upward trend in output and a small decline in hours worked, reflecting in part the substitution of capital for labor as a consequence of new technology.

The largest increases in labor productivity among food manufacturers have occurred in fluid milk processing, meat packing and processing, and grain milling (table 12). Productivity has grown erratically for most industries, mainly because of ups and downs in farm output and business conditions.

Table 11--Productivity measured by output per unit of labor

Year	Food-stores	Eating and drinking places	Nonfarm business sector of the economy
		1977 = 100	
1967	98.0	97.5	84.0
1968	103.0	99.7	86.8
1969	103.9	97.8	86.5
1970	109.8	101.0	86.8
1971	110.4	98.3	89.7
1972	110.3	102.3	93.0
1973	105.5	103.6	95.3
1974	101.1	99.1	92.9
1975	100.7	101.0	94.7
1976	102.0	101.4	97.8
1977	100.0	100.0	100.0
1978	96.0	99.3	100.6
1979	98.3	99.4	99.1
1980	101.3	99.5	98.4
1981	100.7	97.2	100.3
1982 1/	101.6	98.9	100.2
1983 1/-	--	--	103.4

-- = Not available.

1/ Preliminary. Some historical data were revised.

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

Labor productivity at the supermarket suffered a series of setbacks in the seventies, but has risen slightly in recent years. Small gains in supermarket productivity have resulted recently from increases in sales volume and changes in operations. These include computer-assisted checkout systems and data processing systems, and the introduction of new store formats such as warehouse, limited assortment, and super-stores. These stores provide reduced services and thus cut labor requirements, or foster higher sales per unit of labor. Many food chains also have closed smaller, inefficient stores. The industry also has been placing greater emphasis on increasing employee productivity through such methods as quality control circles, training programs, and rotation of work assignments. Output per hour of labor in food stores in 1982 was 5.8 percent higher than in 1978 but still below the level attained by the industry in the early seventies.

Table 12--Indexes of output per employee hour in selected food manufacturing industries

Year	Red meat products	Fluid milk	Preserved fruits and vegetables	Grain mill products	Bakery products	Sugar
			1977 = 100			
1967	74.8	62.9	73.8	73.0	82.8	77.1
1968	76.6	66.5	75.6	77.0	84.5	80.5
1969	75.2	69.6	76.9	78.3	84.7	78.6
1970	77.2	73.7	79.7	79.7	87.5	85.9
1971	78.9	79.4	83.1	83.3	89.5	84.9
1972	85.0	85.1	84.6	85.5	94.1	90.4
1973	82.9	88.4	93.1	81.7	93.6	96.3
1974	83.5	90.9	91.7	86.4	93.6	93.2
1975	82.9	95.5	93.7	87.1	93.4	94.0
1976	90.6	99.5	100.1	91.1	93.9	95.8
1977	100.0	100.0	100.0	100.0	100.0	100.0
1978	99.1	108.0	104.4	100.4	97.2	101.0
1979	102.9	116.3	99.3	102.2	94.1	109.1
1980	108.1	124.8	101.2	107.5	92.3	109.1
1981	109.8	129.3	99.6	112.9	94.3	111.2
1982	--	133.4	--	--	91.7	110.4
Average annual change:			Percent			
1967-82 1/	3.0	5.1	2.2	3.2	0.7	2.4
1977-82 1/	2.8	6.0	-.4	3.2	-1.5	2.3

-- = Not available.

1/ For red meat products, preserved fruits and vegetables, and grain mill products, the changes are calculated only through 1981.

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

The trend in productivity is different for eating places. Labor productivity in eating and drinking places has been nearly stable since the midseventies, perhaps because of a growing number of fast food establishments. From 1975 to 1982, output per employee hour dropped about 2 percent because labor input rose about 24 percent while output increased only 22 percent.

THE FOOD MARKETING BILL AND ITS COMPONENTS

In this section, we review what consumers actually spent for domestically produced foods in 1983. Earlier sections reported on the prices we paid. But spending counts how much we bought as well as the prices we paid. There's a second difference to keep in mind. The expenditures reported in this section include spending at eating places, not just at foodstores. As we did for food prices, we break down food expenditures into two components:

- The farm value is our estimate of how many of the dollars we spent for domestically produced foods at foodstores and eating places were returned to farmers.
- The marketing bill is the difference in dollars between the farm value and retail expenditures.

We will closely examine last year's changes in the marketing bill, dividing it into several principal marketing functions--such as processing and retailing--and also breaking it down into various costs such as labor and packaging.

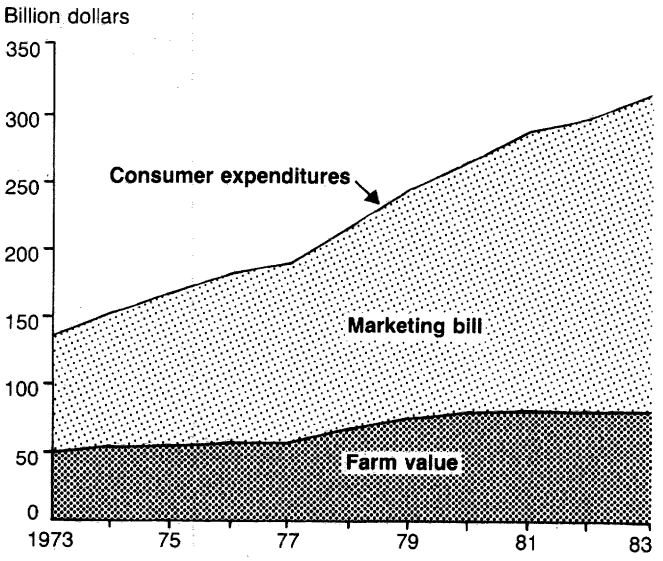
Nearly all of the estimates just mentioned are based on secondary data, not on direct measures of either consumer food expenditures or actual marketing costs. This limits their accuracy. So consider them as general indicators, not precise measures, of how much was spent and the changes that occurred last year.

Food Expenditures Were Up

Consumers spent $312 billion for foods originating on U.S. farms in 1983 (fig. 4 and table 13). (This was less than the total amount consumers spent for all food because it excluded expenditures for imported foods and fishery products.) About 65

Figure 4

Marketing Bill Adds Most to Food Spending



For domestically produced farm foods purchased by civilian consumers both at foodstores and eating places.

1983 preliminary.

Table 13--Consumer expenditures for domestically produced farm foods, the estimated marketing bill, and farm value

Item and year	Total	For food at food-stores 1/	Eating away from home		
			Total	Public eating places 2/	Institutions-3/
		Billion dollars			
Consumer expenditures:					
1972	122.2	85.3	36.8	29.4	7.4
1973	138.8	98.5	40.3	32.5	7.8
1974	154.6	109.5	45.1	36.1	9.0
1975	167.0	116.2	50.8	40.5	10.3
1976	183.3	127.2	56.1	45.5	10.6
1977	190.9	130.8	60.1	48.6	11.5
1978	216.9	149.2	67.7	55.5	12.2
1979	244.9	169.1	75.8	62.2	13.6
1980	264.9	180.6	84.3	69.1	15.2
1981	288.4	194.7	93.7	76.8	16.9
1982	299.1	197.0	102.2	84.2	18.0
1983 4/	312.0	201.8	110.2	91.3	18.9
Marketing bill:					
1972	82.4	52.9	29.4	23.6	5.8
1973	87.1	56.1	31.0	25.1	5.9
1974	98.2	65.2	33.0	26.2	6.8
1975	111.4	72.2	39.2	31.3	7.9
1976	125.0	79.4	45.6	37.2	8.4
1977	132.7	83.5	49.2	40.0	9.2
1978	147.3	92.7	54.6	45.1	9.4
1979	166.1	104.9	61.1	50.7	10.5
1980	183.4	114.6	68.8	56.9	11.9
1981	205.2	127.7	77.5	64.1	13.4
1982 4/	215.8	130.5	85.3	70.9	14.4
1983	228.4	135.7	92.7	77.5	15.2
Farm value:					
1972	39.8	32.4	7.4	5.9	1.5
1973	51.7	42.4	9.3	7.4	1.9
1974	56.4	43.1	13.3	10.6	2.7
1975	55.6	44.0	11.6	9.2	2.4
1976	58.3	47.8	10.5	8.3	2.2
1977	58.2	47.3	10.9	8.6	2.3
1978	69.6	56.5	13.1	10.3	2.8
1979	78.9	64.2	14.7	11.6	3.1
1980	81.5	66.0	15.5	12.3	3.3
1981	83.3	67.0	16.3	12.8	3.5
1982	83.3	66.5	16.8	13.2	3.6
1983 4/	83.6	66.1	17.5	13.8	3.7

1/ Includes food primarily purchased from retail foodstores for use at home. 2/ Includes food purchased at restaurants, cafeterias, snackbars, and other public eating establishments. 3/ Includes the value of food served in hospitals, schools, colleges, rest homes, and other institutions. 4/ Preliminary. Some historical data have been revised.

cents out of each dollar was spent at retail foodstores on food for use at home. Another 29 cents was spent on purchases of food from public eating places. This market share was slightly higher than in 1982 because sales of eating places increased more than foodstore sales last year. The remaining 6 cents represented the retail value of foods served by hospitals, schools, airlines, and other institutions .

Consumer expenditures for farm foods in 1983 rose about 4 percent above the 1982 level, the smallest rise in many years. About half of the increase in value came from higher food prices. A rise of about 1 percent in population and per capita food consumption increased the value of food purchased. Spending for food in public eating places rose at a much greater rate than spending in foodstores, in part because of a larger price increase for restaurant meals than for foods sold in foodstores.

Meat products represent by far the largest share of the retail value of the food we bought. Retail value of meat in 1982 (the latest available data) was 29 percent of total expenditures, compared with 21 percent for fruit and vegetables, the next largest expenditure group (table 14). Because the consumption of foods changes slowly, there has been little change in the proportion of expenditures accounted for by meat products and other food groups from year to year.

Farm Value Unchanged

How much of what consumers spent on food last year represented returns to farmers? We estimate that farmers received about $83.6 billion in 1983 for the farm products equivalent to the foods purchased by consumers or eaten by them in hospitals and other institutions.

Farm value increased little in 1983 for the second year in succession. Lower prices of red meat, fruit, and vegetables held down the farm value of foods. However, because of rising farm prices for poultry, eggs, and oilseeds, the total farm value for the year was about the same as in 1982. This compared with increases of about 2 percent in 1981 and 3 percent in 1980.

The largest share of the money received by farmers for domestic food sales pays for meat products. In 1982, the latest year for which we have data, the farm value of meat was about 37 percent of the total. The next largest share, 21 percent, paid for dairy products. While livestock and dairy producers thus garnered over half the farm value, it is important to remember that they bought substantial amounts of grain and other feedstuffs from crop farmers.

The farm value of food products represented 27 percent of consumer expenditures for farm foods in 1983. This was about 1 percent lower than for 1982.

The farm value is a much smaller part of what we spend for foods eaten away from home than for foods bought at stores because the cost of preparing and serving foods is a huge part of the cost

Table 14--Consumer expenditures, marketing bill, and farm value for major food groups, 1982

Item	Total	For food at foodstores	Eating away from home
		Billion dollars	
Consumer expenditures:			
Meat	86.9	42.9	44.0
Fruits and vegetables	63.8	54.0	9.8
Dairy products	43.8	27.5	16.3
Bakery products	30.6	21.8	8.8
Poultry	15.1	9.6	5.5
Grain mill products	9.0	7.3	1.7
Eggs	5.2	3.6	1.6
Other foods	44.7	30.3	14.4
Total	299.1	197.0	102.1
Marketing bill:			
Meat	56.4	21.1	35.3
Fruits and vegetables	50.0	42.4	7.6
Dairy products	26.4	13.5	12.9
Bakery products	27.2	18.9	8.3
Poultry	9.1	4.3	4.8
Grain mill products	7.6	6.0	1.6
Eggs	2.7	1.3	1.4
Other foods	36.4	23.1	13.3
Total	215.8	130.6	85.2
Farm value:			
Meat	30.5	21.8	8.7
Fruits and vegetables	13.8	11.6	2.2
Dairy products	17.4	14.0	3.4
Bakery products	3.4	2.9	.5
Poultry	6.0	5.3	.7
Grain mill products	1.4	1.3	.1
Eggs	2.5	2.3	.2
Other foods	8.2	7.2	1.1
Total	83.3	66.4	16.9

of food eaten out. In 1983, the farm value accounted for about 16 percent of away-from-home expenditures, compared with about 33 percent of expenditures for farm foods in foodstores.

Food Spending Increases More Slowly than Income

Although food expenditures are rising, they are not increasing as much as consumer income. This illustrates one way in which we are still improving our standard of living. A declining proportion of our income is required for food, leaving more money for other things.

In 1983, Americans spent about 15.9 percent of total disposable income on food (domestically produced as well as imported foods and fish). This share was slightly less than the 16.2 percent 10 years ago, and was substantially less than the 18.7 percent of 20 years ago. Much of this decline in the proportion of income spent for food is attributable to a decline in the farm value component. Farm value of the foods produced on U.S. farms declined from 5.9 percent of consumer disposable income 20 years ago to 3.6 percent last year.

The proportion of income spent on food varies widely by income levels. Consumers in the lowest income groups spend a much larger proportion of their income for food than do consumers at the highest income levels.

Marketing Bill Boosted Food Spending

The marketing bill, the difference between what consumers spent for food and the farm value, amounted to $228 billion in 1983, about $12 billion, or 5.8 percent, more than in 1982. Last year's increase in the marketing bill explained virtually all of the $13-billion rise in expenditures for farm foods.

Higher labor costs accounted for nearly half of last year's increase in the marketing bill. Much of the remaining increase in the bill occurred in the category of other costs including such items as rents, depreciation, taxes and insurance, and professional services.

The increase of 5.8 percent in the marketing bill in 1983 was greater than the rise in prices of most inputs and the general inflation rate. This was because of an increase in the volume of food marketed that boosted the marketing bill.

Marketing costs continue to be the most persistent source of rising food expenditures. Retail expenditures for domestic farm foods have increased about $95 billion since 1978. About $81 billion of this increase consists of nonfarm charges for marketing products after they leave the farm. Farm value has increased only $14 billion since 1978, with most of the increase occurring in 1979.

What the Marketing Bill Bought

To get a clearer idea of what we bought when we paid last year's marketing bill, we look 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 foods bought in foodstores than for away-from-home purchases of restaurant meals and snacks. For 1983, 33 cents of each dollar spent in foodstores paid for the farm value. Thus, 67 cents paid the marketing bill.

Looking at the bill for each dollar's worth of food bought in foodstores by function, 30 cents paid for processing. Between processor and retailer, another 10 cents was spent for wholesaling and 6 cents for intercity transportation. Finally, retailing charges added the last 21 cents (table 15). These shares have been relatively constant over the years because costs of each function have risen at roughly similar rates.

Table 15--Processing and marketing components of consumer expenditures for farm foods

Expenditures and components	1973	1980	1981	1982	1983 1/
	Billion dollars				
Expenditures at foodstores	99.5	180.6	194.7	197.0	201.8
Farm value	42.4	66.0	67.0	66.4	66.1
Marketing bill	57.1	114.6	127.7	130.6	135.7
Processing cost	27.2	52.4	57.1	58.0	60.1
Intercity transportation cost	5.2	10.6	11.7	12.0	12.4
Wholesaling cost	8.1	16.0	18.5	18.9	19.9
Retailing cost	16.6	35.6	40.4	41.7	43.3
Expenditures for eating away from home	39.4	84.3	93.7	102.1	110.2
Farm value	9.3	15.5	16.3	16.9	17.5
Marketing bill	30.1	68.8	77.5	85.2	92.7
Processing cost	6.9	15.0	16.9	18.2	19.9
Intercity transportation cost	1.2	2.4	2.6	2.7	2.8
Wholesaling cost	2.2	5.1	6.3	6.8	7.5
Food service cost	19.8	46.3	51.7	57.5	62.5

1/ Preliminary. Some historical data have been revised.

For dollars spent for food away from home, 16 cents covered the farm value. Processing costs accounted for 18 cents, transportation charges for 3 cents, and wholesaling for 7 cents. Thus, 56 cents, or more than half of the dollar, was paid for food service: the preparation and serving of food eaten out.

The food processing and marketing industry is an important part of the American economy. The $228 billion the industry received from consumers in 1983 was in turn spent to pay the salaries of millions of employees and to pay for all of the other costs of doing business.

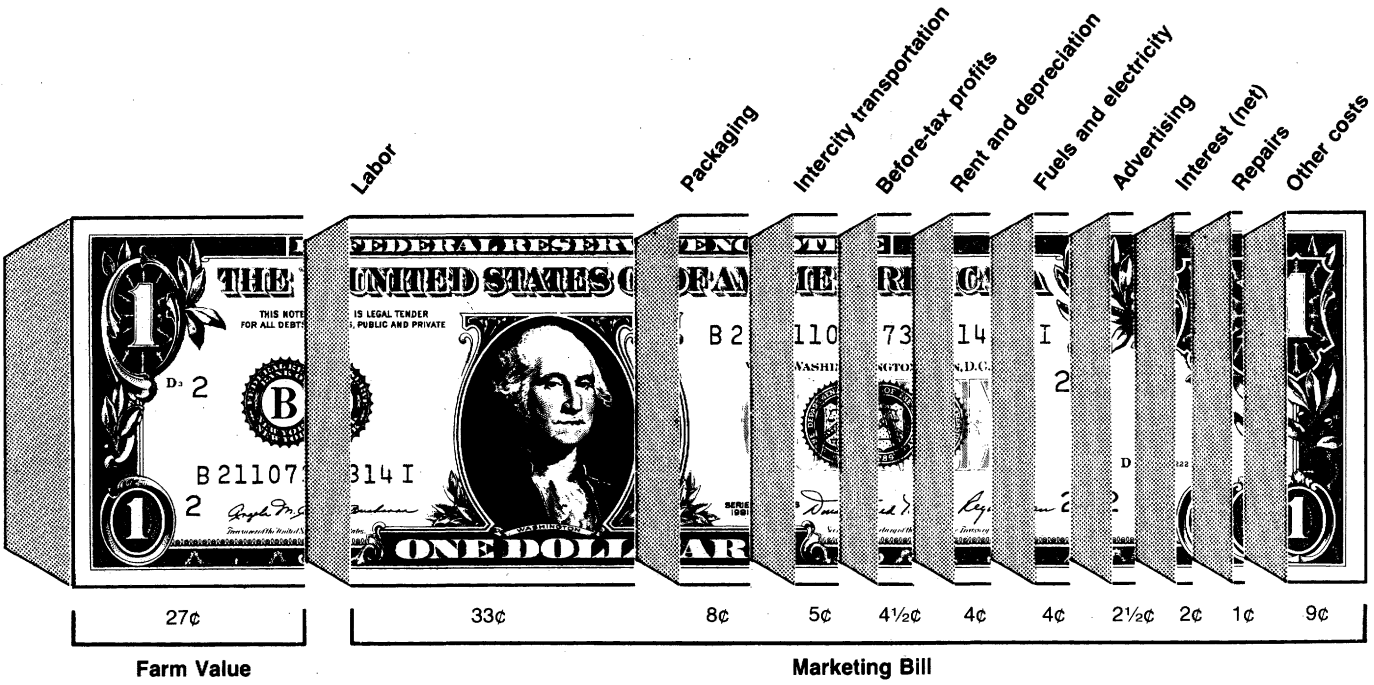
Labor, the Largest Cost

Direct labor costs are the largest part of the marketing bill. They amounted to nearly $102.7 billion in 1983, and comprised 33 percent of food expenditures (fig. 5 and table 16). Labor costs consist of wages, salaries, and employee health and welfare benefits, imputed earnings of proprietors and family workers, and tips for food service. Not included are the costs of labor engaged in for-hire transporting of foods or in manufacturing and distributing supplies used by food industries.

Labor costs rose 6.2 percent in 1983, about the same as for 1982 but below the average rise during 1976-81. As in 1982, direct labor costs accounted for about 45 percent of last year's marketing bill. Labor costs rose last year because of higher

Figure 5

What a Dollar Spent on Food Paid for in 1983



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

1983 preliminary.

hourly compensation (wages and benefits) for workers and a rise in the number of hours worked, reflecting an increase in total industry employment.

Over the years, employee benefits, such as paid vacations and holidays, health insurance, private pensions, and payroll taxes for social security and unemployment, have increased more rapidly than hourly earnings. Thus, benefits have increased as a proportion of total labor costs.

The gain in the importance of benefits was caused in part by higher costs of private pension and insurance plans and legally mandated hikes in payroll taxes for social security and unemployment. Between 1977 and 1983, the employer's portion of the social security tax rate rose from 5.85 percent to 6.7 percent of earnings, while maximum taxable annual earnings more than doubled from $16,500 to $35,700.

Benefit costs also have risen faster than earnings because of sharp increases in health insurance premiums and successful bargaining by many workers for more liberal health and pension benefits.

About 9.6 million workers were employed in food processing and marketing in 1983. The largest number of workers (nearly 4.9 million) were employed in away-from-home eating places. Foodstores employed 2.5 million persons, while food processors employed 1.6 million, and food wholesalers about 0.7 million workers.

The number of persons employed in the food industry has increased about 1 percent annually over the past 5 years, largely because of rising employment in foodstores and eating places. The number of workers employed in food processing has slightly declined during the past 5 years.

Packaging Costs Up

Food containers and packaging materials, the second largest food marketing cost, totaled about $24 billion in 1983, 8 percent of total food expenditures. Cost rose 4 percent over 1982, mainly reflecting higher wholesale prices for metal containers and plastic materials.

Paperboard boxes and containers are the largest packaging cost. The food industry spent about $10 billion or about two-fifths of total packaging expenses on paper and paperboard products in 1983. Fiber (cardboard) boxes, the primary container used to ship nearly all processed foods, represented about one-third of this total. Sanitary food containers, including those for such products as fluid milk, margarine and butter, ice cream, and frozen food, cost almost as much. The third largest paperboard item was folding boxes used for such dry foods as cereals and perishable bakery products.

Metal containers are next in importance, making up about a fourth of total food packaging costs. Cans have probably become less important in packaging as more glass and plastic bottles and fiber containers are used.

Table 16--Components of the marketing bill for domestically produced farm foods

Year	Labor 1/	Packaging materials	Intercity transportation rail and truck	Fuels and electricity	Corporate profits before taxes	Other 2/	Total marketing bill 3/
			Billion dollars				
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	7.6	35.0	125.0
1977	58.3	15.1	9.7	5.6	7.9	36.1	132.7
1978	66.1	16.6	10.5	6.3	9.2	38.6	147.3
1979	75.1	18.6	11.8	8.0	9.9	42.7	166.1
1980	81.7	21.1	13.0	9.9	11.0	46.7	183.4
1981	91.2	22.9	14.3	11.8	12.0	53.0	205.2
1982	96.7	23.2	14.7	12.4	13.1	55.7	215.8
1983	102.7	24.2	15.3	13.2	14.2	58.8	228.4

-- = Not available.

1/ Includes employee wages or salaries, and their health and welfare benefits. Also includes imputed earnings of proprietors, partners, and family workers not receiving stated remuneration. 2/ Includes depreciation, rent, advertising and promotion, interest, property taxes and insurance, accounting and professional services, and many miscellaneous items. 1967-69 data also include fuels and electricity. 3/ The marketing bill is the difference between the farm value or payment to farmers for foodstuffs and consumer expenditures for these foods both at foodstores and away from home eating places. Thus, it covers processing, wholesaling, transportation, and retailing costs and profits. Some historical data were revised.

Costs of plastic containers and wrapping materials are nearly 15 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, meats, and produce. Rising raw-material costs for manufacturing plastics, particularly petroleum, sharply increased prices of plastic materials in the late seventies. Prices weakened substantially in 1982 because of weak demand in nonfood markets, but prices rebounded last year.

Transportation Costs Advance

Intercity truck and rail transportation costs for farm foods advanced about 4 percent to over $15 billion in 1983. This was about 5 percent of retail food expenditures. Higher rates combined with larger total food marketings boosted costs.

Railroad freight rates rose by only 1 percent in 1983, following a 7-percent rise in 1982. The much slower rise was due to general slowing in the rate of inflation, operating efficiencies permitted by the Staggers Rail Act, and a reduction in total demand for rail services.

Truck rates also rose little in 1983. For instance, the average truck rate for shipping lettuce from California to the Northeast increased only 4 cents per vehicle-mile to $3.67 per carton between December 1982 and December 1983.

Energy Cost Rise Slows

Fuel and electricity costs in the food industry have risen at more than than 1.5 times the annual rate of other costs since the beginning of the sharp rise in energy prices in 1973. Rising about 20 percent a year since 1973, energy costs increased from 2 percent of retail food expenditures to 4 percent in 1983. However, the rise in costs slowed the past 2 years as petroleum prices have declined. Last year's energy bill came to $13.2 billion, an increase of 6 percent over 1982.

This energy bill counted only the costs of electricity, natural gas, and other fuels used in food processing, wholesaling, and retailing, including food service of eating places. It excluded transportation fuel costs, except for those incurred for food wholesaling.

Food processing accounts for nearly 40 percent of fuel and electricity costs. These energy expenses have risen more rapidly than for other food marketing functions because processors use a lot of natural gas, which has risen faster in price than electricity.

Food retailing takes slightly over a fifth of food marketing fuel and electricity costs. These energy costs increased from about 1 percent of foodstore sales in 1976 to about 1.25 percent last year. The major portion of the food retailing energy bill is electricity used to operate refrigeration equipment.

Away-from-home food service, which also requires nearly a fourth of the energy bill, has the highest energy costs per dollar of sales, averaging about 3 percent. The other 14 percent of the energy bill is used for food wholesaling, mainly in transporting food to retailers and eating places.

Other Costs Added Up

The major costs just discussed together accounted for over two-thirds of the 1983 food marketing bill. The rest of the bill included a variety of other costs (26 percent of the total bill) and profit (6 percent).

Many relative small costs were incurred in performing food processing and marketing functions. Although individually, most such costs were small, they added up to $59 billion. They were depreciation, rent, advertising and promotion, repairs, bad debts, contributions, property taxes and insurance, interest, and many others. We relied on data from the Internal Revenue Service and the Bureau of the Census to estimate them. Here's a rundown for 1983:

- Plant and equipment rent and depreciation (4.2 percent of the total consumer expenditures). Food processing and wholesaling, the most capital-intensive businesses, have shown the largest increase in depreciation costs over time. Nearly half the rent is paid by public eating places, which suggests that a number of eating places are leased rather than owned. Rent rose faster than depreciation in the past 5 years, probably because the sharp rise in equipment and land prices made renting more economical than buying.

- Media--television, radio, and newspaper--advertising expenditures (about 2.5 percent of food expenditures). Food processors do half of all food advertising; food retailers, about 30 percent.

- Interest (around 2 percent of expenditures). Interest payments climbed faster than most other costs in the late seventies, owing to higher rates, but have declined the past 2 years.

Sufficient data are not available for estimating individual costs of food service in schools and other institutions, property taxes and insurance, for-hire local truck transportation, professional services, and communications. Together, these costs account for 9 percent of the food dollar.

Corporate Profits Up

Before-tax profits earned by corporate firms from marketing domestically produced foods were 4.6 percent of food expenditures. We estimated 1983 profits at $14 billion, compared with slightly over $13 billion in 1982 by multiplying sales times ratios of profits per dollar of sales for food retailers, wholesalers, manufacturers, and away-from-home eating places.

FOOD PRICE HIGHLIGHTS This section reviews changes in the prices of leading food items in 1983, and explains those changes in terms of the farm value and farm to retail price spread.

Lower prices for beef, pork, and fresh fruits were a major cause of the relatively small rise in retail food prices in 1983. Farm to retail price spreads rose for most foods. Farm values of meat declined but those for poultry, eggs, and fats and oils rose.

Choice Beef

After a rapid rise in beef prices during 1978 and early 1979, retail prices of Choice beef have been quite stable (table 17). The 1983 weighted average price of all cuts was $2.38 per pound, 4 cents lower than the all-time high in 1982, and only 0.5 cent higher than in 1980. Prices varied during 1983 from a high of $2.47 per pound in May to a low of $2.30 in December. Prices of individual cuts ranged from about $1.35 per pound for ground beef to $4.00 per pound for porterhouse steak.

The farm value, representing the payment to the producer for the quantity of live animal equivalent to a pound of meat sold at retail, decreased about the same amount as the retail price, 4 cents from 1982 to 1983. The farm value averaged 57 percent of the retail price of beef in 1983, slightly lower than in 1982.

The farm value is computed from the average of terminal and direct market prices for Choice steers, yield grade 3, in eight markets. Computing the farm value takes two steps. Prices per pound of slaughter steers are multiplied by 2.4 pounds, the quantity of live animal required to sell 1 pound of Choice beef at retail. Then, we 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 was unchanged from 1982, averaging $1.02 a pound. However, it varied about 18 cents during the year. When farm prices rose during the first half of the year, retail prices did not increase as fast. Thus, the farm to retail spread fell 12 cents to 94 cents in April. The spread then increased to $1.09 in September, when a decline in the farm value was greater than the decline in retail beef prices. The spread was squeezed in December when cattle rose sharply. For the year, the drop in the inflation rate, large total meat supplies, and weak consumer demand combined to hold the farm to retail price spread steady.

Costs of the processing and marketing functions were about the same last year as in 1982 with the exception of slaughtering costs which declined 1 cent (table 18). This cost included the functions performed from the time the packer purchased the cattle until the carcasses were shipped from the packing plant.

Table 17-Choice beef and pork: Retail price, farm value, and farm to retail price spread by year and quarter

Item	Retail price 1/	Net carcass value 2/	Net farm value 3/	Farm to retail spread			Farm value share 6/
				Total	Carcass-retail 4/	Farm-carcass 5/	
	Cents per retail pound						Percent
Choice beef:							
1979	226.3	150.5	140.8	85.5	75.8	9.7	62
1980	237.6	155.4	145.0	92.6	82.2	10.4	61
1981	238.7	149.3	138.5	100.2	89.4	10.8	58
1982	242.5	150.7	140.5	102.0	91.8	10.2	58
1983	238.1	145.4	136.2	101.9	92.7	9.2	57
1982--							
I	237.3	149.9	138.8	98.5	87.4	11.1	59
II	247.2	165.5	155.3	91.9	81.7	10.2	63
III	248.3	148.6	139.1	109.1	99.7	9.5	56
IV	237.2	138.8	128.9	108.3	98.4	9.9	54
1983--							
I	237.9	144.9	136.4	101.5	93.0	8.5	58
II	245.1	156.1	147.4	97.7	89.0	8.7	60
III	238.4	140.7	130.5	107.9	97.7	10.2	55
IV	231.1	140.0	130.7	100.4	91.1	9.3	57
Pork:							
1979	144.1	100.4	66.6	77.5	43.7	33.8	46
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
1982--							
I	160.1	108.7	76.4	83.7	51.4	32.4	48
II	169.3	120.4	89.5	79.9	48.9	30.9	53
III	185.0	132.7	98.4	86.6	52.3	34.3	53
IV	187.1	125.4	87.8	99.3	61.7	37.4	47
1983--							
I	183.0	119.3	88.1	94.9	63.6	31.3	48
II	171.1	106.9	74.7	96.4	64.2	32.2	44
III	165.4	105.6	74.7	90.7	59.8	30.9	45
IV	159.8	103.8	68.5	91.3	56.0	35.3	43

1/ Composite of all cuts. 2/ For quantity equivalent to 1 retail pound: beef, 1.48 pounds of carcass beef; pork, 1.06 pounds of wholesale cuts. 3/ For quantity of live animal equivalent to 1 retail pound: beef, 2.4 pounds, and pork, 1.7 pounds, minus byproduct allowance. 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.

Many packers cut beef carcasses into primals, subprimals, and retail cuts, but the estimate of slaughtering costs assumes that the beef is sold in carcass form. The slaughtering cost is obtained by deducting the farm value and transportation costs (from the packer to the city where consumed) from an average wholesale value of Choice steer carcasses (600 to 700 pounds, yield grade 3). Thus, the estimate is derived from price differences and not a compilation of costs. The decline in the slaughtering cost in 1983 may reflect the downward pressure on wages in the industry in recent years.

Transportation of beef from the packer to the retail marketing area amounted to 3.8 cents per retail pound in 1983. Warehousing and store delivery were estimated at 14.9 cents. This estimate is based on data reported in the 1977 Census of Wholesale Trade, which indicated that meat wholesaling costs represented about 7.9 percent of gross sales.

Table 18--Choice beef and pork: Farm value, marketing costs by function, and retail price

Item	1979	1980	1981	1982	1983
		Cents per retail pound			
Beef:					
Farm value	140.8	145.0	138.5	140.5	136.2
Slaughtering	6.6	6.8	7.0	6.8	5.4
Intercity transportation	3.1	3.7	3.8	3.8	3.8
Warehousing and store delivery	13.4	14.8	14.9	15.2	14.9
Breaking carcass	8.3	9.4	10.4	11.0	11.4
Cutting and merchandising	54.1	57.9	64.1	65.6	66.4
Retail price	226.3	237.6	238.7	242.5	238.1
Pork:					
Farm value	66.6	63.2	70.3	88.0	76.5
Slaughtering and processing	30.9	31.5	32.9	30.3	28.9
Intercity transportation	2.9	3.4	3.5	3.5	3.5
Warehousing and store delivery	8.5	8.9	9.5	11.0	10.6
Cutting and merchandising	35.2	32.5	36.2	42.6	50.3
Retail price	144.1	139.5	152.4	175.4	169.8

Costs of breaking the carcass into principal parts such as the loin and chuck, which could be done at the packing plant, at the wholesale level, or by the retailer, were estimated at 11.4 cents in 1983. Cutting and retail merchandising costs of Choice beef amounted to 66 cents in 1983. This amount represents the difference between the total of all other costs and the retail price.

Data for 1979-83 indicate that costs have been fairly stable the past 3 years with the exception of the decrease in slaughtering costs for which there is not a good explanation (table 18). The increasing shift to box beef may have resulted in allocating some returns from this activity to the slaughtering function. Changes in the quality, demand, and price reporting of carcass beef also may be affecting the carcass price series used in deriving the slaughtering costs estimate.

Pork

Pork supplies rose about 7 percent in 1983, causing a decline in prices at both the farm and retail level. Retail prices of pork declined each month from $1.85 per pound in January to $1.58 in December. The average price was $1.70 per pound, 6 cents lower than in 1982.

The farm value decreased 11.5 cents to 76.5 cents per retail pound equivalent in 1983. The farm value fell from 98 cents in February to 66 cents in November. Then, it rose to 77 cents in December. The farm value averaged only 45 percent of the retail price of pork in 1983, compared with 50 percent in 1982.

Farm value is computed from the average price of barrows and gilts at seven Midwestern markets. This price is then multiplied by 1.7 pounds, the quantity of live animal needed to sell 1 pound of pork at retail. A value for lard and other byproducts is subtracted to obtain the net farm value. The byproduct value dropped from 6.3 cents in 1982 to 4.9 cents last year.

The farm to retail price spread for pork increased about 6 cents, or 7 percent in 1983. The spread normally increases during periods of falling hog prices. When the farm value increased sharply in December, the farm to retail spread dropped 15 cents to 81.5 cents per pound, the lowest level of the year.

Among the cost components of the farm to retail spread for pork, slaughtering and processing costs amounted to 28.9 cents in 1983 (table 18). Included are costs to cut the carcass into primals and process hams, bacon, and other products. The estimate of this cost is obtained by deducting the farm value and intercity transportation costs from a composite wholesale price of pork.

Transportation costs for pork between the packer and retail marketing area were 3.5 cents per pound in 1983, unchanged from the previous 2 years. Warehousing and store delivery costs were estimated at 10.6 cents per retail pound in 1983. Cutting and retail merchandising costs of 50.3 cents make up the largest component of the farm to retail price spread for pork and was

the only one to increase in 1983. This retail cutting and merchandising component is derived as a residual between the total of all other costs and the retail price. The increase in this cost component may be partly explained by the time lag between changes in farm, wholesale, and retail prices.

Broilers

Americans consumed another record quantity of broiler meat in 1983, nearly 52 pounds for each person. And, while most food prices were rising less rapidly than previously, broiler prices rose only about 1 cent a pound (table 19). Retail prices averaged about 73 cents per pound in 1983. Farm value rose from 36 cents the previous year to 38 cents in 1983 (ready-to-cook basis).

Table 19--Eggs and broilers: Farm value, marketing costs by function, and retail price

Item	Farm value	Marketing functions: Assembly and procurement	Processing	Intercity transportation	Wholesaling	Retailing	Retail price
				Cents			
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	13.8	84.4
1981	56.1	1.2	12.2	1.9	4.1	15.1	90.6
1982	53.1	1.2	12.2	1.9	4.1	16.0	88.5
1983	58.5	.8	11.6	1.7	3.5	16.0	92.1
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	37.2	1.0	8.7	1.4	3.8	14.4	66.5
1979	35.7	1.3	9.6	1.6	4.2	15.6	68.0
1980	38.8	1.4	9.8	1.7	4.3	16.0	72.0
1981	37.6	1.6	10.3	1.7	4.3	18.2	73.7
1982	35.9	1.6	10.4	1.7	4.3	17.7	71.6
1983	38.0	1.6	10.5	1.7	4.3	16.7	72.8

Table 20--Eggs and broilers: Cost components of marketing functions, 1983

Item	Farm value 1/	Marketing functions: Assembly	Processing	Hauling and distribution 2/	Retailing	Retail price
		Cents				
Eggs (per dozen):						
Labor	--	0.4	3.4	2.5	--	--
Packaging	--	--	5.4	.2	--	--
Transportation 3/	--	--	--	--	--	--
Business taxes	--	--	.4	.2	--	--
Depreciation	--	--	.6	.3	--	--
Rent	--	--	4/	.1	--	--
Repairs	--	--	.3	.2	--	--
Advertising	--	--	.3	--	--	--
Interest	--	--	.3	.2	--	--
Energy	--	.4	.7	1.3	--	--
Other	--	--	.2	.2	--	--
Profit		--	0	0	--	--
Total	58.5	.8	11.6	5.2	16.0	92.1
Broilers (per pound):						
Labor	--	.9	4.7	2.9	--	--
Packaging	--	--	2.3	.2	--	--
Transportation 5/	--	--	--	--	--	--
Business taxes	--	--	.2	.2	--	--
Depreciation	--	--	.6	.4	--	--
Rent	--	--	4/	.1	--	--
Repairs	--	--	.4	.2	--	--
Advertising	--	--	.3	--	--	--
Interest	--	--	.2	.2	--	--
Energy	--	.5	1.0	1.5	--	--
Other	--	.2	.8	.4	--	--
Profit	--	--	0	0	--	--
Total	38.0	1.6	10.5	6.1	16.7	72.9

-- = Not estimated.

1/ Farm value for eggs includes allowance for 3-percent loss during marketing. Livestock broilers converted to retail equivalent. 2/ Includes long-distance transportation plus wholesaling and local delivery. 3/ Includes 0.8 cent for assembly, 1.7 cents for long-distance transportation, and 2.4 cents for local delivery, allocated to other components (labor, energy, etc). 4/ Included in depreciation. 5/Includes 1 cent for assembly, 1.7 cents for long-distance transportation, and 2.1 cents for local delivery, allocated to other components (labor, energy, etc).

The farm to retail price spread amounted to 35 cents in 1983, about the same as the year before. Nearly half the marketing cost (17 cents) was at the retail level. The other half consisted of costs for assembly, processing, hauling, and distribution to retail.

For the third consecutive year, heavy supplies of broilers, a substantial drop in exports, and the generally slack economy held prices down at all levels. Most processers are attempting to improve returns by selling more cut-up and further processed chicken. These products generally improve the returns by increasing the value added to the product.

During the past 5 years, broiler prices did not keep pace with the overall increase in food prices in grocery stores of 34 percent. Retail broiler prices have increased from 66.5 to 73 cents per pound, a rise of 9.5 percent. Farm value rose only 1 cent, or 2 percent, during this time. The farm to retail price spread rose about 5.5 cents, or 19 percent.

Eggs

Grade A large eggs averaged 92 cents per dozen during 1983, 3.5 cents a dozen more than for 1982 (table 20). The farm value was 58.5 cents per dozen, up 5.5 cents from 1982. The farm share of the retail dollar spent for eggs averaged 63 percent. Retail and farm prices of eggs rose sharply in the second half of the year following a cut back in production due to higher feed costs and an outbreak of avian flu in the Northeast that destroyed some laying flocks. Retail egg prices in December averaged $1.13.

The farm to consumer price spread averaged 33.6 cents per dozen in 1983, down 2 cents from 1982. Costs of most egg marketing functions declined. Retailers, on the other hand, had the same margin for eggs in 1983.

Fluid Milk

Heavy milk surpluses and an unchanged support price kept both farm and retail prices of fluid milk fairly stable since late 1980. In 1983, retail prices for a half-gallon of whole milk sold in stores averaged $1.128, up only 0.4 cent from a year earlier and about a penny from 1981 (table 21). In contrast, retail prices rose an average of 6 cents per year between 1976 and 1981.

Processors paid 63.9 cents per half-gallon for raw milk last year, about the same as in 1982 but slightly less than in 1981. Procurement and assembly charges in 1983 were the lowest since 1979, primarily because the surplus of milk exerted downward pressure on over-order charges by cooperatives.

The farm value of a half-gallon of whole milk was 59.4 cents, about the same as the preceding 2 years. The farmer's share of the retail price was 53 percent, unchanged from a year earlier. The farmer's share has slowly slipped from the 1976 high of 57 percent.

The only significant price change between 1982 and 1983 was a 2-cent drop in the price stores paid processor-distributors. The 2-cent drop in prices paid for milk and the small rise in retail prices boosted the retailing margin 2.4 cents per half-gallon to 15.4 cents. The retailer's share of the consumer dollar has trended upward since 1978.

Table 21--Fluid whole milk: Farm value, marketing costs by function, and retail price per half-gallon 1/

Year	Farm value 2/	Marketing functions				Retail price 6/
		Assembly and procurement 3/	Processing 4/	Wholesaling 4/	Retailing 5/	
		Cents				
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	10.1	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	112.5
1983	59.4	4.4	15.8	17.9	15.3	112.8

1/ Data for 1979-82 revised.

2/ Prices received by farmers 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. There are approximately 23.2 half-gallons of milk per 100 pounds.

3/ 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.

4/ Data for the processing and wholesaling functions represent costs for 30 fluid milk processor-distributors which are representative of moderate-size, single-plant operations throughout the country. Very small plants and plants operated by retail food chains are not included. Data are for 9 months.

5/ May include some wholesaling formerly performed by processors.

6/ Average of Bureau of Labor Statistics monthly prices.

Processing and wholesaling typically are performed by the same firm. The combined processing and wholesaling margin fell by 2.1 cents per half-gallon in 1983. The 33.7 cents received by the processor-distributor was 30 percent of the retail price, the lowest share since 1976. Last year, the processing margin declined 0.7 cent to 15.8 cents while the wholesaling margin was down 1.4 cents to 17.9 cents.

Returns to fluid milk processing declined sharply last year (table 22). These data are based on a sample of 30 processor-distributors and reflect their total operation, including production of ice cream, cottage cheese, and other products. Erosion of selling prices exerted the greatest effect on profitability. Very heavy milk supplies facilitated large price discounts as processors and distributors tried to gain competitive advantage. The gross margin fell 30 cents per hundredweight of milk processed to $8.48, the lowest since 1980.

Table 22--Net sales, costs, and margins for 30 fluid milk processor-distributors, 1981-83 1/

Item	1981	1982	1983 2/
	Dollars per hundredweight 3/		
Net sales receipts 4/	26.112	26.087	25.754
Ingredient costs 5/	17.571	17.313	17.278
Gross margin 6/	8.541	8.773	8.476
Labor 7/	3.676	3.767	3.765
Containers	1.676	1.732	1.692
Motor fuel	.310	.327	.308
Other energy	.329	.336	.305
Operating supplies	.171	.211	.213
Repairs	.391	.377	.344
Taxes and insurance	.185	.188	.195
Depreciation	.370	.405	.407
Rent and royalties	.260	.258	.251
Services	.325	.309	.355
Advertising	.117	.133	.139
General	.196	.195	.163
Total 6/	8.005	8.237	8.135
Net margin 6/, 8/	.537	.537	.341

1/Reflects total operation including production of ice cream, cottage cheese, and other products. 2/Projected on the basis of data for January-September. 3/Of raw milk processed. 4/Gross sales less discounts, allowances, and product returns. 5/Includes milk, cream, ingredients for perishable manufactured products, and products for resale. 6/May not add due to rounding. 7/Includes fringe benefits. 8/Before taxes.

Faced with declining gross margins, processors trimmed costs. Repairs probably were postponed while administrative costs were cut. Lower petroleum prices and continuing conservation efforts were reflected directly in declines in costs of motor fuel and energy used in the plant and indirectly in container costs. Labor costs per hundredweight (almost half of total costs) were virtually unchanged in 1983. All other cost categories were about the same except for services, which were up substantially. In total, 1983 costs were $8.14 per hundredweight, a dime below 1982.

Net margins averaged only 34 cents per hundredweight in 1983, down a third from 1982 and the lowest since 1974. The cost reductions fell far short of matching the drop in gross margin. The number of plants with negative net margins rose from 8 in 1982 to 10 in 1983. Most of the remaining plants saw net margins deteriorate.

Fruit and Vegetables

Retail prices of fresh fruit fell 6 percent last year reflecting large supplies of oranges and apples. The farm value dropped by almost 24 percent while the farm to retail spread went up slightly less than 1 percent (table 3). The ratio of farm value to the retail price of fresh fruit averaged about 23 percent in 1983, the lowest in many years.

For fresh vegetables, retail prices averaged only 4 percent higher in 1983 than in 1982, despite sharp price increases early in the year. The farm value increased about 2 percent while the marketing spread for fresh vegetables rose about 4 percent in 1983.

Retail prices of processed fruit and vegetables averaged only 1 percent higher in 1983, reflecting large supplies and weak demand. The farm value declined 6 percent while the marketing spread rose about 2.5 percent. Over four-fifths of the retail price of processed fruit and vegetables represents processing and distribution costs. Farm value is less than one-fifth, roughly the same proportion as in other recent years.

Estimates of the charges for processing and marketing functions have been made for selected fruits and vegetables (fresh potatoes, lettuce, oranges, frozen orange juice concentrate, and canned tomatoes) to explain increases in price spreads, and, therefore, retail prices over the years (table 23).

Retail margins are largest for fresh potatoes, lettuce, and oranges, averaging about half of the farm to retail price spread or between 30 and 40 percent of the retail selling price. Retail margins for fresh produce are large, partly because store labor costs are comparatively high and sales per square foot of selling space are below the average for the store. The retail margin, a relatively constant percentage of the retail price, accounted for the largest portion of the increase in retail prices for these three items in recent years. Transportation

Table 23--Selected fruit and vegetables: Farm value, marketing costs by function, and retail price

Food item and year	Farm value 1/	Marketing functions: Assembly and procurement	Packing and processing	Intercity transportation	Wholesaling	Retailing	Retail price 2/
			Cents				
Potatoes (10-pound bag):							
Northeast round white:							
1978	3/ 47.9	4/	19.1	11.3	10.3	48.7	5/ 137.0
1979	3/ 44.3	4/	14.3	11.4	11.3	64.4	5/ 145.6
1980	3/ 87.4	4/	20.5	11.1	10.4	56.8	5/ 186.2
1981	3/ 98.0	4/	31.9	12.8	12.5	79.8	5/ 235.0
1982	3/ 62.3	4/	19.8	12.5	12.9	77.5	5/ 185.0
1983	3/ 62.9	4/	17.3	12.5	11.8	57.5	5/ 162.0
Russet:							
1978	6/ 31.5	4/	25.0	33.5	20.1	86.9	197.0
1979	6/ 36.2	4/	27.2	29.7	15.6	73.5	182.2
1980	6/ 57.2	4/	35.8	39.1	10.0	67.8	209.9
1981	6/ 69.8	4/	54.8	45.1	21.2	91.6	282.5
1982	6/ 58.8	4/	31.0	47.8	21.3	71.1	230.0
1983	6/ 66.8	4/	46.7	47.6	17.0	67.9	246.0
Oranges, Calif. (pound):							
1978	10.3	.4	5.2	3.3	2.6	15.0	36.8
1979	14.0	.4	4.1	4.4	3.6	17.3	43.8
1980	7.8	.5	5.9	5.2	2.4	14.8	36.6
1981	8.7	.5	5.6	5.1	3.6	15.9	39.4
1982	15.3	.5	5.3	6.2	3.5	16.4	47.2
1983	7.7	.5	6.0	6.2	4.2	13.9	38.5
Iceberg lettuce, Calif. (pound):							
1978	7/ 12.9	.3	6.2	7.1	2.7	16.4	45.6
1979	7/ 6.3	.3	7.9	8.1	3.0	22.0	47.6
1980	7/ 4.7	.3	8.4	8.2	3.0	21.2	45.8
1981	7/ 4.6	.4	12.0	8.5	3.1	18.7	47.3
1982	7/ 5.8	.4	14.4	9.1	3.5	22.9	56.1
1983	7/ 4.7	.4	13.1	8.9	3.6	24.4	55.1
Orange juice, frozen (12-ounce can):							
1978	40.3	1.3	12.9	3.6	9.2	16.4	8/ 83.7
1979	41.2	1.4	14.3	3.8	10.4	18.3	8/ 89.4
1980	35.7	1.5	13.9	4.4	11.5	20.4	8/ 87.4
1981	39.9	1.7	24.6	4.8	10.8	20.0	8/ 101.8
1982	45.7	1.7	21.7	5.0	10.3	21.9	8/ 106.3
1983	44.0	1.7	18.3	5.1	12.6	22.7	8/ 104.4
Tomatoes, Calif. (303 can):							
1978	4.8	.7	17.4	3.6	2.6	8.5	37.6
1979	5.1	.8	19.6	4.3	2.7	9.4	41.9
1980	4.5	.9	22.3	4.8	1.3	8.4	42.2
1981	4.7	.9	30.4	5.3	1.6	7.0	49.9
1982	5.2	1.0	35.1	5.5	1.7	6.4	54.9
1983	4.9	.8	29.5	5.6	1.7	10.2	52.7

1/ The farm value is the payment to farmers for the quantity of farm products equivalent to the unit sold at retail minus imputed value of byproduct. Computed from average prices received by growers. Because of losses from processing, waste, and spoilage, the farm value represents larger quantities than the retail unit.

2/ Derived from Bureau of Labor Statistics monthly U.S. average retail prices and price indexes unless otherwise noted. Prices of fresh produce items were weighted by the quantities marketed.

3/ Prices may include some packing costs since growers may grade, wash, and bag the potatoes before they are sold.

4/ Included in farm value.

5/ Represents prices in Eastern markets only.

6/ Includes potatoes for processing which are usually lower in price than potatoes sold for fresh market.

7/ Farm value of lettuce is the value in the field. Harvesting and packing, a contract operation, appear as packing cost.

8/ Estimated by Florida Department of Citrus.

charges from producing areas to retail markets are a relatively large cost of marketing russet potatoes, lettuce, and oranges, accounting for 13 to 20 percent of the retail price.

Processing costs comprise the largest share (three-fifths) of the farm to retail price spread of canned tomatoes. A principal processing cost is for packaging: the metal can, label, and case used. Rising processing costs accounted for most of the increase in retail price of canned tomatoes from 42 cents in 1979 to 53 cents in 1983.

Retail prices of a 12-ounce can of frozen orange juice averaged $1.04 in 1983, 2 cents lower than in 1982. About a fifth of the price consisted of the retail margin.

Table 24--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			Farm to retail price 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	4.3	.8	5.1	49.1	8	9

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.

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.

Processing costs also amounted to about a fifth of the retail price. Packaging represents the largest cost of processing. Automated operations have minimized the labor cost of concentrating and packaging orange juice concentrate. Transportation and wholesaling costs are relatively high at 17 percent of the retail price, in large part because the product must be kept frozen at all times to maintain quality.

Bread

The average retail price of white pan bread in 1983 was 54.2 cents per pound, about 2 percent higher than in 1982 (table 24). This price is the average of monthly prices reported by the Bureau of Labor Statistics.

Table 25--White pan bread: Retail and wholesale prices, cost to the baker and farm value of ingredients, and components of farm to retail price spreads, 1983

Item	Price or cost	Components of price spread
	Cents per pound	
Retail price	54.2	--
Wholesale to retail price spread 1/	--	8.4
Wholesale price	45.8	--
Baker to wholesale price spread 2/	--	36.3
Cost to baker	9.5	--
Flour	6.9	--
Other farm ingredients 3/	1.6	--
Nonfarm ingredients 4/	1.0	1.0
Delivery of flour to baker	--	.5
Mill sales value of flour	6.4	--
Flour milling spread	--	1.1
Cost of wheat to miller 5/	5.3	--
Delivery of wheat, farm to flour mill	--	1.0
Marketing costs for other farm ingredients 6/	--	.8
Farm value	5.1	--
Wheat 5/	4.3	--
Other farm ingredients	.8	--

-- = Not applicable.

1/Difference between retail and wholesale price of bread.
2/Difference between wholesale price and cost of bread ingredients to the bakery.
3/Includes lard, soybean oil, high-fructose corn syrup, corn syrup, and soy-whey blend.
4/Estimated cost to baker of yeast, yeast food, salt, and other nonfarm ingredients.
5/Excludes value of millfeeds.
6/Difference between the cost to the baker of other farm ingredients and farm value.

The farm value of wheat, at 4.3 cents, was 0.1 cent lower than in 1982. 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 hard winter and spring wheat in 11 leading States producing these wheats. A deduction is made for the value of millfeed which is a byproduct of milling the wheat. The value of the millfeed ranges from 15 to 20 percent of the value of the wheat, depending upon 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, corn syrup, and soy-whey blend, contributed 0.8 cent to farm value for a total farm value of 5.1 cents. Farm value of other ingredients rose about a fifth in 1983 as a result of higher corn and soybean prices. Corn is the source of sweetener used in the bread and soybeans are the main source of the shortening ingredient.

The major component of the retail white pan bread price is the baker-wholesale spread, the difference between the cost to the bakery of all ingredients and the wholesale price of bread. In 1983, the baker-wholesale spread was 36.3 cents per loaf, or nearly two-thirds of the retail price (table 25). The cost of ingredients to the baker was 9.5 cents. This cost consisted of flour, other farm ingredients, and nonfarm ingredients.

The 45.8-cent wholesale price of bread is a weighted average of four regional prices. The regional prices consisted of Bureau of Labor Statistics benchmark prices for 2 months of the year extrapolated for other months of the year by producer price indices for bread. Wholesale prices include quotes for private label and regionally advertised bread that is sold on a free-on-board (f.o.b.) basis at the bakery, or is drop-delivered by the bakery. Consequently, the spread between the baker's cost of all ingredients and the wholesale price of bread represents the costs of baking and packaging bread, as well as some selling, transportation, and distribution costs. The remaining costs of transportation and wholesale distribution to retail stores are included in the wholesale to retail price spread of 8.4 cents along with the retail store margin.

Other cost components of the farm to retail spread are relatively small individually. These costs include transportation and handling wheat from farms to flour mills, milling of wheat, processing and marketing costs of other farm ingredients, transportation costs of flour from mills to bakers, and the cost of nonfarm ingredients used in bread.

Sugar

Retail sugar prices rose in crop year 1982/83 in response to higher domestic raw sugar prices. The retail price of sugar averaged about 35 cents per pound during the crop year beginning in October 1982, 2 cents less than in 1981/82 (table 26).

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The 1982/83 farm value of a pound of sugar was 14 cents, up about 2 cents from a year earlier. The farm value is based on the season average price received by growers in the 49 continental United States for sugar cane and sugar beets. In 1982/83, the farm value accounted for 37 percent of the retail price of sugar, up slightly from the previous year.

The farm to retail price spread was 21 cents in 1982/83, and did not change from that in 1981/82. The processing and refining component of the spread amounted to about 17 cents, up about 2 cents from the previous year. This spread is the difference between the farm value and an average quoted wholesale price for sugar packed in 5-pound bags, adjusted down for discounts and allowances to obtain an effective wholesale price. This spread covers all the functions of transporting sugar cane and sugar beets to processing plants, processing of sugar cane and refining of raw cane sugar, production of refined beet sugar, and sale of sugar to buyers, including intercity transportation charges.

The wholesaling and retailing spread in 1982/83 was estimated to be about 4 cents per pound, down 1.5 cents from the previous year. This spread is the difference between the average retail price and the adjusted average quoted wholesale price for sugar.

Table 26--Sugar: Farm value, price spreads, and retail price

Item	Crop year beginning October			
	1979/80	1980/81	1981/82	1982/83
	Cents per pound			
Farm value 1/	12.9	17.3	12.2	13.8
Processing and refining spread 2/	19.7	18.4	14.8	16.9
Wholesaling and retailing spread 3/	2.2	7.9	5.7	4.2
Retail price 4/	34.8	43.6	32.7	34.9

1/Based on season average prices received by continental U.S. sugar producers for sugar cane in Louisiana and Florida, and for all sugar beets.
2/Difference between the farm value and an average of quoted wholesale prices adjusted for discounts and allowances.
3/Difference between the retail price and the wholesale price, adjusted for discounts and allowances.
4/Average of Bureau of Labor Statistics' monthly retail prices for sugar sold in 33- to 80-ounce packages.

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