

National Food Review

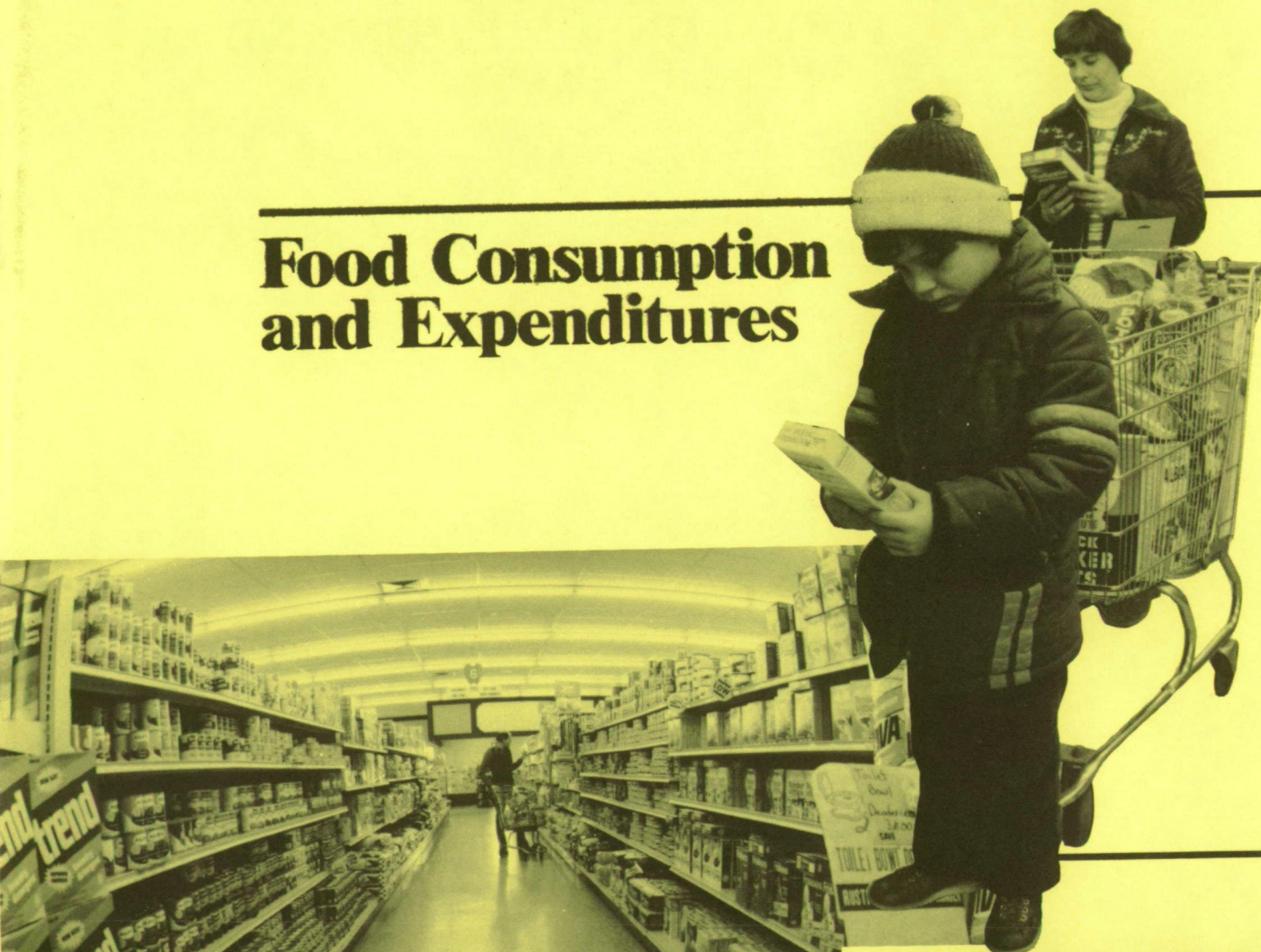
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Food Consumption and Expenditures



FOOD CONSUMPTION AND EXPENDITURES

Consumers' food decisions — what we eat, the effects of our food choices on nutrition, and how much we're likely to pay for food this year — are the focus of this issue of the *National Food Review*.

This issue begins with a look at food prices in 1983 and 1984, and then goes on to examine the farm-to-retail price spread for fruits and vegetables. The nutrient content of the food supply is probed in two articles; one provides an overview based on 1982 consumption data; the other discusses the effects of restaurant and fast food meals on nutrition. Food consumption highlights of 1982, and changes in red meat and poultry consumption, are also covered in this issue.

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Correction: On page 14 of the Fall 1983 *National Food Review* in the article entitled "Nutrition, World Hunger, and the Demand for Food," it was incorrectly stated that "FAO and WHO estimate that 250 million children in developing countries go blind every year from xerophthalmia..." The correct figure is 250 thousand (250,000).

Food Prices in 1983 and 1984

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Last year, a combination of greater livestock production, limited increases in food processing and distribution costs, and weak consumer demand led to the smallest increase in food prices in 16 years—only 2.1 percent. The forecast for 1984, in contrast, indicates that the Consumer Price Index (CPI) for food is likely to rise 4 to 7 percent (table 1). Let's consider what happened to moderate food price increases in 1983 and why greater increases are expected in 1984.

USDA uses a fixed set of foods representing consumer purchases to track changes in prices of domestically produced foods sold in grocery stores. These market basket data account for about 82 percent of food at home, with prices for fish and imported foods making up the remainder.

The cost of the market basket is divided into two components—the farm value, accounting for about one-third of retail food costs, and the farm-to-retail spread, representing all costs incurred between the farm and the grocer's shelves.

1983—A Small Rise in Food Prices

In 1983, the farm value of food declined an average of 2 to 3 percent below 1982, the first decrease in 20 years (table 2). This resulted, in part, because record crop production, particularly of grains, in 1981 and 1982 created surpluses and lowered farm prices. Feed grain price declines encouraged increased livestock production last year, resulting in larger supplies of meat and lower prices.

Weak domestic and foreign demand further dampened farm prices. A worldwide recession discouraged farm product sales here and abroad. Furthermore, the strong U.S. dollar overseas meant higher prices for U.S. products relative to other exporting countries, forcing the loss of some foreign markets to competitors.

While the farm value of food declined in 1983, marketing costs increased by only 3 percent, less than half as much as 2 years ago and below 1982's increase of

Table 1. Changes in Food Price Indicators, 1981 through 1984

	1981	1982	1983P	1984F
Consumer Price Indexes	Percent			
All food	7.9	4.0	2.1	4-7
Food away from home	9.0	5.3	4.4	4-7
Food at home	7.3	3.4	1.1	3-6
Meat, poultry, and fish	4.1	4.0	-.7	3-6
Meats	3.6	4.8	-1.1	3-6
Beef and veal	.9	1.4	-1.5	2-5
Pork	9.3	12.9	-.9	5-8
Poultry	4.1	-1.8	1.2	5-8
Fish and seafood	8.3	3.6	1.2	1-4
Eggs	8.3	-2.8	4.7	15-20
Dairy products	7.1	1.4	1.2	0-3
Fats and oils	10.7	-2.8	1.3	5-8
Fruits and vegetables	12.0	5.5	.3	5-8
Sugar and sweets	7.9	-.2	1.9	3-6
Cereals and bakery products	10.0	4.5	3.2	4-7
Nonalcoholic beverages	4.2	2.8	1.9	2-5

P = preliminary

F = forecast

Table 2. Market Basket Statistics

Category	Relative weight	Changes from previous year					
		1979	1980	1981	1982	1983P	1984F
Percent							
Retail cost	100	11.7	7.2	7.7	3.8	1.1	3-6
Farm value	33	10.7	5.5	2.8	1.0	-2.3	4-7
Farm-to-retail price spread	67	12.3	8.3	10.5	5.1	3.0	2-5

P = preliminary.

F = forecast.

5.1 percent. Since marketing costs account for about two-thirds of the retail price of the market basket, smaller increases play a major role in holding down food prices.

About 50 percent of marketing costs are for labor. A slowing of the general inflation rate and the recession moderated increases in labor costs during the last 2 years. Labor contract settlements in the food industry have included smaller increases, and in some cases, decreases in wages and benefits. Cost-of-living in-

creases in existing labor contracts have also been lower, again reflecting a reduction in the inflation rate. Additionally, the minimum wage has not increased in the last several years. As a result, the labor component of marketing costs rose only about 4 percent last year, compared to 10 percent in 1981 and 7 percent in 1982 (table 3).

Packaging, transportation, fuel and power, and other components of marketing costs rose at a combined rate of about 1 percent in 1983. A slow rate of

Table 3. Major Food Marketing Costs

Category	Changes from previous year			
	1981	1982	1983P	1984F
	Percent			
Food marketing costs	11	5	3	4-7
Labor	10	7	4	3-6
Packaging	7	-2	0	3-6
Fuel and power	19	5	1	5-8
Transportation	16	7	1	3-6

P = preliminary.
F = forecast.

economic recovery held down demand for packaging materials, and prices averaged somewhat below levels of the previous year. Transportation rates also inched up only slightly, reflecting weak demand for these services and lower diesel fuel costs. Lower petroleum prices moderated the rise in the cost of electricity, while natural gas, the major type of energy used in food processing, averaged about 20 percent higher.

What About 1984?

Forecasts for 1984 indicate consumers will pay more for food, largely because of weather and economic conditions. A stronger economy will account for most of the increase. Real disposable (after tax) personal income is expected to rise by about 3 percent. Although modest, it is the strongest increase in recent years. As incomes rise, consumers may be willing to buy more food and higher priced products, particularly meats.

Last summer, the worst drought in 50 years shortened supplies and raised prices for corn, soybeans, and other feed grains. Producers acted to reduce total feeding costs by sending more animals to market, including some breeding stock. This increase in slaughter meant greater meat supplies and lower retail prices in late 1983 and early 1984. However, as

slaughter decreases and fewer animals are available to produce replacements for the market, retail prices should begin to rise by mid-1984. As market prices strengthen, farmers will begin rebuilding breeding herds by holding animals off the market. Then, meat supplies should fall even lower, putting further upward pressure on prices through the third quarter of 1984.

Food marketing costs are expected to rise slightly more than last year's moderate rate. Many labor contracts in food processing and retailing provide for wage increases in the range of 4 to 5 percent in 1984. Some meatpacker contracts hold wages constant through the end of the year. No rise in the minimum wage, which covers a large number of workers in food service establishments, is expected in 1984. However, the cost of Social Security insurance did increase on January 1, adding to labor costs. As the economic recovery strengthens, other marketing costs, such as packaging material and transportation, will rise as demand for these components increases. Similarly, energy costs are expected to increase. In total, food marketing costs should rise 4 to 7 percent above last year.

Most of the expected gain in food prices will occur in the second half of the year, with strong increases in the third quarter. Overall, higher meat prices in the second half of 1984 will add about 1 to 1.5 percentage points to the increase in the CPI for food. Retail pork prices will rise the most. Poultry prices are also expected to increase in the second and third quarters as demand shifts from relatively higher priced red meats to chicken. Broiler production should increase, however, as producers respond to greater demand.

Lower dairy price supports mandated by legislation passed in November 1983,

will help keep dairy product prices stable through the first half of 1984. The new legislation, however, also contains provisions to reduce milk production. As production declines, prices could increase in the second half of 1984. Current estimates indicate the CPI for dairy products may rise as much as 3 percent in 1984.

In 1984, the CPI for fruits and vegetables is forecast to advance 5 to 8 percent, with the largest increase in vegetable prices resulting from the smaller potato harvest in 1983. Also contributing will be an expected strong demand for fresh vegetables. Smaller crops of apples and California oranges will be responsible for higher fresh fruit prices during the year. Before the December freeze, the Florida orange crop promised near-record yields which would have meant larger supplies of frozen orange juice and a moderation of price increases for processed fruits. However, the freeze lowered orange production by 18 percent from the previous crop. Lower yields of juice from the damaged oranges will mean less frozen concentrated orange juice from Florida, but imported juice from Brazil will supplement supplies and help moderate price increases.

Stronger economic conditions and higher marketing costs will increase the CPI for cereals and bakery products this year. Increases in farm prices for food grains will also be responsible for a small share of the rise in retail prices.

Higher marketing costs will cause most of the moderate increase forecast for nonalcoholic beverage prices. Favorable weather should result in ample world coffee supplies and only minimal price increases. Soft drink prices will be higher because of increases in marketing costs and price support levels for sugar. Strong competition among soft drink manufacturers, however, should dampen price increases. □

Farm-to-Retail Spreads Boost Produce Prices the Most

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In 1983, fruits and vegetables cost consumers over three times as much as 20 years earlier. Price increases over the years are attributable to increases in farm value and costs of marketing products after they left the farm. However, processing, shipping, retailing, and other marketing costs, known as the farm-to-retail spread, rose more than the farm value.

A closer look shows that between 1963 and 1983, the farm value of fresh produce gained 163 percent, while the farm-to-retail spread climbed 262 percent. Together, they led to a 231-percent increase in the retail price (table 1). During those years, the farm value of processed fruits and vegetables advanced 160 percent, with a 194-percent increase in processing and marketing costs. This resulted in a 189-percent rise at retail.

Marketing's Share of Produce Prices

As the farm-to-retail costs outpaced farm values, the farmer's share of the consumer's dollar spent on fresh fruits and vegetables declined from 33 percent in 1963 to 26 percent by 1983. On the processed side, the farmer's share slipped from 18 to 16 percent.

Marketing costs tend to take a bigger piece of the consumer dollar spent for processed products because of the extra services involved—cooking and canning, freezing, or dehydrating, as well as packaging and shipping. However, even among processed products, the farm-to-retail price spread varies (table 2). For frozen items, it's usually larger than for canned products because of higher processing and storage costs. Canned juices, however, are an exception. Since they consist largely of water, the greater bulk makes them relatively more expensive to handle and ship than a frozen concentrate yielding the equivalent amount of juice.

Efficient production practices and higher yielding plant varieties helped farmers to hold their costs somewhat in check over the years and increase production. This has kept the farm value of fruits and vegetables below what they would have been in the absence of such advances. For example, widespread use of plastic mulch reduced fertilizer losses and raised yields, curtailing per-unit production costs for tomatoes, peppers, and several other vegetables. Increased use of

machines for harvesting also helped lower farm costs.

Changes at several stages of the processing and distributing system slowed increases in the farm-to-retail spreads for processed products more than was occurring for fresh items. During 1963-83, many small and less efficient processing firms closed and others expanded, adding new and better equipment and methods; actions which helped dampen the increases in processing costs. For instance, batch processing, in which the raw product is partially processed and held in bulk for later finishing, has extended the processing season, especially for tomato products and frozen vegetables. This practice reduces the per-unit processing costs by spreading fixed expenses, such as those for the plant and equipment, over a larger volume of output.

More recently, the 1980 deregulation of transportation rates for fruits and vegetables may also have helped check the rise in marketing costs of processed products compared with those for fresh items. In 1963, the Interstate Commerce Commission regulated rates for rail shipments of all fruits and vegetables, but regulated trucking rates only for processed items, thus eliminating price competition between these haulers. Deregulation extended price competition to haulers of processed items, though the extent of its impact on retail prices has not been determined.

Major Cost Components

Increases in the farm-to-retail spread for fruits and vegetables primarily reflect changes in industry input costs, productivity, and profits. Cost data for the fruit and vegetable industry are not available, but ERS has developed a marketing cost index (MCI) for all food marketing that measures changes in input costs (though not for depreciation of buildings and equipment, long-term debt, or profits).

Labor is the largest cost of food marketing, comprising 47 percent of the total MCI. The MCI identifies costs of food

Table 1. Index of Retail Cost, Farm Value, Farm-To-Retail Spread, and Farm Value Share of Retail Cost for Fresh and Processed Fruits and Vegetables, 1963 and 1983

Year	Farm value	Farm retail-spread	Retail prices	Farm value share
		1967 = 100		Percent
Fresh				
1963	94	90	91	33
1983	247	326	301	26
Percentage change				
1963 to 1983	163	262	231	
Processed				
1963	97	101	100	18
1983	252	297	289	16
Percentage change				
1963 to 1983	160	194	189	

Source: USDA, ERS, market basket statistics



containers and packaging materials as responsible for 15 percent of the total processing and marketing costs, followed by transportation at 10 percent, and energy, 8 percent. Other cost components include advertising, maintenance and repair service, insurance, short-term debts, rent, and miscellaneous supplies and services.

Prices for inputs purchased by the food industry rose steadily from 1963 to 1983, and tended to follow the movement in the inflation rate for the entire economy. Over the 20-year period, the MCI rose a total of 280 percent. This was greater than the rise in the farm-to-retail price spread for fruits and vegetables, particularly the price spread for processed items

which rose 194 percent. The labor component of the MCI rose 316 percent from 1963 to 1983. The smaller rise in the price spread suggests that rising labor and other costs were partially offset by gains in productivity.

Output per unit of labor in all food manufacturing has showed a small, but steady increase of about 2 percent annually over the past decade. This trend largely reflects the substitution of capital for labor as a consequence of new technology. In the fruit and vegetable processing industry, the productivity index, which measures changes in the output per employee hour, has increased an

average of approximately 3 percent annually over the past two decades. The increase in this index was quite rapid in the 1960's and early 1970's, but has leveled off in recent years.

Labor productivity at the retail level has increased little in recent years, despite the automation of checkout work and use of data processing systems. However, these and other labor-saving efforts, such as the movement away from the traditional supermarkets to warehouse stores with bulk displays, limited assortments, and reduced customer service, have held down the rise in labor costs.

Profit margins for food processors and retail food chains are low relative to input

costs. The Federal Trade Commission reported that food manufacturers' profits after taxes averaged 3.1 percent of sales in the first 9 months of 1983. This profit margin was near the long-term average for the industry.

Profit margins suffered during the recent recession due to reduced sales and inflation that continued to increase operating costs. The trend toward greater consumption of fresh fruits and vegetables at the expense of canned products, and consumers' shift to buying more private label brands, also contributed to lower returns for major food processors.

Outlook

The farm value of fruits and vegetables was 8 percent lower last year than in 1982. In addition, the MCI of labor and costs of other important services and materials used in processing and marketing fruits and vegetables increased less than 3 percent during 1983, curtailing the rise in the farm-to-retail spread, and helping hold retail price increases of fruits and vegetables to only 0.3 percent in 1983.

This year, continued increases in demand for fresh fruits and vegetables should boost farm values for these items 5 to 10 percent. Labor costs and prices for other marketing components are projected to increase more slowly than in the 1970's, which will tend to have a moderating effect on changes in retail prices. Prices for most processed products will be held down early in 1984 while consumption is from 1983 supplies. Overall, however, rising consumer demand for fresh vegetables and weather-related reductions in citrus crops will boost 1984 retail prices for fruits and vegetables 5 to 8 percent. □

Table 2. Retail Price, Farm Value, and Farm-To-Retail Price Spreads for Selected Fresh and Processed Fruits and Vegetables, 1982-83

Item	Farm value ¹	Price spreads		Retail price
		Shipping point-wholesale	Wholesale-retail	
		Percent		Cents
Fresh				
Carrots, CA (lb.)	28	18	54	42.1
Celery, CA (lb.)	32	26	42	34.6
Lettuce, (head)	36	25	39	72.6
Onions, NY (lb.)	30	6	64	38.3
Peppers, FL (lb.)	42	16	41	87.5
Apples, WA, Delicious (lb.)	39	19	42	62.4
Grapefruit, FL (lb.)	37	18	45	25.3
Lemons, CA (lb.)	32	23	45	75.7
Oranges, CA (lb.)	42	26	32	44.2
Oranges, FL (lb.)	49	29	22	24.7
Average	36	20	44	
		Farm-processor	Processor-retail	
Processed				
Beans (303 can)	14	50	36	44.8
Beans (9 oz. pkg. frozen)	10	48	42	57.0
Corn (303 can)	14	49	37	51.8
Corn (10 oz. pkg. frozen)	14	43	43	57.0
Peas (303 can)	18	50	32	44.2
Peas (10 oz. pkg. frozen)	12	43	45	62.5
Orange juice (46 oz.)	29	30	40	136.2
Orange juice, frozen conc. (6 oz.)	19	37	44	59.0
Average	17	43	40	

Source: USDA, ERS

¹The figure for fresh produce may be higher than what farmers receive for the commodity because the farm value of these items often includes payment for some marketing costs such as grading, sizing, packaging, and selling, in addition to the normal farm operations of production and harvesting.

Nutrient Content of the U.S. Food Supply, 1982

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Relatively small changes—generally 2 percent or less—occurred in the levels of nutrients in the food supply between 1981 and 1982. Declines occurred for food energy and eight nutrients; two nutrients increased slightly; and four nutrients remained at their 1981 levels (table 1). Between 1967-69 and 1982, however, larger changes occurred. Levels for food energy and seven nutrients increased 1 to 14 percent and levels for five nutrients declined 1 to 8 percent. Levels for two nutrients were the same in 1982 and in 1967-69, despite some fluctuation during the period.

The historical series, "Nutrient Content of the U.S. Food Supply," compiled by the Human Nutrition Information Service (HNIS) of USDA, contains estimates of changes in the per capita levels of nutrients and the percentage of nutrients from major food groups since 1909 (table 2). HNIS researchers use their information on the nutrient composition of foods and USDA's Economic Research Service (ERS) data on the quantities of foods available for consumption to derive per capita levels of nutrients. The amounts of food available for consumption are determined by subtracting data on exports, year-end inventories, non-food use, and military procurement from data on production, imports, and beginning inventories. Subsequent food losses during processing, marketing, and home use are not considered. The quantity of food available for consumption, then, is referred to as "used" rather than "ingested."

Nutrient Levels in 1981 and 1982

The levels of calcium and ascorbic acid were higher in 1982 than in 1981, though only by about 1 percent. The gain in calcium was due primarily to greater use of American-type cheese which more than offset the loss of calcium from the continuing decline in use of fluid whole milk. The higher level of ascorbic acid was attributed to slightly increased use of certain vegetables, especially the fresh dark-green, deep-yellow group.

The 5-percent decline in the level of vitamin B₁₂ was due to decreased use of edible offals (liver and other organ meats), clams, and to a lesser extent, pork. While per capita use of offals and clams is quite small compared to pork, they are concentrated sources of vitamin B₁₂. Therefore, small changes in their use have a noticeable effect. The relatively large decrease in pork use—6 pounds per capita—also contributed to the decline in thiamin, riboflavin, niacin, iron, protein, fat, and food energy. Slight decreases in the use of fluid whole milk and offals in 1982 also contributed to a 1-percent decline in riboflavin, while use of less lard contributed to the lower fat level.

The small decline in the carbohydrate level was attributed to a 5-percent decrease in the use of refined sugar, from 79.5 pounds per capita in 1981 to 75.3 pounds in 1982. The use of corn syrups rose 8 percent during this period, primarily from high fructose corn syrup

(HFCS). The gain in carbohydrate from this source, however, was not sufficient to offset the loss due to the use of less refined sugar.

Nutrient Levels in 1967-69 and 1982

Changes in nutrient levels tend to be greater over a long period than from year to year. Between 1967-69 and 1982, the largest gain was for ascorbic acid—14 percent—due to increased use of citrus fruits and dark-green, deep-yellow vegetables. Frozen orange juice, a concentrated source of ascorbic acid, was the chief source of the increase. Its use rose 72 percent, from 19.5 pounds per capita in 1967-69 to 33.5 pounds in 1982. Non-citrus fruits, while used in considerably larger quantities than citrus fruits, are less concentrated sources of ascorbic acid and so, provide a smaller share of the total. Higher levels of ascorbic acid also resulted from a 4-pound increase in the

Table 1. Nutrients Available for Consumption, Per Capita Per Day¹

Nutrient (unit)	1982 as a percent of: ²					
	1909-13	1967-69	1981	1982	1967-69	1981
Food energy (kcal)	3,470	3,290	3,410	3,380	103	99
Protein (g)	100	99	100	99	100	99
Fat (g)	124	157	164	162	104	99
Carbohydrate (g)	490	377	391	388	103	99
Calcium (g)	0.75	0.91	0.87	0.88	98	101
Phosphorus (g)	1.51	1.52	1.48	1.47	97	100
Iron (mg)	15.0	16.6	16.8	16.6	100	99
Magnesium (mg)	402	339	330	331	98	100
Vitamin A value (IU)	7,900	7,800	7,700	7,700	99	100
Thiamin (mg)	1.63	1.95	2.12	2.07	106	98
Riboflavin (mg)	1.78	2.26	2.30	2.28	101	99
Niacin (mg)	19.0	23.6	25.8	25.6	108	99
Vitamin B ₆ (mg)	2.17	1.94	1.97	1.97	102	100
Vitamin B ₁₂ (mcg)	8.21	9.4	9.1	8.7	92	95
Ascorbic Acid (mg)	106	104	117	118	114	101

¹Quantities of nutrients are computed by Human Nutrition Information Service, Consumer Nutrition Division, on the basis of estimates, prepared by the Economic Research Service, of per capita civilian food consumption (retail weight). No deductions are made in nutrient estimates for loss or waste of food in the home, use for pet food, or for destruction or loss of nutrients during the preparation of food. Data include estimates of home garden produce and iron, thiamin, niacin, and riboflavin added to flour and cereal products; other nutrients added primarily as follows: Vitamin A value to margarine, milk of all types, flavored milk extenders; vitamin B₆ to cereals, meal replacements, infant formulas; vitamin B₁₂ to cereals; ascorbic acid to fruit juices and drinks, flavored beverages and dessert powders, flavored milk extenders, and cereals.

²Percentages are based on unrounded data.

Table 2. Contribution of Major Food Groups to Nutrient Levels, 1967-69 and 1982

Food group	Food energy	Protein	Fat	Carbo- hydrate	Cal- cium	Phos- phorus	Iron	Magne- sium	Vita- min A value	Thia- min	Ribo- flavin	Nia- cin B ₆	Vita- min B ₁₂	Vita- min acid	Ascor- bic
Percent															
1967-69															
Meat, poultry, and fish	21.5	41.8	37.3	0.1	4.0	27.2	31.9	13.2	23.0	30.6	23.5	47.8	40.3	69.4	2.1
Eggs	2.2	5.8	3.2	0.1	2.6	6.0	6.1	1.4	6.7	2.5	5.9	0.2	2.5	9.4	0.0
Dairy products, excluding butter	11.0	21.6	12.3	6.8	75.5	35.2	2.3	21.4	12.7	8.9	41.3	1.6	11.2	20.0	4.5
Fats and oils, including butter	17.0	0.1	40.2	(1)	0.4	0.2	0.0	0.4	8.5	0.0	0.0	0.0	0.1	0.0	0.0
Citrus fruits	0.8	0.4	0.1	1.6	0.9	0.6	0.8	1.9	1.2	2.4	0.4	0.7	1.3	0	23.9
Noncitrus fruits	2.2	0.6	0.2	4.9	1.2	1.1	3.7	4.0	6.3	1.9	1.6	1.8	6.5	0	12.6
Potatoes and sweetpotatoes	2.9	2.4	0.1	5.4	1.1	3.7	4.4	7.4	5.9	5.1	1.6	6.7	10.9	0	16.7
Dark-green, deep-yellow vegetables	0.2	0.3	(1)	0.4	1.1	0.5	1.3	1.7	21.2	0.7	0.8	0.5	1.8	0	8.1
Other vegetables, including tomatoes	2.2	3.1	0.3	4.4	4.6	4.7	9.3	10.2	12.9	6.4	4.5	5.5	10.7	0	30.1
Dry beans and peas, nuts, soy products	2.9	5.0	3.5	2.1	2.7	5.8	6.7	11.1	(1)	5.3	1.8	6.5	4.7	0	(1)
Grain products	19.9	18.4	1.4	36.5	3.5	12.8	29.9	18.5	0.4	36.1	17.8	23.5	9.8	1.2	0
Sugars and other sweeteners	16.3	(1)	0	36.9	1.2	0.2	0.7	0.2	0	(1)	0.1	(1)	0.1	0	(1)
Miscellaneous ²	0.8	0.4	1.3	0.7	1.1	2.0	2.9	8.5	1.3	0.1	0.8	5.2	0.1	0	2.0
1982															
Meat, poultry, and fish	20.1	42.4	34.0	0.1	4.1	27.9	30.7	13.7	21.0	26.0	22.2	45.2	40.0	70.0	1.9
Eggs	1.8	4.8	2.6	0.1	2.3	5.1	5.1	1.2	5.6	1.9	4.9	0.1	2.0	8.5	0
Dairy products, excluding butter	10.2	21.3	11.7	5.7	72.4	33.7	2.6	20.2	13.2	7.4	37.3	1.3	10.8	19.7	3.3
Fats and oils, including butter	19.1	0.1	44.7	(1)	0.4	0.2	0	0.4	8.4	0	0	0	0.1	0	0
Citrus fruits	1.0	0.5	0.1	2.0	1.0	0.8	0.8	2.4	1.6	2.8	0.5	0.8	1.4	0	26.7
Noncitrus fruits	2.2	0.7	0.3	4.8	1.3	1.3	4.0	4.5	6.0	1.9	1.8	1.7	7.5	0	12.5
Potatoes and sweetpotatoes	2.9	2.4	0.1	5.5	1.1	3.8	4.9	7.4	4.8	5.0	1.5	6.3	10.0	0	14.3
Dark-green, deep-yellow vegetables	0.2	0.5	(1)	0.5	1.4	0.7	1.5	2.1	22.9	0.8	1.1	0.6	2.3	0	10.7
Other vegetables, including tomatoes	2.2	3.1	0.3	4.2	4.8	4.8	9.2	10.4	13.5	6.1	4.5	5.1	10.6	0	27.0
Dry beans and peas, nuts, soy products	2.8	5.0	3.7	1.7	2.7	5.7	5.9	11.2	(1)	4.6	1.8	6.5	4.3	0	(1)
Grain products	20.0	18.9	1.3	36.7	3.8	13.4	32.1	19.2	0.4	43.4	23.8	28.9	10.9	1.7	0
Sugar and other sweeteners	16.9	(1)	0	38.2	4.0	0.8	0.7	0.2	0	(1)	(1)	(1)	(1)	0	(1)
Miscellaneous ²	0.7	0.4	1.2	0.5	0.9	1.7	2.4	7.0	2.4	0.1	0.6	3.4	0.1	0	3.5

¹Less than 0.05 percent.²Includes coffee, chocolate liquor equivalent of cocoa beans, and fortification of products not assigned to a food group.

per capita use of fresh dark-green, deep-yellow vegetables.

Higher levels for niacin, up 8 percent, thiamin, 6 percent, and riboflavin, 1-percent, were primarily due to the revised standards for enrichment of white flour effective in 1975. Moreover, use of grain products rose from 144.9 pounds per capita in 1967-69 to 149.6 pounds in 1982, with greater rice consumption providing most of the increase. The marked increase in use of poultry, from 45.8 to 64.0 pounds, contributed substantially to the gain in niacin. Increased use of poultry was also a major factor in the 2-percent rise in the vitamin B₆ level, although fruits and grain products also contributed.

The 4-percent increase in fat is attributed to greater use of salad and cooking oils, shortening, edible beef tallow, and poultry, in that order. Use of salad and cooking oils increased 46 percent, rising from 15.9 to 23.3 pounds per capita per year. The increase in fat from these oils alone was the same as the combined increases from shortening, edible beef tallow, and poultry. Increased contributions of fat from all these sources more than offset decreased amounts from lard, red meats, and butter.

The 3-percent gain in the carbohydrate level resulted primarily from increased use of corn syrups, and to a lesser extent, grain products. This gain offset a substantial decline in carbohydrate from decreased use of some dairy products. Use of corn syrups increased, particularly after the introduction of HFCS in the late 1960's. Use of corn syrups rose from 16.0 pounds per capita in 1967-69 to 60.0 pounds in 1982, while use of HFCS alone rose from 1 to 37.6 pounds during this period. Grain products provided more carbohydrate chiefly due to the increase in rice consumption from 7.9 pounds per capita to 11.8 pounds. The higher carbohydrate and fat levels together produced a 3-percent rise in the level of food energy in the food supply.

Vitamin B₁₂ showed the largest decline—8 percent—due to decreased use of edible offals, and to a lesser extent, eggs and some dairy products. Less use of

fluid whole milk and dairy products other than cheese was a major factor in declines in the levels of three minerals—phosphorus, calcium, and magnesium. The increase in use of cheese, from 15.2 pounds per capita in 1967-69 to 24.2 pounds in 1982, and in lowfat milks, from 50.0 to 102.9 pounds, did not offset all of the decline in these minerals. Part of the decline in phosphorus was also attributed to decreased use of red meat, and to a lesser extent, eggs. A substantial part of the decline in the magnesium level was attributed to decreased use of coffee, from 14.6 to 10.1 pounds per capita. The slightly lower level of vitamin A was due primarily to decreased use of offals and fluid whole milk. This decline was not offset by gains from more cheese, poultry, and certain vegetables.

Trends in Dietary Fatty Acids And Cholesterol

Fatty acids and cholesterol are important in the proper function of the body, but desirable amounts of these substances in the diet are currently subjects of considerable controversy. Researchers at HNIS have analyzed national food supply data for trends in the amounts and sources of fatty acids and cholesterol available for consumption during this century.

Fatty acids are chemical components of fat that provide energy (kilocalories) and act as carriers for the fat soluble vitamins A, D, E, and K. They are involved in the regulation of widely diverse physiological processes, acting as precursors of other compounds and as structural and functional components of cell membranes. Fatty acids are classified as saturated, monounsaturated, or polyunsaturated, depending on their concentration of hydrogen atoms. The greater the concentration of hydrogen atoms, the greater the degree of saturation. In foods, oleic acid is the most common monounsaturated fatty acid and linoleic acid, the most common polyunsaturated fatty acid.

Cholesterol is a fat-like substance found only in foods of animal origin. It is necessary in the formation of several sub-

stances, such as vitamin D and hormones. Another important function is as part of the covering of nerve fibers. Cholesterol is produced by the human body in sufficient quantities to meet the body's needs, but it is also present as a natural component of diets containing foods of animal origin.

Fatty acids

The level of total fat in the food supply increased about 30 percent since the beginning of the century, rising from 124.5 to 162.3 grams per capita per day between 1909-13 and 1982 (figure 1). During this period, the proportion of calories provided by fat increased from 32 to 43 percent, while the proportion from carbohydrate declined reciprocally, and the proportion from protein remained relatively unchanged.

Three food groups—fats and oils; meat, poultry, fish; and dairy products—have accounted for about 90 percent of the fat in the food supply since the beginning of the century, although the proportion provided by each has changed (figure 2). The increased amount of fat from vegetable sources accounts for the rise in the total fat level of the food supply; however, animal sources still contribute the largest proportion. Early in the century, contributions of fat provided by animal and vegetable sources were 83 and 17 percent, respectively; in 1982, the contributions were 57 and 43 percent. The shift in the food sources of fat, as well as the increase in the total fat level, directly affected the fatty acid content of the food supply.

Saturated fatty acids and oleic acid each contributed 40 percent of the fat in the 1909-13 food supply, but by 1982 the proportion from saturated fatty acids had dropped to 33 percent, while the proportion from oleic remained unchanged. During that time, the small proportion of fat provided by linoleic acid more than doubled—from 7 to 16 percent. As a result of these shifts and the increase in the total fat level, the caloric contributions of these fatty acids also changed. In 1909-13, the proportions of food energy

Figure 1

Fat, Fatty Acids, and Cholesterol: Changes in the U.S. Food Supply Since 1909-13

Percent of 1909-1913

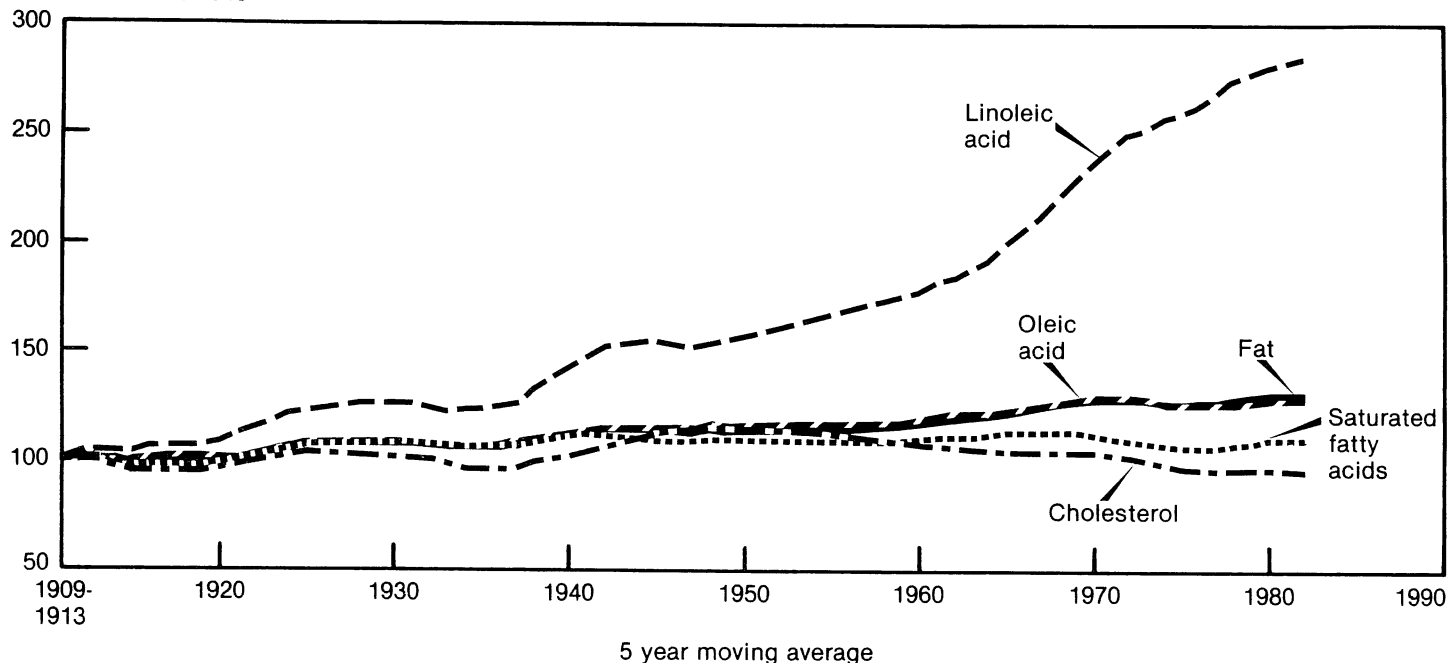
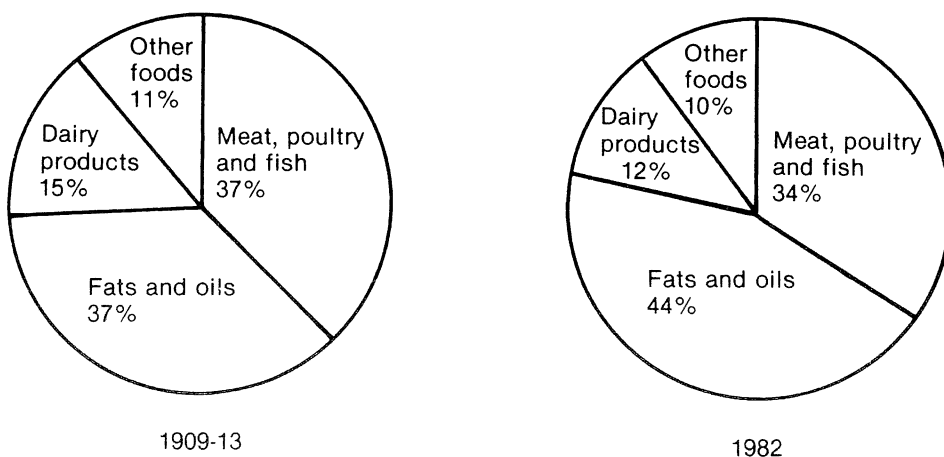


Figure 2

Total Fat: Proportionate Contributions by Major Food Groups

provided by the fatty acids were: saturated fatty acids, 13 percent; oleic acid, 13 percent; and linoleic acid, 2 percent. In 1982, saturated fatty acids provided 14 percent; oleic, 17 percent; and linoleic, 7 percent.

Saturated fatty acids — Between 1909-13 and 1982, the quantity of fat in the food supply provided by saturated fatty acids increased 9 percent from 49.8 to 54.1 grams per capita per day (figure 3). For the first half of the century, the fats and oils group was the leading source of saturated fatty acids. However, the margin was narrow, and by the early 1960's, the meat, poultry, fish group became the leading source, with fats and oils ranking second. The dairy products group also contributed significant quantities of saturated fatty acids—18-20 percent of the total for most years. However, in 1946, when consumption of dairy products was at a peak level, this group provided 27 percent of the saturated fatty acids in the food supply.

The decline in saturated fatty acids from the fats and oils group resulted primarily from a decline in consumption of lard (direct use) and butter. Together, use of these products decreased from 29.4 to 7.1 pounds per capita per year between 1909-13 and 1982. Within the fats and oils group, the proportionate contribution of saturated fatty acids from butter and direct use of lard decreased from 82 to 21 percent during this time. On the other hand, the contribution of saturated fatty acids from margarine, shortening, and other edible oils increased dramatically as use of the products rose. In addition, direct use of beef tallow began in the late 1970's, mainly for deep-fat frying by the food and restaurant industries. By 1982, beef tallow accounted for 4 percent of the saturated fatty acids in the fats and oils group.

Within the meat, poultry, fish group, roughly 85 percent of the saturated fatty acids has been contributed jointly by beef and pork, with pork the primary source throughout most of the century. For a brief period in the mid-1970's, beef ranked first when per capita use of beef reached a peak of 94.4 pounds in 1976 and pork consumption was 53.7 pounds, near a record low. Trends in consumption changed, however, and in 1979, pork resumed its lead as a source of saturated fatty acid.

Among the components of the dairy products group, fluid whole milk was the chief source of saturated fatty acids until 1980, when cheese assumed the lead. Between 1909-13 and 1982, the proportion of saturated fatty acids from whole milk was halved from 60 to 29 percent. The share from cream dropped from 25 to 4 percent. On the other hand, the proportion of saturated fatty acids provided by cheese increased fourfold to 38 percent in 1982. The contributions of saturated fatty acids from other dairy products, although smaller than from whole milk and cheese, also increased over the years. In 1982, ice cream and other frozen desserts accounted for 16 percent of the saturated fatty acids from dairy products, fluid lowfat milks for 11

percent, and canned and dry milks, for 3 percent.

Oleic acid—Between 1909-13 and 1982, fat provided by oleic acid increased 28 percent—from 50.3 to 64.5 grams per capita per day (figure 4). Throughout the century, the fats and oils group has been the leading source of oleic acid. In 1909-13, this group provided 20.5 grams per capita per day or 41 percent of the oleic acid in the food supply; in 1982, the level of oleic acid had increased to 29.4 grams per capita per day or 46 percent of the total. The contribution from the meat, poultry, fish group, which ranked second as a source of oleic acid for most years, rose from 19.9 grams in 1909-13 to 23.3 grams per capita per day in 1982. However, during this period, the proportion of the total oleic acid from this group declined from 40 to 36 percent. Dairy products provided the same small contribution of oleic acid in 1909-13 and in 1982—about 6 grams—but their proportionate share declined from 12 to 10 percent. The downward trend in the proportion of oleic acid from the dairy and meat, poultry, fish groups reflects the much larger increase from fats and oils.

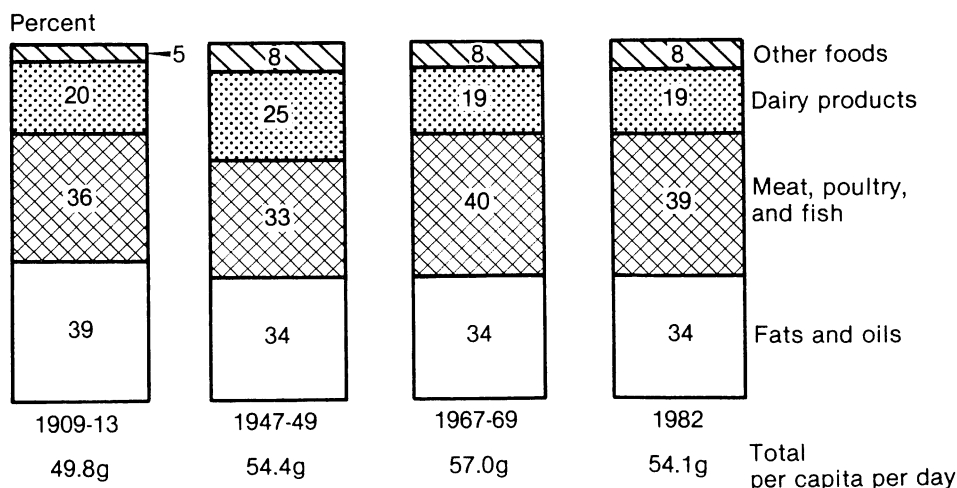
Within the fats and oils group, the chief sources of oleic acid in 1909-13 were lard, shortening, and butter which contributed almost equal proportions—33, 32, and 29 percent, respectively. In 1982, the respective proportions were 5, 41, and 5 percent, attesting to the dramatic changes in use of these foods. Since the early 1960's, edible oils also have become important sources of oleic acid, accounting for 20 percent of the oleic acid from this food group in 1967-69 and 30 percent in 1982.

Important changes in the sources of oleic acid also occurred within the meat, poultry, fish group, and dairy products group. Between 1909-13 and 1982, the proportion of oleic acid in the meat, poultry, fish group from pork fluctuated downward from 64 to 51 percent; the share from beef rose from 26 to 34 percent; and the share from poultry rose from 4 to 11 percent. In 1909-13, whole milk and cheese provided 60 and 9 percent, respectively, of the oleic acid in the dairy group; in 1982, the proportions had changed to 29 and 38 percent, reflecting changes in consumption.

Linoleic acid—This fatty acid is considered essential; that is, it must be pro-

Figure 3

Saturated Fatty Acids in the U.S. Food Supply by Food Group



vided in the diet or deficiency symptoms will develop. The quantity of linoleic needed by humans to prevent deficiency is easily met by the average diet, but the optimal proportion of this fatty acid in the diet relative to total dietary fat and caloric intake remains controversial. Suggested intakes have ranged from 1-10 percent of caloric intake. The level of linoleic acid in the food supply has more than doubled since 1909-13, increasing from 9.0 to 25.5 grams per capita per day in 1982 (figure 5). In 1982, linoleic acid provided 7 percent of the total caloric content of the food supply.

Throughout the century, the fats and oils group has been the major source of linoleic acid. Increased use of certain foods in this group is primarily responsible for the overall rise in the level. Between 1909-13 and 1982, the amount of linoleic acid contributed by the fats and oils group increased from 3.5 to 18.6 grams per capita per day. During this time, the amount of linoleic acid provided by the meat, poultry, fish group also increased, but to a lesser extent—rising from 2.9 to 4.0 grams per capita per day—while the small quantity from dairy products remained relatively constant. However, the percentage of total linoleic acid from the meat, poultry, fish, and the dairy products groups declined due to the greatly increased proportion from the fats and oils group.

Increased use of vegetable fats was the most important factor influencing the level of linoleic acid in the food supply. Between 1909-13 and 1982, use of edible oils, primarily salad and cooking oils, increased from 1.5 to 23.3 pounds per capita per year. In 1982, these oils accounted for 65 percent of the linoleic acid from the fats and oils groups. The proportion of linoleic acid in this food group from margarine, although small compared with that from edible oils, tripled to 18 percent in 1982. On the other hand, the proportion of the linoleic acid in the fats and oils group coming from direct use of lard declined sharply from 41 to 2 percent.

Figure 4

Oleic Acid in the U.S. Food Supply by Food Group

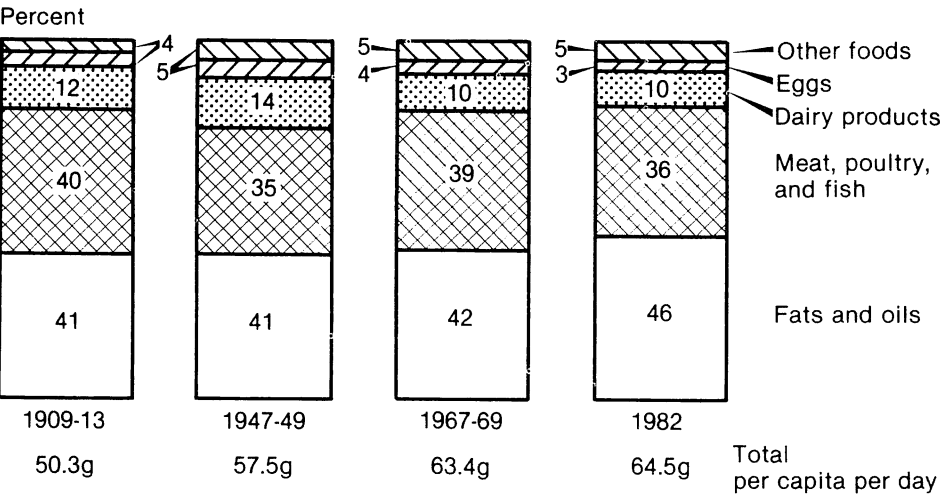
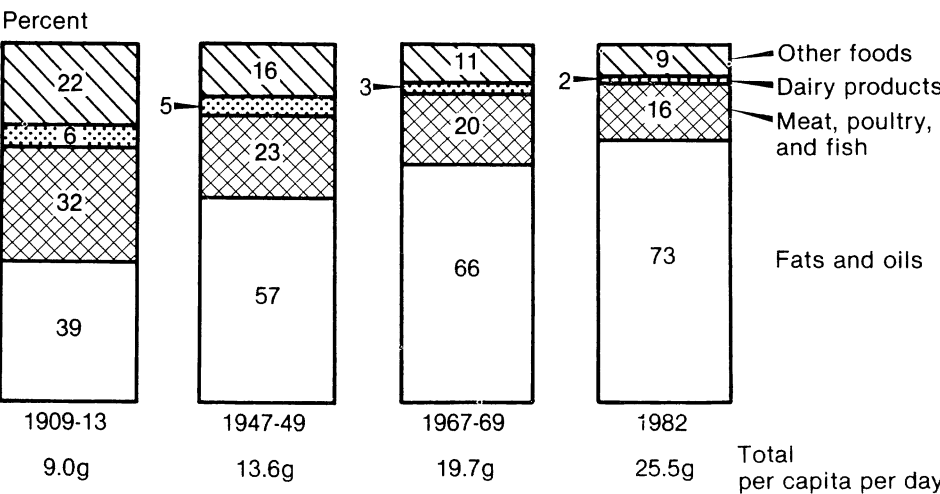


Figure 5

Linoleic Acid in the U.S. Food Supply by Food Group



Within the meat, poultry, and fish group, pork and chicken are the major sources of linoleic acid. This fatty acid is also provided by other foods, such as eggs and nuts, but their contribution is small compared with that from fats and oils.

Cholesterol

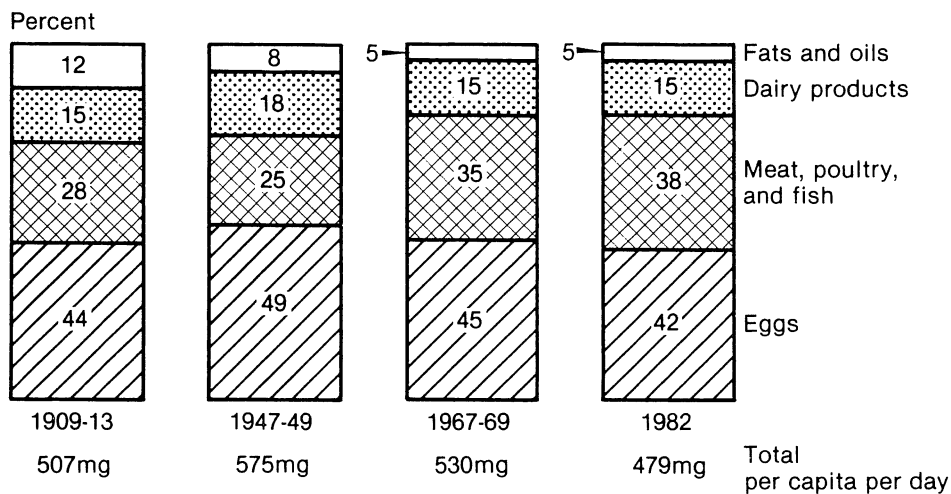
The cholesterol level of the food supply has fluctuated during this century. It reached its lowest level of 464 milligrams per capita per day in 1917 and again in 1935. Its peak level of 596 milligrams per capita per day occurred in 1945. Since then, the level of cholesterol in the food supply has fluctuated downward to 479 milligrams per capita per day in 1982.

Throughout the century, cholesterol has been provided by four food groups—eggs; meat, poultry, fish; dairy products; and fats and oils—in that order (figure 6). However, the share of total cholesterol contributed by eggs and the fats and oils group declined over the years, while the proportion from the meat, poultry, fish group increased and that from dairy products remained relatively constant.

The most important factor tending to lower the level of cholesterol in the food supply is decreased use of whole milk, eggs, butter, and lard. Cholesterol provided by eggs was highest in 1951 (295 milligrams per capita per day) when use of eggs peaked. Thereafter, cholesterol from use of eggs declined 32 percent to 200 milligrams per capita per day in 1982. Although the fats and oils group was the major source of fat in the food supply throughout almost all of the century, this group accounted for the smallest proportion of the cholesterol, and this proportion has declined due to the shift from use of animal to vegetable fats.

Figure 6

Cholesterol in the U.S. Food Supply by Food Group



The meat, poultry, fish group accounted for a larger proportion of the cholesterol in the food supply in 1982 than at the beginning of the century. Most of the rise is attributed to increased use of beef and poultry. Pork was the largest contributor of cholesterol in this group until the mid-1950's when it was surpassed by beef. Cholesterol from beef use reached a peak of 65 milligrams per capita per day in 1976, but by 1982 the contribution of cholesterol from beef had declined 18 percent to 53 milligrams per capita per day. During this century, use of poultry increased dramatically, and in

1982, the proportion of the cholesterol from poultry was 10 percent, slightly larger than the 8 percent contributed by pork. Dairy products provided between 15 and 18 percent of the cholesterol in the food supply between 1909-13 and 1982. This relative stability is noteworthy in view of the major changes in consumption within this group. However, the decline in cholesterol from decreased use of fluid whole milk and cream was offset by the rise in cholesterol from increased use of cheese, lowfat milks, and frozen desserts. □

Food Away From Home and the Quality of the Diet

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Eating out is a growing trend in America. The share of the food dollar we spend to eat away from home increased from 28 percent in 1962 to over 37 percent in 1982, and is expected to reach 45 percent by 1990.

Conventional restaurants take in almost 40 percent of consumers' food expenditures away from home. Spending for meals at fast food outlets accounts for another 30.1 percent; these outlets represent the fastest growing source for away from home food expenditures—increasing from 7.5 percent in 1954. Meals served at institutions, such as hospitals, schools, or similar outlets, represent 13.5 percent, while 3 percent goes into vending machines. Other outlets such as hotels and recreational places account for the remaining 14.7 percent.

Who's eating out and what's the effect on their diet? The 1977-78 USDA Nationwide Food Consumption Survey (NFCS) answers the first question by identifying the types, quantities, and sources of foods eaten during a 3-day period by a representative sample of almost 10,000 people. The data included meals consumed at restaurants, schools, and similar institutions—even those eaten at other people's homes.

The survey revealed that persons between 13 and 21 ate 21 percent of their food away from home; those from 22 to 40 ate 18 percent. Single males, 23 to 34, ranked first—eating 28 percent of their meals and snacks away from home. Females, 15 to 18, also had one of the highest shares, 23 percent. Persons 60 and over averaged eating only 8 percent of their food outside the home.

Researchers at Cornell University recently developed a model to help answer the second question: what is the effect of eating away from home on nutrient intake? Using data from the NFCS, they estimated the change in the consumption of protein, carbohydrate, fat, calcium, iron, vitamins A and C, and thiamin associated with eating out.

Nutrient Intake Declines

The Cornell analysis found that nutrient intake was lower for those who ate some of their meals away from home. The study also found no significant link between the share of calories consumed away from home and fat intake, suggesting that while Americans eat out more, the types of foods chosen are not significantly contributing to overconsumption of fat.

These results, though, may actually understate the impact of eating out because there was a significant underreporting of calories by the individuals surveyed. On average, across all age groups, people reported eating less than the recommended dietary allowances (RDA) of calories—particularly women who reported eating only 80 percent of the RDA for their age. This level of caloric intake is inconsistent with the incidence of overweight among the population. It is suspected that people underreported foods eaten away from home, beverages, and snacks, such as potato chips and soft drinks, that are often high in calories and fat. Nonetheless, the analysis provides an indication of the minimum impact of eating foods away from home.

Individuals between 13 and 40 missed out on the most nutrients by eating out.

For example, among just the 13- to 21-year-olds, nutrients, except vitamin A, declined as calories eaten away from home increased. Table 1 shows vitamin C intake fell by 15 percent of the RDA, thiamin, 9 percent; calcium, 4 percent; and iron, 3 percent, for each meal eaten away from home.

The 22 to 40 age group consumed fewer of all nutrients. Eating one meal a day away from home cut their vitamin C by 14 percent of their RDA. Similarly, vitamin A declined by 15 percent for males and 19 percent for females.

The greatest change in nutrient intake occurred for the over-60 group. For each additional meal eaten away from home, calcium fell by 10 percent, vitamin C by 32 percent, and vitamin A, 14 percent. However, since few meals were eaten out, there was no significant impact on their overall diets.

The Cornell researchers also determined that people who eat out could get a nutritionally adequate diet, but only at the expense of eating more calories. Technically, this is referred to as a low-nutrient density (table 2). For example, persons who got 10 percent or less of total calories away from home averaged 5.25 milligrams (mgs.) of vitamin C per 100 calories, compared with 4.5 mgs. for

Table 1. Estimated Decrease in Nutrient Consumption Due to the Consumption of One Meal¹ Away From Home

Age/Group	Calcium		Iron		Vitamin A ²		Vitamin C		Thiamin	
	mg	%RDA	mg	%RDA	IU	%RDA	mg	%RDA	mg	%RDA
13-21	14.4	4	0.474	3	—	—	9.21	15	0.114	9
22-40										
male	32.7	4	.576	6	676.7	15	8.31	14	.069	7
female	32.7	4	.576	3	676.7	19	8.31	14	.069	5
41-60	—	—	—	—	—	—	5.01	8	.069	6
60+	90.0	10	—	—	1304.0	32	8.25	14	—	—

¹One meal is assumed to be equal to 30% of total daily calories.

²Vitamin A consumption expressed in International Units.

— No significant change.

those eating 30 percent or more of their food outside the home. Looking at the average, persons who ate 1 percent or more of their calories away from home had lower nutrient density for all nutrients than those who never ate out.

Overall, the diets of most individuals in the sample met or exceeded the RDA for all nutrients. Exceptions were iron consumption among women, 13 to 50, and calcium by teenagers. However, the model did identify segments of the population that may be at nutritional risk. Individuals, 13 to 21, who eat more than 30 percent of total daily calories away from home may be getting less than the RDAs for vitamin C, calcium, and iron. Similarly, those 22 to 40 whose caloric intake

away from home exceeds 30 percent may not be getting enough vitamin A and calcium.

Fast Food

While the Cornell study did not concentrate specifically on the effect of fast food, inferences can be drawn. It was determined, for example, that the diets of teenagers were the most adversely affected by the consumption of food away from home. Teenagers in the NFCS also ate 21 percent of their meals or snacks away from home at fast food restaurants, compared with 13 percent for the sample as a whole.

Nutrition specialists are concerned about fast food for two reasons. The

selection is often limited, and the caloric content may be high in relation to nutrients. For example, a typical fast food meal of a hamburger, french fries, and milkshake contains approximately half the RDA of calories and protein for the adult male (table 3). Yet, that meal gives him only one-third of the RDA of vitamin C, thiamin, and niacin, and lesser amounts of iron, calcium, vitamin A, and riboflavin. The meal's large calorie count reflects a high fat level.

This relatively high fat content again suggests that the results of the Cornell study which shows no relationship between fat intake and the share of calories consumed away from home are unexpected and may be attributable to



the suspected problem of underreporting of snack foods and meals away from home.

Nutritional adequacy depends on getting enough of a proper variety of foods. However, fast food restaurants typically offer limited menus, although there is an increasing tendency to offer alternatives, such as a salad bar. The trend towards eating more fast food reduces the variety in our diets and may increase the risk of nutritional deficiency.

Determining the impact of specific sources of food, such as fast foods, on our diets will require more detailed surveys and studies. Assessing the changes in the quality of the diet associated with different types of food away from home will help us make better food choices. □

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Table 2. Nutrient Density Over a Range of Calories Away From Home

% Calories Away From Home	Nutrient Density (mg/100 calories)			
	Calcium	Iron	Vitamin C	Vitamin A ¹
0% .	42.7	0.80	5.4	349
1-10%	41.7	.69	5.1	295
11-20%	40.1	.68	4.9	294
21-30%	41.0	.68	4.7	290
31-40%	42.1	.67	4.5	252
41-50%	42.1	.68	4.6	258
51% .	37.1	.71	4.2	263

¹Vitamin A consumption is expressed in International Units.

Table 3. Nutrient Content of Fast Food Meals

Place/Food	Total calories	Protein (grams)	Carbohydrate (grams)	Fat (grams)	Vit. A (IU)	Vit. C (mg)	Iron (mg)	Calcium (mg)
Burger Chef ("Super Chef," fr. fries, choc. shake)	1300	47	181	41	773	24	5	661
McDonald's ("Big Mac," fr. fries, choc. shake)	1100	40	143	41	607	16	6	523
Burger King ("Whopper," fr. fries, choc. shake)	1200	40	147	47	650	29	7	439
Pizza Hut (10" pizza, cola drink)	1200	72	152	35	2000	2	14	1000
Kentucky Fried Chicken (3 pcs. chicken, roll, fr. fries, and shake)	1300	65	141	57	750	27	5	150
Hardee's ("Formed" steak, bun, fr. fries, choc. shake)	1100	41	143	41	NA	NA	NA	NA
Arby's (Beef on bun, potato patties, coleslaw, shake)	1200	37	166	40	NA	NA	NA	NA
Arthur Treacher's (2 pcs. fish, fr. fries, cola)	900	22	101	42	NA	NA	NA	NA

Source: Mapes (1978), Ross Laboratories (1978).

Food Consumption Highlights

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447-8801

Per capita food consumption dropped 7 pounds in 1982 to an average of 1,387 pounds, reflecting a decline in animal product use of 9 pounds from 1981. Reductions in pork, eggs, and dairy products offset increased poultry consumption. We consumed almost 2 pounds more of crop products per person, with increases in vegetables and potatoes offsetting decreases in cereal and bakery items, sugar and sweeteners, and fruits and melons.

Meat, Poultry, and Eggs

Red meat consumption, excluding game meat and edible offals, was 139.4 pounds per person in 1982, down 5.8 pounds from 1981. Pork consumption dropped 6 pounds to 59 pounds, partly because supplies decreased and prices rose nearly 13 percent. Beef use rose slightly to 77.3 pounds, as larger supplies held price increases to 1.4 percent. Veal consumption remained at 1.6 pounds per person.

Americans consumed more poultry—about 64 pounds each in 1982, up 1.3 pounds from 1981 and nearly double the 1960 level. Chicken and turkey reached record levels of 52.9 pounds and 10.8 pounds per capita, as prices for chicken fell 1.8 percent and those for other poultry fell 1.6 percent from 1981. Despite lower egg prices in 1982, per person consumption fell 0.4 pound to 33.4 pounds (263 eggs), which may be partially attributed to concern over cholesterol.

Dairy Products

Increased demand for cheese, cream, specialties milk, other beverage milk, and ice cream boosted per capita consumption of dairy products on a milk-equivalent basis from 543.4 pounds in 1981 to 561.6 pounds in 1982. This increase occurred despite a 1.4-percent rise in dairy product prices.

Fluid milk and cream products consumption dropped from 245.7 pounds in 1981 to 242.2 pounds in 1982, while milk and cream prices rose 0.7 percent. Consumption of cream and specialties milk products, such as milk-cream mixtures,

sour cream and dips, and yogurt, however, rose 0.4 pound to 8.7 pounds per capita in 1982. Use of other beverage milk, including lowfat, skim, buttermilk, and flavored milk, increased from 99.5 pounds to 100.2 pounds per person, largely because of higher sales of lowfat milk. Per capita lowfat milk sales increased from 2.27 pounds in 1960 to 75.68 pounds in 1982, as consumers substituted lowfat milk for plain whole milk. Despite higher prices, butter consumption increased 0.2 pound to 4.5 pounds per capita.

Cheese consumption has risen steadily since 1960 because of its popularity as a snack food and increased use in processed foods, such as pizza and frozen dinners. In 1982, cheese consumption in-

creased from 18.4 pounds to a record 20.1 pounds per person, although prices increased 2.6 percent. More production of cheese, relatively stable prices, and USDA donations of 178 million pounds to needy persons resulted in an increase of 1-pound per person in consumption of American cheese in 1982.

Americans consumed 26.3 pounds of frozen dairy products (on a product weight basis) per person in 1982, unchanged from a year earlier. Increased consumer demand for more varieties of ice cream, such as specialty imports, boosted production and consumption. Ice cream remained the most popular frozen dairy dessert, with Americans consuming 17.5 pounds per person, up 0.3 pound from 1981. However, we ate less sherbet

Table 1. Per Capita Consumption of Selected Foods, 1960-84¹
(Retail-weight pounds)

Food Item	1960	1970	1980	1981	1982P	1983P	1984F
All items	1,401	1,397	1,405	1,394	1,387	1,396	1,395
Animal products	614	615	587	582	573	582	576
Red meats ²	147	165	160	157	151	156	153
Beef and veal	69	86	78	79	79	80	79
Pork	60	62	68	65	59	62	61
Other	18	17	14	13	13	14	13
Poultry	34	49	61	63	64	63	63
Eggs	43	39	35	34	33	34	33
Dairy products ³	365	336	307	304	302	305	303
Other	25	26	24	24	23	24	24
Crop products	787	782	818	812	814	814	819
Cereal and bakery	147	142	150	151	150	151	150
Vegetable oils	29	41	47	48	49	50	47
Fruits and melons ⁴	168	160	162	164	156	164	163
Vegetables & potatoes ⁴	299	284	292	281	287	280	288
Sugar and sweeteners ⁵	109	121	133	135	134	134	135
Other	35	34	34	33	38	35	36

¹For detailed information, see *Food Consumption, Prices, and Expenditures, 1962-82*, ERS Statistical Bulletin No. 702, December 1983.

²Includes game meat and edible offals.

³Includes butter.

⁴Includes home-garden produce.

⁵Excludes sugar in processed fruits and vegetables and sweetened condensed milk. Does not include noncaloric sweeteners.

P = preliminary.

F = forecast.

and ice milk in 1982. Consumption of mellorine, an ice cream substitute with no butter fat, remained at 0.2 pound per person.

Consumption of dry milk products rose slightly, with increases in the use of non-fat dry milk and whey, and decreases in dry whole milk.

Food Fats and Oils

The average American consumed 0.2 pound more food fats and oils (fat content basis) in 1982, with vegetable oil increasing 1.0 pound to 47.1 pounds, but animal fats dropping 0.9 pound to 9.7 pounds.

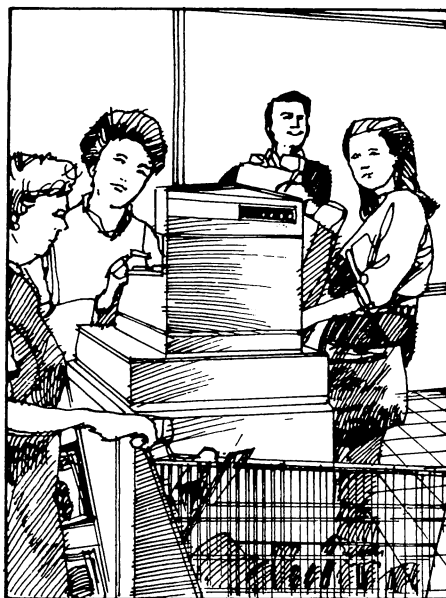
Table spread use rose 0.2 pound to 15.6 pounds per person, as butter consumption rose 0.2 pound to 4.5 pounds per capita and margarine remained at 11.1 pounds. Cooking fats consumption rose 0.2 pound to 21.2 pounds, as shortening use inched up from 18.5 to 18.8 pounds per person and lard consumption dropped 0.1 pound to 2.4 pounds per capita.

Consumption of fat and oil products has increased 26 percent since 1960; however, the use of animal fats fell from a 41-percent share of the total in 1960 to 17 percent in 1982, as consumers substituted margarine for butter, vegetable oils (primarily soybean) for lard, and used more salad and cooking oils.

Fruits and Melons

Per capita consumption of fruits dropped 8 pounds in 1982. Fresh and canned fruit use declined, while use of melons and frozen and dried fruits increased. Canned and chilled fruit juice consumption dropped from 23.28 in 1981 to 17.34 pounds per person in 1982, while frozen citrus juice consumption rose from 33.39 to 37.17 pounds per person (single-strength equivalent) during the same period.

Higher fresh fruit prices pushed down consumption in 1982, with the exception of grapefruit, bananas, grapes, pineapples, and strawberries. Short supplies following the 1982 Florida freeze raised orange prices 28.2 percent, and as a result, Americans ate 12.3 pounds of oranges, 0.8 pound less than 1981. The



freeze did not severely damage the grapefruit crop and consumption increased 0.7 pound to 7.4 pounds per person. Bananas remained the most popular fresh fruit, accounting for almost 28 percent of all fresh fruit consumption and nearly 40 percent of noncitrus fruit use in 1982. As banana prices fell in 1982, consumption increased over 1 pound, to 22.6 pounds per person.

Canned fruit (except pineapples) consumption fell 0.4 pound to 13 pounds per capita in 1982. Canned noncitrus fruit consumption, which accounts for most canned fruits, dropped from 12.7 pounds to 12.4 pounds per capita (excluding pineapples). Canned apple and applesauce consumption fell by 0.1 pound in 1982, in response to higher prices. Canned cherry use also dropped. Canned peaches and canned pears, however, increased to 3.7 pounds and 1.8 pounds per capita, respectively.

Canned citrus juice consumption was down 2.8 pounds from 1981, to 4.7 pounds per person, as consumers substituted lower priced fruit juices. For this reason, canned apple juice consumption continued to increase, reaching a record level of 7.2 pounds per capita in 1982.

Frozen fruit consumption increased during 1982. Use of frozen apples, peaches, and cherries went up, while frozen berries dropped, due mainly to a decline in the use of strawberries.

Dried fruit consumption increased from 2.71 pounds to 2.76 pounds per capita in 1982. Increased use of dried apples, apricots, dates, figs, and prunes offset lower consumption of raisins, the major dried fruit. Smaller shipments and higher bulk prices pushed down consumption of raisins 0.04 pound to 1.70 pounds per person in 1982.

Vegetables

Per capita consumption of vegetables (excluding potatoes and sweetpotatoes) was 157.2 pounds, up 3.8 pounds from 1981. Frozen vegetable consumption declined, while fresh vegetable consumption increased. Canned vegetable consumption was unchanged.

Despite a 0.5-percent increase in prices, consumers continued to substitute more fresh for canned vegetables. Fresh vegetable (excluding potatoes and sweetpotatoes) consumption increased to 100.9 pounds per person in 1982, up 4.9 percent. This increase was attributed to the growing popularity of salad bars, and salad vegetables, including tomatoes, broccoli, and carrots. Lettuce consumption dropped 0.3 pound to 23.5 pounds per capita, reflecting the 19.3-percent increase in prices caused by a white fly infestation in California that reduced 1982 supplies. Fresh potato use increased 1.4 pounds to 46.7 pounds per capita, as prices dropped 15.3 percent.

Canned vegetable consumption remained stable in 1982 at 45.6 pounds per capita. Lower prices increased consumption of canned tomatoes and tomato products by 0.6 pound to 20.2 pounds per person. Use of other vegetables, including pickles and sauerkraut, dropped 0.6 pound to 23.7 pounds per capita as higher processing costs pushed up retail prices. The use of dark-green and deep-yellow vegetables, such as carrots and pumpkins, remained at 1.7 pounds per capita in 1982.

A price increase of 10.3 percent dropped frozen vegetable consumption from 11.6 pounds in 1981 to 10.7 pounds per capita in 1982. Consumption of frozen corn, broccoli, and peas, the three main frozen vegetables, fell to 2.0, 1.5, and 1.4 pounds, respectively, in 1982.

Other Foods

Cane and beet sugar consumption was down in 1982 to 75.2 pounds per capita, as soft drink producers continued to replace sugar with high-fructose corn syrup (HFCS) (*see NFR-24*). Sugar and artificial sweetener prices fell 9.2 percent in 1982 from year-earlier levels. Saccharine consumption increased 0.1 pound per capita in 1982, continuing the trend toward substitution of artificial sweeteners for sugar that has boosted per-capita consumption of saccharine by almost 400 percent since 1960—from 1.9 pounds to 7.3 pounds in 1982.

Soft drink consumption also increased from 1981, to 39.6 gallons per person despite a 2.9-percent increase in cola drink prices. Soft drink consumption has nearly tripled since 1960 because of the increased variety and growing popularity of diet beverages. The use of coffee dropped 3 percent to 7.5 pounds in 1982, reflecting a 29-percent increase in roasted coffee prices. The use of coffee has declined steadily from a high of 15.8 pounds

per person in 1960. Tea consumption, in contrast, has increased 33 percent since 1960, although it amounted to only 0.8 pound per person in 1982. Per capita consumption of cocoa rose slightly from 1960 to 3.0 pounds.

Because of its high nutritional value, relatively low price, and variety of food uses, rice consumption has almost doubled from 6.1 pounds per person in 1960 to 11.8 pounds in 1982.

Americans consumed 149.5 pounds of flour and cereal products in 1982, compared with 150.6 pounds in 1981. Wheat flour use dropped 1.9 pounds to 114 pounds per capita in 1982 because prices for flour and prepared mixes increased 1.5 percent.

Outlook for 1983 and 1984

Preliminary estimates indicate per capita food consumption rose 11 pounds in 1983 on the strength of abundant supplies and higher personal disposable income.

Consumption of animal products increased an estimated 9 pounds per person in 1983. Lower prices pushed up consumption of red meat, with pork gaining the most. Beef and veal and egg consumption each rose about 1 pound and poultry consumption declined in 1983, while use of dairy products is estimated to

have risen 3 pounds, because of larger supplies and the free cheese distribution.

Per capita consumption of crop products changed little in 1983. Use of fruits and melons showed the largest expansion—8 pounds per person in 1983. Consumption was boosted by large apple and orange crops which increased fruit supplies. In contrast, weather-related reductions in vegetable production led to a 7-pound-per-person decline in vegetables and potatoes. Overall, fruit and vegetable prices increased 0.5 percent in 1983, compared to a 5.5 percent jump in 1982.

In 1984, total food consumption is forecast to decline 0.1 percent as expected reductions in red meat production and price increases of 3 to 6 percent will lower animal product consumption by 1 percent. Lower supplies and forecasted price increases of 5 to 8 percent, will hold consumption of poultry at an estimated 63 pounds per person.

Consumption of crop products is forecast to increase slightly in 1984, despite a possible price gain of 8 to 11 percent for fresh fruits and vegetables. The December 1983 freeze reduced orange supplies in Florida, and fruit consumption is expected to drop slightly as a result. □

Beef, Pork, and Poultry: Our Changing Consumption Habits

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Around a bite a day...that's about how much our average annual consumption of beef, veal, pork, and poultry has increased in the early 1980's compared to a decade ago (table 1). Although the approximately 205 pounds per person eaten annually (excluding lamb, mutton, and edible offals) in 1980-82 was only 5 pounds more than in 1970-72, the mix has changed. For example, we ate about 63 pounds of chicken and turkey each year in 1980-82, compared to only about 50 pounds during the first 3 years of the 1970's. Beef and veal consumption fell from 86.4 pounds to 78.6 pounds per person during the decade. Pork consumption changed little—dipping from an average of 64.5 pounds in 1970-72 to 64.1 pounds in 1980-82.

One can go back another decade to 1960-62 for a broader view of changing eating habits. Our consumption of beef, veal, pork, and poultry was 165.7 pounds then, but had jumped more than 20 percent by 1970-72, compared with only a 2-percent rise during the 1970's. Twenty years ago, per capita consumption of chicken and turkey was 38 pounds; beef and veal, 71 pounds; and pork, 59 pounds.

Meat and poultry eating habits change for a variety of reasons. Some are short-term reactions to situations, such as increased supplies of one meat relative to another that make it more attractive economically to the consumer; others may be longer term, including health concerns. Purchases among different

meats and poultry products are shaped by a variety of factors. Shifts can result from government decisions or from weather that affects feed grain production.

Year-to-Year Changes

We are presently going through a period of sharply changing consumption. Last year's drought and acreage reduction programs combined to cut feed grain production 47 percent. To avoid higher feeding costs, cattlemen sent 5 percent more cattle to slaughter during July through September 1983, than a year earlier. As a result, retail beef prices fell to \$2.30 per pound in December, the lowest level since May 1980. The increased availability and lower prices helped boost beef consumption by about 1 pound per person last year.

Table 1. Per Capita Consumption, Retail Weight Equivalent, 1962-82¹

Year	Beef	Pork	Lamb and mutton	Veal	Edible offals ²	Total red meat	Broilers	Other chicken	Total chicken	Turkey	Total poultry ³	Grand total
Pounds, retail weight						Pounds, ready-to-cook					Retail weight	
1962	66.2	59.1	4.6	4.6	9.9	144.4	25.8	4.0	29.8	7.0	37.2	181.6
1963	69.9	61.0	4.4	4.1	10.1	149.5	27.1	3.6	30.8	6.8	38.0	187.5
1964	73.9	61.0	3.7	4.3	10.4	153.3	27.6	3.5	31.2	7.3	38.9	192.2
1965	73.6	54.7	3.3	4.3	9.9	145.8	29.6	3.7	33.3	7.4	41.1	186.9
1966	77.0	54.4	3.6	3.8	10.2	149.0	32.0	3.6	35.6	7.8	43.8	192.8
1967	78.8	60.0	3.5	3.2	10.5	156.0	32.4	4.1	36.4	8.5	45.3	201.3
1968	81.2	61.4	3.3	3.0	10.7	159.6	32.8	3.9	36.7	7.9	45.0	204.6
1969	82.0	60.5	3.1	2.7	10.6	158.9	34.8	3.6	38.4	8.3	47.1	206.0
1970	84.0	62.3	2.9	2.4	10.7	162.3	36.8	3.6	40.4	8.0	48.8	211.1
1971	83.4	68.3	2.8	2.2	10.9	167.6	36.5	3.8	40.3	8.3	49.0	216.6
1972	85.4	62.9	2.9	1.9	10.5	163.6	38.2	3.6	41.8	8.9	51.1	214.7
1973	80.5	57.3	2.4	1.5	9.7	151.4	37.2	3.3	40.4	8.5	49.3	200.7
1974	85.6	61.8	2.0	1.9	10.5	161.8	37.2	3.5	40.7	8.8	49.9	211.7
1975	87.9	50.7	1.8	3.4	10.1	153.8	36.7	3.4	40.1	8.5	49.0	202.8
1976	94.4	53.7	1.6	3.3	10.6	163.6	39.9	2.9	42.7	9.1	52.2	215.8
1977	91.8	55.8	1.5	3.2	10.4	162.7	41.1	3.1	44.1	9.1	53.6	216.3
1978	87.2	55.9	1.4	2.4	9.5	156.4	43.8	2.9	46.7	9.2	56.3	212.7
1979	78.0	63.8	1.3	1.7	10.4	155.2	47.7	2.9	50.6	9.9	60.9	216.1
1980	76.5	68.3	1.4	1.5	9.5	157.2	47.0	3.1	50.1	10.5	61.0	218.2
1981	77.2	65.0	1.4	1.6	9.4	154.6	48.6	3.1	51.7	10.7	62.8	217.4
1982	77.3	59.0	1.5	1.6	8.6	148.0	49.7	3.2	52.9	10.8	64.1	212.1

Source: "Food Consumption, Prices, and Expenditures, 1962-82"; Stat. Bul. 702; USDA/ERS; December 1983.

¹Includes processed meats on a fresh basis.

²Variety meats, edible tallow, and lard.

³Includes a constant estimate of 0.4 lb. for ducks and geese. Table may not add due to rounding.

An even larger increase occurred in pork slaughter in the July-September period last year over 1982—12 percent. Preliminary estimates show a 3-pound-per-person jump over 1982's annual consumption of 59 pounds. Average retail prices fell from \$1.85 per pound in January 1983 to \$1.58 by December, the lowest since early 1982.

Similar dramatic short-run changes in consumption occurred in the early 1970's. Grain prices increased sharply during 1972-74, but a governmental freeze on retail prices, including meat, kept higher farm costs from being passed through to consumers.

The price freeze on pork and poultry was lifted in July 1973, and farm and retail prices increased for these commodities. The freeze on beef prices, however, remained in effect until September 1973. As farm costs rose, profits disappeared, and beef slaughter eventually stopped, creating shortages at the meat counter. Per capita consumption of red meats and poultry plummeted 14 pounds to 200.7 pounds in 1973.

Differences exist in the ability of livestock producers to respond to a rapidly changing market. Cattlemen have less flexibility than chicken and pork producers because the birth-to-maturity time is 27 to 48 months for cattle; the process is about 10 to 27 months for hogs and even shorter for broilers—3 to 15 months. This means, for example, that if broiler producers reduce production in the face of rising feed costs, they can more rapidly rebuild their flock when profitable conditions return. This enables them to meet customer needs while red meat supplies are still low.

On the demand side, comparative prices of meat and poultry are an important influence on short-run consumption patterns. When beef prices get disproportionately higher than pork or poultry, consumers shift to the lower cost products. For example, between 1977 and 1979, the Consumer Price Index (CPI) for beef and veal rose 56.4 percent, while the CPI for pork gained 15 percent, and poultry prices, 16 percent. In the same

Table 2. Growth of Franchise Eating Establishments Specializing in Red Meat and Poultry, 1973-83.

Item offered as primary entree	Number of franchise establishments		Percent increase from 1973-1983
	1973	1983	
Hamburger and roast beef	20,914	29,600	42
Chicken	5,099	8,683	70
Steak, full menu	4,490	10,240	128
Pizza ¹	2,928	11,593	296

¹ Beef and pork also used in pizza products.

period, beef and veal consumption fell 16 percent, from 95 pounds per person in 1977 to 79.7 pounds 2 years later. Meanwhile, pork consumption climbed 14.3 percent over the 2 years, from 55.8 pounds to 63.8 pounds, while poultry consumption increased 13.6 percent, from 53.6 pounds to 60.9 pounds per person in 1979.

Influences on Long-Term Trends

The meat consumption patterns evolving over the last 20 years give some indication of the long-term effects of technological advances in the industries, rising consumer incomes, diet and health concerns, and eating habits away from home.

More efficient and economical production practices from the farm through marketing have helped moderate costs and, thus, consumer prices. The benefit of greater production efficiencies to the consumer is most clearly demonstrated by the poultry industry (*see NFR-23*). A 1983 ERS report indicates that per-unit production costs for poultry would be twice what they are without the improvements in feeding practices, disease control, and confinement housing occurring since 1960.

The ERS report estimates that in the absence of technological advances, the retail price for chicken would have been \$1.30 per pound in 1981—56 cents above the actual retail price. Similarly, improvements in producing and processing turkeys meant that customers paid only 93 cents per pound for turkey in 1981, instead of the \$1.77 that would have been

necessary to cover the costs of production under the 1960 technology.

Spurred by cost-savings at the farm, per-pound retail prices for poultry have remained well below those of red meat products. The CPI shows that while retail beef and veal prices climbed 194.5 percent between 1962 and 1982 and pork gained almost 200 percent, poultry prices rose a comparatively modest 91 percent. In 1982, consumers paid, on the average, 72 cents per pound for broilers and 93 cents per pound for turkey. Retail choice beef prices, in contrast, averaged \$2.42 per pound, and pork was \$1.75.

Better production practices have also helped hold the line on costs in the beef and pork industries. Both rely on labor-saving, large-scale operations. For example, a typical hog operation might market 650 hogs per year. For that matter, 60 percent of all hogs marketed come from just 14 percent of the farms raising hogs. Such efficiencies kept retail price increases for beef and pork below what they would have been in the absence of industry changes, which helped maintain consumer demand for these products over the last 20 years.

After adjusting for inflation, consumers' after-tax income rose 62 percent between 1962 and 1982. This helped support consumption of meat products, particularly beef. Although beef consumption in 1982 was down from the 1976 high of 94.4 pounds, it is still substantially above the 66.2 pound consumption rate of 1962. Pork consumption was 59 pounds per person in 1982, nearly the

Figure 1

Per Capita Red Meat and Poultry Consumption (Retail Weight)

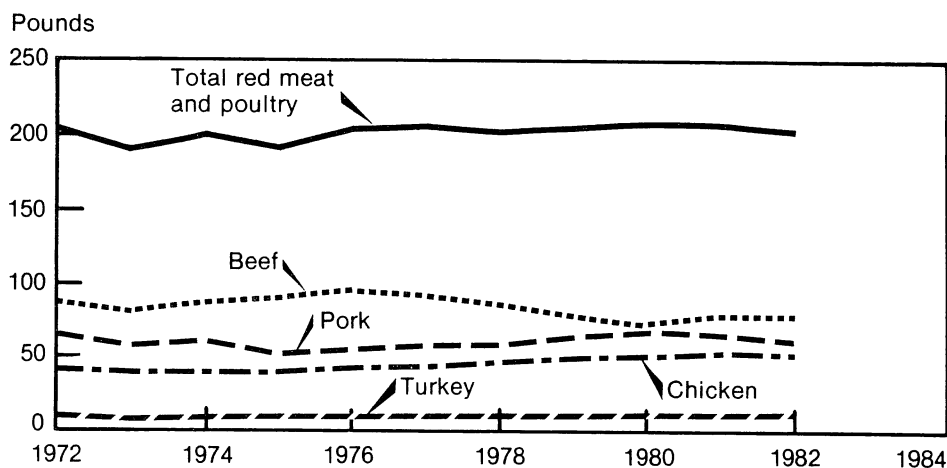
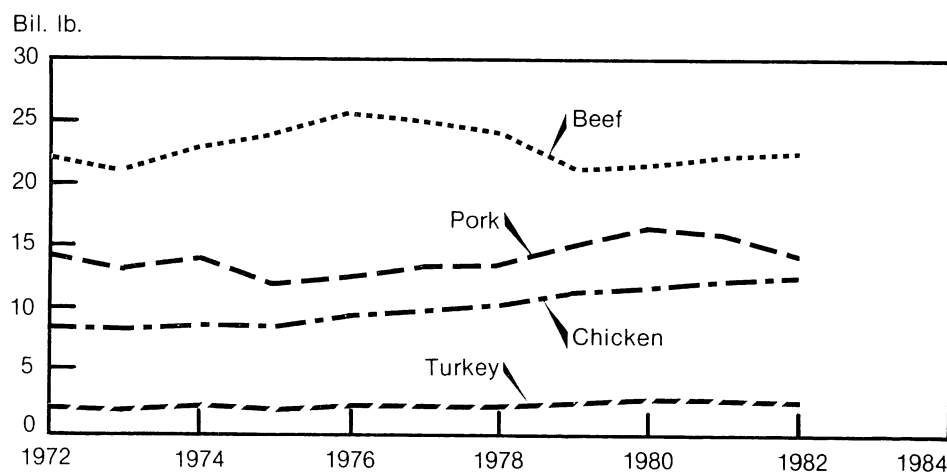


Figure 2

Production: Commercial Beef and Pork and Federally-Inspected Chicken and Turkey



same as the 59.1 pounds in 1962. There have been annual fluctuations, of course, ranging from 50.7 pounds per person in 1975 to 68.3 pounds in 1971 and 1980. Veal consumption has declined steadily from 5.2 pounds in 1960 to 1.6 pounds per person in 1982.

While our consumption of beef, veal, pork, and poultry increased almost 35 pounds per person over the last two decades, poultry posted the largest gain. The major reason: its lower relative price. Increased concern about calories, fitness, and health have encouraged some people

to change their diets. Medical evidence suggesting a correlation between consumption of foods high in saturated fats and increased risk of cardiovascular disease and obesity is also a factor.

Eating away from home increased from 28 percent of our food spending in 1962 to over 37 percent in 1982, with fast food outlets getting a growing share. The traditional fare of hamburgers and roast beef at fast food outlets helped maintain the demand for beef. Many outlets also began offering chicken. Between 1973 and 1983 the number of franchise establishments that primarily sell chicken rose 70 percent, while those selling primarily hamburger and roast beef increased 42 percent. However, establishments selling other red meat products rose substantially higher (table 2).

Beef consumption is expected to decline slightly through 1986, since cattlemen will retain stock to rebuild their herds after the 1983 liquidation caused by high grain prices. Pork production and consumption is expected to increase slightly through 1989 as it recovers from 1983's higher grain prices. Per capita poultry consumption through the 1980's may peak at the 1983 level of just over 50 pounds, because of cyclically expanding beef and pork production. □

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Domestic Food Programs

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Greater participation, higher payment rates, and increased distribution of surplus foods boosted total Federal expenditures for USDA-supported food programs to \$4.5 billion in the July-September quarter of 1983, 18.1 percent above those months in 1982. Costs for Federal food program administration, State administrative expenses, and other administrative costs rose between the two periods, from \$249 million to \$299 million. Estimated costs and participation rates are based on preliminary data sup-

plied by USDA's Food and Nutrition Service (FNS).

Family Food Programs

Total Food Stamp Program (FSP) costs in the third quarter of 1983 increased 13.8 percent from a year earlier, \$2.9 billion compared with \$2.5 billion, reflecting a 3.5-percent increase in participation, a 12.1-percent rise in State administrative expenses, including anti-fraud costs, and a 53.5-percent boost in other costs, such as printing and transporting stamps.

An average of 21.1 million persons received food stamps worth \$2.7 billion in the third quarter of 1983, up 13.5 percent over the value distributed in July-September 1982 (table 1). Monthly benefits per person rose by 9.6 percent between the two quarters, from \$38.58 to \$42.30.

To qualify for the FSP, a household must meet both gross and net monthly income eligibility standards. The gross monthly income limit is set at 130 percent of the Federal poverty guideline es-

Table 1—Federal Cost of USDA Food Programs, Calendar Years, 1980-83¹

Program	1982 (Quarters) ²							1983 (Quarters) ²		
	1980	1981	1982 ²	I	II	III	IV	I	II	III
Million dollars (Current)										
Family Food										
Food Stamps	9,004	10,968	10,375	2,647	2,601	2,363	2,764	2,918	2,796	2,682
Nutr. Asst. Prog. in Puerto Rico ³	—	—	396	—	—	200	196	196	197	197
Food Distribution										
Needy Families	23.5	31.1	34.0	7.6	7.9	8.4	10.2	9.4	10.2	9.7
Schools ⁴	967	832	786	263	104	168	250	266	158	173
Other ⁵	115	111	176	45	29	46	56	47	48	54
Special Distribution ⁶	—	—	304	60	65	55	124	294	375	268
Cash in Lieu of Commodities ⁷	85	110	113	29	29	28	27	21	34	41
Child Nutrition ⁸										
School Lunch	2,395	2,283	2,245	704	531	292	718	786	580	314
School Breakfast	311	330	327	100	79	45	103	111	86	49
Special Food ⁹	338	401	358	68	81	134	75	80	95	151
Special Milk	137	72	19	5	4	5	5	5	4	5
Nonfood Assistance ¹⁰	18	9	—	—	—	—	—	—	—	—
WIC ¹¹	783	863	987	237	227	261	262	266	276	326
Total ¹²	14,177	16,010	16,119	4,166	3,758	3,605	4,590	4,999	4,659	4,265

¹Administrative costs are excluded unless noted.

²Preliminary.

³Puerto Rico switched from the Food Stamp Program to a nutrition assistance program on July 1, 1982.

⁴Includes child care centers and camps participating in the Child Care and Summer Food Service Programs.

⁵Commodity Supplemental Food Program, Nutrition Program for the Elderly, and donations to charitable institutions.

⁶Initiated December, 1981.

⁷Includes Child Nutrition Programs and the Nutrition Program for the Elderly.

⁸Cash expenditures. Includes money donated for local purchase of food.

⁹Divided into Child Care Food Program and Summer Food Service Program (SFSP) in fiscal 1976. Includes administrative costs for SFSP.

¹⁰Nonfood assistance was terminated on October 1, 1981.

¹¹Special Supplemental Food Program for Women, Infants, and Children. Includes food and administrative costs.

¹²May not add due to rounding.

Source: Computed from monthly data supplied by the Food and Nutrition Service.

established by the Office of Management and Budget (OMB). Households with elderly or disabled members are exempt.

Net income is gross income minus allowable deductions for earned income, dependent care, and shelter costs. In addition, all households are allowed a standard deduction, and elderly or disabled persons may deduct medical expenses in excess of \$35 a month.

More households became eligible for participation in the FSP when income standards were raised on July 1, 1983, to reflect changes in the cost of living. For a four-person household, the maximum gross monthly income limit was increased from \$1,008 to \$1,073 (table 2), and the net monthly income limit was raised \$50 to \$825.

Expenditures for the Nutritional Assistance Program (NAP) in Puerto Rico declined 1.3 percent to \$197.5 million in the third quarter of 1983 from \$200.1 million in those months of 1982. Average monthly benefits per person dropped from \$41.68 in the third quarter of 1982 to \$41.14 a year later, while participation remained stable at an estimated 1.6 million persons. Participants in the NAP receive cash benefits rather than food coupons.

Table 2. Food Stamp Program Monthly Income Eligibility Standards, July 1, 1983 to June 30, 1984¹

Household size	Gross Income Standard	Net Income Standard
Dollars		
1	527	405
2	709	545
3	891	685
4	1,073	825
5	1,255	965
6	1,437	1,105
7	1,619	1,245
8	1,801	1,385
Each additional member	+182	+140

¹Standards are higher in Alaska and Hawaii.

Child Nutrition Programs

Federal expenditures for the Child Nutrition Programs amounted to \$715.7 million in July-September 1983, including \$518.6 million in cash payments and \$180.1 million in commodities or cash in lieu of commodities.

Changes in the Federal poverty guidelines raised income eligibility standards for all child nutrition programs for the 1983-84 school year. The income standard for a family of four increased from \$12,090 to \$12,870 for free meals and from \$17,210 to \$18,315 for reduced-price meals, qualifying more children for free or reduced-price meals.

An average of 27.4 million students participated in the National School Lunch Program (NSLP) in the third quarter of 1983, a 1.7-percent decline from the 27.8 million of a year earlier. Those receiving reduced-price meals declined by 2.2 percent, while 1.7 percent fewer got free meals and the number receiving paid meals fell 1.6 percent. A decline in the number of schools and residential child care institutions operating a lunch program, from 90,360 at the beginning of the 1982-83 school year to 89,900 in the 1983-84 school year, contributed to lower NSLP participation.

Federal expenditures for the NSLP rose to \$386.9 million in the third quarter of 1983, a 6.5-percent increase over a year earlier. The increased cost may be attributed to higher reimbursement rates paid by the Government to States for each meal served. For the 1983-84 school year, the reimbursement rate for a free lunch increased from 115 to 120.25 cents, for a reduced-price lunch from 75 to 80.25 cents, and for a paid lunch, from 11 to 11.50 cents. These rates are adjusted each July to reflect changes in the Consumer Price Index (CPI) for food away from home. The commodity reimbursement for each lunch remained at 11.50 cents because the change in the Producer Price Index between May 1982 and May 1983 was minimal.

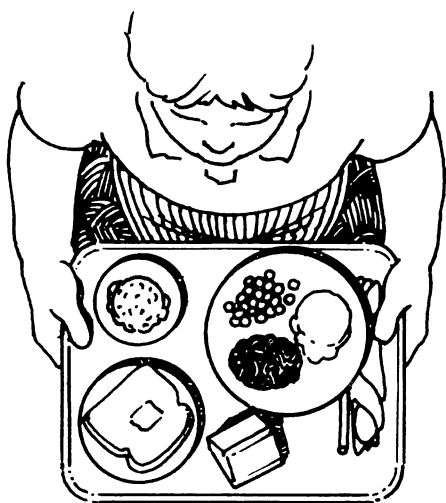
Approximately 4.5 million students participated in the School Breakfast Program (SBP) during the third quarter of 1983, 4 percent more than a year earlier. Participation by students paying the full price for breakfast increased by 4.8 percent, while those receiving free and reduced-price breakfasts increased by 4.0 and 2.8 percent, respectively. About 85.6 percent of the breakfasts served in the third quarter of 1983 were free.

Increased participation and higher reimbursement rates raised Federal cash payments for the SBP 8.2 percent, from \$45.3 million in the July-September quarter of 1982 to \$49.0 million in the same months of 1983. Basic breakfast reimbursement rates for the 1983-84 school year rose from 60 to 62.75 cents for free meals, up 4.6-percent. Basic reimbursement rates for reduced-price and paid breakfasts rose by 9.2 and 2.9 percent.

The Child Care Food Program provided cash and commodity assistance for meal service to about 920,000 children in September 1983, an increase of 7.6 percent from a year earlier. Program costs totaled \$78.2 million in the third quarter of 1983, an increase of 14 percent from the same months in 1982, largely due to greater participation and higher per-meal payment rates.

Special Milk Program (SMP) costs dropped 5.2 percent, from \$5.1 million in the third quarter of 1982 to \$4.8 million in the same 1983 period due to fewer half-pints served and a lower reimbursement rate for free half-pints. The Federal Government reimburses schools participating in the SMP for the actual cost of free half-pints, which averaged 13.3 cents in the third quarter of 1983, down from 14.0 cents a year earlier. The reimbursement rate for paid half-pints, currently 9.25 cents, is usually adjusted in July according to the change in the Producer Price Index for fresh processed milk. However, there was no adjustment in July 1983 because the change in the index was minimal.

In the third quarter of 1983, costs for the Summer Food Service Program to-



taled \$79.7 million, up 8.7 percent from a year earlier. Nearly 60 million meals were served, compared with 57.7 million in July-September 1982.

Supplemental Food Programs

Record high participation of 2.8 million persons in the Special Supplemental Food Program for Women, Infants, and Children (WIC) in the third quarter of 1983 was largely caused by an additional \$100 million appropriated in the Emergency Food Assistance Act (P.L. 98-8). Participation was up 19.3 percent for women, 18.3 percent for infants, and 17.6 percent for children.

WIC program costs climbed from \$260.9 million in the third quarter of 1982 to \$326.0 million in 1983, up 25 percent. Greater food expenditures made up 67.6 percent of the increase and higher administrative costs accounted for the remainder. Monthly food cost per person averaged \$30.28 in July-September 1983, 66 cents more than a year earlier.

An average of 135,000 persons participated in the Commodity Supplemental Food Program (CSFP) in the third quar-

ter of 1983, a 1.1-percent increase from that period in 1982. Total program costs increased 4.2 percent, from \$8.2 million in July-September 1982 to \$8.5 million a year later. Under the CSFP, USDA purchases foods, such as orange, apple, and pineapple juice, beef, egg mix, poultry, instant potatoes, and canned corn and distributes them to eligible women, infants, and children through State and local agencies. USDA's Food and Nutrition Service (FNS) determines the quantity of food required and makes allocations. Some foods acquired by USDA's Commodity Credit Corporation (CCC) under Federal farm price-support efforts are also donated through FNS to the CSFP and other food assistance programs. CCC stocks include dairy products—such as cheese, butter, and nonfat dry milk; and basic foods—such as rice, peanuts, and other grains.

USDA food purchases for the CSFP decreased from \$5.1 million in the third quarter of 1982 to \$4.5 million in the same quarter of 1983, while the value of CCC commodities donated to the CSFP increased from \$2.2 to \$2.8 million. Monthly food cost per person averaged about \$18 in the third quarters of 1982 and 1983.

Food Distribution Programs

In the July-September quarter of 1983, commodities valued at \$267.8 million were provided to the States for needy persons, up \$212.3 million from a year earlier. This special distribution of surplus agricultural products was still being established in the third quarter of 1982 and has expanded in response to high unemployment, mounting Government stocks, and development of a network of distribution outlets and volunteers. American processed cheese and cheddar cheese accounted for 58.5 percent of the products distributed; butter, 13.0 percent; nonfat dry milk, 7.6 percent; and cornmeal, rice, honey, and flour, 20.7 percent.

Participation in the Needy Family Program (NFP) has remained about the same. A 2.9-percent increase in Native American participants, from 90,633 to 93,267 was offset by a decline in participation in the Trust Territories due to the introduction of the Nutritional Assistance Program there. Total program costs rose 14.3 percent, from \$8.4 million in the third quarter of 1982 to \$9.6 million in the same quarter of 1983, partly the result of a 9.5-percent increase in the value of commodities donated, from \$6.3 million to \$6.9 million. As more Native Americans joined the NFP, administrative costs rose 28.3 percent. Native American reservations are allowed to operate the NFP through their own tribal organizations instead of State agencies. Administrative costs go up temporarily in the initial stage when new tribes join because they receive training and technical assistance in program management, including certifying eligible participants, ordering, maintenance of equipment, and financial management.

USDA provides commodities or cash in lieu of commodities to the States for meal service under the Nutrition Program for the Elderly. In the past year, assistance shifted toward cash. In the third quarter of 1983, commodities accounted for 4.6 percent of program costs, down from 10.2 percent a year earlier. Commodity contributions dropped 30.9 percent, while cash outlays increased 60.8 percent. Total program costs rose 51.5 percent, from \$23.5 million in the July-September quarter of 1982 to \$35.7 million in the same period in 1983. The number of meals served under the Nutrition Program for the Elderly increased from an average of 762,000 a day in the third quarter of 1982 to 785,000 in the third quarter of 1983. □

Food Spending and Income

Anthony E. Gallo
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An improving economy and declining unemployment boosted Disposable Personal Income (DPI) to \$2.4 trillion (seasonally adjusted at an annual rate) during July-September 1983. This was 2.6 percent higher than the preceding quarter and 7.8 percent above a year earlier.

Consumers allocated over 92 percent, or \$2.2 trillion, of DPI to Personal Consumption Expenditures (PCE) during the third quarter of 1983, 1.6 percent more than the previous 3 months. Savings, which had dipped to 4.3 percent of DPI during the second quarter of 1983, rose to 5.3 percent, or \$115.8 billion.

In sharp contrast to trends in recent years, PCE for durables and nondurables rose more than it did for services. Expenditures for durable and nondurable goods increased 3.6 and 1.9 percent, respectively, while services, which constitute the bulk of PCE, rose only 1.3 percent over the previous quarter.

Of the nearly \$815 billion in PCE for nondurables, food outlays during the third quarter amounted to \$375 billion, 6.8 percent more than a year earlier and 1.6 percent greater than the previous quarter. The 0.7-percent drop in food prices between the second and third quarters of 1983, however, means real expenditures for food actually rose 2.3 percent during the period.

Spending for food at home rose 1.4 percent, from \$265 billion during the second quarter to \$268.8 billion. PCE for food away from home reached \$106.2 billion, approximately 2 percent above the previous quarter. Nearly one-third of the increase in food away from home expenditures, however, was due to higher prices.

The portion of DPI allocated to food was 15.9 percent, down slightly from the 16-percent share reported in the previous quarter. The shares for both food at home and food away from home were 11.4 percent and 4.5 percent, respectively. □

Table 1. Personal Consumption Expenditures—Seasonally Adjusted at an Annual Rate¹

Item	1982				1983		
	I	II	III	IV	I	II	III
Billion dollars (current)							
Total personal consumption expenditures	1,938.9	1,972.8	2,008.8	2,046.9	2,073.0	2,147.0	2,181.1
Nondurables	749.7	754.7	766.6	773.0	777.1	799.6	814.8
Food, beverages, and other groceries	449.5	458.0	465.2	471.8	479.0	487.7	498.1
Food, exc. alcoholic beverages	339.4	345.5	351.2	355.2	361.8	369.0	375.0
At home	248.2	251.9	254.7	256.4	259.2	265.0	268.8
Away from home	91.2	93.6	96.5	98.8	102.7	104.0	106.2
Alcoholic beverages	48.7	49.2	49.2	49.3	49.8	50.6	51.3
At home	30.8	31.1	30.7	30.5	30.6	31.1	31.6
Away from home	17.9	18.1	18.5	18.8	19.3	19.5	19.7
Cleaning & household supplies	21.9	22.3	22.5	22.7	22.8	23.4	23.7
Toiletries	16.5	16.9	17.0	17.2	17.6	17.9	18.1
Tobacco	23.0	24.2	25.3	27.3	26.9	26.8	30.0
Drugs	19.4	19.9	20.1	20.3	21.4	21.5	21.9
Clothing and shoes	118.4	119.0	119.2	119.6	120.0	126.4	125.1
Gas and oil	94.0	89.6	91.3	91.1	87.3	90.3	93.1
Fuel oil and coal	19.4	19.6	20.9	20.2	17.7	21.2	23.0
Other	49.0	48.7	49.8	50.1	51.7	52.4	53.6
Durables	239.4	242.9	243.4	252.1	258.5	277.7	282.8
Motor vehicles and parts	106.4	107.6	109.4	116.1	118.4	133.9	135.6
Furniture and household equipment	91.7	93.9	93.5	94.9	97.3	100.8	102.9
Other	41.3	41.4	40.5	41.0	42.9	43.0	44.3
Services	949.7	975.2	998.9	1,021.8	1,037.4	1,069.7	1,083.5
Housing	323.8	329.7	337.8	345.2	352.6	359.5	367.2
Household operation	140.2	144.6	145.2	147.1	145.9	155.5	155.8
Transportation	66.5	68.0	69.8	69.2	70.1	70.9	74.0
Personal care	18.1	18.2	18.4	18.6	18.5	18.7	18.7
Medical care	188.7	194.4	199.9	203.5	207.0	211.7	215.1
Personal bus. service	105.2	109.2	114.9	122.9	127.0	133.2	132.8
Recreational services	46.4	47.8	48.8	49.3	49.8	52.4	52.5
Other	60.8	63.2	64.1	66.0	66.4	68.0	67.4
Savings	130.8	127.1	123.0	120.8	121.7	91.5	115.8
Other	58.2	59.1	59.7	60.1	61.2	62.5	64.8
Disposable personal income	2,127.9	2,159.0	2,191.5	2,227.8	2,255.9	2,301.0	2,361.7

¹Reflects data as of December 17, 1983.

Food and Nutrition Legislation

Loreen Forester
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Food Assistance

S. 1867—Sen. Charles Grassley (IA)

Proposes a 16-percent increase over current appropriations for the surplus commodity program of the Older Americans Act of 1965, as amended, for fiscal years 1983 and 1984. The program partially reimburses State agencies for meals served under the Nutrition Program for the Elderly. The law also would place a 90-day deadline on State agencies to submit reimbursement claims for meals served.

House Concurrent Resolution 40

Expresses the sense of Congress that the Government should maintain current efforts in Federal nutrition programs to prevent increases in domestic hunger. It also states that the Special Supplemental Food Program for Women, Infants, and Children (WIC) should be funded at a level that would at least maintain the fiscal 1983 year-end case load.

Food Stamps

S. 1727—Sen. James McClure (ID)

Would amend the Food Stamp Act of 1977 to reduce administrative costs. One provision would reinstate the food stamp purchase requirement except for households with four members with an income of less than \$30 per month or those with elderly or disabled members. Another provision would prohibit cash change for food stamp purchases, currently allowed

for under a dollar, the lowest denomination of food stamps issued. Minimum allotments, presently at \$10 per eligible household of one or two persons, would be eliminated. Further, this bill would enable Food Stamp Program officials to intercept tax refunds and unemployment benefits of individuals who received overpayment of food stamps. It would further reduce administrative costs by making States liable for their total overpayments in excess of 3 percent of actual allowed benefits. To reduce fraud, photographic identification cards would be issued to recipients, who also would be required to sign the food stamps at the time of issuance and countersign them at the time of use. Parents and guardians of children between the ages of 6 and 12 would no longer be exempt from work registration requirements.

S. 1993—Sen. Jesse Helms (NC)

Would amend the Food Stamp Act of 1977 to tighten eligibility conditions by adding new types of resources that must be considered as income. As in Senate bill 1727, it would also prohibit cash

change for food stamp purchases, make States liable for total overpayments greater than 3 percent, allow unemployment compensation and tax refunds to be intercepted to cover uncollected overpayments, and provide for disclosure of interest and dividend information from the Internal Revenue Service. Error-prone project areas would also be identified and required to improve their performance.

S. 2016—Sen. Ed Zorinsky (NE)

Proposes that retrospective accounting, the process of determining benefits based on income data for the previous month, be optional instead of mandatory.

Food Safety

H.R. 4544—Rep. Sid Morrison (WA)

Would promote the use of food irradiation as a postharvest treatment for raw agricultural commodities by classifying it with pesticide chemicals instead of food additives. Irradiation of food with gamma rays, x-rays, or high-energy electrons retards spoilage by killing microorganisms and insects in the food. Reclassification would transfer regulatory responsibility from the Food and Drug Administration to the Environmental Protection Agency and would subject food irradiation to a different set of safety tests and labeling requirements. □

Food and Nutrition Actions by USDA

Tom Fulton
(202) 447-4943

USDA regularly proposes and implements operational and regulatory changes that affect the status of food and nutrition in the United States. Here are some recent actions.

Nutrition

●The Joint Nutrition Monitoring Evaluation Committee sponsored by USDA and the Department of Health and Human Services will report to Congress in November on the importance of monitoring the nutritional status of Americans. The report will cover nutrients and food substances no longer seriously deficient in our national diet, including protein, thiamin, riboflavin, niacin, iodine, and ascorbic acid, and those of current concern, such as calories, fat, calcium, iron, and vitamin A, vitamin D, sodium, potassium, fluoride, zinc, vitamin B₆, folacin, fiber, sugar, and alcohol. The report will include information about the determinants of nutritional status, health-related nutrition problems, such as obesity, and make recommendations for the National Nutrition Monitoring System and for research.

Food Safety

●USDA is proposing a new slaughter inspection system for broilers and cornish hens. Called New Line Speed (NELS), it could increase the number of birds inspected per minute from 70 to 91 where conditions and facilities permit.

●USDA has revised its policy on packaging materials used in federally inspected meat and poultry plants. Beginning July 17, 1984, plants must secure guarantees from suppliers showing that

each type of wrapper or container used for meat and poultry products complies with the Federal Food, Drug, and Cosmetic Act.

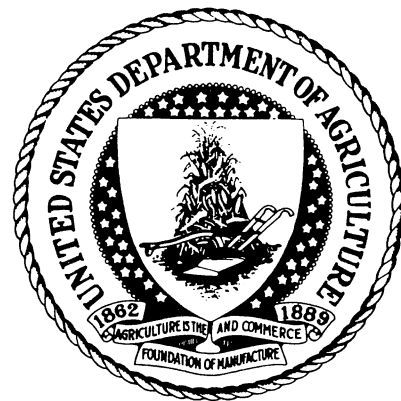
●On January 16, the United States declared Denmark officially free of foot-and-mouth disease (FMD). This will allow Denmark to ship fresh and frozen meat products to the United States that are certified as originating only from USDA-approved plants which handle only meats of Danish origin. USDA will continue to impose certain restrictions on meat from other sources in Denmark because that country has a common border with the Federal Republic of Germany which is not recognized as FMD-free.

●Effective February 29, 1984, USDA no longer permits kidneys from mature chickens and turkeys to be used in human food. Kidneys from mature poultry have been found to have high concentrations of the heavy metal cadmium. Young poultry are not affected.

Food Assistance

●On January 13, USDA announced it would begin efforts to help stabilize cattle prices by buying canned beef to donate to soup kitchens and other charities. This is in response to provisions of the Dairy and Tobacco Adjustment Act of 1983 which require the Secretary of Agriculture to do all he can to help mitigate the price-depressing effect of increased slaughter of dairy cattle associated with provisions of the law which mandate reduced milk production.

●USDA has signed an agreement with the U.S. Secret Service, defining the responsibilities of the agencies in con-



ducting criminal investigations of Food Stamp Program violations. USDA's Office of the Inspector General will concentrate on persons who administer or benefit from the program, such as Federal or State employees, grocers, and food stamp recipients. The Secret Service will focus on outside criminal elements, such as food stamp thieves or counterfeiters, and persons suspected of trafficking in food stamps.

International Food Assistance

●In January, USDA released its revised country and commodity allocations for fiscal year 1984 under titles I and III of Public Law 480, the Food for Peace Program. Current program plans provide for distribution of \$791 million in commodity shipments. Of this amount, \$738.5 million is presently allocated and \$52.5 million is being held in a reserve to furnish commodities for unforeseen needs during the remainder of the fiscal year. □

Selected ERS Research Reports

[Order the following reports from the National Technical Information Service (NTIS), 5285 Port Royal Rd., Springfield, VA 22161.]

Estimates of Manufacturers' Food and Beverage Shipments Among Major Marketing Channels, 1977, by John M. Connor. Staff Report. Apr. 1982, 94 pp. Order PB83-138800 from NTIS. \$11.50 paper copy; \$4.50 microfiche copy.

This report estimates the 1977 manufacturers' value of as many as 138 processed food and beverage product classes flowing through five major marketing channels: imports and exports, intermediate goods for other manufacturers, foodservice outlets, branded foodstore products, and unbranded foodstore products. About 20.5 percent of domestic consumer supply was shipped to foodservice establishments and the remainder to other retail outlets. Approximately 20 percent of the value of all foodstore shipments of processed foods was unlabeled or private-label merchandise. An application of these data shows that proper measurement of advertising-to-sales ratios yields estimates over twice as high as conventional approaches. A second application calculates that forward vertical integration (intrafirm shipments of food inputs) averaged 23 percent of total sales.

A Simultaneous Equations Model of Food Stamp Program Participation and Program Effects, by David Smallwood and James Blaylock. Staff Report. May 1982, 15 pp. Order PB83-152900 from NTIS. \$7.00 paper copy; \$4.50 microfiche copy.

A simultaneous equations model is proposed for analyzing Food Stamp Program participation and program effects on household behavior. The model is useful for studying the effect of program participation on food expenditures and vice versa. Aside from its simultaneity, the model postulates that the participation decision is based on selected household socioeconomic characteristics and the potential for increasing both food and non-food expenditures, each of which may have differing impacts.

Transfer Payments In Nonmetropolitan Areas, by Robert A. Hoppe and William E. Saupe. Staff Report. Sept. 1982, 46 pp. Order PB83-148718 from NTIS. \$8.50 paper copy; \$4.50 microfiche copy.

Transfer payments have become an important source of income, particularly in nonmetropolitan areas. By 1977, transfer programs represented 16.1 percent of nonmetro personal income, compared with only 13.1 percent of metro personal income. This report describes the U.S. transfer payment system and identifies programs that are especially important to nonmetro areas. It documents the growth of transfer payments in both metro and nonmetro areas. The report also pinpoints counties that could be affected by changes in the transfer system because they receive large transfer payments.

Measuring Food Deficits and Undernutrition: An Accuracy Problem, by Carol Goodloe. Staff Report. Nov. 1982, 52 pp. Order PB83-134585 from NTIS. \$10.00 paper copy; \$4.50 microfiche copy.

This paper presents estimates of undernutrition and food deficits using household survey data for Bangladesh, Indonesia, and Sri Lanka. These estimates are compared to previous studies to assess different methods. Previous methods of estimating undernutrition and food deficits may overstate actual levels because of problems with key elements in the methods—the caloric standard and the calorie-income elasticity. Estimates are very sensitive to the caloric standard, yet no theoretical basis exists for establishing a valid caloric standard. Calorie-income elasticities estimated from survey data differed from other studies and raise questions about the usefulness of the concept in estimating undernutrition and food deficits.

The Omnibus Budget Reconciliation Act of 1982: Effects on Programs Administered by the Department of Agriculture, by Richard W. Rizzi. Staff Report. Nov. 1982, 20 pp. Order PB83-152611 from NTIS. \$7.00 paper copy; \$4.50 microfiche copy.

Agriculture and food program provisions of the Omnibus Budget Reconciliation Act of 1982 are summarized. This includes changes in the dairy, wheat, feed grains, upland cotton, rice, export, and food stamp program.

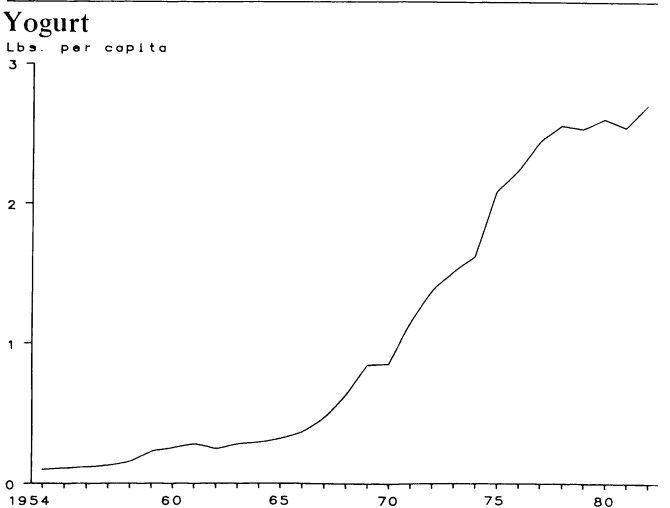
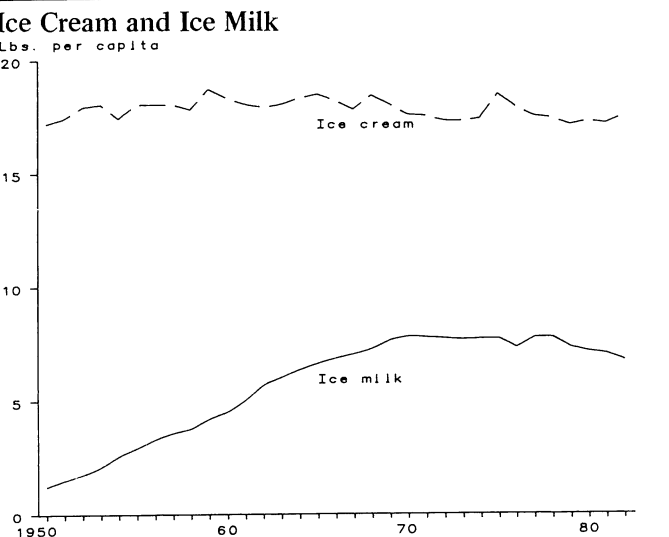
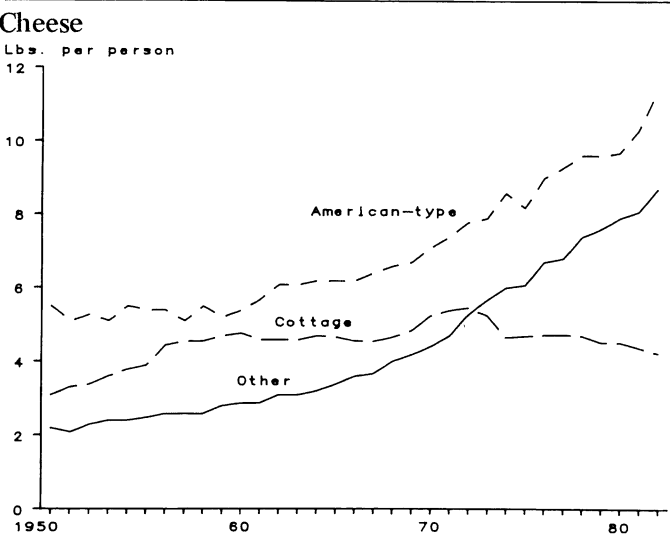
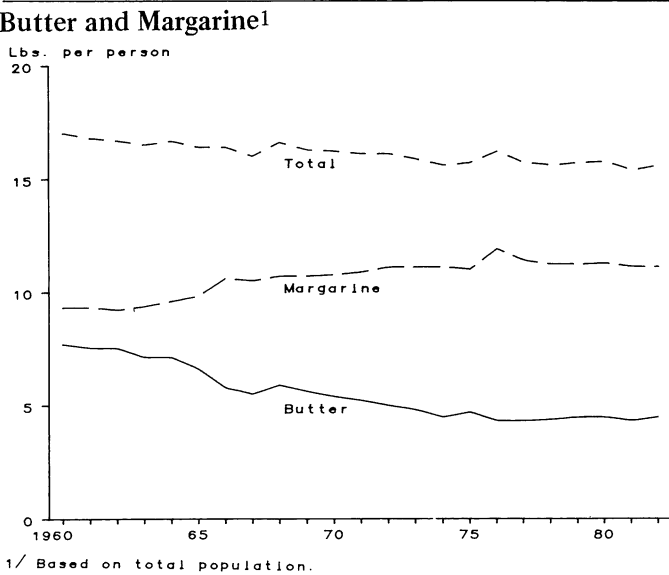
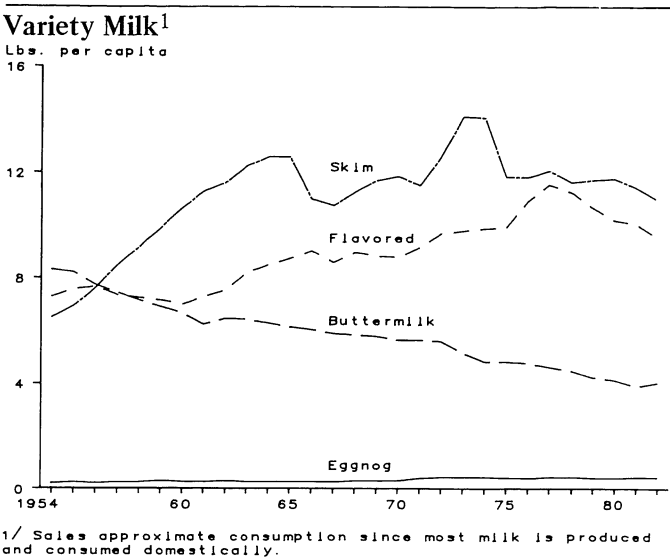
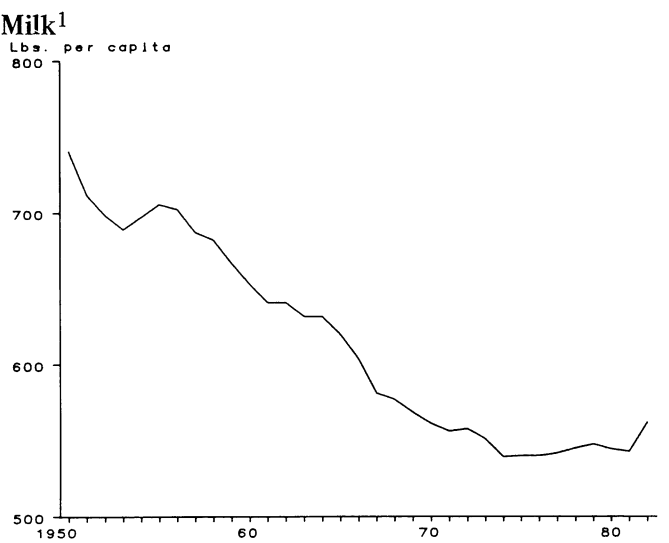
Registration and Procedures for Safety Reassessment for Drugs and Chemicals Used in Agriculture: Some Economic Considerations, by Kathleen C. Reidy and Clark R. Burbee. Staff Report. Nov. 1982, 20 pp. Order PB83-149716 from NTIS. \$7.00 paper copy; \$4.50 microfiche copy.

This report discusses several of the regulatory problems faced by industry in the Federal registration process for animal drugs, food additives, and pesticides. Descriptions of the types of registration solutions are included. Problems associated with the safety reassessment of animal drugs that were approved for use years ago and not assessed for safety with current state-of-the-art techniques are also addressed.

Federal Funds in 1980: Geographic Distribution and Recent Trends, by J. Norman Reid and Eleanor Whitehead. Staff Report. Nov. 1982, 68 pp. Order PB83-173864 from NTIS. \$10.00 paper copy; \$4.50 microfiche copy.

This report summarizes the distribution of Federal dollars in 1980 and assesses recent trends. Federal per capita funding remains unevenly divided among the regions; however, the advantage of the West and South may be moderating somewhat. The spread of some Federal programs into more rural counties may have peaked and there is evidence that the nonmetro funding gap has widened. Major differences remain in the way specific categories of programs are allocated. Nonmetro areas are behind urban areas in defense funding, but lead in agricultural and income security programs. Poorer nonmetro counties are especially reliant on public assistance programs.

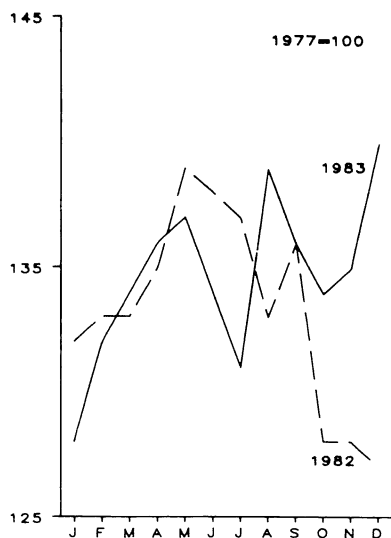
U.S. Per Capita Dairy Product Consumption



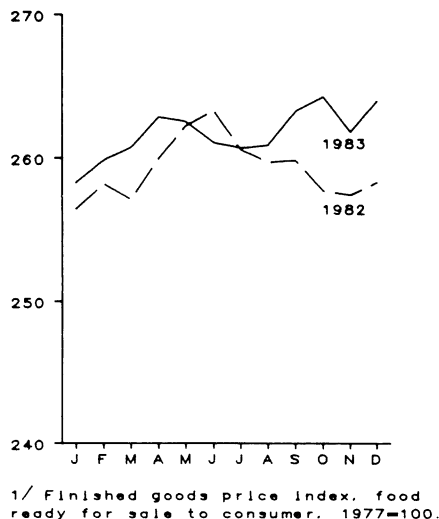
Source: U.S. Department of Agriculture. Food Consumption, Prices, and Expenditures, ERS, various issues.

Food Prices

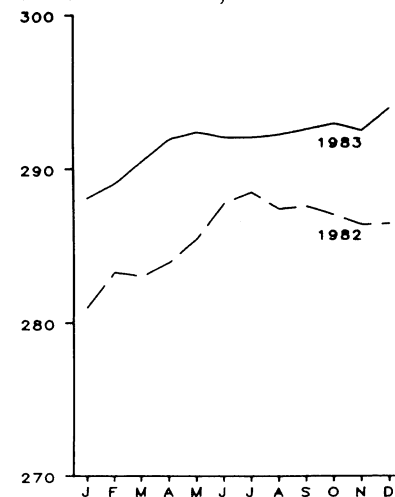
Farm Prices



Producer Prices of Consumer Foods

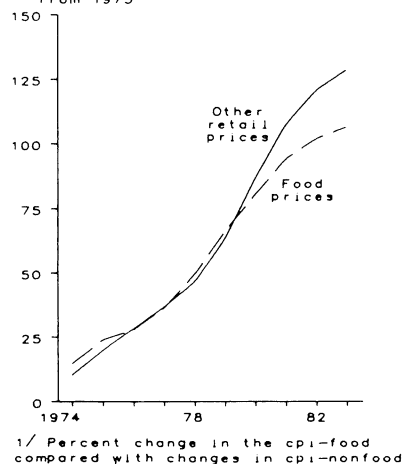


Consumer Prices, All Food



Food Prices Rise Less Than Other Retail Prices

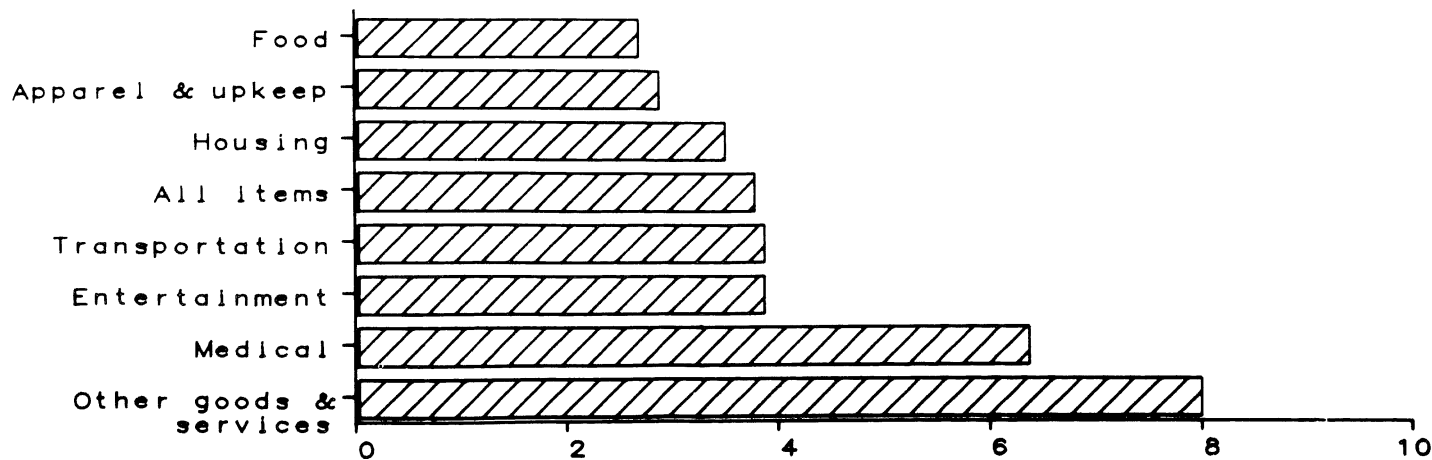
Percent change from 1973



Changes in selected retail food prices

Item	1983 November-December	1982-1983 December-December
	Percent	Percent
All food	0.5	2.6
Food away from home	.2	4.1
Food at home	.6	1.9
Meats, poultry, fish	.4	-2.6
Meats	-.1	-4.7
Beef and veal	.1	-1.6
Pork	-.3	-11.0
Other	-.5	-3.1
Poultry	4.0	10.2
Fish and seafood	.4	1.8
Eggs	12.4	35.7
Dairy Products	-.1	.8
Fats and Oils	1.0	7.6
Fruits and vegetables	1.3	5.4
Sugars and sweeteners	.5	2.3
Bakery, cereal	.5	3.8
Nonalcoholic beverages	.3	2.2
Other Prepared foods	.1	2.8

Food Prices Up Less Than Most Other¹

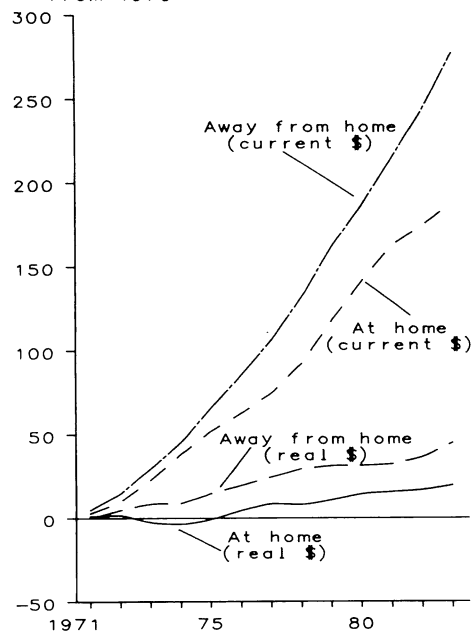


1/ Percent Increase, 12 months ended December 1983 (unadjusted).

Income and Expenditures

Eating Out Expenditures Rise Faster Than Those for Food at Home

Percent change from 1970



Percent of Personal Income Spent For:

	1960	1970	1980	1982	1983 ¹
	Percent				
All food, exc. alcohol	20.0	17.2	16.5	16.0	16.0
At home	16.0	13.2	12.1	11.6	11.5
Away from home	4.0	4.0	4.3	4.4	4.5
Clothing	7.6	6.7	5.7	5.5	5.4
Housing	13.7	13.5	14.6	15.4	15.7
Medical Care	4.4	5.9	7.9	9.0	9.2

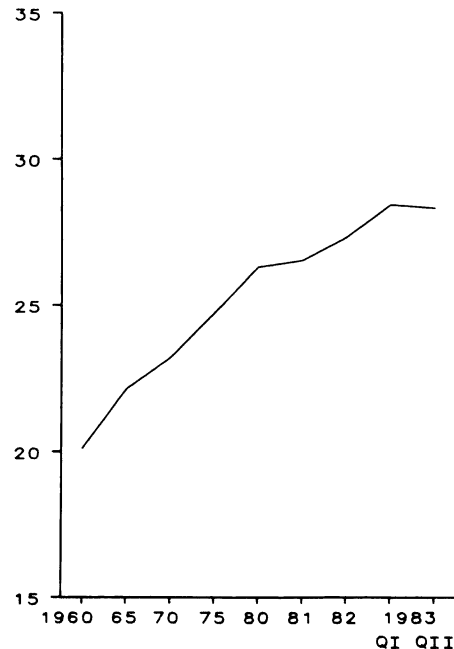
¹Based on first two quarters only.

Employment and Earnings

Year	Total employed	Unemployment rate	Hourly manuf. earnings
	Millions	Percent	Dollars
1980	99.3	7.0	7.27
1981	100.4	7.5	7.99
1982	99.5	9.5	8.50
1983:			
Oct.	102.0	8.8	8.92
Nov.	102.6	8.4	8.98
Dec.	102.9	8.2	9.05
Percent change:			
Dec., 1982-	3.9	-2.5	
Dec., 1983			

Share of Food Expenditures for Eating Out Rise¹

Percent

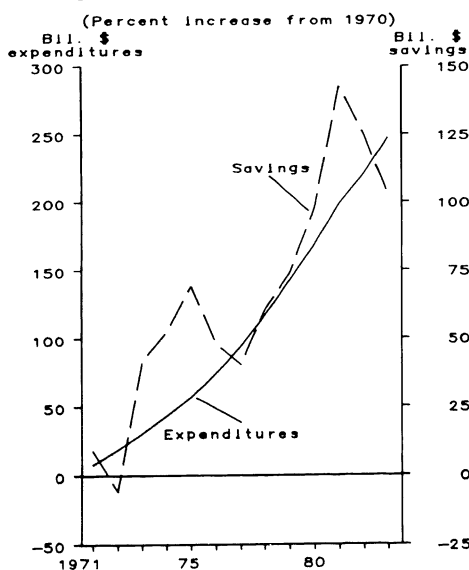


Population

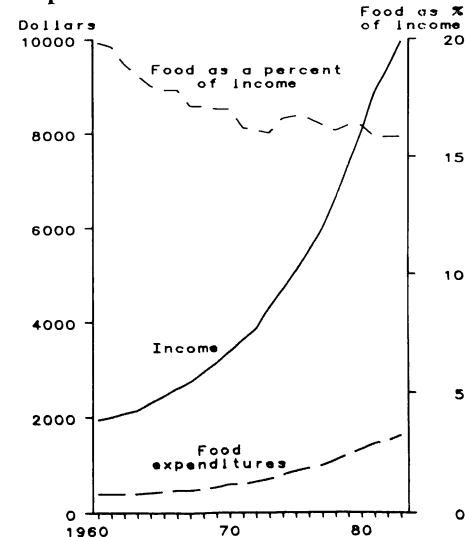
	1980	1981	1982	1983P
	Millions			
Total	227.7	229.9	232.1	234.2
Civilian	225.6	227.7	229.9	232.0

P = preliminary

Expenditures Rise Faster Than Savings



Incomes Rise Faster Than Food Expenditures



¹Food expenditures away from home as a percent of all food, excluding alcohol



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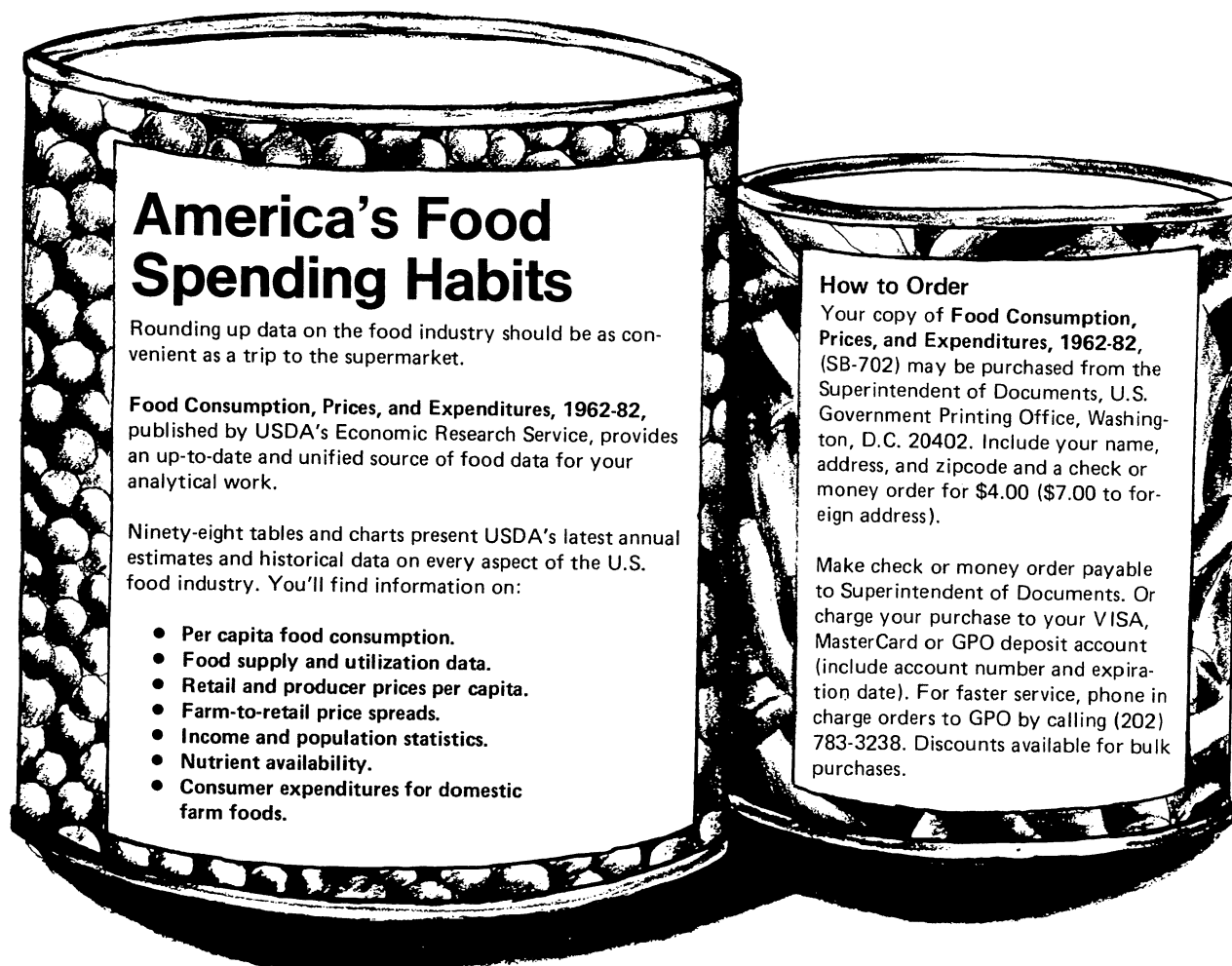
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