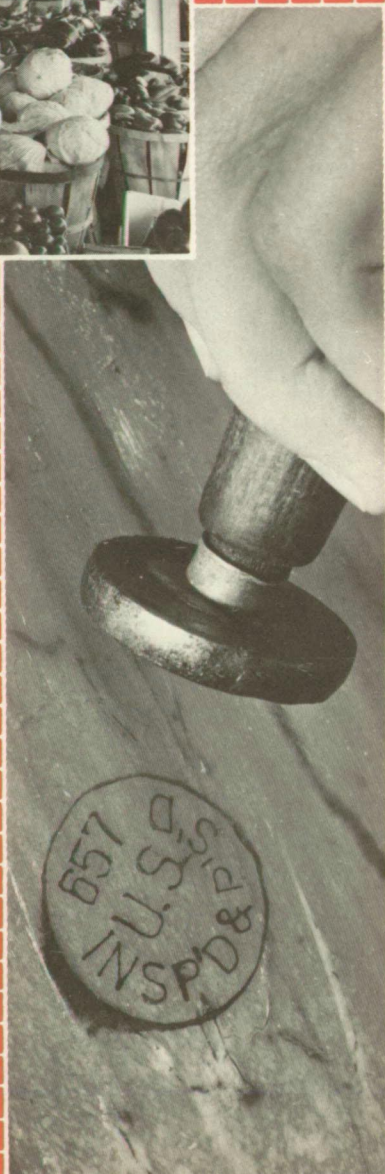
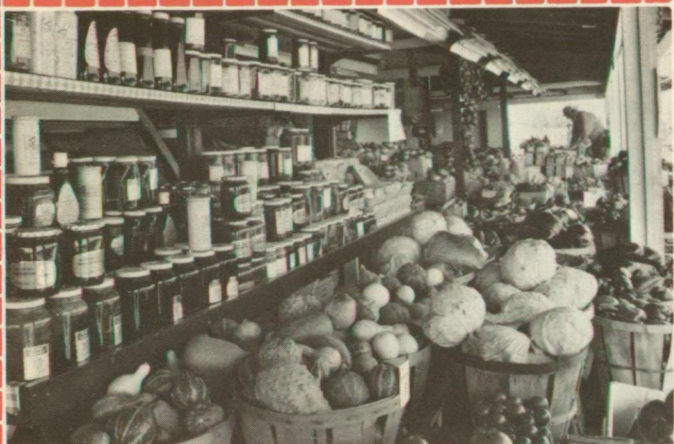


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**Food Safety
& Quality**

Contents

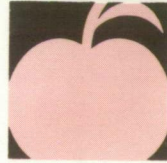
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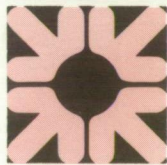
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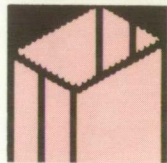
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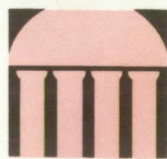
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Commodity Grades Help Consumers

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On a trip to the supermarket, consumers face an often overwhelming array of food choices. Their purchasing decisions are made a little easier, however, by USDA's commodity grading system which helps assure uniform product quality.

Under the grading process, products are evaluated according to established quality limits known as standards. Grades, then, serve as product descriptions which convey messages about such characteristics as color, texture, tenderness, and flavor.

Foods which have been graded are not required by Federal law to be labeled at retail, although some States and local areas may require it. Grades may not always be apparent to consumers; however, they are used heavily by wholesalers, manufacturers, and people who buy for retail stores. Grading allows professional commodity buyers to trade by description rather than personally inspect products.

Consumers benefit from the use of grades by buyers and sellers in the food marketing system. By properly identifying agricultural commodities at various levels of the system, grades can save time and money. They can facilitate trade between wholesalers and retailers, for instance, and increase economic efficiency. As a result, consumers may pay less for farm products than they would in the absence of a commodity grading system.

The Need for Grading

The commodity grading system evolved because of the large number of participants in the process that brings food from the farm to consumers' tables. When buyers personally inspected products as they came from the farm, the natural variability of commodities was apparent; negotiations with farmers considered these quality differences.

As the marketing system became a multitiered structure with handlers, manufacturers, wholesalers, and retailers between the farmer and the consumer, it was necessary to have commonly understood descriptive terms for agricultural products that could be used throughout the marketing process.



USDA grades set standards for buyers and sellers.

Initially, several grades for the same commodity, such as State standards for grain, were in place at the same time, leading to market confusion. In response, the Federal Government, with industry assistance, developed a set of uniform trading terms that buyers and sellers could use nationally.

National Standards Are Developed

The Cotton Futures Act of 1914, the Cotton Standards Act of 1923, and the Smith-Doxey Amendment of 1937 authorized USDA to develop standards and classes for cotton. The Grain Standards Act of 1916 required Federal evaluation for grain moving in interstate commerce. In 1975, the U.S. Grain Standards Act required greater involvement by USDA in grain grading. Tobacco classification was authorized under the Tobacco Stocks and Standards Act of 1921 and the Tobacco Inspection Act of 1935.

Although Congress authorized Federal standardization and grading for food

products in 1907, the Food Production Act of 1917 provided the major impetus in this area. Comprehensive authority was delegated to USDA under the Agricultural Marketing Act of 1946.

USDA presently develops, maintains, and adjusts grades and standards for meat, hogs, wool, cattle, poultry, eggs, dairy products, fresh, frozen, canned, and dried fruits, cotton, tobacco, spirits of turpentine, and rosin.

The Agricultural Marketing Service and Federal Grain Inspection Service of USDA are responsible for grading commodities. The grading of fish, shellfish, and seafood products is done by the National Marine Fisheries Service of the U.S. Department of Commerce. In many cases, employees of State governments grade all types of commodities under Federal supervision.

In general, grading of agricultural commodities is voluntary. However, commodities traded on futures markets must be graded to ensure that the quality con-

USDA's Commodity Grading System: Some Examples

Beef	USDA Prime*	Very tender, juicy, flavorful; has abundant marbling (flecks of fat within the lean).
	USDA Choice*	Quite tender and juicy, good flavor; slightly less marbling than Prime.
	USDA Good	Fairly tender; not as juicy and flavorful as Prime and Choice; has least marbling of the three. Usually used in processed products.
Fresh fruits and vegetables	U.S. Fancy*	Premium quality; only a few fruits and vegetables are packed in this grade.
	U.S. No. 1*	Good quality; chief grade for most fruits and vegetables.
	U.S. No. 2	Intermediate quality.
	U.S. No. 3	Lowest marketable quality.

*Indicates grades most often seen at retail.

forms with that specified by the standardized contract. Grain slated for export by ship must be graded, except that of firms which export 15,000 metric tons or less a year.

Under some Federal marketing orders, certain fruits and vegetables must be graded. Some States also have certain quality requirements checked by USDA, such as Florida for frozen concentrated orange juice.

In addition, Government agencies, including USDA, the Department of Defense, and the Veterans Administration, insist that all foods purchased for their feeding programs be graded. Commodities moving into Government storage under agricultural price support and loan programs are also required to be graded.

Ninety-five percent of all turkeys, 75 percent of broilers, and 46 percent of the eggs produced are graded. For beef, graded products amount to 65 to 70 percent of steers and heifers and about 55 percent of federally-inspected beef animal slaughters. Grades are assigned to 75 percent of dry milk production, 60 percent of butter, and 15 percent of cheese. About 55 percent of frozen and 35 percent of fresh fruits and vegetables are graded.

Grades Mean Better, Less Costly Products

The commodity grading system can contribute to economic efficiency. Grades, for example, make it possible for a professional buyer to purchase commodities by telephone from many different sources and be assured of uniform quality. Trading by description, then, has replaced personal inspection by buyers in much of the food system.

Wholesalers, manufacturers, and retail store buyers also purchase large quantities of food at a time, frequently at a distance. Losses in such transactions could be significant if the product isn't the quality expected. Furthermore, by providing widely accepted product descriptors to all traders, grades and standards can facilitate competition.

Grading can lower transportation costs for the entire marketing system by indicating, along with price information, which products are likely to bring a sufficiently higher return at the next point of sale to justify shipping costs. Grading can reduce spoilage by separating high-quality products from those likely to deteriorate more quickly. Marketing costs decline as

raw commodities from many producers are commingled for sale according to grade.

To the extent that markets are competitive and sellers pass on cost savings, consumers benefit from the grading system through lower prices. In addition, grades reflect consumer quality preferences, enabling farmers to determine what level of product quality will be the most profitable for them to produce and sell. By being responsive to consumers' preferences, farmers can increase their income, while satisfying consumers.

Food packers and processors voluntarily request USDA grading and must pay for it. The cost of these services is a small portion of the value of the product. Grading for eggs, for example, costs an estimated 0.25 to 0.33 cent per dozen. A total of 12 billion pounds of beef was graded in 1983 at a cost of about 0.1 cent per pound. Widespread voluntary adoption of grading over the years strongly suggests that the benefits have exceeded the costs.

Some Tests for Grades

To be effective, grades must meet several criteria. First, they should reflect significant quality variations within the product line. The grading system should reflect significant differences in demand while not being too complex or costly to use.

Second, grades should be based on standards which can be measured reliably at a reasonable cost and accurately assigned. For example, backfat measurement is crucial in determining pork grades (see related article in this issue). Presently, it isn't practical to measure backfat of live animals, so estimates are made after slaughter. USDA is now conducting research on the feasibility of measuring livestock backfat using sound waves.

To be most effective, the number of grades should correspond directly to the number of quality categories buyers feel are important. Too many will not allow buyers to distinguish among grades. On the other hand, problems can arise when

Beef: Graded and Ungraded in the Meat Counter

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users perceive distinct quality differences within one assigned grade. In this case, the addition of one or more grade categories to coincide with the users' classification will enhance marketing and pricing efficiency.

To be effective, grades must be based on factors that are obvious to buyers and sellers as they negotiate price. If desired, buyers and sellers can verify product classification through personal inspection, decreasing the potential areas of disagreement.

Finally, to avoid confusion, the grades assigned to a commodity must convey the same information to all who use them.

Grades May Be Revised

Since the early 1900's, when most standards were established, agricultural commodities and the marketing system have undergone significant change. Ideally, grades and standards keep pace through procedures established for their review, and, if warranted, their modification.

Product evolution, a shift in consumers' preferences, or development of new measurement techniques can provide the impetus for proposals to modify commodity grades and standards. Although consumers participate in hearings when USDA proposes such revisions, it is usually agricultural producers or associations who initiate requests.

USDA is currently considering revising the grading system for pork after research found significant differences in the yields of carcasses graded as U.S. No. 1 (see related article in this issue). These yield differences were greater than those between the highest and lowest grades under the present system, pointing to the need for one or more additional grades.

USDA has submitted for public comment a proposal to expand the number of grades to capture important differences. If, after considering all the relevant issues, USDA determines that a grade change would improve the marketing system, a proposal will again be submitted for public comment. The final decision will reflect information provided to the Department during the comment period.

Changing consumer food preferences and competition for markets are motivating food retailers to adopt new sales practices for fresh beef. Many supermarkets have found a growing market among price and health conscious consumers for leaner meats than what USDA grades as Prime and Choice. Retailers are increasingly offering these leaner, and often less expensive, cuts and labeling them with generic and store grade names, rather than USDA grade designations.

Economic Research Service (ERS) economists recently completed a preliminary analysis of beef quality labeling practices by supermarkets to determine the extent of use of USDA grades and names. They found that while 43 percent of U.S. supermarkets use only USDA Prime or Choice designations for fresh beef cuts of steaks and roasts, 44 percent use other names. The remainder offer both store and USDA grades.

Quality Grading of Beef

Beef naturally varies in quality. Carcasses well marbled with fat tend to be juicier, more tender, and palatable than lean beef. Some means of categorizing beef into quality levels reflecting consumer preferences and a common terminology is essential to commercial marketing.

In 1927, USDA adopted the first quality grade standards for carcass beef. Grade standards are developed in cooperation with industry and are periodically revised to reflect changes in market

demands. The last revisions in beef grades were implemented in 1976.

Grading is voluntary and available to packers on a fee basis. At present, about 55 percent of all commercial carcass beef is USDA-graded for quality, compared to about 65 percent in 1970 and 45 percent in 1975 (table 1).

Grading is distinct from meat inspection, another USDA function which assures the safety of meat for consumption. All carcasses and meat products must be inspected at the slaughterhouse.

Carcasses are graded into one of eight classes depending upon the age of the animal, degree of marbling, and other factors. Packers generally request grading only of carcasses of younger cattle primarily raised for meat on large quantities of feed grains. These carcasses typically qualify for the four highest grades: Prime, Choice, Good, and Standard. In recent years, about 90 percent have qualified for Choice, 5 percent for the Prime, and 5 percent for the other grades.

Supermarkets may purchase either beef graded by USDA or that which is not. Cuts from graded carcasses can be labeled and promoted with the designated USDA grade at the retail level. Stores can also use other terms to identify the quality of cuts from either USDA-graded or ungraded carcasses.

With growing public interest in leaner meats, many supermarkets are now purchasing carcasses with less marbling than in USDA Choice. Cuts from these ungraded carcasses are given a generic

Table 1. USDA Grades About Half of Commercial Beef Production

	Commercial production graded	Quality grades		
		Prime	Choice	Good and standard
		Percent		
1970	64.9	6.8	79.6	13.6
1975	43.4	5.1	77.3	17.6
1980	56.5	5.9	89.0	5.1
1983	54.7	3.9	92.0	4.1

Source: Agricultural Marketing Service, USDA

quality designation such as “lean beef” or a store label. Because ungraded carcasses are often available at a lower wholesale price, retailers can offer leaner beef at a savings compared to USDA Choice.

Use Categories Identified

The ERS analysis was based on data on the use of USDA and other quality designations for fresh beef steaks and roasts obtained from a nationwide survey of supermarkets conducted in 1982. Information for over 10,000 fresh beef items was collected from 542 supermarkets in 28 cities.

Beef steaks and roasts were identified as USDA Prime, USDA Choice, and “other”, depending upon the grade label used by the supermarket. “Other” includes generic, store labels, and the infrequently used, USDA Good.

The seven possible combinations of Prime, Choice, and other grades used by supermarkets were grouped into four categories that would provide the most meaningful distinctions among labeling practices:

- “Prime” includes supermarkets offering USDA Prime beef either exclusively or in combination with beef having any other quality designations.
- “Choice” identifies supermarkets offering only USDA Choice.
- “Other or store label” consists of supermarkets offering other than USDA Prime or Choice beef. It includes the use of generic and store names and any beef cuts labeled USDA Good.
- “Choice with other or store label” identifies stores which offer USDA Choice beef in combination with beef found in the “other or store label” category.

Grade Use Varies Among Stores

ERS researchers compared the use of different beef quality names used by supermarkets in relation to such factors as store type, ranking, location, format, regional location, annual sales class, selling area, household income, and meat department services (table 2).

Table 2. Use of Beef Grades Varies by Supermarkets

Supermarket characteristics	Beef grade designations			
	Prime	Choice	Other or store label	Choice w/ other
	Percent of supermarkets ¹			
Supermarket Type ²				
Chain ³	7.0	38.7	44.6	9.7
Independent	6.0	40.3	43.8	9.9
Ranking (in a market)				
Among top six firms	6.1	40.1	45.0	8.8
Other firms	9.1	38.2	41.8	10.9
Store Location				
Central city	4.6	39.2	47.0	9.2
Suburban	8.9	39.1	41.5	10.5
Store Formate				
Conventional ⁴	7.1	38.0	44.0	10.9
Superstore/combination ⁵	3.8	49.4	41.8	5.0
Ltd. Assortment/Warehouse ⁶	7.2	21.4	71.4	0.0
Region (U.S.)				
New England	9.5	4.8	78.6	7.1
Mid Atlantic	8.8	46.5	41.2	3.5
South Atlantic	4.6	56.9	23.1	15.4
West North Central	16.0	46.0	28.0	10.0
East North Central	4.3	54.8	33.3	7.5
West South Central	4.8	37.1	41.9	16.1
Mountain	1.9	28.9	61.5	7.7
Pacific	4.7	14.1	65.6	15.6
Annual Sales Volume (\$ mil.)				
Less than 4.0	5.8	39.3	43.9	11.0
4 - 7.9	6.9	39.6	44.2	9.2
8 - 11.9	5.6	37.1	46.1	11.2
12.0 and greater	10.2	40.7	42.4	6.8
Selling Area (square feet)				
Less than 10,000	8.5	38.5	43.8	9.2
10,000 - 29,999	5.6	39.2	44.2	11.0
30,000 or more	10.0	42.0	46.0	2.0
Household Income Level				
Stores in low-income areas	2.1	37.5	47.9	12.5
Stores in non-low income areas	9.0	38.9	40.2	11.9
Meat Counter ⁷				
No service	6.3	39.0	45.1	9.6
Service	8.7	40.2	41.3	9.8

¹ May not add due to rounding. ² Supermarkets are grocery stores having annual sales of \$1 million or more. ³ A firm is classified as a “chain” if it owns 11 or more supermarkets. Independent firms own 10 or fewer supermarkets. ⁴ Traditional supermarkets offering food products as well as laundry detergents, paper products, and health and beauty aids. ⁵ Offers a wide variety of nonfood products such as prescription drugs, clothing and hardware, in addition to food items. ⁶ Offers less variety and may not carry fresh meat, produce, or other perishable products. ⁷ Fresh meat is cut and wrapped to customer specification.

The analysis reveals that more suburban supermarkets offered prime quality beef (8.9 percent) than central city supermarkets (4.6 percent). "Other or store label" quality names were used by 47 percent of central city stores compared with 41.5 percent of supermarkets located in suburban areas. Since suburban areas are more likely to have higher household incomes, a greater variety, including more expensive cuts of meat, may be offered by supermarkets there.

Comparisons were also made of supermarkets in low-income neighborhoods with those in other areas of the city. The share of supermarkets offering Choice beef was almost identical in these two groups, while those selling "other or store label" was slightly greater in low-income neighborhood stores, 47.9 percent versus 40.2 percent. The greatest difference was for USDA Prime which

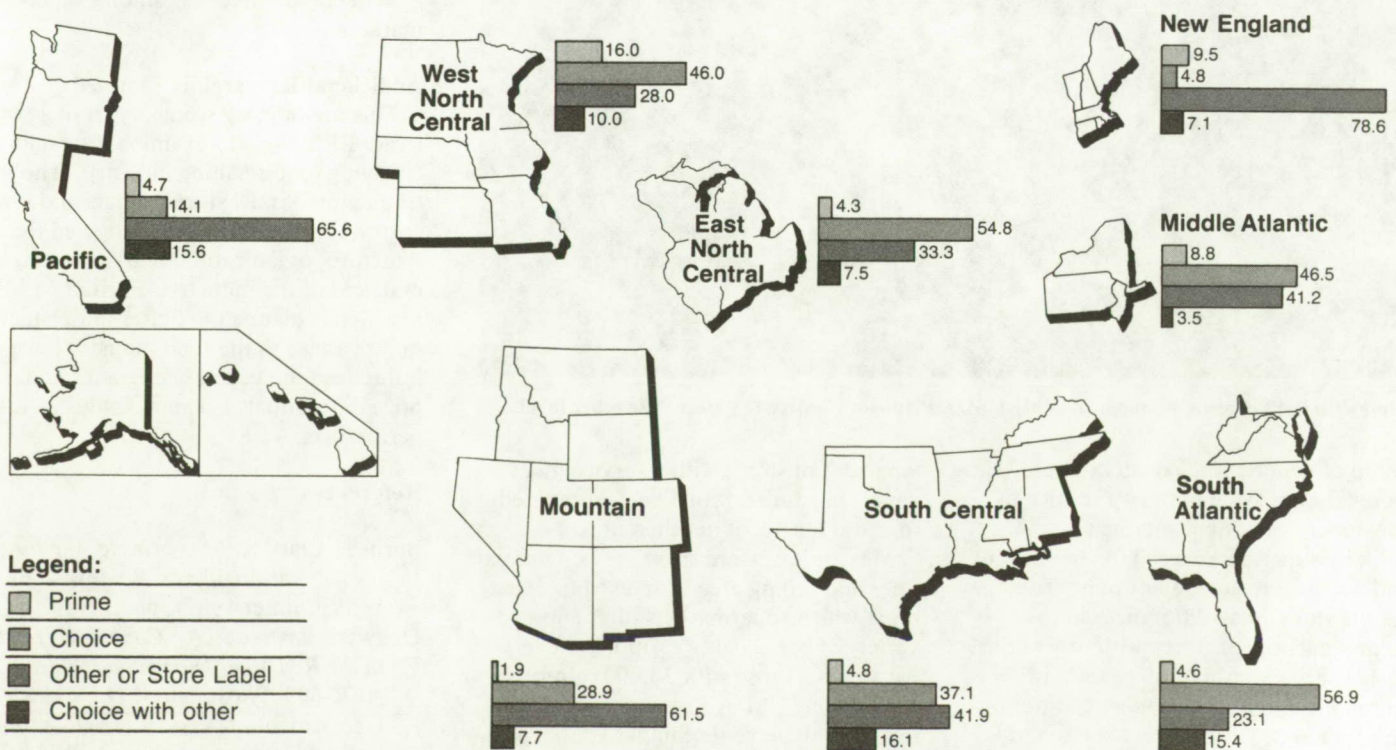
was offered in only 2.1 percent of stores in low-income neighborhoods, compared to 9 percent in other areas.

In recent years, innovations in the supermarket industry have led to the development of several store formats, including combination food and drug stores and limited assortment and warehouse stores. Limited assortment and warehouse stores were established as an alternative to conventional grocery stores and the emerging "superstores" which offer food products along with a wide variety of nontraditional items including automotive equipment, drugs and cosmetics, and housewares. Warehouse stores are characterized by reduced services, such as no bagging and carryout, and less variety. By reducing selection, these stores are also able to place greater emphasis on selling merchandise purchased at a discount from manufacturers.

Only 21.4 percent of warehouse supermarkets sold USDA Choice beef while 71.4 percent offered only beef with other or store labels. In contrast, 38 percent of conventional format stores offered USDA Choice beef exclusively and another 44 percent sold only other or store label beef. The greater reliance on non-USDA quality names in warehouse stores is in keeping with their focus on economy and less variety of products and services.

Most supermarkets offered either beef with the USDA label or with a store or generic quality designation. Almost 50 percent of super/combination stores and 38 percent of conventional stores sold only USDA Choice. Almost 42 percent and 44 percent, respectively, offered other or store labels only. Only 11 percent of conventional supermarkets and 5 percent of super/combination stores offered both USDA Choice beef and store

Figure 1. Supermarket Use of Beef Grades Differs Regionally





Survey finds 43 percent of stores sell only USDA Prime or Choice, 44 percent use other labels.

brand or generic labeled cuts. These stores may provide both as a service to consumers desiring leaner beef.

Many supermarkets sell fresh meat cut and wrapped to customer order. The results show small differences in the labeling practices of stores with or without such a service. About 45 percent of stores without a service meat counter offered other or store labeled beef, compared to 41 percent for stores offering meats to customer specification. Almost

9 percent of stores with a service meat counter included Prime beef, compared to about 6 percent in other stores.

Measures of store size based on annual sales and selling area were used to determine which supermarkets offer a greater variety of beef quality. Among the largest stores, those with 30,000 or more square feet, USDA Prime cuts were found in 10 percent. Similarly, 10.2 percent of stores with annual sales of \$12

million or more—the top sales group—sold Prime beef.

The greatest differences in beef quality labeling practices were found on a regional basis. Fifty-seven percent of all supermarkets in the South Atlantic region sold Choice beef exclusively, compared to only 4.8 percent of New England stores. A much greater proportion of New England supermarkets offered other or store label beef—78.6 percent, compared to 23.1 percent of South Atlantic stores. Over 15 percent of supermarkets in the South Atlantic, South Central, and Pacific regions offered Choice beef together with other or store labels. USDA Prime was available in 16 percent of the West North Central region, compared to only 1.9 percent of Mountain region stores.

Important factors affecting regional marketing practices may include: tradition of meat consumption, proximity to beef production areas, consumer knowledge about beef quality (reliance on USDA grades as an indicator of quality), and degree of competitiveness among supermarkets.

Additional Research is Planned

This preliminary study is part of a larger ERS effort to examine the rapidly changing food retailing industry. The introduction of new store formats and low-cost warehouse stores has affected the structure, organization, and marketing practices of the industry. Further research is planned to better understand how changes in the food industry have influenced the use of beef grades and price differentials between grades in supermarkets.

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Hogs Are Now Longer and Leaner

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More efficient production practices and changing consumer preferences have encouraged hog producers to raise leaner animals. Hogs today have more muscle and less fat than in the 1960's. More importantly, they deliver a greater amount of lean pork to the live pound.

A 1982 Economic Research Service (ERS) study documents the significant changes that have occurred in hog production between 1968 and 1980. Using a nationwide survey, ERS researchers found that in 1968, only 8 percent of slaughter hog carcasses qualified for USDA's leanest, meatiest grade—U.S. No. 1. By 1980, almost 72 percent made the top grade (table 1). In the same period, average carcass length increased by a half-inch and average backfat thickness decreased by a quarter-inch (table 2).

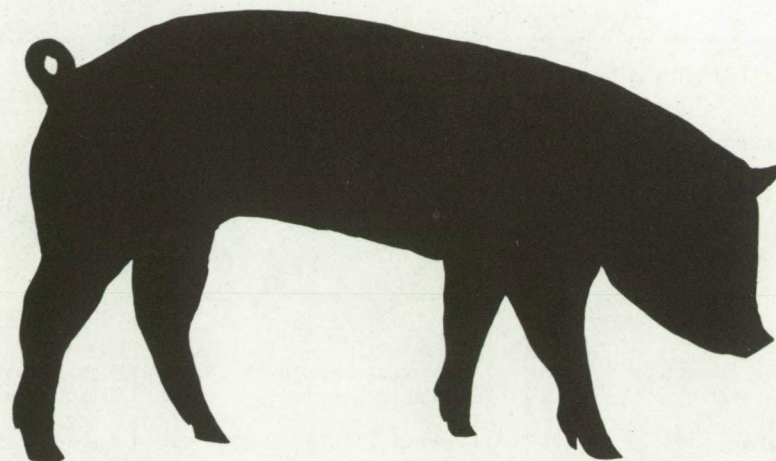


Table 1. More Hogs Make Top Grade

U.S. Grade	1967-68 ¹	1980 ²
	Percent	
1	8.2	71.7
2	42.1	24.2
3	35.7	3.7
4	12.2	.3
Utility	1.8	.1

¹U.S. Department of Agriculture, *Improvements in Grades of Hogs Slaughtered From 1960-61 to 1967-68*, Marketing Research Report No. 849, May 1969. ²U.S. Department of Agriculture, *Improvements in Grades of Hogs Marketed*, ERS-675, February, 1982.

These changes are the result of decisions by consumers, packers, and producers. Also involved was USDA's grading system which provides uniform standards for relating the type of animal produced to the uses of the many end products.

Consumers Want Less Fat

In the last 20 years, preferences for livestock products have changed. Consumers now want leaner pork. In addition, the demand for animal fats for other products has declined rapidly because of more plentiful vegetable oil substitutes. In 1960, the average American diet included 7.5 pounds of lard a year. In

1968, it had fallen to 5.5 pounds. By 1980, per capita lard consumption had dropped to 2.4 pounds—one-third of the 1960 level. (These figures exclude lard used in margarine, shortening, and non-food products.)

Changing consumer preferences have influenced the demands of retailers, processors, and meatpackers. Farmers responded, in turn, by breeding a leaner hog.

Grades Encourage Leaner Hogs

USDA's grading system, which categorizes products with similar attributes, facilitated the changes in hog production. Grades provide a common "language" for communicating to producers the animal characteristics desired by consumers. They also provide a guide for choosing breeding stock and a way for producers to measure the efficiency of

various production, feeding, and marketing programs by monitoring the quality of hogs produced.

USDA grades indicate the approximate value of the carcass based on lean meat yield (see insert). Therefore, they make it possible to buy and sell pork carcasses on the basis of their worth. In this way, they can affect the type of animal produced.

Standardized grades can help packers determine value differences in the market hogs they buy and the pork they sell. Higher returns provide an incentive to produce leaner hogs.

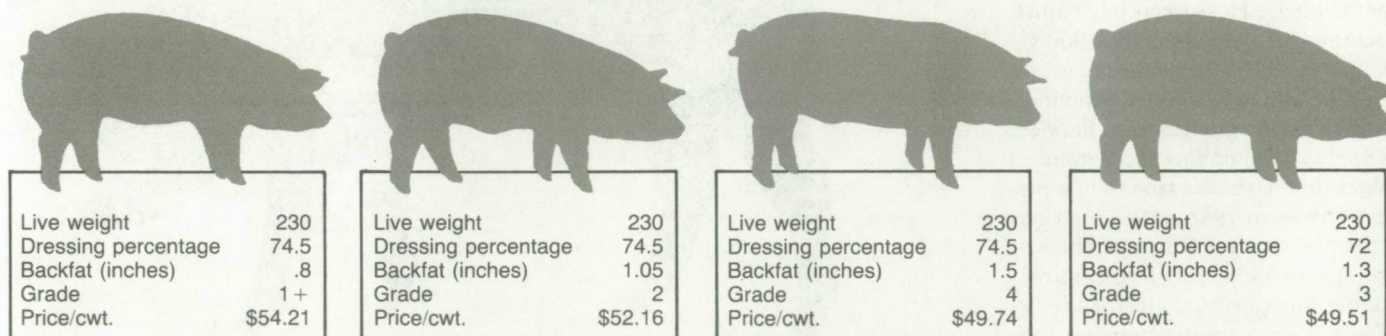
A New Grading System is Proposed

USDA is responsible for reviewing the grading system and revising it as necessary to reflect improvements made in production and marketing. The current grading standards were developed in 1968

Table 2. Hogs are Longer and Leaner

U.S. Grade	Average carcass length		Average backfat thickness	
	1967-68 ¹		Inches	
1	30.4	31.0	1.51	1.22
2	30.3	30.8	1.79	1.56
3	30.4	30.8	2.13	1.94

¹U.S. Department of Agriculture, *Improvements in Grades of Hogs Slaughtered from 1960-61 to 1967-68*, Marketing Research Report No. 849, May 1969. ²U.S. Department of Agriculture, *Improvements in Grades of Hogs Marketed*, ERS-675, February, 1982.

Figure 1. Price Differences Under a Grade and Yield Program¹

¹Dressing percentage is defined as hot carcass weight divided by live weight. Standard yield for a 230-pound hog in this packer's program is 72.7 percent. Grade is based on backfat thickness. However, lack of muscling may decrease the grade. Price/cwt. assumes a base live bid price of \$50/cwt.

Source: Pork '84, "High Yield Won't Pay Off if Hogs are Fat," May 1984, p. 29.

and reflected industry progress since 1955.

The ERS study reveals that in 1980, 96 percent of the hog carcasses were graded U.S. No. 1 and 2. Some of the most significant variations in terms of the total hog population, then, are not identified by the present grading system because such a large proportion of the hogs are graded No. 1. Grades specify only minimum standards, leaving the top grade open-ended.

An examination of pork carcasses found that those graded U.S. No. 1 had yields of 53 percent to 70 percent. The average yield for U.S. No. 1 was 59 percent; 55 percent for U.S. No. 2; 50 percent for U.S. No. 3; and 44 percent for U.S. No. 4. The 17-percent range in U.S. No. 1 yields is larger than the difference among grades, indicating refinement of the standards may be needed.

Price premiums based exclusively on the existing USDA grade standards would give the same price to producers whose animals meet minimum U.S. No. 1 standards and those whose animals exceed the standards. Producers raising leaner, meatier hogs expect to get more money for them. An ideal grading system should classify together products with

uniform characteristics determining their values, so that price can reflect differences in value and provide incentives for improvement.

USDA has proposed a new grading system based on the continuing trend toward leaner hogs over the past 16 years. Under the proposed system, one backfat measure would be used instead of the current average of three. Hog carcasses with less than 1.0 inch of backfat at the last rib would grade U.S. No. 1, compared to 1.6 inches or less under the current system; less than 1.25 inches, U.S. No. 2; and less than 1.5 inches, U.S. No. 3.

The proposal has been published in the Federal Register and comments in response to the notice were evaluated and summarized. They will be reflected in a document currently being prepared which will be resubmitted to the Federal Register for further public comment.

Many Packers Have Their Own Grades

Most packers have developed their own grading system which substitutes for USDA's. One packing company has standards similar to the new system proposed by USDA. The purpose is to encourage

the marketing of lean hogs with a minimum amount of fat by offering price incentives—more would be paid for lean hogs but less for hogs with more fat (figure 1).

Under the packer's program, backfat thickness is measured at the last rib and the amount of muscling in the entire carcass is taken into consideration. Presently, about 53 percent of the hogs purchased by this packer are under the system, with only about 20-35 percent of those hogs receiving the two highest grades.

Nationwide, only about 14 percent of all slaughter hogs are sold under a grade and yield system where producer compensation is based on actual carcass weight and grade. Instead, most hogs are sold after visual inspection of the live animal, though buyers still make grade and yield adjustments. In some cases, substantial inconsistencies can occur between live prices and the carcass value of pork.

Steps are now being taken by USDA to provide a grading system which better identifies value differences among pork carcasses. These value differences should be reflected, in turn, in price differences that encourage farmers to produce leaner hogs.

Policies and Programs Affect Turkey Costs

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How USDA's Current Grading System Works

USDA pork carcass grades are based on the expected combined yields of the four major lean cuts — ham, loin, picnic shoulder, and Boston butt. These grades measure meat yield and are not comparable to beef grades like Prime, Choice, and Good which measure meat quality attributes.

Minimum standards require both the lean quality and belly thickness of the carcass to be acceptable. Pork carcasses with acceptable lean quality are graded as U.S. No. 1, 2, 3, or 4. These grades are based on the degree of fatness of the carcass and the thickness of muscle in relation to skeletal size. The hogs with the thinnest backfat and thickest muscling relative to carcass length and weight have the greatest probable meat yield and are graded No. 1.

Hogs not meeting the standards for No. 1 through No. 4 are graded utility. These carcasses have either unacceptable lean quality, an oily carcass, or a belly too thin to produce bacon. The meat, however, is still fit for human consumption and is usually used as ground, processed, or canned pork.

For the average 165-pound carcass, the four major lean meat cuts will total about 98 pounds for a U.S. No. 1 hog, 90 pounds for a No. 2 hog, 82 pounds for a No. 3, and 73 pounds for a No. 4.

Federal regulations affect turkey growers and processors, and thus, the cost of the turkey we buy. They range from required inspections to the payment of taxes and add about 10.9 cents to the cost of producing and marketing a pound of ready-to-cook turkey, according to a recent Economic Research Service (ERS) study. This represents about one-eighth of last year's average price to consumers.

Some of the regulations relate to health, safety, or environmental concerns. Others, like variable freight rates administered by the Interstate Commerce Commission, come under the heading of economic regulations. Social regulations constitute a third category and include Social Security and income taxes and laws to help ensure equal employment opportunities.

Regulations Assure Safe Foods

Concerns about food safety around the turn of the century led to passage of the Pure Food and Drug Act of 1906 and the Federal Meat Inspection Act of 1907. These acts prohibited the adulteration and misbranding of food and drugs and established sanitary standards and inspection regulations for red meat products sold in interstate and foreign commerce.

Because commercial poultry production did not begin to expand rapidly until the 1950's, industry inspection remained voluntary until passage of the Poultry Products Inspection Act in 1957. This act established standards for poultry similar to those for red meat.

Inspection regulations, which are administered by USDA's Food Safety and Inspection Service (FSIS), can have an important effect on processing plant output and costs. Plant layout and equipment changes, for example, must be approved by FSIS and daily sanitation inspections are required. In addition, two of every 100 turkeys are rejected in the inspection process because of contamination or disease. These losses add about 1 cent per pound to producing and marketing costs.

The Department of Labor's Occupational Safety and Health Administration was created in 1970 to provide safety

standards to protect workers from possible hazards. In the case of the turkey industry, such hazards include machinery, noise, and feed mill dust.

Public concern for environmental quality resulted in the National Environmental Policy Act of 1970 which created the Environmental Protection Agency (EPA). EPA has broad powers to enforce laws relating to water and air quality, control of pesticides, solid waste disposal, and other environmental concerns.

The primary impact of environmental protection regulations on the turkey industry involves water pollution control at both the producing and processing levels. Capital investment costs for processing plants that built private treatment facilities in the 1970's to comply with EPA standards for wastes discharged into public waterways ranged from \$70,000 to \$600,000 per plant. Annual fixed costs total from \$10,500 to \$90,000, or more. Operating costs range from \$4,200 to \$14,000 per year. Total annual expenditures for water pollution control, therefore, can add 0.42 cent per pound, ready-to-cook weight, for many turkey processors.

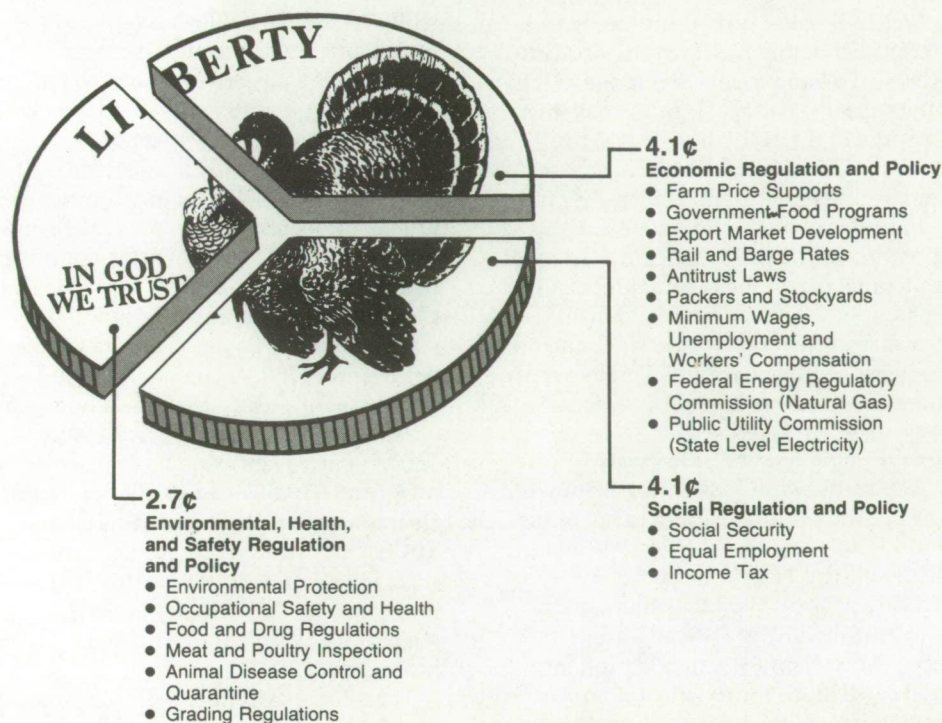
Together, environmental, safety, and health regulations add about 2.7 cents per ready-to-cook pound to the cost of producing and marketing turkeys (figure 1). Except for animal disease control and quarantine, most of these regulations affect poultry processors, rather than growers.

Economic Regulations

No direct economic controls exist for turkey production or prices. However, related regulations raise the cost of growing turkeys, while others mean higher marketing costs. In total, these translate into 4.1 cents per ready-to-cook pound.

Feed accounts for 75 percent of the cost of turkey production. Therefore, agricultural price support and production control programs for feed grains are important influences on expenses for raising turkeys. These programs, aimed at stabilizing farm prices and avoiding severe fluctuations in farm income, tend to

Figure 1. Government Regulations and Programs Contribute an Estimated 10.9¢ Per Pound to the Cost of Producing and Marketing Turkeys



result in higher prices for feed than would occur in their absence.

Feed prices are also influenced by foreign demand for U.S. corn. Annual exports of corn by the United States have varied by an average of 4.4 million metric tons, or 8.5 percent, over the 5-year period through 1981. USDA estimates indicate that this fluctuation in the level of annual exports could change the price of corn in any given year by \$8.42 per metric ton. Translated into feed costs for turkeys, this could result in a 1.3-cent-per-pound increase or decrease in costs of production. Fluctuations in farm costs, in turn, influence the price of ready-to-cook turkey.

While foreign sales of grain may mean increased feed costs, exports of processed poultry could result in higher farm prices for turkey. USDA estimates, for instance, that farm prices for turkey would have been 1.4 cents lower per pound in 1980 without the 75 million pounds exported. Similarly, exports of 63 million pounds in 1981 could have boosted farm prices by 1 cent per pound.

The turkey industry is highly concentrated in certain geographic areas, many located outside the Midwestern grain belt. Government regulation of transportation rates, therefore, has an important influence on costs.

Railroad freight rates for shipping grain to turkey-producing regions in the United States have more than doubled over the last several years, reflecting increases in labor costs, fuel, and other factors. In addition, regional differences in shipping costs have widened, favoring some production areas. Shipping charges from the Midwest to the South, for instance, are currently about \$10 per ton less than to the Northeast and Middle Atlantic States. This gives Southern growers a 1.5-cent-per-pound advantage in the cost of producing turkeys.

Regulations may also add to differences in the cost of production between small and large farms. Large-scale turkey growers, for instance, face costs associated with minimum wage, unemployment insurance, and workers' compensation regulations.

Small turkey growers, in contrast, are usually exempt from minimum wage and employment standards, as well as rules requiring unemployment insurance and workers' compensation contributions by employers. However, the number of small growers has steadily declined. The number of farms raising turkeys dropped from 162,244 in 1949 to only 26,638 in 1978, of which only 7,271 reported selling turkeys commercially. A fourth of these farms sold 95 percent of all turkeys and each sold more than 16,000. Almost half of the turkeys were sold by the 304 farms selling more than 100,000 each.

Social Regulations

Social regulations encompass a wide range of laws to protect the general health and welfare of people. The foundation of the network of social legislation lies in the New Deal of the 1930's when old age and survivors' insurance, unemployment compensation, public work projects, and public aid programs were created. Over the years, these laws have been expanded to include equal employment, medical insurance, food stamps, and other public welfare programs. Today, they add about 4.1 cents to the costs of producing and marketing turkeys on a ready-to-cook weight basis.

New Technologies: More with Less?

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The Social Security system was established in 1935. However, farm and domestic workers and other self-employed groups were not covered until the 1950's. In 1983, the employee's share of Social Security payments amounted to 6.7 percent of cash wages up to a \$35,700 maximum. A matching 6.7 percent was also contributed by the employing firm. Self-employed farmers contributed 9.35 percent of their net income to the Social Security system. For the turkey industry as a whole, the Social Security payments account for about 1.6 cents of the estimated 12 cents per ready-to-cook pound spent for labor.

Income taxes are paid by all segments of the industry, including farmers, feed mills, processors, wholesalers, and retailers. Assuming that total net income for the entire production and marketing chain amounts to 8 cents per pound, the income tax liability would amount to about 2 to 3 cents per pound, ready-to-cook weight.

Total Cost May Vary

The total per-pound cost of Federal regulations and policies for ready-to-cook turkey may vary from year to year depending, for example, on such things as fluctuations in the supply, and consequently the price of feed grains. Furthermore, differences in rail and barge rates, labor laws, and other regulations may affect transportation and processing costs.

The ERS study, then, reports that the net cost impact of Government actions may actually range from as low as 6.8 cents to as much as 15 cents per pound of turkey. This means that between 7.4 percent and 16.4 percent of 1983's average retail price of 91.7 cents per pound went to pay for the costs associated with Government regulations and policies.

Predictions abound on the emerging technologies likely to affect the U.S. food and fiber system. They range from dramatic improvements in plant yields to computerized farms to new "engineered" foods.

To some, this may sound like science fiction. But imagine a Dust Bowl farmer's reaction to the revolutionary changes in farm machinery, pesticides, and plant and animal genetics that have occurred during the past 50 years. Since 1930, per acre yields of corn, sorghum, and tomatoes for processing, for example, have increased over 450 percent. Yields of other crops rose between 65 and 352 percent.

The most likely advances in technology will involve three areas: further expansion of yield potentials in crops and animals through genetic improvement; plants and animals better able to adapt to harsh environments or requiring less production inputs such as pesticides or fertilizers; and viable substitutes for many food products, feed ingredients, and traditional agricultural supply and management inputs.

Agriculture and Science

Over the last 50 years, there have been simultaneous improvements in farm management, pest control, and cropping techniques. However, applied genetics alone have probably accounted for as much as 50 percent of harvest increases since the 1930's. Impressive as these gains in yields have been, the traditional process of selective breeding of plants and animals for desired characteristics is a lengthy one. This is especially true for many types of livestock with several years between generations.

Scientists are now focusing on cells and their components in an effort to greatly shorten the time needed to develop higher yielding plant and animal varieties.

Tissue culture, for example, allows scientists to grow cells or only parts of plants which are then screened for preliminary disease or pest resistance. This technique is not new but scientists have developed ways to keep the plant parts, known as plantlets, alive. Millions of plantlets can be studied more easily in a laboratory than the same number of whole plants in many acres of greenhouses or fields.

The fact that plantlets can be grown quickly will also take years off plant breeding time. For example, a barley variety, developed using tissue culture, was recently released in a record 5 years, compared to the normal 12 years.

Tissue culture is now used routinely for breeding new varieties of asparagus, rape-seed, cabbage, citrus, sunflower, carrots, cassava, alfalfa, millet, endive, clover, tomatoes, potatoes, and tobacco. Researchers have used the technique experimentally with corn, wheat, and soybeans.

Gene splicing, technically termed recombinant DNA (rDNA), is also used to improve plant and animal characteristics. It involves the transfer of specific "beneficial" genes from one plant or animal to others in the same or completely different species (figure 1).

Studies by USDA and others indicate that the time required for these technological advances and the extent of the gains may vary considerably. Projected increases in average yields were recently prepared at a Resource Conservation Act (RCA) Symposium. Forecasts were made under four scenarios ranging from low to optimistic (table 1). What is most likely, according to the RCA Symposium participants, is that average cotton and alfalfa yields will probably be about 20 percent above current levels by 2000, while the amount of rice per acre will double. Yields should range from 50 percent higher for alfalfa and 150 percent greater for rice by 2030.

*Clark Burbee, Henry Haszler, Rosanna Mentzer Morrison, and Tanya Roberts also contributed to this article.

Other emerging biotechnologies may accelerate livestock yield increases through genetic change. This includes increasing the number of offspring of a desired trait or sex produced in a year through such techniques as embryo transplants.

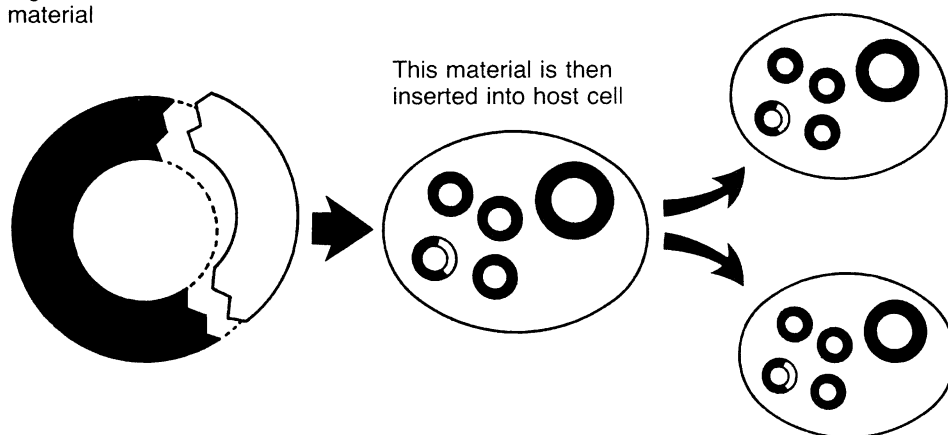
Improvements in animal yields will continue through cross-breeding and the selection of breeding stock on the basis of records of performance. Newly synthesized hormones may improve the feasibility of transferring traits in cattle and sheep from one generation to the

next through artificial insemination. This technique has already proved important. Currently, 100 percent of turkeys, 60 percent of dairy cows, but only 5 percent of U.S. beef herds and practically no sheep are artificially inseminated.

Figure 1. Gene Splicing: How it Works

Specially prepared pieces of genetic material are spliced together to form recombinant material

When the cell divides, the new genetic material is reproduced along with the original



Source: McElroy, Robert and Kenneth Krause. *New Technologies to Raise Agricultural Efficiencies*. U.S. Dept. of Agr., Econ. Res. Serv. Ag. Infor. Bulletin #453.

Table 1. U.S. Potential Crop Yields

Year	Low		Probable		High		Optimistic	
	2000	2030	2000	2030	2000	2030	2000	2030
	Percent increase							
Crops								
Feed Grains ¹	20	50	40	100	60	150	100	200
Alfalfa	10	25	20	50	45	110	60	150
Wheat ²	25	50	50	100	75	150	100	200
Cotton ³	0	20	20	60	40	70	100	200
Rice ⁴	50	100	100	150	150	200	200	250
Soybeans	50	60	60	120	120	180	150	300

¹Barley, corn, oats, sorghum, corn and sorghum silages. ²The Southern Plains, Northern Plains, and Mountain regions will have wheat yield gains 10 percent below the national average by 2030. ³The cotton yield projection for the San Joaquin Valley is 10 percent higher than the national average. ⁴Rice is grown only in the Corn Belt, Delta States, Southern Plains, and Pacific regions.

Source: Resource Conservation Act Symposium: *Future Agricultural Technology and Resource Conservation*. Executive Summary. 1983.

Greater Efficiency Could Result

Current production practices for a number of crops and animals could be affected radically by scientific advances in several areas. Plant growth regulators (PGRs), for example, are being synthesized. Some PGRs speed up plant maturity, reducing fertilizer needs and early season losses to insects and diseases. One PGR, used experimentally, resulted in yield increases for radishes and lettuce of 25 percent and beans of 20 percent, while reducing growing times by 10 days.

New, more pest and disease resistant varieties of plants may be bred through rDNA. This technique could enable development of plants tailored to harsher environments, thereby reducing the need for heavy doses of pesticides, herbicides, irrigation water, and fertilizer. Large areas, now considered uncultivable, could be brought into production.

Frost injury is a major problem affecting production of corn, soybeans, wheat, tomatoes, pears, almonds, apples, cherries, citrus fruits, avocados, and other plants. Frost injury in the United States varies from year to year, but estimates of average annual losses range from \$1 to \$3 billion.

Recent biotechnological advances that help protect plants by spraying them with a mixture of water and genetically altered bacteria may limit frost damage. Actual use of this technology is awaiting the results of legal actions which have required further study of possible environmental effects.

On the livestock side, another example of an emerging technology is the development of bovine growth hormone (bGH). Using rDNA, scientists can identify and isolate the gene responsible for producing this hormone. As a result, bGH can be produced for commercial use in quantities not possible before. Daily injections

of bGH into lactating dairy cows improved feed efficiency and increased milk production per cow by 15 to 40 percent in several experimental trials.

Synthesized vaccines have been developed against such fatal diseases as scours in calves and piglets, one strain of hoof and mouth disease, and shipping fever. These vaccines ensure that more of the inputs used in livestock production translate into greater numbers of healthier, and thus, marketable animals.

Improved management skills, greatly aided by the computer, will assist in the efficient application of production inputs. Only about 5 percent of all farmers now own a computer; in 2 years, the number could be 40 percent, according to recent estimates. The use of computers and devices such as satellites to monitor crops may also lead to greater efficiency.

New Feeds, Foods, and Input Substitutes

Farmers, food processors, and feed ingredient manufacturers may one day be able to replace some traditional agricultural items with materials and processes being developed. For example, amino acids—components of protein essential in the diet—are being synthesized through traditional fermentation processes. Some animal feeds already contain these man-made products in place of some soybean meal or gluten. Future feeds may be comprised of corn, a mix of amino acids tailored to the animal's requirements, vitamins, minerals, a flavorizer, and fiber for bulk.

Another example of a potential competitor for traditional agricultural commodities in feeds is single-cell protein (SCP) made from such microorganisms as bacteria, algae, and fungi. Already firms in the United States, Europe, and Japan are producing SCP on a commercial scale. Widespread use, however, will likely occur only if the cost of production and thus, price, can be lowered. To date, SCP is still two to three times more ex-

pensive than pure soybean meal. Industrial production of animal feeds from SCP should offer a more stable supply and price than conventional products which are often subject to shortages, weather, disease, or other factors.

For consumer products, new enzymes—the active agents in fermentation processes—already have helped improve food quality and reduce processing costs. High fructose corn syrup (HFCS) is one example. Enzymes are used to convert corn starch into HFCS. Although it was introduced in 1967, the commercial success of HFCS did not begin until 1972 when a new enzyme process was developed which lowered production costs and made HFCS more price competitive with sugar. Other new products from enzyme technology are used to produce cheese and stabilize nutrients in meat analogs.

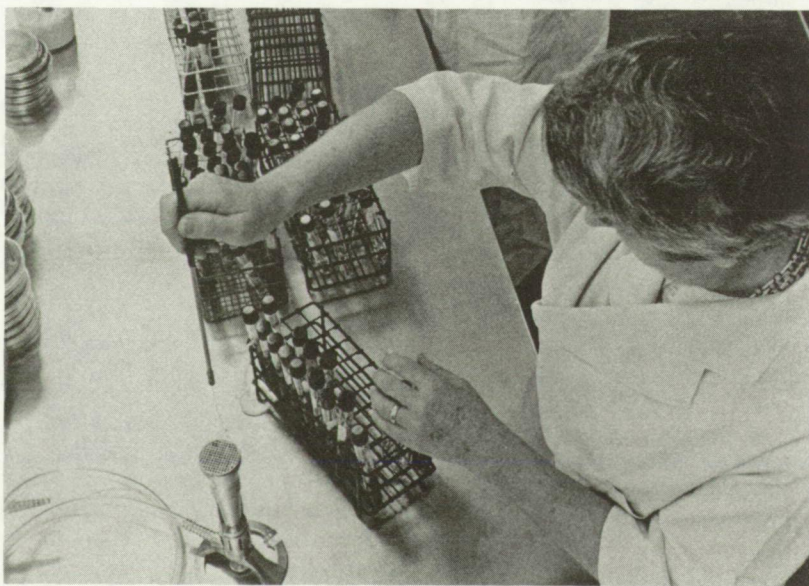
Back on the farm, energy production from animal wastes could become more commonplace as farm size continues to expand and energy costs rise. Larger farms make investments in "home" generated energy more economically feasible. Furthermore, as gas and oil prices rise, the relative cost of alternative fuels declines and interest in their production and use grows.

Consumers May be Big Winners

New technologies have different impacts on producers and consumers. Technological changes affect the costs and returns of individual farms and can geographically alter production areas. As larger supplies come to market, prices fall and net incomes—total revenue minus production costs—in the farm sector are generally no better than before the technology was adopted.

Ultimately, the benefits of technological change are captured by consumers. Advances in production and processing have helped hold down the cost of food. The growth rate of production for most commodities has exceeded population increases, assuring adequate supplies at costs below what they would have been in the absence of technological change. At the same time, incomes have risen faster than food costs. As a result, the share of income used for food purchases has fallen from 27 percent in 1940 to about 15 percent today.

From all indications, productivity gains will tend to moderate any increases in food costs. For example, plants that require less fertilizer or water will help offset increases in production costs associated with rising prices for these inputs.



The laboratory offers farmers view of the future.



How America Quenches Its Thirst

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Thus, while it may seem a long way from the scientist's laboratory to the consumer's table, we all have an important stake in future agricultural production technologies.

Gene Center Opens

The Plant Gene Expression Center, a joint venture of USDA's Agricultural Research Service (ARS), the California Agricultural Experiment Station, and the University of California at Berkeley, has been established to speed the genetic engineering of crops to help meet tomorrow's food and fiber needs.

Ira Michael Heyman, chancellor at the Berkeley campus, said the Albany, California, center "will exploit biotechnology to produce genetically engineered crops, thereby enhancing traditional plant breeding methods. Bioengineering will also provide new crops for new uses, including feedstocks for industry."

USDA will initially provide annual funding of \$4 million, with industry and various public institutions contributing a smaller amount.

Terry B. Kinney, Jr., ARS administrator, said the center will "reach out and draw on the expertise and ideas of the existing science and agriculture research community, both public and private."

Kinney added that when the center is fully operational it will "integrate its efforts with major centers of biotechnology, in effect establishing a network that would embrace most of the world's top researchers in plant biotechnology."

James B. Kendrick, Jr., vice president for agriculture and university services, University of California, noted that "the center will put its research products into the hands of scientists anywhere who are dedicated to the genetic improvement of plants."

Americans are drinking more commercially produced beverages than ever before. In 1982, we averaged 133 gallons per person of milk, coffee, tea, beer, wine, soft drinks, and fruit juices in total, compared to 114 gallons in 1962. In contrast, per capita consumption of food overall was relatively constant over this period.

While the trend in consumption has been upward, there have been significant shifts among beverages, with increases for some and decreases for others. In 1982, for example, soft drinks ranked first, accounting for 29.7 percent of total beverage consumption. Twenty years earlier they were third at 14.1 percent (figure 1).

Consumers are also drinking more beer, pushing it from 13.2 percent of total beverages in 1962 to 18.3 percent. Consumption of other alcoholic beverages rose from 2 percent to 3.1 percent of the total, with a doubling in wine accounting for almost all of the increase.

Meanwhile, coffee plummeted from a first-place share of 33.4 percent of the total in 1962 to fourth, at 18.3 percent 20 years later.

These shifts in consumption patterns, in turn, have affected calorie intake. In 1982, soft drinks, beer, wine, and liquor accounted for almost 10 percent of total calories consumed, compared with 5 percent in 1962. These beverages added about 343 calories a day to per capita calorie availability in 1982, almost double the 175 calories 20 years earlier.

More than Price Affects Demand

Economists traditionally point to price as one of the major factors influencing total consumption and the shift among competing products.

Coffee prices rose over 300 percent between 1962 and 1982, compared with an increase of 218 percent in the price of all food (figure 2). A large part of the increase in coffee prices occurred in the late 1970's when a freeze in Brazil caused production shortages. Per capita coffee consumption, which had been declining at an annual rate of 1 gallon, fell by almost 8 gallons in 1977 as consumers

responded to the 85.2-percent rise in price (figure 3).

For other beverages, the relationship between price and consumption is less clear. For instance, the price of soft drinks rose 274 percent between 1962 and 1982, while fresh whole milk price increased about half as much, at 144 percent. Yet, per capita consumption of soft drinks soared 146 percent over the 20-year period, and milk fell 18 percent.

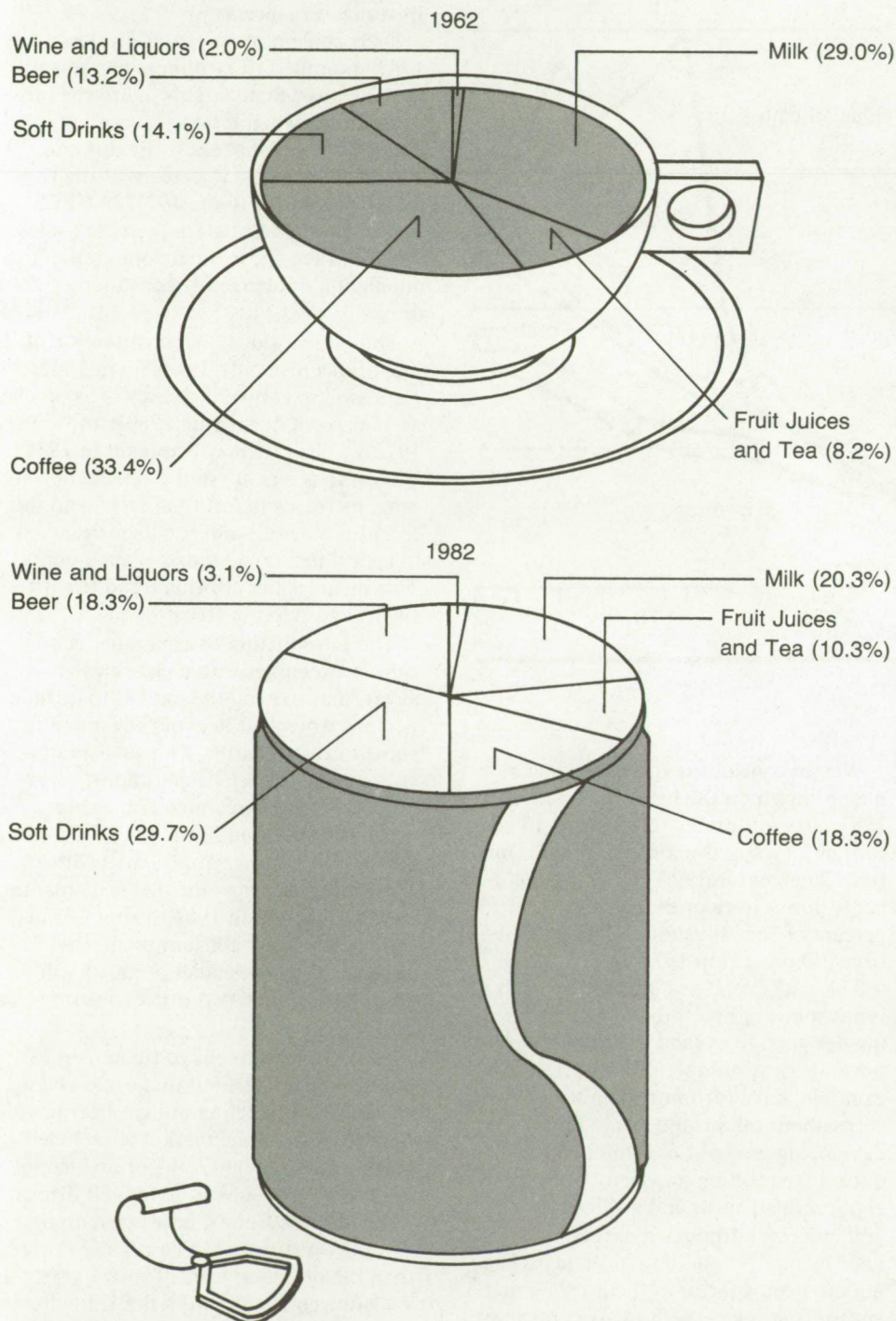
Other factors, then, such as changes in lifestyle, dietary concerns, and shifts in the age distribution of the population affect consumers' decisions about what and how much they drink of different beverages.

Old Habits are Changing

The favorite drinks of Americans differ among age groups. USDA's 1977/78 Nationwide Food Consumption Survey (NFCS) indicates, for example, that more than 80 percent of individuals over 35 drank coffee, compared to about 50 percent of 19-to 34-year-olds (table 1). Alcoholic beverages were consumed more by 19-to 50-year-olds. About 30 to 34 percent of males in this age group drank alcoholic beverages, compared to 27 percent aged 51 to 64 and 17 percent over 65. Soft drink consumption was greatest among 12-to 34-year-olds. About 70 percent of males and 70 to 74 percent of females in this age group consumed sodas. Among 35-to 50-year-olds, the share was only about 53 percent for males and 57 percent for females.

In the United States, the median age of the population is increasing, rising from 29 in 1962 to 31 in 1982. Shifts in the age distribution, then, will affect consumption patterns. The percent of the population in the peak milk drinking years of 6 to 18 has decreased, for instance, contributing to the decline in milk consumption.

In addition, persons in the age group that traditionally drinks more milk have been switching to soft drinks. According to the NFCS, the average daily consumption of milk and soft drinks by teenagers in 1965 was 16 and 9 ounces, respectively. By 1977, milk had declined to 12

Figure 1. Beverage Market Shifts to Soft Drinks

ounces and soft drinks had risen to 19 ounces. Even 6-to 12-year-olds are drinking less milk; in 1965, average daily consumption was 19.4 ounces, declining to 15 ounces by 1977. Soft drink consumption, in contrast, rose from 5 ounces to 7 ounces.

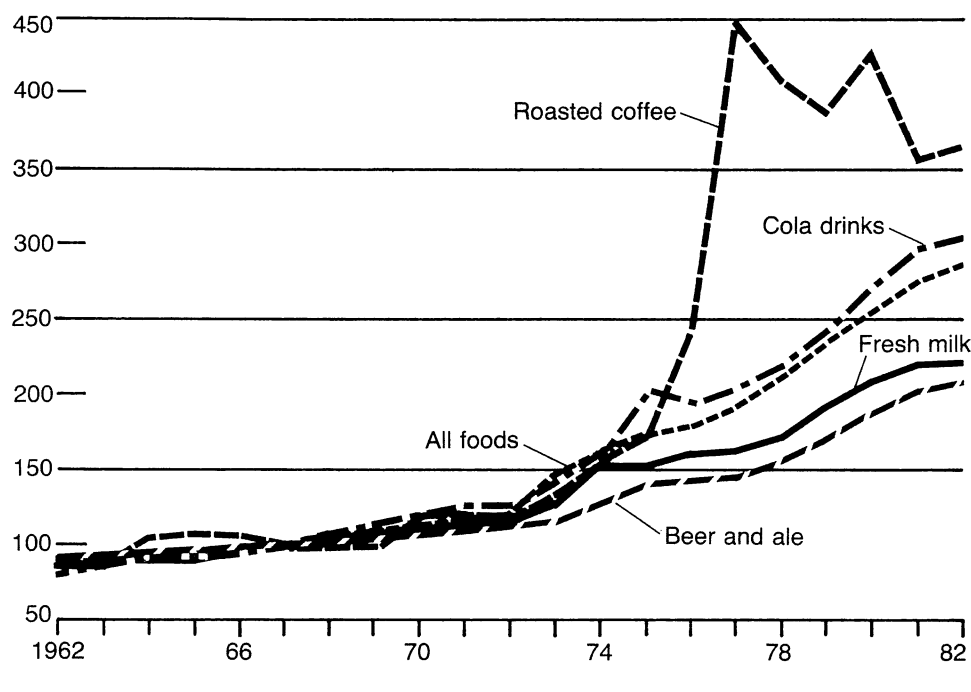
Though the peak coffee consumers are traditionally 30-to 50-year-olds, individuals in this range apparently have not developed the previous generation's preference for it. Price and health concerns are the apparent factors influencing this trend. Another reason could be the changing taste of coffee. In 1962, coffee manufacturers began using more robusta beans, which are more bitter, but less costly than the arabica, the major bean then in use. Fewer people now in the peak consuming age group have developed that once-traditional taste for coffee.

The next generation of potential peak coffee consumers—those currently in their twenties—has also shown preferences for other beverages. According to the International Coffee Organization (ICO), 81 percent of individuals in their twenties were coffee drinkers in 1962, compared to only 42.6 percent in 1983.

It's the Soft Drink Generation

Major changes in lifestyle have also gone hand in hand with declines in milk and coffee consumption. Increased physical activities and time spent outdoors, for example, have helped boost soft drink and beer popularity. Accordingly, manufacturers of these products have geared their advertising to leisure activities. In 1982, they spent \$660 million promoting their products. In addition, many soft drink and beer manufacturers sponsored rock concerts, sporting events, and activities on college campuses.

Coffee and milk consumption have also been affected by the expanding food-away-from-home market. The quantity of soft drinks received by food service operations more than doubled between 1969 and 1979, while the amount of milk rose only 14.6 percent. Despite a 1,000-percent increase in the quantity of instant coffee sold, the amount of total coffee

Figure 2. Consumer Price Index for Beverages

sold decreased by 15.2 percent. Milk and coffee consumption away from home is primarily in full service restaurants and the institutional market, which includes schools, hospitals, and rest homes. Soft drinks, on the other hand, have a strong identity in fast food establishments—one of the fastest growing sectors in the away-from-home market.

Consumers Go for Low-Fat and Sugar-Free Beverages

In the last decade, many consumers have made health-related changes in food and beverage choices. Concerns about saturated fat have more than doubled consumption of low-fat milk since 1962, partially offsetting the 47-percent decline in whole milk use. Similarly, the trend in decaffeinated coffee has been upward, despite declining total consumption of coffee.

Weight consciousness has also had a major impact on the beverage market. In 1983, diet soft drinks represented 18 percent of total soft drink consumption, up from 7 percent in 1970. Similarly, light beers, lower in calories, accounted for 19 percent of beer consumption in 1983, up from 1.9 percent in 1975.

The last several years have also seen innovations in both products or packaging designed to expand the market for beverages. A number of breweries, for example, have further responded to concerns about caloric and alcohol intake by developing low- or no-alcohol beers. Producers are reacting to consumer concerns about refined sugar and artificial ingredients by introducing natural fruit juice blends. In addition, aseptic packaging has been a factor in the growing market for fruit juices, with many companies

now offering individual packaged servings.

Beverage Prospects

Daily consumption of soft drinks in 1982 amounted to 14 ounces per person in the United States. This figure rises to 27.2 ounces when total consumption is divided by only those actually drinking soft drinks—about 51 percent of the population according to the 1977/78 NFCS. The greatest potential for increased sales rests with the approximate one-half of the population not currently consuming soft drinks.

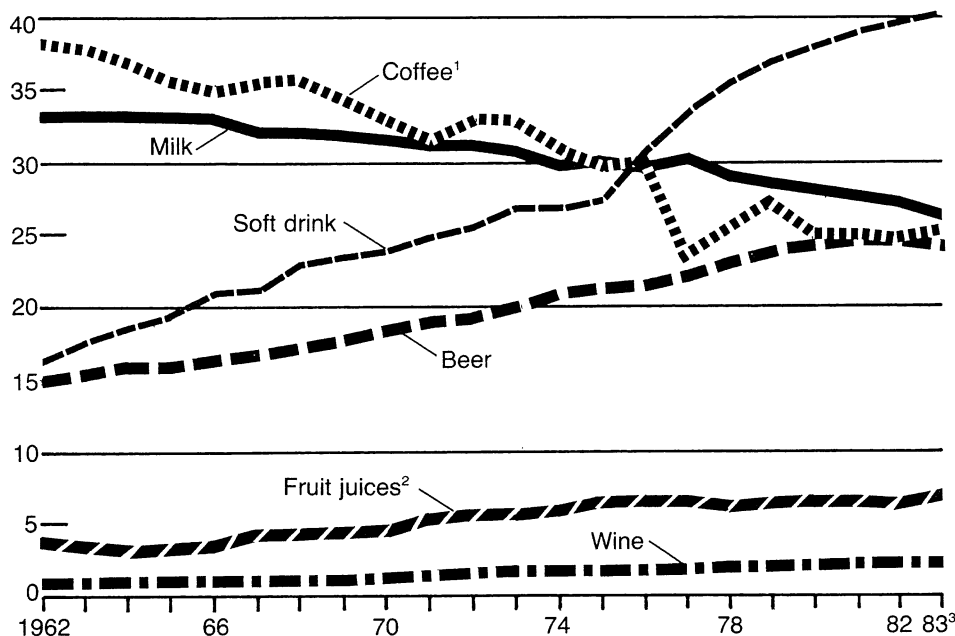
The rate of growth in consumption of soft drinks rose only 3 percent in 1982, compared to annual increases of as much as 15 percent during the 1960's and 1970's. The rate may be higher in 1984, however, as a result of the stronger economy, increases in fast food sales, and the recent proliferation of products designed to appeal to a broad range of consumers. This includes the growing trend toward sugar- and caffeine-free products.

The introduction of aspartame, a non-calorie sweetener with a taste close to sugar, may expand the market to include persons who want to avoid sugar and its substitute, saccharin. Known as Nutra-sweet in commercial applications, aspartame is made from a blend of amino acids. Estimates indicate that the increase in products reformulated with aspartame will boost the diet soda market share 25 percent in 1984 to about 23 percent of soft drink consumption. Increased use of these diet products will also increase total soft drink consumption.

Historically, men have consumed 81 percent of all beer, but that could change since the introduction of light beer has already expanded the market to include more women. Light, low- or no-alcohol beers may also substitute for soft drinks. Despite these trends, beer consumption in 1983 is estimated to be slightly lower than the previous year.

Coffee consumption in the United States has also been relatively stable for the last 3 years, signaling a tapering off of the decline. A recent study by the ICO

Figure 3. Per Capita Beverage Consumption



¹Ground coffee converted to fluid equivalent on the basis of 60 6 oz cups per pound; the conversion factor for tea is 200 6 oz cups per pound leaf equivalent.

²Excluding tomato and other vegetable juices.

³Preliminary.

Table 1. Beverage Use Varies By Age

Age group	Milk	Soft drinks ¹	Coffee	Beer	Total alcohol ²
Percent of individuals					
6-11	97.1	64.1	2.9	0	.4
12-18					
males	93.0	70.6	11.8	2.2	2.7
females	87.8	74.2	12.3	.9	2.3
19-34					
males	78.7	72.5	49.7	24.9	30.4
females	75.3	69.9	53.9	7.7	18.8
35-50					
males	72.0	52.9	83.0	25.1	34.1
females	68.1	57.2	81.0	5.7	17.4
51-64					
males	77.4	37.2	87.2	7.0	27.0
females	75.3	38.9	86.3	5.2	15.5
Over 65					
males	82.1	21.6	86.5	9.6	16.6
females	79.9	21.4	85.4	1.7	8.3

¹Includes noncarbonated soft drinks made from powdered mixes. ²Includes distilled liquor, wine, beer, and ale.

Source: Nationwide Food Consumption Survey, 1977/78.

reported a slight increase in the percentage of the population drinking coffee. In 1984, 57 percent of all Americans drank coffee, compared to 55 percent the previous year. The largest gain came in the percentage of the U.S. population drinking decaffeinated coffee. In 1984, 17.1 percent of Americans drank decaffeinated coffee versus 15.3 percent in 1983.

Fluid milk products may continue to lose ground in the beverage market. In the next decade, the 1945-60 "baby boom generation" will move into the lowest consuming age group, although this shift should be offset somewhat by their children. On balance, growth in fluid milk consumption over the next 5 years is expected to be at a rate less than the projected 3-percent increase in population.

A new dairy promotion program established by the Dairy and Tobacco Adjustment Act of 1983 could help boost consumption and improve the outlook for milk. The program, funded by a 15 cents-per-hundred-pounds assessment on all milk produced in the contiguous 48 States and marketed commercially by dairy farmers, involves dairy promotion, research, and nutrition education. From September 1984 through April 1985, about \$50 million is scheduled to be spent for television, radio, and magazine advertisements stressing the nutritional benefits of a calcium-rich diet.

In 1983, the average daily per capita intake of beverages was an estimated 47 ounces, not including water or reconstituted drink mixes. This translated into about an 8-ounce beverage at each of three meals and almost three 8-ounce drinks between meals for every man, woman, and child in the United States. Consequently, prospects are limited for total commercial beverage consumption to increase significantly. Instead, an increase for one beverage may well come at the expense of another, and manufacturers will devote advertising dollars to convincing consumers which beverage to drink.

The Farm: Source of Many Jobs

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More than one in five jobs in America can be traced to the farm. The Economic Research Service (ERS) estimates that about 23 million people, 22 percent of the total work force, earn their living in the food and fiber system. This includes not only industries directly related to farming, but all businesses required to support the eventual delivery of food, clothing, shoes, and tobacco to domestic and foreign consumers.

Besides the 14 percent of the food and fiber labor force working on farms, ERS researchers using data for 1979 identified seven major categories that capture all other functions in the sector. These include two categories processing farm products—"food processing" with 7.8 percent of food and fiber employment and "textiles" with 11.1 percent. Approximately 14.5 percent of the work force was employed at "eating places" such as restaurants, cafeterias, and fast food outlets.

Jobs necessary to support the manufacture and distribution of foods were included. Those related to manufactured inputs, such as agricultural chemicals and food containers, were categorized as "other manufacturing" and represented 7 percent of total food and fiber employment. The categories of "trade" and "transportation" incorporate warehousing services at all levels of the food and fiber system, as well as wholesale and retail transportation. Trade-related jobs account for 30.4 percent of the sector's employment, and transportation, 3.4 percent.

The "other" category captures data on mining, fisheries, forestry, and services other than trade, transportation, and eating places. Jobs in this category reflect 12.1 percent of food and fiber employment.

The relative importance of each category varies regionally. For example, while the textile industry accounts for only 11 percent of farm-related jobs nationally, the share is 17 percent in the Southeast, including 43 percent in South Carolina and 38 percent in North Carolina.

Of the 23 million jobs associated with agriculture, roughly 14 percent, or 2.8 million, are directly in farming (table 1). Midwest farms provide almost 35 percent of the region's agriculture-related employment. In Nebraska, North Dakota, and South Dakota, over 40 percent of the food and fiber work force was engaged in farming.

The ERS results also show that some sectors contribute more heavily than others to the food and fiber economy. For instance, almost all workers in the farming and food processing sectors contrib-

ute to the output of the system. In contrast, only a portion of total textile employment is related since many materials are synthetic. Employment necessary for the manufacture of these products is associated with the oil and plastic industries, rather than agriculture.

Regionally, more than 27 percent of total employment in the Midwest was linked to agriculture; almost 24 percent in the Southeast; and about 20 percent in the Northeast and North Central. In the West, the share was 22 percent.

California had the most food and fiber jobs, 2.5 million, followed by New York with 1.6 million, and Texas with 1.4 million (table 2). However, Nebraska and North Carolina had the largest percentage of their total work force employed in the food and fiber sector, 32 percent each; North Dakota was next at 30 percent (figure 1).

Figure 1. Nearly One-third of Labor Force is Employed in the Food and Fiber System in Some States

Percentage of state's workers employed in food and fiber jobs:

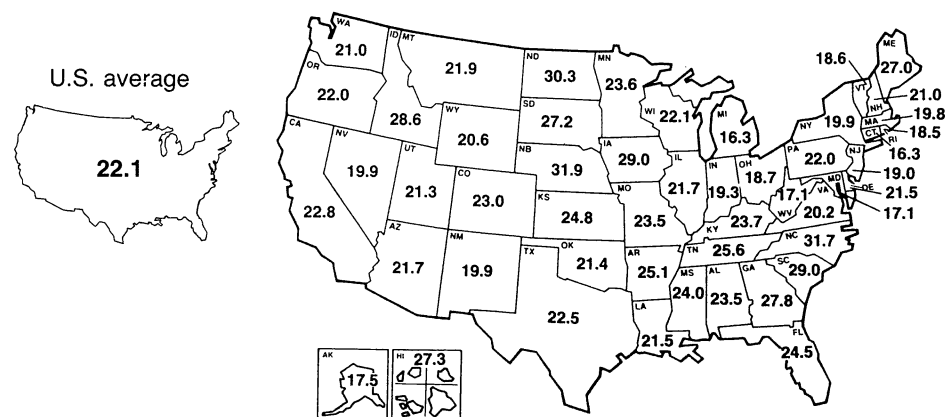


Table 1. The Importance of Job Categories Varies Regionally

Region	Farming	Food processing	Textiles	Other manufacturing	Trade	Transportation	Eating places	Other	Total
Percent of food and fiber employment									
Northeast ¹	5.6	6.2	17.5	9.4	32.2	3.2	14.3	11.6	100
North Central ²	13.5	.9	2.9	10.5	33.3	3.3	17.0	10.5	100
South ³	12.8	7.5	17.2	6.4	28.8	3.3	12.5	11.5	100
Midwest ⁴	34.7	9.6	3.0	3.6	25.7	2.6	12.8	7.9	100
West ⁵	17.4	7.6	2.6	3.3	30.6	4.0	18.5	15.9	100
National average	13.6	7.8	11.1	7.0	30.5	3.5	14.5	12.1	100

¹Northeast includes ME, VT, NH, MA, RI, CT, NY, NJ, PA. ²North Central includes OH, MI, IN, IL, WI. ³South includes DE, MD, WV, VA, KY, TN, NC, SC, AR, OK, TX, LA, MS, AL, GA, FL. ⁴Midwest includes MO, KS, NE, IA, SD, MN, ND. ⁵West includes MT, WY, CO, NM, AZ, UT, ID, NV, CA, OR, WA, AK, HI.

Table 2. The Food and Fiber System Provides Jobs for Millions

State	Number of workers in food & fiber system	State ranking by number of workers	State	Number of workers in food & fiber system	State ranking by number of workers
Alabama	381,560	21	Nebraska	246,040	31
Alaska	31,520	50	Nevada	71,130	46
Arizona	227,980	34	New Hampshire	93,280	41
Arkansas	239,520	32	New Jersey	673,000	10
California	2,501,900	1	New Mexico	106,930	40
Colorado	319,040	26	New York	1,594,600	2
Connecticut	257,580	30	North Carolina	853,170	8
Delaware	59,000	47	North Dakota	91,750	42
Florida	938,930	7	Ohio	940,320	6
Georgia	649,560	11	Oklahoma	272,880	28
Hawaii	108,870	39	Oregon	267,390	29
Idaho	120,700	38	Pennsylvania	1,166,600	4
Illinois	1,159,400	5	Rhode Island	83,220	44
Indiana	503,460	16	South Carolina	379,120	22
Iowa	415,780	19	South Dakota	91,580	43
Kansas	296,850	27	Tennessee	506,360	15
Kentucky	369,920	23	Texas	1,407,900	3
Louisiana	361,740	24	Utah	124,460	37
Maine	131,520	35	Vermont	44,550	49
Maryland	357,480	25	Virginia	500,460	17
Massachusetts	571,360	12	Washington	397,000	20
Michigan	701,870	9	West Virginia	127,950	36
Minnesota	486,210	18	Wisconsin	526,690	14
Mississippi	237,100	33	Wyoming	46,100	48
Missouri	539,060	13			
Montana	80,990	45	United States	22,743,000	—



Consumer Income Shows Another Gain

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The Nation's disposable personal income (DPI) rose to \$2.6 trillion in the second quarter of 1984, 2.2 percent above the previous quarter and 11.1 percent higher than a year earlier (table 1). The increase in DPI for April-June 1984 was less than the previous 3 months,

when incomes rose 3 percent, the largest quarterly rise since the third quarter of 1981.

Of the total DPI, consumers spent about \$2.3 trillion, up 2.2 percent from the previous quarter and 8.6 percent more than a year earlier. Savings of \$154

billion amounted to 6 percent of DPI, slipping from 6.1 percent in the previous quarter, the highest rate since 1982.

Spending Increases

Personal Consumption Expenditures (PCE) for durable goods rose 2.5 percent

Table 1. The Nation's Income and How It's Spent

Item	1983				1984	
	I	II	III	IV	I	II
Billion dollars (current)						
Disposable personal income	2,261.4	2,302.9	2,367.4	2,428.6	2,502.2	2,557.6
Total personal consumption expenditures	2,070.4	2,141.6	2,181.4	2,230.2	2,276.5	2,326.7
Nondurables	775.2	796.9	811.7	823.0	841.3	857.8
Food, beverages, and other groceries	473.4	482.7	492.3	496.7	508.4	516.0
Food, exc. alcoholic beverages	356.5	362.7	368.7	372.3	381.2	388.6
At home	256.4	261.4	265.2	267.3	272.2	279.0
Away from home	100.1	101.3	103.5	105.0	109.0	109.6
Alcoholic beverages	50.3	50.9	51.7	52.7	52.8	53.0
At home	31.2	31.6	32.2	32.8	32.4	33.0
Away from home	19.1	19.3	19.5	19.9	20.4	20.0
Cleaning & household supplies	22.8	23.3	23.6	23.8	24.3	24.8
Toiletries	17.7	18.0	18.2	18.6	19.1	19.6
Tobacco	26.1	27.8	30.1	29.3	31.0	30.0
Drugs	21.2	21.3	21.8	22.0	22.8	23.5
Clothing and shoes	121.6	127.1	126.8	132.5	136.1	142.0
Gas and oil	86.7	89.5	92.1	91.7	92.0	93.4
Fuel oil and coal	18.6	21.0	22.4	22.1	22.5	21.4
Other	53.7	55.3	56.3	58.0	59.5	61.5
Durables	259.4	276.1	284.1	299.8	310.9	318.7
Motor vehicles and parts	115.3	128.4	132.0	141.7	147.7	152.0
Furniture and household equipment	99.1	102.4	105.2	109.8	113.0	115.3
Other	45.0	45.3	46.9	48.2	50.3	51.4
Services	1,035.8	1,068.6	1,085.7	1,107.5	1,124.4	1,150.2
Housing	352.6	359.2	366.8	374.7	382.4	392.3
Household operations	147.0	155.0	155.7	157.5	158.8	161.9
Transportation	70.2	71.1	73.9	74.8	76.1	78.3
Personal care	19.4	19.7	20.0	20.2	20.4	20.8
Medical care	203.6	208.4	211.3	216.3	219.4	222.9
Personal bus. services	125.6	130.6	131.0	133.0	136.0	137.8
Recreational services	50.8	53.0	53.9	55.4	56.7	58.2
Other	66.6	71.6	73.1	75.6	74.6	78.0
Savings	128.0	96.7	119.0	128.7	152.5	154.0
Other	63.0	64.6	67.0	69.7	73.2	76.9

¹ Reflects data as of July 18, 1984. Seasonally adjusted at an annual rate.

Source: U.S. Department of Commerce, Bureau of Economic Analysis.

in the second 3 months of 1984. Rising car sales boosted expenditures for the major component of this category—motor vehicles and parts—by 2.9 percent from the previous quarter and 18.4 percent above the same 1983 period. Consumer spending for furniture and household equipment gained 2 percent in the second quarter and was 12.6 percent higher than a year earlier.

Expenditures for services rose 2.3 percent in the second 3 months of 1984 to \$1.2 trillion, nearly one-half total PCE. Spending on housing and medical care (the two major components of this category) climbed 2.6 and 1.6 percent, respectively, in the second quarter. Household operations rose 2 percent, while personal business services rose 1.3 percent from the previous quarter.

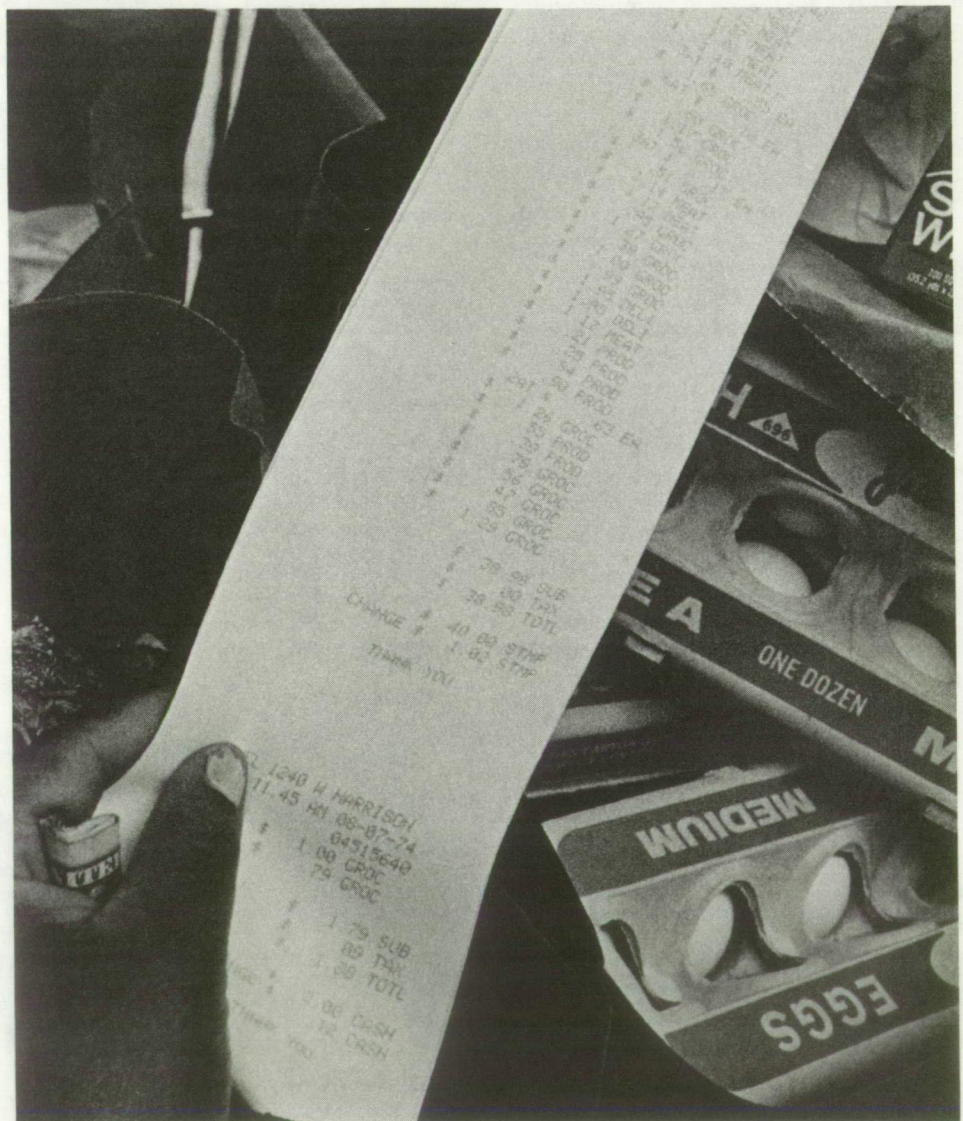
The amount spent on durables advanced 2.5 percent in the second quarter, boosted by increased expenditures for food and clothing. Higher prices pushed food outlays to \$388.6 billion, 1.9 percent above the first quarter of 1984 and 7.1 percent more than the second quarter a year earlier. Spending for food away from home inched ahead 0.6 percent in the second 3 months of 1984 and was 8.2 percent higher than a year earlier. In contrast, spending for food at home increased 2.5 percent and was 6.7 percent above the year-earlier level.

Income Share For Food

Although consumers spent more for food, these expenditures represented a slightly smaller share of their income. As the increase in DPI outpaced that of food prices, the share spent on food remained at 15.2 percent in the second 3 months of 1984 (table 2). This was down from 15.7 percent a year earlier. Food at home expenditures took 10.9 percent of consumer incomes in the second quarter of this year, unchanged from the previous 3 months but lower than the year-earlier level of 11.4 percent. Meanwhile, spending for food away from home accounted for 4.3 percent of DPI, down from 4.4 percent the previous quarter and unchanged from the second quarter of 1983.

Table 2. Percent of Income Spent on Food Down from a Year Earlier

	1983				1984	
	I	II	III	IV	I	II
Food at home	11.3	11.4	11.2	11.0	10.9	10.9
Food away from home	4.4	4.4	4.4	4.3	4.4	4.3
All food	15.8	15.7	15.6	15.3	15.2	15.2



Share of income for food holds at 15.2 percent.

Domestic Food Programs: An Update

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Changes in program cost and participation discussed in this article refer to the 1-year period from the January-March quarter of 1983 to the same 3 months of 1984. Data reported in article are as of June 1984.

Federal expenditures for the domestic food assistance programs rose from \$5.25 billion in the first 3 months of 1983 to \$5.29 billion in the same period this year, according to preliminary data from USDA's Food and Nutrition Service. Only outlays for the Food Stamp Program and the Special Milk Program declined over the year.

Costs Decline for Two Programs

Expenditures for the Food Stamp Program (FSP) (excluding the Puerto Rico Nutrition Assistance Program) decreased 3.8 percent, from approximately \$3.1 billion in the first quarter of 1983 to \$3.0 billion in the same period this year. The aggregate value of food stamps distributed fell from \$2.9 billion to \$2.8 billion (table 1). Other costs, such as those for printing and transporting stamps, declined from \$32.1 million to \$20.5 million. These decreases were partially offset by a 28.7-percent increase in State administrative expenses, from \$155.6 million to \$200.3 million. USDA reimburses the States for the most part for half of the cost associated with program administration, including antifraud activities.

Much of the decline in total expenditures for the FSP can be attributed to lower participation. An average of 21.5 million persons per month received food stamps, down 3.8 percent from a year earlier. This decline reflected a drop in the unemployment rate from 10.4 percent to 7.9 percent over the period (figure 1).

Average monthly benefits per person under the FSP fell from \$43.56 to \$42.94. FSP benefits are based on the household's net income and the cost of the USDA Thrifty Food Plan. As income rises, due to promotions, cost of living adjustments in wages and assistance payments, and other factors, benefits decline. In most years, the resulting decline

in benefits is offset by the next scheduled Thrifty Food Plan increase. Because the 1983 inflation rate was very low only minor adjustments in benefits were necessary last October. With rising income levels, benefits per person declined compared to the previous year.

Federal expenditures for the Special Milk Program (SMP) fell 6.4 percent, from \$5.1 million in the first quarter of 1983 to \$4.7 million in the same period in 1984. The number of half-pints served under the program decreased 7.8 percent—from 53 million to 49.3 million. The SMP provides either free or reduced-price milk to school-age children. Participation in the program is limited to child care institutions and schools that do not participate in other child nutrition programs.

Many Programs Show Increases

Large increases in program costs between the 1983 and 1984 comparison periods occurred in the supplemental food programs, reflecting the availability of additional appropriations authorized by Congress. Expenditures for the Special Supplemental Food Program for Women, Infants, and Children (WIC) climbed by one-third—from \$265.7 million in the first quarter of 1983 to \$354.4 million a year later. About 84 percent of the increase was due to higher food costs resulting mainly from a rise in program participation and 16 percent to greater administrative expenses, including costs for nutrition education. During the same period, program costs for the Commodity Supplemental Food Program (CSFP) increased 9.5 percent to \$8.2 million.

Table 1. Federal Cost of USDA Food Programs, Calendar Years, 1981-84¹

Program	1981	1982	1983 ²	1983 (Quarters) ²				1984 (Quarters) ²
				I	II	III	IV	I
Million dollars (Current)								
Family Food								
Food Stamps	10,968	10,375	11,117	2,919	2,796	2,673	2,728	2,768
Nutr. Asst. Prog. in Puerto Rico ³	—	407	829	207	207	207	207	207
Food Distribution								
Needy families	31.1	34.1	38.7	9.4	10.2	9.7	9.5	10.4
Schools ⁴	832	791	834	266	157	160	250	270
Other ⁵	111	180	256	67	68	63	57	66
Special Distribution ⁶	—	301	1,131	276	348	256	250	277
Cash in Lieu of Commodities ⁷	110	115	131	26	35	42	27	33
Child Nutrition ⁸								
School Lunch	2,283	2,245	2,442	786	580	321	755	825
School Breakfast	330	327	357	111	86	50	110	118
Special Food ⁹	401	357	402	81	93	143	85	92
Special Milk	72	19	17	5	4	4	4	5
Nonfood Assistance ¹⁰	12	—	—	—	—	—	—	—
WIC ¹¹	863	1,002	1,197	266	276	321	334	354
Total ¹²	16,013	16,153	18,752	5,019	4,660	4,250	4,817	5,025

¹ Administrative costs are excluded unless noted. ² Preliminary. Quarterly data may not add to annual total due to rounding. ³ Puerto Rico transferred from the Food Stamp Program to a substitute nutrition assistance program on July 1, 1982. ⁴ Includes child care centers and camps participating in the Child Care and Summer Food Service Programs. ⁵ Commodity Supplemental Food Program, Nutrition Program for the Elderly, and donations to charitable institutions. ⁶ Initiated December 1981. ⁷ Child nutrition programs and the Nutrition Program for the Elderly. ⁸ Cash expenditures. Includes money donated for local purchase of food. ⁹ Divided into Child Care Food Program and Summer Food Service Program (SFSP) in fiscal 1976. Includes sponsor administrative costs for SFSP for 1981 and 1982. ¹⁰ Nonfood assistance was terminated on October 1, 1981. ¹¹ Special Supplemental Food Program for Women, Infants, and Children. Includes administrative costs. ¹² May not add due to rounding.

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

More women, infants, and children were served by the supplemental food programs because of the increased appropriations. Average monthly participation in WIC rose 27 percent over the comparison period, from 2.41 million to a record-high 3.06 million persons. Infants comprised 27.1 percent of all participants and accounted for 19.3 percent of the increase. Women and children comprised 21.5 percent and 51.4 percent, respectively, of participants and represented 25.3 percent and 55.4 percent of the increase.

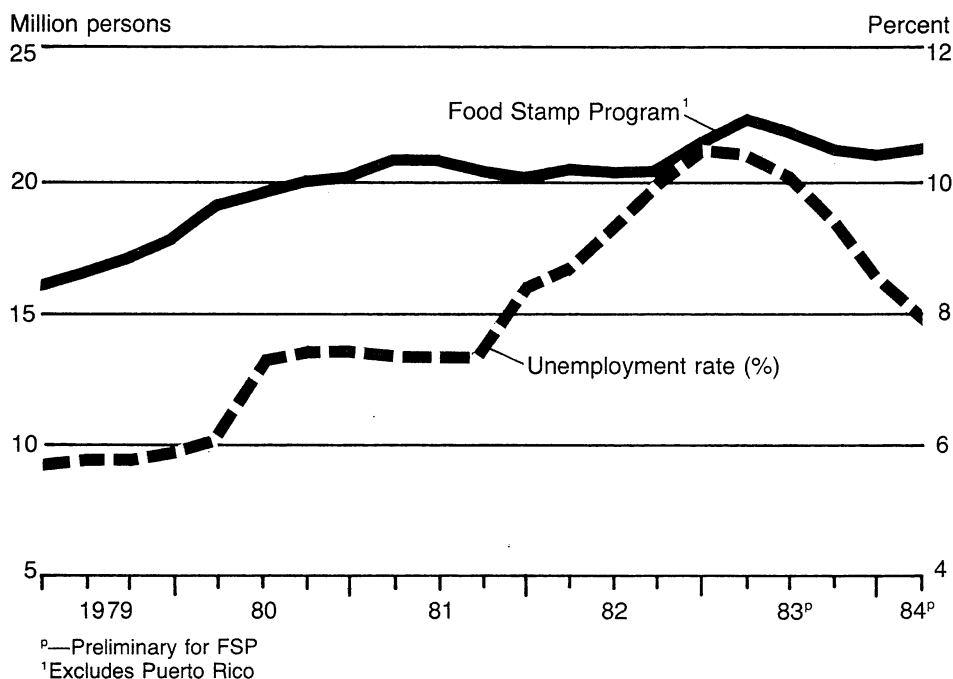
Average participation in the CSFP was up 0.6 percent, increasing from 148,712 persons to 149,631. A 12.5-percent rise in the number of women participating in the program was largely offset by a 10.2-percent decrease in the number of infants.

Average monthly benefits per person under WIC rose from \$29.56 in the first quarter of 1983 to \$31.36 in the same period this year—a 6.1-percent increase. Similarly, monthly benefits under the CSFP increased from an average of \$16.80 a person to \$18.20.

Federal expenditures for the Needy Family Program (NFP) and the Nutrition Program for the Elderly (NPE) increased in the first quarter of 1984. An average of 109,000 persons participated in the NFP in the first 3 months of 1984 and received commodities worth \$10.4 million—up 9.9 percent from the first quarter of last year. The value of cash and commodities distributed under the NPE increased from \$22.8 million in January through March of 1983 to \$32.4 million this year. During this period, the average number of meals served daily under this program increased from 758,000 to 798,000.

Total Federal expenditures for the Child Care Food Program increased from \$90.7 million to \$103.0 million. This was mainly in response to higher reimbursement rates and an increase in child care centers and day-care homes offering the program; 75,100 in March 1983 compared to 85,200 a year later. The average number of children participating rose

Figure 1. Unemployment Can Influence FSP Participation



from 968,000 to 1.03 million over the period, a 6.6-percent increase.

Participation in the School Breakfast Program grew 1.8 percent to an average of 3.4 million. Over the comparison period, participation in the National School Lunch Program (NSLP) rose by 0.8 percent, from 23.2 million to 23.4 million. Federal cash expenditures for these two programs amounted to \$118.1 million and \$824.5 million in the first quarter of 1984.

Schools participating in the NSLP also received commodity donations and cash in lieu of commodities valued at \$268.8 million. In addition to cash, USDA is required to donate a specified amount of commodities to schools for each lunch served under the NSLP (table 2).

Further, USDA often donates surplus commodities, such as cheese, butter, nonfat dry milk, and honey, to schools to prevent waste and encourage consumption of nutritious foods.

Table 2. Per-Meal Payments to Schools¹

Program and category	July 1983-June 1984	July 1984-June 1985
Cents per meal		
National School Lunch Program²		
Paid	11.50	12.00
Reduced-price	80.25	85.50
Free	120.25	125.50
Commodities ³	11.50	12.00
School Breakfast Program⁴		
Paid	9.00	9.50
Reduced-price	32.75	35.50
Free	62.75	65.50

¹Rates are higher in Alaska and Hawaii. ²Rates are 2 cents higher than indicated for school food authorities serving 60 percent or more meals free or at reduced-price in second preceding year. ³The basic commodity rate is given to schools for each lunch served. ⁴Rates are for schools "not in severe need." Schools may qualify as "severe need" if at least 40 percent of the meals are served free or at reduced-price and if the regular reimbursement rates are insufficient to cover the costs of the program.

Source: Food and Nutrition Service.

The President's Task Force on Food Assistance

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Table 3. Food Stamp Program Monthly Income Eligibility Standards¹

Household size	Gross income	Net income
Dollars		
1	540	415
2	728	560
3	917	705
4	1,105	850
5	1,294	995
6	1,482	1,140
7	1,671	1,285
8	1,859	1,430
Each additional member	+189	+145

¹Standards are higher in Alaska and Hawaii.

Source: Federal Register.

Income Eligibility Rises

Higher living costs prompted an increase in the income eligibility standards for participation in the child nutrition programs, the Special Supplemental Food Program for Women, Infants, and Children (WIC), and the Food Stamp Program (FSP).

From July 1 through next June 30, children in a family of four earning a gross income of up to \$13,260 a year are eligible to receive free meals under the National School Lunch, School Breakfast, Special Milk, and Child Care Food programs. The previous limit was \$12,870. Children from a family of four with an annual gross income between \$13,260 and \$18,870 may qualify for reduced-price meals.

The maximum income for a family of four for participation in WIC extends up to \$18,870, compared with the previous limit of \$18,315. However, States may set lower income eligibility limits.

Participation in the FSP is based on gross and net income standards (table 3). Elderly persons, however, are exempt from meeting the gross income standard.

President Ronald Reagan commissioned the Task Force on Food Assistance in August 1983 to determine the extent of hunger in America and evaluate the effectiveness of food assistance programs.

The group, headed by J. Clayburn LaForce of the Graduate School of Management, University of California, Los Angeles, reported in January 1984, that while hunger does exist in the United States it cannot be easily quantified. Furthermore, if eligible persons participate, the existing private, State, local, and Federal assistance programs can adequately meet their needs.

In developing its report, the task force held public hearings in several major cities, visited food distribution centers, such as soup kitchens and food banks, and reviewed information and data relating to hunger, nutrition, and assistance programs.

The group considered two basic definitions of hunger. Clinically, it is defined as a weakened condition caused by a prolonged lack of food. In adults, it leads to weight loss and reduced physical strength or impaired functions. In children, it also slows or halts growth. Under this definition, the task force found "no evidence that widespread undernutrition is a major health problem in the United States."

The task force then turned to perhaps a more common definition—the inability, even occasionally, to obtain adequate food and nourishment. It concluded that this type of hunger does exist in America; however, the extent was not determined. The report stated, "since general claims of widespread hunger can neither be positively refuted nor definitively proved, it is likely that hunger will remain as an issue on our national policy agenda for an indefinite future."

Assistance and the Needy

The task force examined what was termed the "social safety net"—the array of public and private assistance programs

for the poor in the United States. Private organizations operate soup kitchens, food pantries, shelters, and other forms of direct assistance. State and local communities share the costs and administration of some Federal food programs and provide their own various forms of aid.

The Food Stamp Program (FSP), the largest Federal feeding program in terms of expenditures, is available to everyone living in a household with income and assets below a specific limit. Other Federal programs are targeted to particular groups often at nutritional risk, such as the elderly, infants, children, and pregnant women. These include the National School Lunch Program (NSLP), the Special Supplemental Food Program for Women, Infants, and Children (WIC), the Commodity Supplemental Food Program (CSFP), and feeding programs for the elderly.

In considering the effectiveness of these food assistance efforts, the task force identified three segments of low-income population. First, are the "traditional" poor—groups with a relatively high incidence of poverty. These include primarily elderly and single-parent households. Federal income-assistance programs, such as Aid to Families with Dependent Children (AFDC) and Medicaid, are targeted toward these two groups.

The "new" poor are individuals and families experiencing extended unemployment and lost or reduced income. They usually have more assets and greater expenses than the traditional poor. However, assets in excess of the allowable limits often mean ineligibility for assistance. The task force expects "continued economic growth and reduced unemployment to be the primary mechanism for restoring economic well-being to this group."

The final category, the "homeless," are individuals living on the streets or in shelters provided by local organizations. Although they may be eligible for Federal food assistance, many do not participate. Instead, they often receive meals from local soup kitchens or other privately

operated organizations. According to the task force, a long-term solution to the problems of the homeless has not been found, but for now private organizations seem to be the most effective at meeting their needs.

The task force reported, furthermore, that the private sector plays an important role in food assistance. Increased activities of charitable organizations, the commission stated, does not imply a failure of the Federal food assistance policies, but serve to fill the gaps that broad, standardized programs cannot fully cover. Private charities can provide social interaction and assistance to individuals who may otherwise be reluctant to participate in public welfare programs.

The Task Force's Recommendations

The task force offered four major recommendations to improve assistance to the needy. First, States should be offered the option of establishing their own food assistance programs. Funded by Federal block grants, each State would receive a single, predictable allocation based on a formula that reflects changes in food costs and the size of the needy population. States should also be given the option of remaining in the FSP while receiving a block grant for other State-designed and operated programs.

The block grant approach to food assistance programs is not new. Past proposals have been offered under the assumption that programs at the State or county level would be a more effective use of funding. Greater local autonomy in allocating funds between assistance programs may enable services to be better adapted as needs vary throughout a State. Furthermore, a block grant program would place liability for administration and errors with the State and encourage responsibility.

Greater local control may also result in more flexible programs. The commission's proposal, for example, would allow States to choose between cash or in-kind payments, such as food stamps. In addition, States could establish their own eligibility requirements within some Federal guidelines.



Task force examined public and private aid programs.

The program the task force outlined differs from previous proposals in suggesting that grants not be less than current Federal spending levels for food assistance and that continued Federal support be guaranteed. Previous proposals also did not allow the option of remaining under the existing FSP.

Improved Program Management

The task force's second major recommendation was that improvements be made in administration of the food assistance programs and targeting of benefits to recipients. The report details a number of specific suggestions regarding program operation and rules, many of which, according to the task force, could be accomplished through the block grant system.

To help assure a sufficient income to maintain a minimum nutritional level, the President's task force advised that the maximum amount of benefits a household may receive be restored to 100 percent of the cost of the Thrifty Food Plan (TFP). The TFP was designed by USDA to serve as a measure of the level of expenditures needed to obtain an adequate diet. Under current law, the maximum benefit allotment is equal to 99 percent of the TFP.

Many of the task force's suggestions for the FSP are designed to expand the program to meet the needs of specific segments of the low-income population. For example, one recommendation would raise the asset limit for nonelderly households from \$1,500 to \$2,250 and from \$3,000 to \$3,500 for elderly households for more of the "new" poor to qualify for food stamps. Currently, applicants with an automobile valued at \$4,500 or more are ineligible to receive benefits. The task force suggested that the limit be raised to \$5,500.

Decreased mobility often makes food shopping and preparation difficult for the elderly and disabled. Therefore, the task force proposed allowing cash benefits for food stamp recipients in these groups or permitting the use of food stamps as payment for prepared meals.

The homeless are sometimes excluded from food stamp eligibility for lack of a permanent address, although there is no such Federal regulation. The task force urged that such requirements be eliminated in States where they exist.

The task force recommended that eligibility be automatic for recipients of AFDC and Supplemental Security Income (SSI). AFDC and SSI eligibility requirements are comparable to those for

the FSP, but are determined by State standards.

To induce States to decrease the percentage of benefits paid to ineligible persons, the task force proposed making States fully responsible for error rates above 5 percent, with rewards for error rates below 5 percent. Combined with the other procedural changes suggested, the task force anticipated that the 3- to 4-percent error rates of other Federal assistance programs could be achieved. Under present legislation, States are penalized a percentage of their administrative expenses if they exceed a target error rate. The task force recommended that States assume the cost of the excess benefits as well.

Staggered delivery of food stamps was proposed to reduce pressure on private food programs. Interviews conducted by the task force identified that an increase in demand occurred for private food assistance at the end of the month when both food stamps and household funds may be depleted. The staggered delivery proposal would also help prevent abuse by merchants who may raise the prices of perishable goods at the beginning of the month in areas where food stamps are commonly used.

The task force also stated that Federal assistance programs contain disincentives for individuals to be part of the work force. To make it easier for participants to work while receiving program benefits, the task force recommended that food stamp offices have some evening or Saturday hours.

Another recommendation included targeting subsidies for homes providing child care to the poor. Under this proposal, eligibility for Child Care Food Program (CCFP) benefits would be limited to homes in low-income areas. This would reduce administrative costs by eliminating the need to determine eligibility on a case-by-case basis. Eligibility could be determined individually in non-poor areas, although this would increase the administrative delay and expense.

The WIC program is currently being evaluated by USDA, with a final report to be issued by the end of 1984. Pending this, the task force suggested only that the program be reauthorized for an additional year at the present caseload level.

Private Food Assistance is Important

The task force's third major recommendation called for continued Government support of private food assistance efforts. Specifically, the report urges that the allowable tax deductions for food donations to soup kitchens and other assistance operations be made clear to potential corporate donors.

The group also suggested extending tax benefits for food donations to farmers and other food handlers who are not incorporated. Among other things, this would encourage farmers to allow gleaning—hand collection of crops after harvesting is completed—from their fields by charities.

Finally, the task force proposed that the military actively assist local charitable organizations. This might include, for example, donating warehouse space or surplus foods that are unsuitable for resale.

New Measurements of Poverty

Because of its difficulty in quantifying the extent of hunger, the task force's fourth major recommendation was that the Federal Government develop new methods of measuring poverty, including trends in poverty. Currently, the Office of Management and Budget's (OMB) guideline—the income level below which people are considered poor—is used to determine the number of Americans living in poverty. This measure, however, does not include noncash income such as food stamps, nor does it accurately reflect inflation. Specifically, changes in shelter prices tend to be overstated and energy and medical costs understated. As an alternate measure, the task force instead suggested a marketbasket of necessities for low-income households.

The task force also cited the importance of developing better nutritional data. In particular, the Health and Nutrition Examination Survey (HANES) and the Nationwide Food Consumption Survey (NFCS) should be examined to improve and possibly integrate them.

The Center for Disease Control (CDC) operates the Pediatric Surveillance System and Pregnant Women Surveillance System that provide the only continuous information available on nutritional status. To broaden these systems, the task force advises that all States be encouraged to participate.

The task force recommended that new surveys be developed similar to and possibly building upon the HANES, NFCS, or the CDC systems. The new surveys should be able to target particular groups, such as school children or the long-term unemployed. The task force also called for smaller, intermittent surveys to complement the more complete national ones. The nutritional surveys should be designed so that their results can be more easily used by policymakers, public health officials, and the food industry.

Other Concerns

The task force also expressed concern over four other issues but because these topics were not the focus of the group's effort, they made only general recommendations.

The task force described the situation of the homeless as a long-standing issue that defies simple solution. The group recommended that the Federal Government coordinate efforts with State and local governments and private organizations to address the problems of the homeless.

The Federal Government has supported private food aid, the task force cited, through the Emergency Food and Shelter portion of the Jobs Stimulus Bill of 1983 (P.L. 98-8) which provided \$50 million in grants to charitable organizations. Administered by the Federal Emergency Management Agency (FEMA)

and the United Way, the program achieved several important objectives according to the task force. These include serving as an extension of private voluntary resources already in place; delivering effective service at minimum administrative costs; and applying resources quickly to areas in critical need. The task force believes that the effectiveness of this project is due to its temporary nature. Therefore, the group recommended that similar grants be provided to a consortium of national charities to assist private organizations in providing emergency assistance to the neediest areas on a non-permanent basis.

The task force found it paradoxical that Federal programs designed to raise farm income also maintain higher food prices which disproportionately penalize the poor because food expenditures compose a greater portion of their income. The group expected that if price supports on agricultural goods were reduced, low-income households could benefit substantially from the resulting lower food prices. The commission recommended that the Federal Government increase donations of surplus commodities and assure timely distribution to the greatest possible number of needy persons.

The task force stated that Federal programs should include strong incentives for individuals to be a part of the work force. To discourage long-term dependence on assistance programs, the report suggested that eligibility rules and benefit schedules be designed specifically to encourage work. The task force expressed its belief that States should retain the option to require work in return for food assistance.

Legislative Responses

As a result of the task force report, several bills have been introduced in Congress. H.R. 5151, introduced by Representative Leon Panetta of California in March 1984, incorporates many of

the task force's recommendations, including automatic eligibility for the elderly and disabled, allowing the homeless to qualify for food stamps without a fixed address, and instituting a continuous food consumption survey of low-income individuals.

Senate Resolution 306, to exclude block grants as an alternative to the Food Stamp Program, was introduced by Senator Mark Andrews of North Dakota in

response to the task force's first recommendation.

Senator Jesse Helms of North Carolina introduced Senate bill 2545. The "Nutrition Programs Reform Act" would allow States greater discretion in program management by removing certain Federal restrictions, such as a requirement that local agency funds be allocated according to USDA guidelines; a rule that one-sixth of administrative funding be for nutrition education and that States provide training to nutrition education personnel; special requirements for treatment of migrant households; and a regulation that State agencies provide advance funding for local agencies to permit greater discretion in intrastate allocations. States would also be allowed to reduce WIC program benefit packages by up to 20 percent to better handle varying caseloads.

The bill would require USDA to report annually to Congress on the characteristics of WIC participants, including nutritional risk, income, and priority classifications.

Senators Robert Byrd of West Virginia and Walter Huddleston of Kentucky sponsored Senate bill 2607, the "Anti-Hunger Act of 1984," which contains most of the task force's recommendations for the Food Stamp Program including: staggered food stamp issuance; categorical eligibility for AFDC and SSI recipients; increased allowable assets at the levels recommended; assurance that the homeless may participate in the FSP; standards for food stamp office hours of operations; restoration of food stamp benefits at 100 percent of the Thrifty Food Plan; and an increase in allowance for earned income when determining eligibility to encourage participation in the work force. For the elderly, payment for low-cost meals in restaurants with food stamps would be allowed; high-cost special diets could be deducted as a medical expense; and outreach activities to encourage participation would be required.

New Facility to Study Nutrition

A center to study the nutritional needs of infants, children, and women will be constructed in Houston, Texas. The \$49 million funded for the facility was the most ever authorized for a Federal human nutrition center.

Established in 1979, the USDA Children's Nutrition Research Center operates under a cooperative agreement between Baylor College of Medicine and USDA's Agricultural Research Service. Projections are that the center's new home, located adjacent to the Baylor school and the Texas Children's Hospital, will be officially opened in August 1987.

Funds for the center came from a supplemental appropriations bill passed by Congress in August. Congress appropriated an initial \$5.5 million last year to procure architectural and engineering plans for the facility.

The center is the only USDA research unit focusing exclusively on the nutrient needs and nutritional status of pregnant and lactating women and of children from conception to adolescence.

Food and Nutrition Actions

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.

Food Safety and Quality

- USDA has announced that on April 15, 1985, it will begin to regulate the amount of curing solution in ham and other cured pork products by requiring minimum protein levels. Current regulations permit no more than 10 percent curing solution in a finished cured pork product labeled "water added." Under the new regulation, four categories of canned ham will be allowed and could be labeled: "ham" if it is at least 20.5 percent protein; "ham with natural juices" if it is at least 18.5 percent protein; "ham - water added" if it is at least 17.0 percent protein; and "ham and water product" if it is less than 17.0 percent protein.

- On May 14, 1984, USDA began allowing swine producers to feed their hogs untreated bakery waste, candy, eggs, domestic dairy products including untreated milk, and certain kinds of fish. Only about 1.4 percent of domestic swine are fed garbage of any kind.

- Since June 8, USDA no longer requires that titanium dioxide be added to isolated soy protein, a binder or extender used in some meat and poultry products. Titanium dioxide assists in demonstrating the presence of isolated soy protein in those sausages and other meat and poultry products in which it is allowed.

- On May 17, USDA submitted proposed legislation to Congress that would strengthen USDA's authority to deal with meat and poultry plants that willfully and repeatedly violate Federal inspection laws. The proposal expands the grounds on which USDA may withdraw or refuse inspection service.



- On June 5, USDA began intensifying its residue testing program to prevent veal contaminated with sulfa and antibiotic residues from reaching the market. The problem arises when animals are slaughtered before the drugs have cleared their systems.

- On June 26, USDA proposed to revise the composition and labeling standard for animal fat-based margarine and oleomargarine to allow the use of any approved nutritive carbohydrate sweetener. This change would bring the USDA standard into line with those for vegetable oil-based margarine set by the U.S. Food and Drug Administration.

- Effective June 27, USDA requires producers to certify that pesticides used on price support loan tobacco have been approved by the Environmental Protection Agency and applied in accordance with label directions. Producers who fail to certify will be ineligible for Government price support loans. Previous USDA regulations required tobacco producers to certify only DDT, TDE, toxaphene, or endrin.

- USDA is now reviewing public comments on its proposal to update Federal regulations for canned meat and poultry products. The proposed regulations cover heat-processed meat and poultry products packed in airtight containers. The proposal embraces the most important aspects of canning, including con-

tainer inspection, heat processing equipment and procedures, processing and production records, container coding, examination of finished product, and recall procedures.

Nutrition Programs

- New income limits for participation in USDA's child nutrition programs became effective July 1. The income limit for free school meals for a family of four was raised from \$12,870 to \$13,260 annually. The limit for reduced-price meals increased from \$18,315 to \$18,870.

- Effective July 1, the income eligibility limits for participation in the Food Stamp Program were raised by about 3 percent, reflecting changes in the cost of living. Under the new guidelines, the gross monthly income limit for a family of four increased from \$1,073 to \$1,105 and the net income rose from \$825 to \$850.

- USDA has changed its buying procedures for bulk frozen ground beef and other red meat for school lunch and other domestic feeding programs. USDA will procure meat on a destination or delivered basis, rather than on a f.o.b. shipping point basis.

Agricultural Programs

- Secretary of Agriculture John Block has named 36 dairy farmers to serve on the national promotion board that will administer a dairy promotion, research, and nutrition education program. The program is financed by a mandatory 15-cents-per-hundredpounds assessment on all milk produced in the contiguous 48 States and marketed commercially by dairy farmers. The Secretary must also conduct a referendum of dairy farmers in August-September 1985 to determine if they approve continuing the program after September 30, 1985.

Food and Nutrition Legislation

Loreen Forester
(202) 475-5120

Congressional action will affect five child nutrition programs in fiscal year 1985. Modification and funding activity will affect the Special Supplemental Food Program for Women, Infants, and Children (WIC), the Commodity Supplemental Food Program (CSFP), the Summer Food Service Program (SFSP), the Nutritional Education and Training (NET) Program, and State Administrative Expenses (SAE). The authority to purchase commodities for the National School Lunch Program (NSLP) must also be extended.

S. 2545 - Sen. Jesse Helms (NC)

This bill, called the "Nutrition Programs Reform Act," would modify and reauthorize the SFSP and WIC. One major change included in this bill would be to switch the SFSP from an entitlement program to one subject to Congressional allocation. The fiscal year 1985 allocation would be \$60 million for the SFSP, compared with \$105 million in 1984.

The bill would require that eligibility for the SFSP be determined for each individual. The current system accepts all children at participating public and private nonprofit camps and schools located in an area where more than half the children are from families with incomes at or below 185 percent of the Federal poverty level. Government agency sites for the SFSP, such as municipal recreation programs, would be eliminated. The bill would also reduce meals served to only lunch rather than lunch and either breakfast or a snack.

The WIC program would be reauthorized for 1 year at \$1.25 billion, \$110 million below 1984 funding. Several measures are designed to reduce the cost of the program. For example, a minimum number of participants per office could be established to close smaller offices and incorporate them into larger, more cost-efficient offices; meals for children who have access to other food assistance, such as the Child Care Food Program (CCFP), would have to be deducted from the family's program benefits; WIC and CSFP would be prohibited from operating



in the same geographical area to avoid duplication of services; costs incurred in initiating WIC in an area would no longer be absorbed by the Federal Government; benefits would be prorated for the initial month for those joining after the first of the month; and outreach activities to encourage participation in the program and informational material in languages other than English would no longer be required.

S. 2607 - Sen. Walter Huddleston (KY)

The "Anti-Hunger Act of 1984" would reauthorize the SFSP, WIC, SAE, and commodity distribution programs for 4 years, and permanently authorize NET at \$8 million.

Child nutrition program changes would include: providing storage and distribution costs to States for up to 3 percent of the value of USDA commodities donated to schools; allowing schools with annual tuition fees of greater than \$1,500 to participate in the NSLP again; again reimbursing day care centers under the CCFP for three meals per day plus two snacks; and providing a hardship deduction for unusually high medical expenses in determining NSLP and School Breakfast Pro-

gram (SBP) free and reduced-price meal eligibility. It would also reimburse schools an additional 6 cents per breakfast to improve the nutritional quality of the SBP and decrease the cost to students of reduced-price school lunches and breakfasts to 25 cents from 40 and to 15 cents from 30, respectively. In order to require verification of eligibility, the Federal Government would have to provide administrative funds for such procedures. Children in nonprofit kindergartens would be allowed to participate in the Special Milk Program. The bill would also provide incentives for schools in needy areas to join the NSLP and SBP, such as funding for food service equipment. The bill would also clarify that NSLP facilities may be used for elderly nonprofit feeding programs.

The WIC program would be reauthorized at \$1.52 billion for 1985, with increases of approximately 8 percent per year for the next 3 years.

S. 2617 - Sen. Robert Dole (KS)

This bill would reauthorize all five child nutrition programs for 4 years. Although the WIC program would be maintained at the current participation level of 3 million women, infants, and children, changes would include: prorated benefits for the initial month for those joining the program after the first of the month; counting pregnant women as two individuals in determining eligibility; eliminating mandatory publicity of WIC availability and eligibility criteria; and requiring States to seek repayment of benefits issued inappropriately due to intentional misrepresentation of information by recipients, except when the cost of recovery exceeds the amount to be collected.

The bill would raise the ceiling for the NET to \$10 million from \$5 million, with the additional money targeted to nutrition education for food stamp recipients. It would also authorize a study to determine the feasibility of a program in which the Federal Government would provide a free lunch to all school children.



Per Capita Consumption

In 1950, the average American ate 146 pounds of fruit, on an annual basis. Fresh fruit made up nearly three-fourths of this, averaging 107 pounds per person.

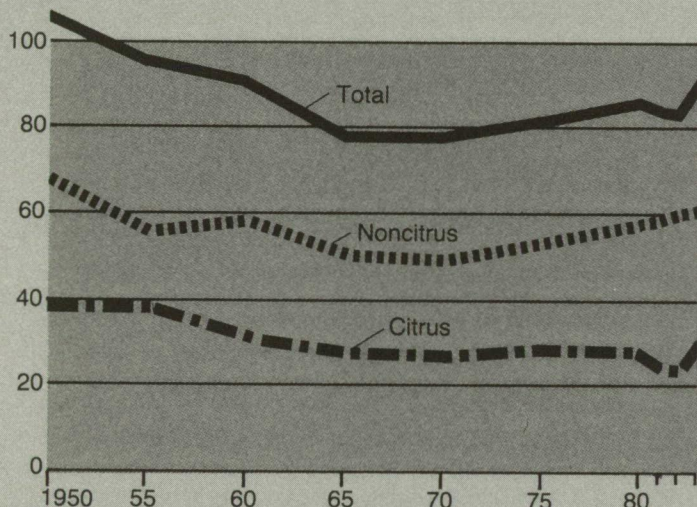
By 1970, total per capita fruit consumption had declined to 133.2 pounds, with fresh fruits accounting for 59 percent or 78 pounds per person. At the same time, a record 43 pounds per person of canned and chilled fruits and juices were consumed.

In 1983, per capita fruit use rose to 143.2 pounds as Americans increased their consumption of fresh fruit to 91.8 pounds per person, or 64 percent of the total.

And if you guessed that the favorite fruit of Americans is the apple, try again—it's the banana, by a wide margin. In 1983, consumers favored bananas over apples by 18 percent, eating an average of 21.2 pounds of bananas and 18 pounds of apples per person.

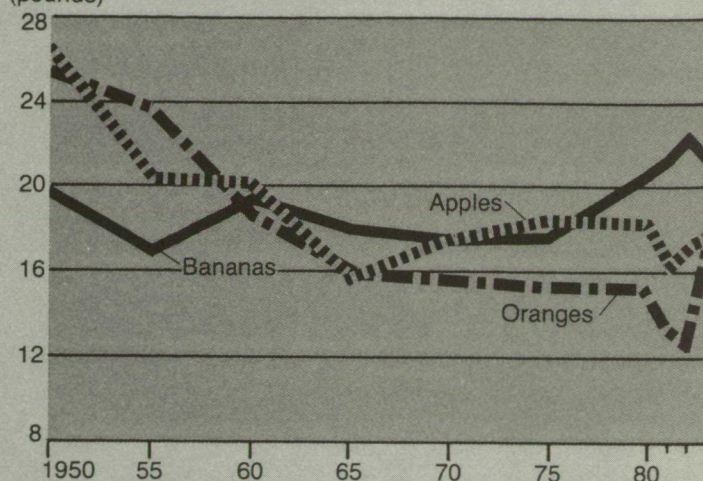
Fresh Fruits

(pounds)



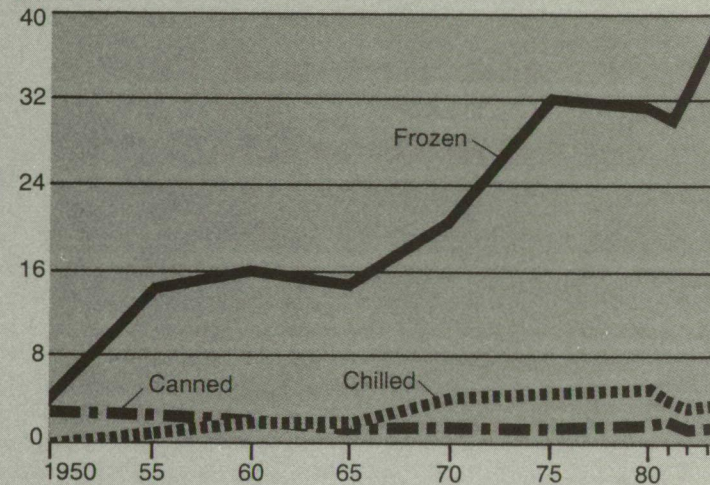
Fresh Oranges, Apples, and Bananas

(pounds)



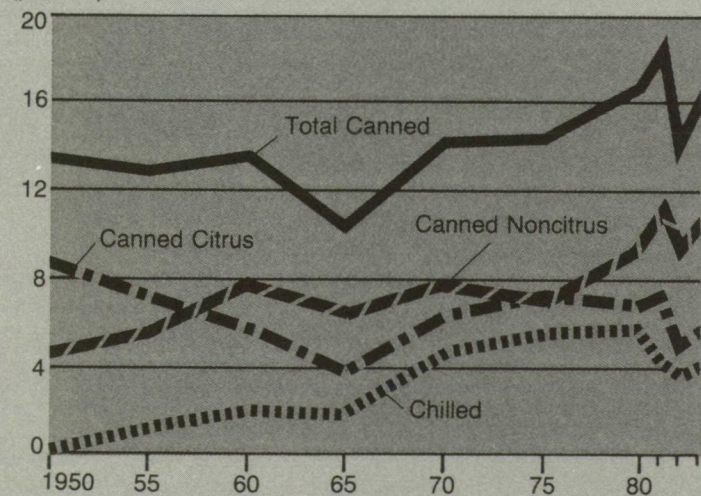
Orange Juice

(pounds)



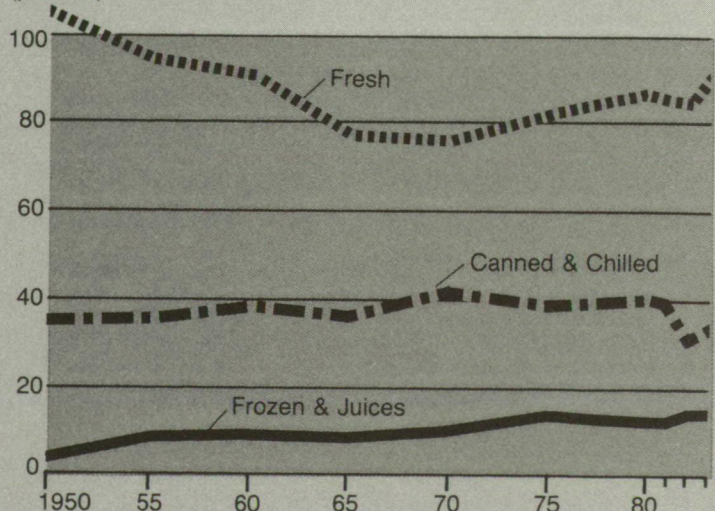
Canned and Chilled Juices

(pounds)



Fruit

(pounds)

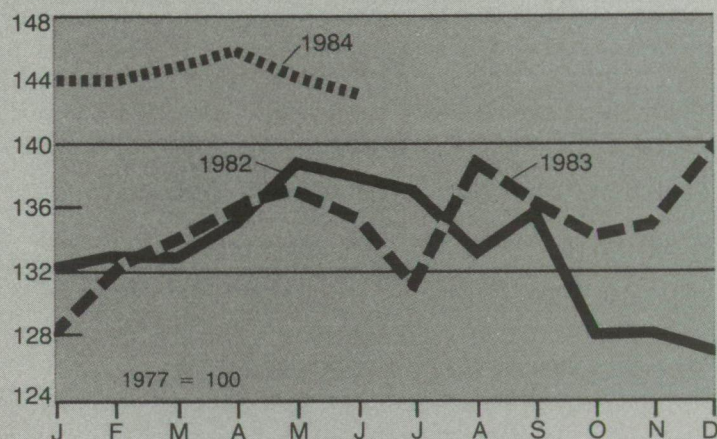


Food Prices

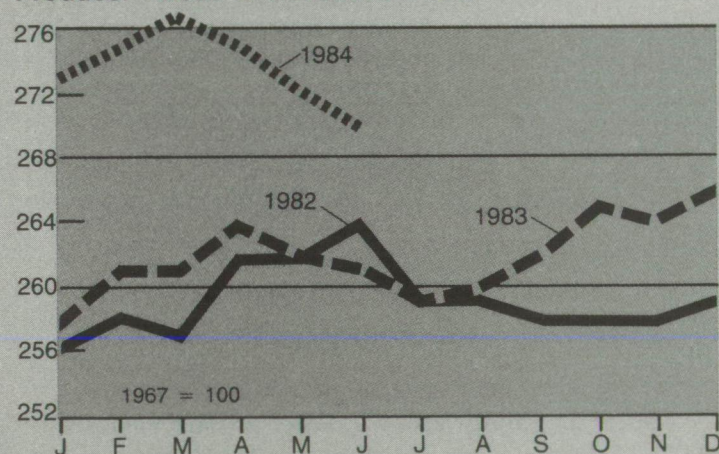
Prices declined modestly this spring, but are still above 1983. Farm prices in June were up 6.7 percent over a year ago; producer prices rose 3.5 percent; and consumer prices for all foods were 3.8 percent higher than in the same month in 1983.

Last year farmers got a slightly larger share of retail prices of milk, eggs, chicken, sugar, and potatoes compared with 1982. They received less, however, of the dollars going for beef, pork, oranges, and lettuce.

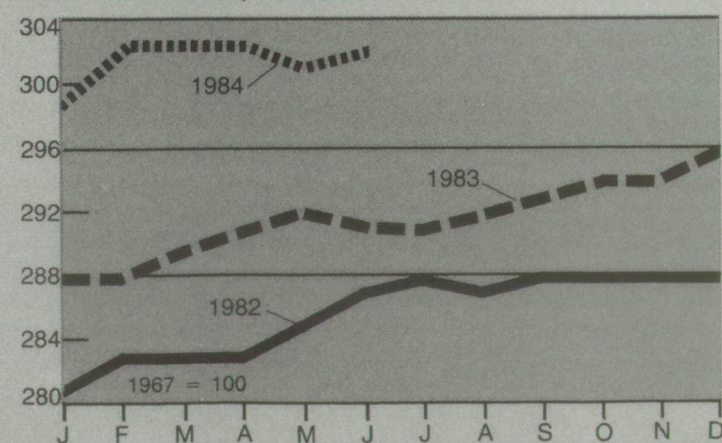
Farm Prices



Producer Prices of Consumer Food



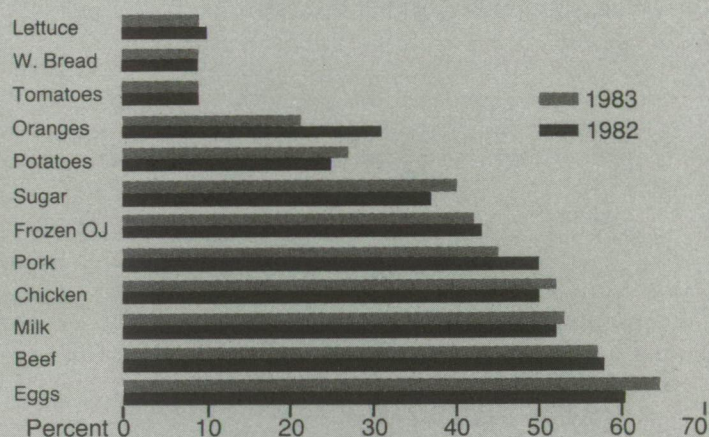
Consumer Prices, All Food



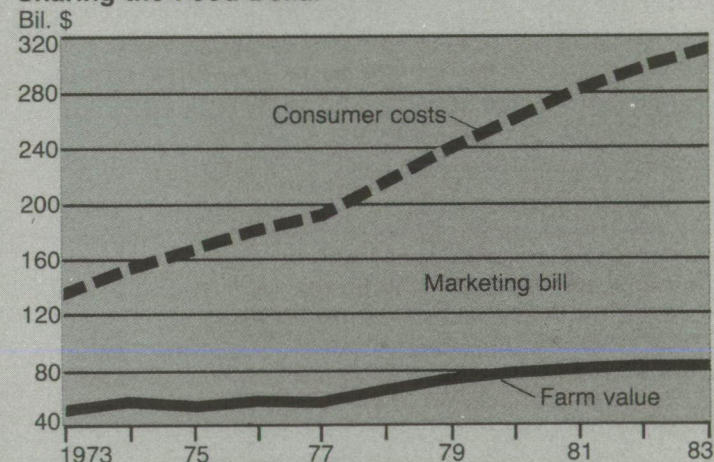
Food expenditures in 1983 totaled \$312 billion, compared with \$298 billion in 1982. The marketing bill—representing costs other than the farm value—rose 6.5 percent from 1982, while the farm value rose just 0.6 percent.

A steady growth in average income since 1967 helped bolster per capita food consumption 3.3 percent by 1983. Over the period, U.S. population increased nearly 19 percent, but food use jumped almost 23 percent.

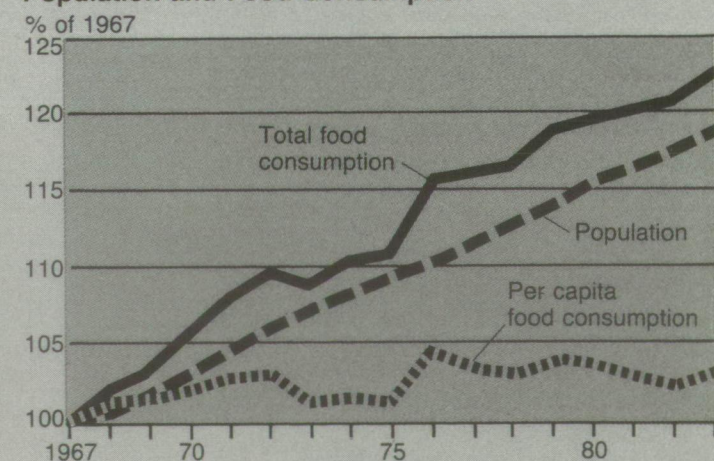
Farm Share of Retail Food Prices



Sharing the Food Dollar



Population and Food Consumption



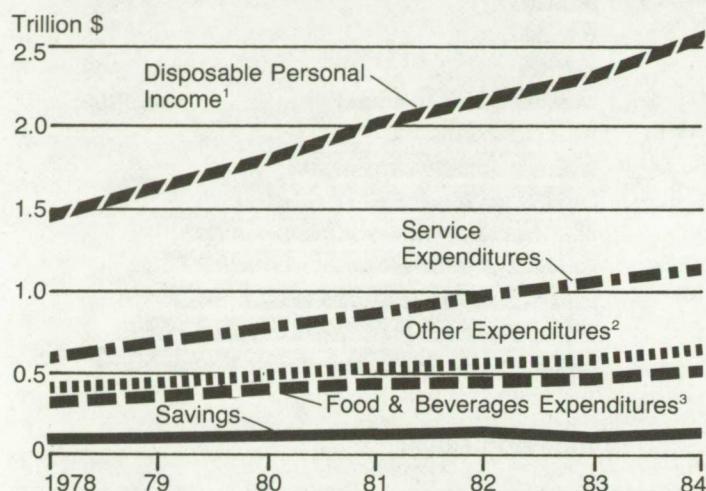
Income and Expenditures

Based on the cost of USDA's moderate food plan in June 1984, a couple between the ages of 20 and 50 are likely to spend \$56 a week for food. If they have two children under age 6, weekly food costs rise to about \$80. But with two children, 6 to 11, the couple's weekly grocery bill increases to almost \$97. The weekly food bill for a teenage boy, 12 to 19, is higher than for a girl—\$27.30 compared with \$22.60. As we age, food expenditures decline—a couple aged 55 or

older may spend less than \$50 a week on food.

All households, on average, spend about 38 cents of a food dollar on meat and poultry, 20 cents on fruits and vegetables, 14 cents on dairy products, and 13 cents for bread and grain products. Low-income households spend their food dollar similarly except they allocate less for fruits and vegetables and more for miscellaneous products.

Personal Income and Expenditures



¹Consumer disposable income does not include interest paid by consumers and personal transfer payments to foreigners.

²Drugs, gas and oil, fuel, clothing, and durables.

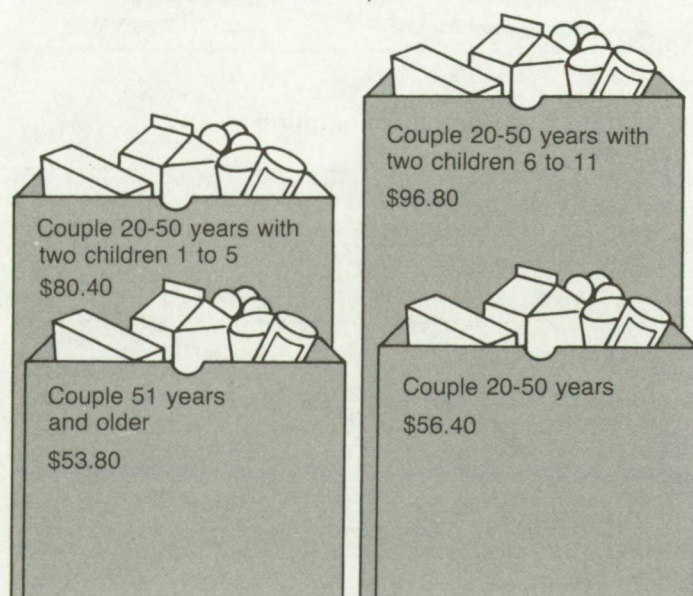
³Food, beverages, and other groceries.

⁴Second quarter.

Source: U.S. Department of Commerce

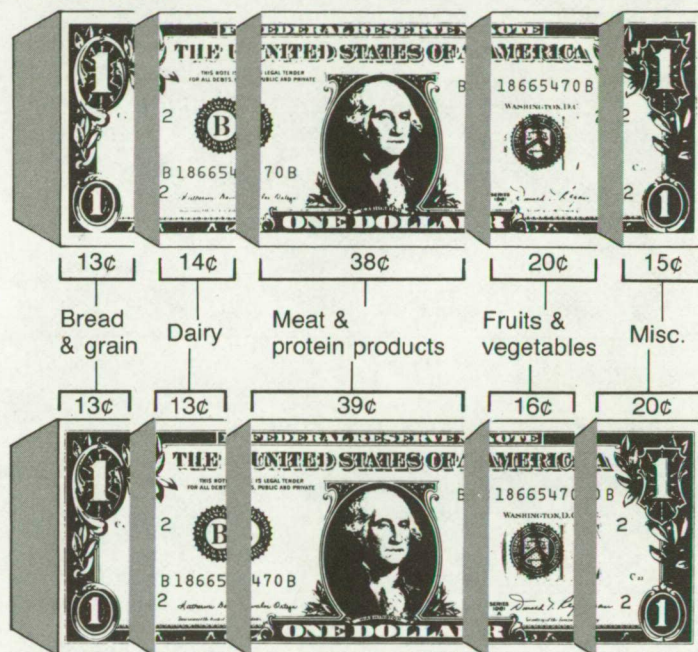
Family's Weekly Food Cost

(USDA moderate cost food plan, June 1984.
All meals at home or from home.)



Allocating the Food Dollar

All Households



Low-Income Households

Source: USDA Survey of Food Consumption in Low-Income Households, 1979-80

Per Capita Expenditures as a Share of Disposable Income

	1982	1983
	Percent	
Animal products	4.6	4.4
Beef, veal	1.3	1.3
Pork	1.2	1.2
Poultry	.4	.4
Eggs	.2	.2
Dairy products	1.3	1.2
Crop products	4.3	4.2
Fruits	.8	.7
Vegetables	1.7	1.5
Flour, cereal grain products	1.5	1.7

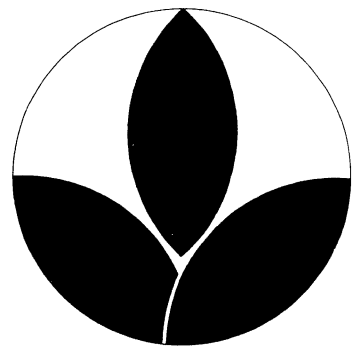
Sound Off!

The editors of **National Food Review** are dedicated to improving this magazine, and always appreciate reader suggestions on ways to make it more useful and timely. If you would like to comment on any aspect of the publication—the charts, articles, or tables—send your suggestions to:

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Washington, D.C. 20250

Prospects for the 1985 farm bill will come under close scrutiny at **Outlook '85**, USDA's 61st annual agricultural outlook conference, which will be held in Washington, D.C., December 3-5, 1984. As is its tradition, the conference will lead off with the outlook for the economy, agriculture and trade, and international policy—major components of today's agricultural equation.

OUTLOOK '85



Shorter and tighter than in recent years, the conference will provide policymakers with a complete overview of the agricultural situation in 3 days. Secretary of Agriculture John Block is scheduled to open the proceedings with an address at 10 a.m. Monday, December 3. Two special panels on the 1985 farm bill will follow, one focusing on the environment for the new legislation and the second including viewpoints from members of Congress, the Administration, and the farm and private sectors. Succeeding sessions will cover the major farm commodities, while sessions on family economics and nutrition are scheduled over the 3 days.

This year for the first time, listeners outside the Washington area will be able to call in questions to certain follow-up sessions for major commodities. Callers will use a regular long-distance business line at regular long-distance rates.

As last year, a 900-line service will allow listeners to hear all sessions. The service costs 50 cents for the first minute and 35 cents for each additional minute. Thus, you can hear an hour-long session for less than \$22, plus tax.

For a copy of the preliminary **Outlook '85** program, which contains time and location for each session, please write: Outlook '85, USDA/WAOB, Room 5143-S., Washington, D.C. 20250.

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