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According to the Bureau of Labor Statistics (BLS), food price levels increased 57% from the beginning of 1970 through 1976, including a 31% increase in 1973 and 1974. The Consumer Price Index shows that over the last 50 years food prices have been susceptible to wider fluctuations than the prices of other goods. Farm prices and food prices are generally generated in two different markets--the market for raw agricultural commodities and the market for finished food products. Findings/Conclusions: Farm prices of raw agricultural commodities are influenced largely by such unpredictable natural forces as the weather, pests, and crop disease. Farm and food prices are influenced by other factors that affect supply such as Federal programs for cropland set-aside, commodity disposal, export sales, and marketing orders; production costs, and the length of the production cycle. Higher marketing charges have accounted for 87% of the increase in consumer expenditures since 1973. The largest food marketing cost is labor. There are four principal reasons why food prices do not always decline when the farmer receives less for the raw commodity: (1) a drop in farm value may have little or no impact on the retail price when the farm value is a small percentage of a product's price; (2) a

decrease in farm value may be offset by increases in the cost of marketing, transporting, assembling, and wholesaling; (3) retail pricing methods are based on factors other than product cost; and (4) food chains may not pass on price drops to the consumer. Recommendations: If the Congress establishes a permanent Bureau of Agricultural Statistics or National Commission on Food Production, Processing, Marketing, and Pricing, it should provide the agency with the authority to assure access to food industry records and provide for adequate safeguards to protect confidential records. The Congress should direct the BLS to institute a retail collection program which would allow BLS to publish nationwide average retail prices for individual commodities and allow the Department of Agriculture to resume publishing farm value-retail price spreads. The Secretaries of Agriculture and Transportation and the Chairman of the Interstate Commerce Commission should conduct an indepth study of the problem of haulers of raw agricultural commodities having to drive many miles with empty trucks and should develop and propose legislation if such a need exists. (RRS)

7586

BY THE COMPTROLLER GENERAL

Report To The Congress

OF THE UNITED STATES

What Causes Food Prices To Rise? What Can Be Done About It?

The primary causes of food price rises in this decade have been agricultural commodity shortages caused by bad weather and increased food marketing costs--especially labor costs--spurred by inflation. Food prices don't always fall when farm prices fall for a number of reasons. But a lack of specific and timely data makes it difficult to determine the reasons why. Improvements could be made in the Government's and food industry's roles in the food system which would lower food price levels or slow the rate of price increases. And the Government, when deciding on the need for additional legislation to protect the consumer or improve the environment or working conditions, should consider its effects on food prices.

GAO is recommending actions by the Congress and a number of Government organizations aimed at reducing food marketing costs, improving efficiency, stabilizing food prices, and improving food price statistics

CED-78-170

SEPTEMBER 8, 1978

COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON, D.C. 20548

B-114824

To the President of the Senate and the
Speaker of the House of Representatives

This report attempts to explain the complex reasons for changes--especially increases--in food prices and points out actions that can be taken by the Government and industry to help consumers.

We made our review

--in response to a joint request from Congressmen John W. Jenrette, Jr., Richard Nolan, and Frederick W. Richmond;

--to follow up leads we had developed during an earlier survey of food prices and the food marketing and distribution system; and

--pursuant to the Budget and Accounting Act, 1921 (31 U.S.C. 53), and the Accounting and Auditing Act of 1950 (31 U.S.C. 67).

We are sending copies of this report to the Director, Office of Management and Budget; the Secretaries of Agriculture, Commerce, Labor, and Transportation; the Attorney General; the Administrator, Environmental Protection Agency; the Chairman, Interstate Commerce Commission; the Chairman, Federal Trade Commission; the Commissioner, Food and Drug Administration; and the Chairman, Council on Wage and Price Stability.

Comptroller General
of the United States

COMPTROLLER GENERAL'S
REPORT TO THE CONGRESS

WHAT CAUSES FOOD PRICES TO RISE? WHAT CAN BE DONE ABOUT IT?

D I G E S T

Food prices:

--How are they determined?

--What makes them change?

--Why don't retail prices decline when farmers get less for commodities?

--Do Department of Agriculture food price statistics really tell Americans what they pay for food?

--What of the future?

These questions are on the tips of everyone's tongues these days; and GAO attempts to answer them in this report. In doing so, GAO offers recommendations to the Congress and to the heads of a number of Federal departments and agencies on steps it believes, after a long and careful review, should be taken by all concerned.

From 1970 through 1977 consumer expenditures for U.S. farm-produced food increased 72 percent--41 percent of this increase occurring in 1973 and 1974 when there was a worldwide grain shortage and pervasive domestic inflation.

These sharp price increases and the continuing increases or lack of decreases have

--brought charges of unfair pricing policies in the food industry,

--caused consumers to be concerned with the rate at which food prices increase, and

--led farmers to complain that the prices they receive are too low compared with their production costs.

FOOD PRICE ECONOMICS

Food prices rise generally because farm prices of raw agricultural commodities rise and/or the

costs and profits to market these commodities as finished food products rise.

Farm prices of raw agricultural commodities are influenced largely by rather unpredictable natural forces such as the weather, pests, and crop disease. Farm prices and food prices are influenced also by other factors that affect supply, such as Federal programs for cropland set-aside, commodity disposal, export sales, storage, and marketing orders; production costs; and the length of the production cycles of most agricultural commodities. (See pp. 13 to 20.)

Consumer expenditures for U.S. farm-produced food increased by $76 billion from 1970--$106 billion--to 1977--$182 billion. Higher marketing charges accounted for $54 billion, or 71 percent of the increase. Of the $22 billion increase in the farm value, 55 percent occurred in a single year--1973. Since 1973, 87 percent of the increase in consumer expenditures has been caused by higher marketing charges. (See p. 26.)

The largest food marketing cost is labor. In 1977, for the first time, food marketing labor costs ($62 billion) exceeded the farm value ($57 billion) of the commodities marketed. From 1970 through 1977, food marketing industry profits both before and after taxes rose as much as or more than any other cost element on a percentage basis; however, the amount of 1977 before-tax profits (approximately $8 billion) was relatively insignificant when compared with the labor costs of $62 billion. Food industry profits, therefore, cannot logically be cited as a major reason for food price increases. (See pp. 27 to 32.)

Does inflation cause high food prices or do high food prices cause inflation? The truth seems to be that one feeds on the other. In April 1978 the President announced plans to moderate inflation through a number of Government actions aimed at achieving voluntary wage and price restraints, reduction of crude oil imports, greater economy and productivity in Government, and an appropriate fiscal and monetary balance in economic policy. (See pp. 34 to 39.)

The proper balance and administration of Government programs affecting the supply of agricultural

commodities can do much to stabilize domestic food prices. (See p. 39.)

WHY FOOD PRICES DON'T ALWAYS DECLINE WHEN THE FARMER GETS LESS FOR THE RAW COMMODITY

There are four principal reasons:

--When a product's farm value represents a small percentage of its retail price--such as in the case of canned goods, which require a high degree of processing, or fresh produce, which requires special handling--a drop in farm value may have little or no impact on the retail price. (See p. 42.)

--A decrease in a product's farm value may be partially, completely, or more than offset by increases in food marketing costs-the costs of assembling, transporting, processing, wholesaling, and retailing products. (See p. 43.)

--Various retail pricing methods, such as following competitors' prices, setting gross profit margins by department rather than for each product, letting retail margins increase somewhat when wholesale or farm prices fall and absorbing some of the cost increases when prices rise, and running specials at lower prices or offering cents-off coupons rather than reducing the established prices, are based on factors other than just product cost and may result in no reduction in a particular product's regular retail price in response to a drop in its farm price. (See p. 48.)

--In areas where a few manufacturers, retail stores, or food chains account for a high percentage of total food sales, price competition may be limited and there is less likelihood that a drop in a commodity's farm price will be passed on to the consumer. (See p. 48.)

Various possible combinations of these conditions and lack of specific and timely data on changes in the cost and profit components at the various levels of the food industry make it difficult, if not impossible, to determine precisely why a product's price does not decline when the farmer gets less for the raw commodity. (See p. 42.)

The total farm value of U.S. farm-produced food remained relatively stable from 1975 through 1977. Total consumer expenditures for food for the period, however, increased 22 percent, or about $33 billion. Most of the increase was received by the food industry. (See p. 46.)

Legislation has been proposed to provide for an agency or commission to monitor food prices or study the food industry. However, the legislation does not provide for the agency or commission to have access to the records of the food industry. Such access would facilitate checking the validity of reported food price information. (See p. 54.)

WAYS TO STABILIZE FOOD PRICES IN THE FUTURE

At what rate will food prices rise in the future? Answering this question definitively is obviously difficult because of the unpredictability of so many key variables--inflation, weather, crop disease, pests, technology, and Government policies and programs.

There are things that the Government and the food industry could do, however, to help lower food price levels or slow the rate of price increases. These include

--the relaxation or modification of certain Federal transportation regulations which cause truckers to travel many miles with empty trucks and thus serve to increase food distribution costs and

--more rapid adoption by the food industry of available technology such as computerized checkout systems at the retail level, methods to decrease the amount of food loss or spoilage, and standardization of food containers. (See pp. 56 and 78.)

Also, Government decisionmakers need to consider the effects of their proposed actions on food industry costs and thus on food prices. Among actions now being discussed or formulated by the Congress and/or the executive branch are nutritional labeling of all food and food products, drained weight labeling, percent of characterizing ingredients labeling such as the amount of beef

in beef stew, mandatory unit pricing, mandatory open dating, and more stringent noise and water pollution standards. (See pp. 68 to 77.)

Because all or part of the costs of such actions are invariably passed along to the consumer, both their beneficial and detrimental effects need to be considered in deciding whether to implement them.

FEDERAL FOOD PRICE STATISTICS NEED IMPROVING

The Department of Agriculture, using information obtained from various sources, produces several statistics on food prices and the food industry. During the period covered by GAO's review, these included the farm value-retail price spread, percentage of disposable income spent for food, the retail cost of a market basket of food commodities, and the marketing bill. In addition, the Bureau of Labor Statistics, from which Agriculture obtains certain of its information, publishes a monthly Consumer Price Index, which includes a measurement of food price changes.

Although these statistics are considered the best available information on these subjects, several problems have limited their reliability and usefulness. For example, one of Agriculture's most widely used statistics has been the farm value-retail price spread which represents that part of a product's retail price which goes to the food marketing industry. GAO found that:

--Retailer specials were not adequately considered in the retail price computations of either the Bureau or Agriculture. (See p. 92.)

--Farm prices were not collected on a statistically sound basis. (See p. 95.)

--The lag between the time a product is sold by a farmer and the time it is displayed on a retailer's shelf was not considered in computing the spreads. (See p. 97.)

Recently, because of a change in the Bureau's retail price collection method and a delay in developing a revised method to calculate nationwide

average retail prices used in the spreads, Agriculture has temporarily discontinued publishing spreads for most individual foods. A Bureau official said that it would take 6 months to 1 year to determine if prices are being collected for a sufficient number of like items to calculate nationwide average retail food prices.

Until 1977 Agriculture used Department of Commerce disposable personal income and food expenditure statistics to calculate and publish the percentage of disposable income spent for food. Many Government and private organizations' studies found, however, that the percentage was not representative of food expenditures by low-income families. (See pp. 100 to 104.)

Because of such complaints, Agriculture stopped publishing the percentage, although it continues to publish disposable personal income and food expenditure totals. Information on food expenditures by income level and/or family size would be helpful in monitoring the Nation's economy and in the Federal decisionmaking process, although an Agriculture official said that the expense involved might be prohibitive. Agriculture has not, however, studied the data needs and costs of data collection. (See p. 104.)

The market basket and marketing bill published by Agriculture and the Consumer Price Index published by the Bureau are frequently misused. Neither agency has been very successful in educating users about the statistics' limitations and uses. (See pp. 105 and 107.)

RECOMMENDATIONS TO THE CONGRESS

Bills to establish a permanent Bureau of Agricultural Statistics (House bills 256, 497, and 3132) or a temporary National Commission on Food Production, Processing, Marketing, and Pricing (S. 1223) are now being considered by the Congress. To facilitate gathering and verifying information, GAO recommends that if such a bureau or commission is to be established, the Congress provide (1) it with the authority needed to assure access to food industry records and (2) for adequate safeguards to protect the confidentiality of such records. (See p. 56.)

If the Bureau of Labor Statistics is unable to revise its method of computing nationwide average retail prices because of changes in its retail price collection procedures, GAO recommends that the Congress direct the Bureau to institute a retail price collection program which would allow (1) the Bureau to resume publishing nationwide average retail prices for many individual commodities and (2) Agriculture to resume publishing farm value-retail price spreads. (See p. 110.)

RECOMMENDATIONS TO THE EXECUTIVE BRANCH

The Secretaries of Agriculture and Transportation and the Chairman of the Interstate Commerce Commission should initiate and coordinate an indepth study of the problem of haulers of raw agricultural commodities driving many miles with empty trucks. The study should ascertain the extent of, reasons for, and extra costs caused by the problem. The Secretaries and the Chairman should develop and propose legislation to modify existing regulations if the study indicates such a need. (See p. 87.)

The Secretary of Transportation and the Chairman of the Interstate Commerce Commission should also provide for a study of the projected effect of authorizing intercorporate hauling--compensated transportation between related companies--including a determination of the (1) net benefits to the trucking industry and (2) effect on consumer prices. (See p. 87.)

The Director, Office of Management and Budget, should direct his staff to implement and oversee a coordinated Federal effort to assist the food industry in implementing those efficiency-increasing actions discussed in this report. (See p. 87.)

The Secretary of Agriculture should provide for an assessment of the possible ways in which the food marketing industry could be required to submit monthly data on cost and profit margins. Upon completion of this assessment, the Secretary should develop proposed legislation to accomplish this. (See p. 56.)

The Secretary of Agriculture should also direct the Economics, Statistics, and Cooperatives

Service to

--improve the method for computing farm value-retail price spreads by better adjusting retail prices for the effect of retailers' special prices and instituting a system which considers time lags in computing the spreads;

--determine the data needs and cost of data collection required to calculate and publish the percentages of disposable personal income spent for food by income level and/or family size and, if found to be feasible and economical, initiate gathering and analyzing the data and publishing the resultant percentages; and

--increase efforts to inform users of its statistics on the retail cost of a market basket and the marketing bill what these statistics show and their uses and limitations. (See p. 111.)

The Secretary of Labor should direct the Bureau of Labor Statistics to

--determine the additional labor and cost necessary to institute a retail price collection system which would note quantities sold at regular and special prices and, if found to be practicable and economical, institute such a system and

--increase efforts to inform users of the food portion of the Consumer Price Index what the Index shows and its uses and limitations. (See p. 111.)

The Secretaries of Agriculture and Labor should direct their staffs to identify areas of common data needs and explore the feasibility of adjusting data collection and data presentation methods to better accommodate both users. (See p. 112.)

Also, the Secretary of Labor and the Director, Office of Management and Budget, should further consider updating the Consumer Price Index more often than every 10 years to recognize shifts in consumer buying patterns. (See p. 112.)

AGENCY COMMENTS

The Departments of Agriculture (see app. IV) and Transportation (see app. VI) and the Interstate Commerce Commission (see app. V) provided written comments, while Labor and the Office of Management

and Budget provided oral comments. Their comments are discussed where appropriate in the report.

Agriculture generally agreed with the recommendations to improve food price statistics but pointed out several problems that would be encountered in implementing the recommendations. (See pp. 56 and 112.) The Office of Management and Budget and Labor generally disagreed with the need for improved food price statistics. (See pp. 113 and 114.)

Agriculture, Transportation, the Office of Management and Budget, and the Interstate Commerce Commission generally agreed with the need for studies to determine the impact of and possible alternatives to certain transportation regulations. (See p. 87.)

Contents

ABBREVIATIONS

ARS	Agricultural Research Service
BLS	Bureau of Labor Statistics
CCC	Commodity Credit Corporation
CPI	Consumer Price Index
EPA	Environmental Protection Agency
ERS	Economic Research Service
ESCS	Economics, Statistics, and Cooperatives Service
FDA	Food and Drug Administration
FEDS	Firm Enterprise Data System
FTC	Federal Trade Commission
GAO	General Accounting Office
ICC	Interstate Commerce Commission
OMB	Office of Management and Budget
OPEC	Organization of Petroleum Exporting Countries

OSHA	Occupational Safety and Health Administration
SRS	Statistical Reporting Service
UPC	Universal Product Code
USDA	U.S. Department of Agriculture

CHAPTER 1

INTRODUCTION

"Beef Prices Fuel Unexpected Food Cost Rise"

"Food Prices Lead Jump In Inflation"

"Food-Price Surge in '78 Now Is Seen Topping Carter 6%-8% Forecast"

"Food Costs Up, But Farmers Not Gaining"

"Food Price Hikes Due To High Middleman Costs"

During the past several years, headlines like these have expressed and reflected the public concern about rising food prices. The Congress also has become increasingly concerned about the rapid increase in food prices. According to Bureau of Labor Statistics (BLS) figures, food price levels increased 57 percent from the beginning of 1970 through 1976, including a 31-percent increase in 1973 and 1974.

We made this study to identify (1) how food prices are determined and what causes them to change, (2) why retail food prices don't always decline when the farmer gets less for the raw commodity, (3) the need for changes in laws and regulations and opportunities to reduce food marketing costs in the future, and (4) the nature and usefulness of various food price statistics published by the U.S. Department of Agriculture (USDA) and others. 1/

1/As discussed in ch. 5, we noted several problems with published food price statistics. However, because better food price statistics do not exist, we had little choice but to use those that were available. Accordingly, the reader should keep in mind that the statistics used in this report are generally considered to be the best available but may not necessarily be accurate or reliable. Also, the reader is cautioned that it is easy to confuse some food price statistics For example, imported foods and seafood are not included in the consumer expenditures for marketing industry charges reported by USDA but are included in such consumer expenditures reported by the Department of Commerce. Both agencies' statistics are referred to in this report.

PRICE TRENDS OF FOOD AND CERTAIN OTHER GOODS AND SERVICES

The Consumer Price Index (CPI) published by BLS shows that over the last 50 years, except for the mid-1950s to early 1970s, food prices have been more susceptible to wide fluctuations than the prices of other goods.

--From 1930 through 1933 food prices declined more than the prices of other goods and services.

--From 1934 through 1937 food prices rose at a higher rate than the prices of nonfood items, but during 1938 and 1939 food prices decreased while the prices of most nonfood items either stayed the same or increased.

--During part of the early years of World War II (1940-43), food prices rose much more rapidly than the prices of other goods and services.

--After a period of price stability because of wartime price controls (1944 and 1945), food prices increased at a higher rate than nonfood prices until the late 1940s.

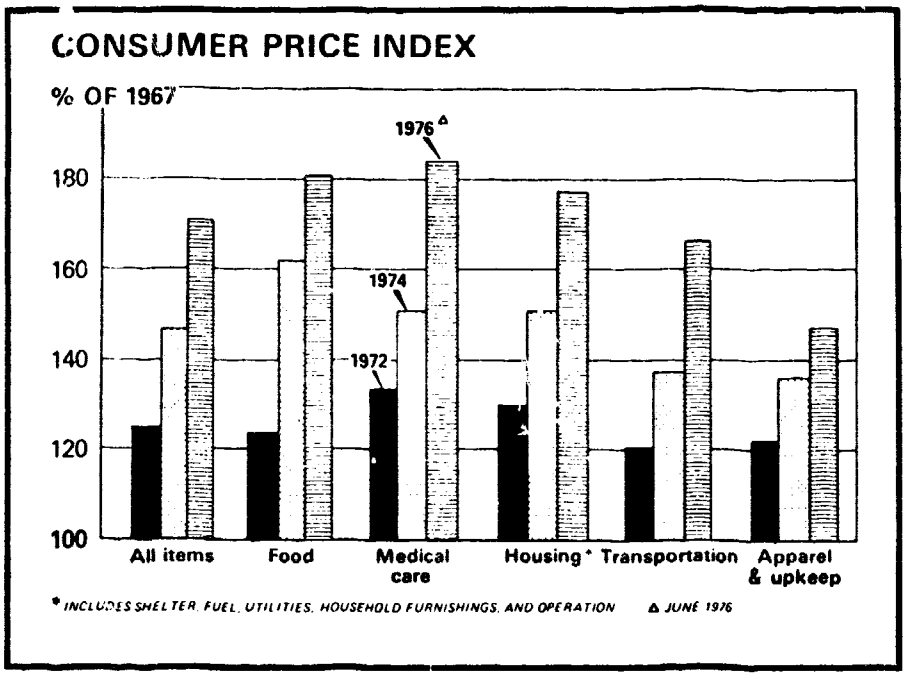
--Food prices again rose more rapidly than nonfood prices during the Korean conflict in the early 1950s.

--From the mid-1950s to the early 1970s, food and nonfood prices increased at similar rates.

--In 1973 and 1974 food prices increased substantially and at a much higher rate than nonfood prices.

--From the beginning of 1975 to January 1978, food prices increased at a lesser rate than nonfood prices.

Before 1978 the CPI measured the average change in the price of goods and services usually purchased by urban wage earners and clerical workers. Currently, the CPI measures these average price changes for all urban consumers. The goods and services covered by the CPI are determined by the results of a BLS consumer expenditure survey, which is taken about every 10 to 15 years. The following USDA chart compares the price index for food with the indexes for other goods and services in 1972, 1974, and 1976. These changes are measured from a base year--1967--which equals 100. An increase of 22 percent since 1967, for example, would be shown as 122.



As the chart shows, both medical and housing costs increased more than food costs from 1967 to 1972. From 1972 to 1976, however, food costs increased at a higher rate than any of the other costs. Much of this increase occurred in 1973 and 1974.

The following table, adapted from a USDA publication, indicates the substantial food price increases in the major commodities and commodity groups during 1973 and 1974. (1967 prices = 100.)

	1972	1973	1974
All foods	123.5	141.4	161.7
Beef and veal	136.6	163.8	168.5
Pork	121.6	161.7	161.0
Poultry	110.4	154.8	146.9
Eggs	107.7	160.2	160.8
Dairy products	117.1	127.9	151.9
Fruits and vegetables:			
Fresh	128.0	150.8	162.6
Processed	120.5	130.2	170.6
Cereal and bakery products	114.7	127.7	165.1
Vegetable oils	116.6	126.4	173.4

According to USDA statistics, most of the 1973 price increases were caused by increases in the farm value of foods, while most of the 1974 price increases were caused by increases in food marketing costs.

Prices and price increases, however, are only one side of the coin--one must also consider increases in income levels. According to Department of Commerce statistics, consumer disposable income increased about 108 percent from the beginning of 1970 through 1977. (1977 data is preliminary.) From the beginning of 1972 through 1974, however, total food expenditures increased 5 percent more than income.

While price increases for food and other necessities affect all income groups, they may have more of an impact on the poor and near-poor than on others. A 1974 Department of Health, Education, and Welfare study showed that any increase in the cost of living may result in a proportionately greater hardship on the poor than on any other group because the poor spend a larger proportion of their income on necessities. Thus, the poor are less able to absorb the impact of higher prices by cutting down or cutting out certain expenses.

CHARACTERISTICS OF THE FOOD SYSTEM

As of 1976 there were 2.8 million farms in the United States with 1.1 billion acres of land devoted to farming. In 1976 U.S. farms produced

--12.7 billion pounds of pork,

--26.9 billion pounds of beef and veal,

--15.1 billion pounds of broiler chickens and turkeys,

--2.1 billion bushels of wheat,

--1.3 billion bushels of soybeans,

--212 million tons of corn and other feed grains,

--23.9 million tons of fresh and processed vegetables, and

--26.4 million tons of citrus and noncitrus fruits.

According to USDA preliminary data, consumers spent about $182 billion for U.S. farm-produced food in 1977. Of this amount $57 billion, or 31 percent, represented the amount received by farmers. The remaining $125 billion, or 69 percent, represented the amount received by the food marketing industry to cover

costs and profits. The food marketing industry has four major components--processors, transporters, wholesalers, and retailers. These components assemble, inspect, grade, process, store, package, transport, wholesale, and retail the food as it moves from the farm to the consumer. The chart on page 6 shows the breakdown of the consumer dollar spent in 1977 for U.S. farm-produced foods.

The food that pours into retail stores comes in 6,000 to 8,000 different forms--many of which did not exist 5 years ago and may very well not exist 5 years from now.

GOVERNMENT ROLE IN FOOD PRODUCTION AND MARKETING

Many Federal agencies are either directly or indirectly involved in activities affecting the production and marketing of food. These activities include, among others, programs to (1) control or adjust agricultural supply levels, (2) inspect food products for wholesomeness, (3) regulate the transportation of food, (4) regulate the commodity futures market, and (5) regulate the types of labeling and advertising claims made by food manufacturers.

The level of Government activity affecting any one food or food group can be quite extensive. In a March 1974 report, 1/ for example, we discussed the activities of USDA and 11 other Federal departments, agencies, or commissions which had an impact on the production and marketing of meat. Activities include research; setting up and administering regulations; statistical and market reporting; land conservation; consumer protection; stabilizing, supporting, and protecting farm prices; and maintaining competitive practices.

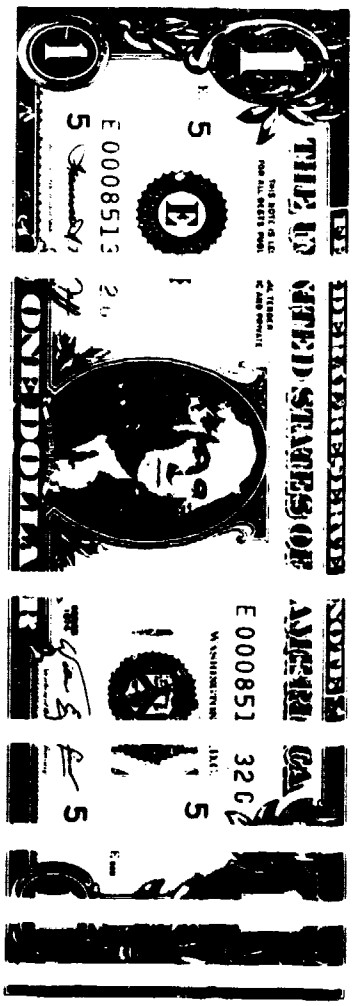
It would be too cumbersome to list the many Federal programs relating to the food industry, food availability, and food prices and the enabling legislation which authorizes them. There are, however, certain Federal agencies whose programs heavily affect the supply, quality, and wholesomeness of food and cause increased food industry costs for consumer protection, environmental protection, and worker safety. A brief description of these agencies and some of their programs follows.

1/"Information on Federal Agencies Having an Impact on Production and Marketing of Meat," B-136888, Mar. 25, 1974. This report was done at the request of the Subcommittee on Livestock and Grains, House Committee on Agriculture.

BREAKDOWN OF THE CONSUMER DOLLAR SPENT IN 1977 FOR U.S. FARM-PRODUCED FOODS

---- Food Marketing Industry ---------- Producer ----

Farm value	31c
Labor	34c
Other@	14c
Packaging	9c
Transportation	5c
Profits before taxes	4c
Business taxes	3c



@ "Other" includes depreciation, rent, advertising, repairs, bad debts, contributions, interest, food service in instituitions, utilities, fuel, promotion, local for-hire transportation, water transportation, and insurance

SOURCE: This Chart Was Prepared From USDA–Published Information.

USDA

USDA is the primary Federal agency responsible for functions relating to agricultural research and education, conservation, food marketing, agricultural supply adjustment, surplus agricultural commodity disposal, and rural development.

More specifically, USDA

--aids in stabilizing, supporting, and protecting farm income and prices through price-support programs, commodity acquisition and disposal programs, set-aside programs, marketing orders, crop insurance and crop disaster programs, and fostering of farmer cooperatives;

--issues information on supplies, demand, price movements, locations, quality, conditions, and other data on farm products in specific markets and marketing areas;

--administers inspection programs to help insure the wholesomeness of domestic, imported, and exported meat, poultry, and egg products;

--provides grading services for a variety of agricultural products;

--assists in maintaining free competitive practices in the marketing of livestock, meat, and poultry;

--administers the food stamp, commodity distribution, and child and other nutrition programs;

--assists in promoting U.S. agricultural exports;

--conducts and supports agricultural research projects and assists farmers in applying available technology;

--conducts programs of research in agricultural economics and marketing and prepares estimates and reports of production, supply, price, and other aspects of the agricultural economy; and

--coordinates a nationwide rural development program.

Important USDA programs affecting agricultural supplies and their price levels are the price-support, commodity acquisition and disposal, and set-aside programs. Price-support programs include a system of loan rates and target prices for various agricultural commodities. The programs' main objective is to ensure farmers a viable return for their productive efforts.

The loan rate, generally determined by the Secretary of Agriculture within a range set by law, gives individual farmers income protection by putting a floor under the price of the crop. After harvest, a farmer may request a loan from USDA's Commodity Credit Corporation (CCC) in an amount equal to the loan rate multiplied by the quantity to be put under loan. The time during which a farmer can request these loans varies for individual commodities. For example, loans for corn and sorghum are available from harvest through May 31 of the following year and for barley, rye, and oats from harvest through March 31 of the following year. In all these cases, the loan matures on demand but no later than the last day of the eleventh calendar month following the month the loan is made.

The loans are called "nonrecourse" loans because the farmer has the option of marketing the crop before or at the time the loan matures and repaying the loan plus any interest and storage charges. If the farmer chooses not to redeem the loan, CCC takes title to the commodity as full payment of the loan. In the latter case, the farmer pays no interest but is liable for any storage charges incurred during the loan period.

Target prices covering certain basic crops are set by law and are used as the basis for calculating deficiency payments. Deficiency payments are made when a crop's average market price, generally during the first 5 months of its marketing year, is less than the target price. The deficiency payment rate is based on the difference between the target price and the higher of the average market price or the loan rate. The payment rate is then multiplied by the farm's normal production to arrive at the total deficiency payment. Farmers may participate in the deficiency payment program whether or not they take part in the loan program.

Generally, commodities CCC acquires are disposed of through domestic and export sales, transfer to other Government agencies, and donations for domestic and foreign welfare use. The impact of this commodity acquisition and disposal operation on retail food prices during the 1970s is discussed in chapter 2.

If the Secretary of Agriculture determines that the supply of certain commodities is likely to be excessive, he is authorized to require farmers who wish to participate in the price-support programs to set aside from production a prescribed number or percentage of acres normally devoted to production of a particular commodity. The effect of set-aside programs on retail food prices in the early 1970s is also discussed in chapter 2.

Other Federal agencies

Some of the other Federal agencies which directly or indirectly affect the marketing of food are:

--The Food and Drug Administration (FDA) which administers programs which help insure that food and food additives are safe, pure, and wholesome.

--The Interstate Commerce Commission (ICC) whose regulation of the surface transportation industry affects both raw agricultural commodities and finished food products.

--The Federal Trade Commission (FTC) which (1) promotes free and fair competition in interstate commerce through prevention of general trade restraints, (2) safeguards the public from false or deceptive advertising, and (3) prevents those practices which may substantially lessen competition or tend toward monopoly.

--The Environmental Protection Agency (EPA) and the Department of Labor's Occupational Safety and Health Administration (OSHA) which administer programs in the environmental protection and worker safety areas, respectively. EPA was established in 1970; OSHA, in 1971.

These programs have added many benefits to the Nation's consumers and workers. But they have also added costs in the marketing of food which often are passed on to consumers in the form of higher prices. Some of these programs and their impact on food prices during the 1970s, or possible future impact, are discussed throughout this report.

SCOPE OF REVIEW

We reviewed pertinent policies, procedures, reports, and records of USDA's Economic Research Service (ERS), Statistical Reporting Service (SRS), and Agricultural Marketing Service relating to statistics on food supply, food prices, and the food production and marketing industries. 1/ We also reviewed food-related and other statistics published by BLS and the Department of Commerce.

1/Effective Jan. 1, 1978, ERS, SRS, and two other USDA agencies were merged into a new Economics, Statistics, and Cooperatives Service (ESCS). Because this was largely a structural reorganization, we will, for the most part, use the former organizational names in this report.

We interviewed officials of BLS, all the above USDA agencies, and various food marketing companies based primarily in California, Illinois, and Minnesota. The companies, with local, regional, and/or national operations, included processors, transporters, wholesalers, and retailers. In addition, we talked with various food producers and trade associations located in the three States and Washington, D.C.

We also reviewed numerous studies, articles, speeches, and surveys relating to food prices and/or the food production and marketing industry prepared by the executive and legislative branches and by private sources. A representative selection of this material is included in the bibliography in appendix I.

CHAPTER 2

HOW FOOD PRICES ARE DETERMINED AND WHAT MAKES THEM CHANGE

A food product's price in the marketplace, for any given period, is based largely on the supply and demand for the product. As the relationship between supply and demand changes, so generally does the price. Supply and demand are affected by many factors, including weather, general economic conditions, and Government programs.

Farm prices and food prices, generally, are generated in two different markets: (1) the market for raw agricultural commodities and (2) the market for finished food products. Farm prices of U.S. raw agricultural commodities are to varying degrees influenced by worldwide production, which in turn is largely influenced by rather unpredictable natural forces, such as the weather, pests, and disease.

The prices of raw agricultural commodities are influenced also by other factors that affect supply, such as Federal programs for cropland set-aside, commodity disposal, export sales, storage, and marketing orders; production costs; and the length of the production cycles of most agricultural commodities.

Food processors purchase raw agricultural commodities at prices determined largely by the commodities' availability. They then add processing, transportation, and packaging services and sell the food product to wholesalers and/or retailers who add still more services. The ratio of marketing costs to total food costs varies widely for most food products. It depends primarily on (1) the farm value of the commodity after the raw agricultural commodity leaves the farm. Appendix II lists the retail price and the farmers' and marketing industry's shares of the retail price for 47 market basket foods. 1/ Appendix III discusses, for fresh and processed tomatoes and beef, the services provided and costs added by the food marketing industry.

The largest food marketing cost is labor. In 1977, for the first time, food marketing labor costs ($62 billion) exceeded the farm value ($57 billion) of agricultural commodities marketed. Inflationary pressures, energy shortages, various Federal programs requiring higher environmental and

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1/See pp. 105 to 107 for description and discussion of the market basket.

worker-safety standards, and higher profits have contributed to increases in food marketing charges. 1/ Although labor is the largest single component of food marketing costs, the transportation and profits components--especially profits--are increasing at a more rapid rate. (See p. 27.)

Food price increases in this decade have resulted primarily from (1) a decreasing worldwide supply of key agricultural commodities coupled with an increasing demand for the commodities in the early 1970s and (2) rapidly escalating food marketing costs since 1973. The marketing bill, a food price statistic computed by the Department of Agriculture's Economic Research Service from data supplied by various sources, is an estimate of the total charges by marketing firms for transporting, processing, and distributing foods originating on U.S. farms. 2/ In 1977 the bill was $125 billion, or about two-thirds of consumer expenditures for U.S. farm-originated foods. The following table, prepared from USDA-published data, shows how consumer expenditures were divided between the food marketing industry and farmers from 1970 through 1977.

Year	Consumer expenditures	Marketing industry		Farmers	
		Amount	Percent	Amount	Percent
	(billions)	(billions)		(billions)	
1970	$106	$ 71	67	$35	33
1971	111	76	68	35	32
1972	118	79	67	39	33
1973	135	84	62	51	38
1974	149	93	62	56	38
1975	161	106	66	55	34
1976	172	116	67	56	33
1977a/	182	125	69	57	31
1978b/	201	135	67	66	33

a/1977 data is preliminary.
b/1978 data is estimated.

1/Much of the above discussion was taken from "The Economic Outlook for Food," a speech made by Kenneth R. Farrell before the Outlook '78 Conference, Washington, D.C., Nov. 17, 1977.

2/See pp. 107 to 109 for a more detailed discussion of the marketing bill.

An analysis of the above data shows that higher marketing charges accounted for $54 billion, or 72 percent, of the $76 billion increase in consumer expenditures from 1970 to 1977. Also, about 55 percent of the $22 billion increase in farm value over that period occurred in a single year--1973. Since 1973, 87 percent of the increase in consumer expenditures for U.S. farm-produced food has been caused by higher marketing charges. Except for 1973 when bad weather conditions greatly reduced world grain supplies, much of the rapid escalation of food prices in this decade has been due to sharply increasing food marketing industry costs caused primarily by pervasive inflation.

The demand for food is also important in determining price. However, demand is more predictable than supply because it usually changes in relation to changes in population and income levels.

The following sections discuss some of the major causes of food price increases since 1970.

IMPACT OF NATURAL CAUSES ON AGRICULTURAL SUPPLY

During the early 1970s the supply level of various agricultural commodities, including wheat, soybeans, and feed grains, played a key role in the food industry's economic performance. The early 1970s saw a period of agricultural plenty in the United States. Domestic farm output, which had increased 12 percent during the 1960s, increased an additional 9 percent during the first 2 years of the 1970s. This high output level held down farm prices and, coupled with increasing production expenses, kept farmers' net incomes from rising. In an effort to increase farm prices, USDA instituted programs to reduce production through set-aside programs and to reduce existing agricultural stocks by expanding agricultural export markets. As events developed, the set-aside programs should have been replaced earlier by price-support programs that would have provided the additional income needed by farmers while encouraging increased production. (See p. 21.)

In 1972 a worldwide crop shortfall caused by adverse weather conditions expanded the worldwide demand for U.S. agricultural commodities. The huge demand for wheat, for example, increased export levels to such a degree that for the first time in 25 years, domestic purchasers had to compete with foreign purchasers for available U.S. wheat supplies. This increase in demand and the corresponding decrease in domestic supply had the effect of drastically increasing prices.

Weather is an important factor in agricultural production

Weather is one of the most crucial production inputs in farming and is by far the most uncontrollable and unpredictable. If accurate and timely long-range weather forecasts were available, it would be easier to manage our food production to avoid surpluses as well as shortages. 1/

Adverse weather conditions can affect crop production at any time during the planting, growing, or harvesting stages. A few weeks of wet, cold weather in the spring can delay planting and reduce yield, or a hot, dry summer can stunt growth and reduce yield. Production of some crops can sometimes be reduced with even 1 day of adverse weather conditions as in the case of frost damage to a fruit crop.

In March 1977 the Secretary of Agriculture, in testimony before the House Committee on Agriculture, said that the ultimate lesson of supply and demand instability is that weather still largely determines how much farmers can produce in a given year and that their harvests determine the world's food supply and therefore the state of the market.

Adverse weather was a primary cause of the worldwide shortage of grain in 1973 and 1974. In the 1972-73 crop year, worldwide production in three categories--rice, wheat, and feed grains--declined from the previous year. Feed grain production was down 15.8 million metric tons, rice down 13.7 million metric tons, and wheat down 7.7 million metric tons. The adverse weather conditions causing this grain shortfall started a series of events which led to domestic shortages and higher prices for wheat and feed grains.

Impacts of pests and crop disease on production levels

Although U.S. agricultural production often is at a level sufficient to satisfy domestic requirements in spite of losses due to pests and crop diseases, an outbreak that is more severe than usual during the growing season or damage that is higher than normal after harvest can reduce supplies to levels below the previous quantities demanded. Higher retail prices will occur when supply is reduced.

1/For a further discussion on weather forecasts, see our report "Quality of Weather Forecasts and Opportunity for Improvement," CED-78-33, Jan. 24, 1978.

Losses due to pests and crop disease are large. A 1974 report by a consultant for the National Science Foundation stated:

> "Estimates of the annual loss of crop production to insects, rodents, birds, and disease are staggering. In the United States alone there are perhaps 10,000 insect species which cause damage; approximately 600 species need suppression annually. It is estimated that, worldwide, perhaps 200 million tons of cereals annually are lost to insects--enough food for 800 million people. In some countries nearly half of the crop production may be lost to insects or rats." 1/

In the 1970 crop year, the U.S. corn crop was damaged severely by blight. The blight and the resultant decrease in corn supply caused the average corn price to increase 15 percent. Because much of the corn produced domestically is used as livestock feed, the higher price for corn was reflected in increased costs to livestock producers which may have affected the supply of meat going to market.

Nature of agricultural production makes it hard to quickly remedy shortages

Certain aspects of agricultural production, such as the seasonableness of crop planting, the time necessary for a crop to mature, and the biological limitations of livestock reproduction, make it difficult for agricultural producers to rapidly increase the supply of agricultural commodities in the marketplace.

The growing season for annual crops is usually limited in that the number of days needed to produce a crop depends on the time required for seed germination and crop maturation. For example, corn takes 120 days or more to reach the harvest stage. Certain crops, such as radishes and spinach, germinate and reach harvest stage in a few weeks. On the other hand, most annual crops mature so slowly that only one crop a year is possible, except in the warmest areas. Also, tree fruits, such as apples, cannot be induced to produce more than a single crop a year.

1/For further information on food losses, see our reports (1) "Food Waste: An Opportunity to Improve Resource Use," CED-77-118, Sept. 16, 1977, and (2) "Hungry Nations Need to Reduce Food Losses Caused by Storage, Spillage, and Spoilage," ID-76-65, Nov. 1, 1976.

The biological characteristics of animals limit how quickly meat production can be expanded in response to supply shortages. For broilers, the response time is relatively short. About 3 weeks are required to incubate eggs and an additional 9 weeks are needed to raise a broiler to market weight. Hogs and cattle have considerably longer production cycles. Pigs are born about 4 months after conception and are then fed for about 6 months before slaughter for a total of about 10 months. In the case of cattle, the lag is even longer: from conception to slaughter takes an average of 27 months.

The ability to expand beef supplies is further limited by the facts that (1) the supply of breeding stock is fixed in the short run and (2) cows typically bear only one calf at a time (the average litter of pigs is about seven). If farmers decide to withhold heifers from the market to be used as breeding stock to rebuild their cattle herds, a short-run reduction of beef supplies will occur in the marketplace.

All of these factors greatly limit the ability of agricultural producers to adjust, in the short run, to supply shortage situations.

GOVERNMENT PROGRAMS CAN LIMIT AGRICULTURAL SUPPLIES IN THE MARKETPLACE

The Federal Government administers several programs which affect the supply of agricultural commodities. These programs include (1) a set-aside program to withhold land from production, (2) a commodity purchase and disposal program which can reduce the supply of commodities available to the domestic consumer during times of oversupply, (3) a program to open new or expand existing foreign markets for agricultural commodities, and (4) marketing orders to regulate the handling and marketing of certain domestically produced commodities--principally fresh vegetables, fresh and dried fruits, and nuts. There are also various laws which control the importation of certain commodities such as beef and dairy products.

Traditionally, U.S. agricultural policy has had three general objectives:

--Maintaining the productive base by attempting to stabilize agricultural prices and maintain farmers' incomes.

--Protecting the domestic consumer by attempting to provide adequate supplies at reasonable prices.

--Exporting agricultural surpluses for commercial, humanitarian, and political purposes.

The need for and extent of the Federal programs affecting agricultural supply differ each year and depend on the interaction between sectors of the economy, the state of the economy, and supply and demand forecasts.

Setting aside cropland held down production

The Agricultural Act of 1970 (84 Stat. 1358), as amended by the Agriculture and Consumer Protection Act of 1973 (87 Stat. 221), authorized the Secretary of Agriculture to conduct, through the Commodity Credit Corporation, set-aside programs (to withhold land from production) for the 1971-77 crop years for wheat and feed grains, if the Secretary determined that the supply of such commodities would otherwise be excessive. This authority was extended through the 1981 crop year by the Food and Agriculture Act of 1977. (Public Law 95-113, Sept. 29, 1977, 91 Stat. 913 et seq.).

During the 1971, 1972, and 1973 crop years, CCC paid farmers a total of $5.9 billion to withhold 32 million, 57 million, and 17 million acres, respectively, from planting of wheat and feed grains. Some agricultural economists agree that the 1971 and 1972 set-aside programs were necessary because of existing and anticipated oversupplies. However, economists also contend that continuing the programs into 1973 adversely affected food supplies during a period when shortages were already occurring.

For example, in July 1972, despite the announcement earlier that month of the Russian grain purchase--the largest single foreign purchase of U.S. agricultural products--and reports of worldwide grain shortages caused by adverse weather, USDA announced a 1973 set-aside program for wheat which it stated was needed to reduce stocks, improve farmers' incomes, and provide farmers flexibility.

The Chairman of the Cost of Living Council, however, subsequently called for increased planting of winter wheat in the fall of 1972 and greater production in 1973 to increase supply. USDA officials disagreed, but by September 1972 a USDA publication stated that unprecedented world import demand and tightening exportable wheat supplies outside the United States had brought about record U.S. exports, rising wheat prices, and decreased domestic use. By January 1973 the farm price for wheat had risen to $2.38 a bushel, the highest price for that month since 1947.

In January 1973 USDA changed its set-aside policy to reduce the wheat acreage to be set aside in 1973. This change, however, came too late to affect the U.S. winter wheat crop--a large portion (about three-fourths) of the total U.S. wheat crop. Production controls were not put into effect for the 1974-1977 crops because the Government was then calling for all-out production to assure adequate supplies of food for domestic and export markets.

Although the set-aside programs reduced production to some extent, they were not as effective as USDA officials had planned because wheat set-aside acreage included cropland which farmers would normally have kept idle to accumulate moisture for crop production the next year. 1/ There is little doubt, however, that the continuation of the set-aside programs into 1973 was partially responsible for the shortage in the supply of wheat and feed grains and the increased prices. This shortage, in conjunction with substantially increased exports, raised the seasonal average price for a bushel of wheat from $1.34 in 1971 to $3.95 in 1973. The seasonal average price increased to $4.09 in 1974 before decreasing to $3.52 in 1975.

Commodity disposal and export expansion programs also affected prices

The Government's commodity disposal and export expansion policies in the 1972-75 period also helped reduce supplies that might otherwise have been held in reserve. This tended to raise domestic prices. Efforts over the years to reduce Government-held stocks have taken the form of sales and donations to foreign countries, donations to child feeding programs, and other domestic commodity distribution programs. To ease the growing deficit of the U.S. balance of payments and to alleviate the depressing effect of Government stockpiles on farm income, the Government increased its efforts during the early 1970s to expand foreign export markets for U.S. agricultural goods. The continuation of this expanded export program into 1973 increased farmers' incomes to record highs but also (1) increased retail prices sufficiently to decrease food consumption levels and (2) reduced available stock inventories to the point that they could not be used to stabilize prices.

1/For a more detailed discussion of the set-aside programs, see our report "New Approach Needed to Control Production of Major Crops if Surpluses Again Occur," CED-77-57, Apr. 25, 1977.

The following table shows the reduction in CCC's stocks of wheat and various grains from 915 million bushels on December 31, 1970, to 3 million bushels on December 31, 1976, before climbing back to 35 million bushels on December 31, 1977.

CCC-Owned Inventories of Wheat and Various Grains

End of December	Barley	Corn	Sorghum	Oats	Soybeans	Wheat	Total
	(millions of bushels)						
1970	28	215	163	146	80	283	915
1971	36	144	58	199	(a)	372	809
1972	9	140	37	172	0	267	625
1973	1	70	8	121	0	139	339
1974	(a)	6	1	69	0	15	91
1975	(a)	(a)	0	36	0	(a)	36
1976	0	(a)	(a)	3	0	0	3
1977	(a)	(a)	1	(a)	0	34	35

a/Less than a million bushels.

The disposals of CCC wheat and other grain stocks were accompanied by a substantial increase in exports of privately held wheat and grain stocks. For example, exports of feed grains--barley, oats, corn, and sorghum--increased by 124 percent and prices increased by 105 percent from 1970 to 1973. Despite price increases, however, the use of these grains to feed domestic livestock increased through 1972. By October 1, 1974, however, the continued acceleration of feed grain prices had caused their domestic use to decrease almost 17 percent from 1970 levels.

Marketing orders limit supply and/or control the quality of many fruits and vegetables

The Agricultural Marketing Agreement Act of 1937, as amended (7 U.S.C. 601), authorizes the use of marketing orders or marketing agreements to regulate the handling and marketing of certain domestically produced commodities--principally fresh vegetables, fresh and dried fruits, and nuts. The act identifies the commodities and the products of those commodities which can and cannot be covered by marketing orders.

Some of the principal objectives of the act center on:

--Establishing and maintaining orderly marketing conditions to enable producers to obtain parity prices for their commodities. Parity prices are those which provide the same purchasing power as

could have been obtained by selling the same commodities in a base period, 1910-14.

--Protecting consumer interests by authorizing no marketing order actions which would maintain prices to producers above the parity level.

--Establishing and maintaining marketing conditions that provide for a more orderly flow of a commodity to market, thus creating stability in supplies and prices.

Some of the regulatory controls authorized under the act are:

--Quality restrictions to control the grade, size, or maturity of a commodity going to market.

--Quantity restrictions to control the total amount or rate of flow of a commodity going to market.

--Container restrictions to control the size, capacity, weight, and dimensions of shipping containers.

Industry groups, called committees or boards, propose to the Secretary of Agriculture those regulations they deem necessary to maintain an orderly marketing condition. The Secretary must approve the proposed regulations before the committees can implement them. When approved, these regulations become part of the Code of Federal Regulations and have the force and effect of law.

Marketing orders must be limited to the smallest production area the Secretary finds practicable for achieving the act's purposes. Regulated production areas can range from several counties to individual States or groups of States.

Marketing order requirements may decrease the supply of a commodity and thus may increase the consumer price for that commodity. Without such requirements, however, producers could periodically glut the market, causing low farm prices and losses of farm income.

GOVERNMENT PROGRAMS CAN ASSIST FARMERS WITHOUT LIMITING SUPPLY

Over the years the Federal Government has developed a program of price-support assistance to farmers to lessen the impact on farm income of yearly fluctuations in commodity prices. Also, the Congress enacted legislation in 1977 pro-

viding for a commodity reserve program which would lessen the impact of agricultural surpluses and shortages on the farmer and consumer.

Price-support programs

CCC administers price-support programs for various agricultural commodities such as wheat, corn, and feed grains. (See p. 7.) Under the programs, price support is achieved through loans, purchases, and/or payments to farmers. Price-support programs for farmers were started in 1933 in an effort to remove some of the price problems in marketing farm commodities.

The price-support level, or loan rate, for a crop is generally announced before the planting season begins. If the market price at harvest is higher than the loan rate and is not expected to increase, generally much of the crop will be sold in the marketplace without any CCC involvement. However, if the market price at harvest is less than the loan rate, it would be advantageous for the farmer to get a loan from CCC equal to the size of his crop multiplied by the loan rate. The length of time after harvest that these loans are available differs for most commodities. The farmer then has the option, within 1 month from the maturity of the loan, of (1) paying off the loan and marketing his crop--which he would probably do if the market price became higher than the loan rate plus interest on the loan--or (2) delivering his crop to a CCC storage facility and completely discharging his obligation--which he probably would do if the market price stayed below the loan rate level.

In times of rising production costs and decreasing prices for farm commodities, price-support programs offer necessary encouragement for continued production and thus tend to help stabilize prices.

Commodity reserves

In the past the United States has not had a comprehensive agricultural commodity reserve program, which might allow it to insure adequate domestic supplies and stable prices while providing an element of reliability for foreign buyers.

In an effort to assure an ample supply of food at reasonable prices for both consumers and producers, the Food and Agriculture Act of 1977 provides for a grain reserve program. The law authorizes the Secretary of Agriculture to offer producers of wheat, corn, and other livestock feed grains, storage contracts for 3 to 5 years. Under the program implemented by the Secretary, farmers will continue to retain

ownership of the reserve grain--thus avoiding CCC ownership. The program goal for wheat is to attain reserves of not less than 8.2 million metric tons nor more than 19 million metric tons. There is no limit on the total amount of feed grains that can be placed in reserve.

The reserve grain can be stored either on the farm or in commercial warehouses, with the farmer agreeing not to sell the grain until the agreement expires or until national average market prices reach 125 percent of the then-current national average loan rate for feed grains and 140 percent for wheat. When these levels are reached, the farmer may repay the loan and sell the grain without penalty. If he decides to sell before these levels are reached, however, he must repay the higher of the (1) loan principal plus interest, plus all storage payments, or (2) 125 or 140 percent of the producer's then-current loan rate for feed grains or wheat, respectively.

Also, CCC will call the reserve loans when the national average market price reaches 140 percent of the national loan rate for feed grains and 175 percent for wheat. If the loan is not redeemed within 30 days after notification, CCC may take title to the commodity. After the loan is repaid, the farmer may either sell his grain or hold it for a higher price.

The program's purpose is to isolate these stocks from the market to (1) strengthen current market prices, (2) serve as a hedge against inflationary effects of a poor crop in the future, and (3) be available for meeting emergency needs. As of July 28, 1978, farmers had placed 10.2 million metric tons of wheat and 4.7 million metric tons of other grains in the reserve program.

FARM PRODUCTION COSTS ARE INCREASING

Between the beginning of 1959 and the end of 1976, a period of 18 years, total farm production expenses tripled, rising from $27.2 billion to $81.7 billion. During the same period, realized net farm income only doubled. Farm production expenses include the costs of (1) feed, (2) livestock, (3) seed, (4) fertilizer and lime, (5) repair and operation of capital items, (6) depreciation, (7) hired labor, (8) taxes on farm property, (9) interest on farm mortgage, (10) net rent to nonoperator landowners, and (11) miscellaneous. The largest single expense is for feed.

Feed grain prices are especially important because of the beef marketing system's growing dependence on fattening cattle at feedlots rather than on pasture or roughages such as hay. Because consumers spend an average of 34 percent of their food bills for meat products, increases in the cost

to produce that meat and corresponding retail price increases play a major role in the total amount of consumer expenditures for food.

For example, in 1973, when wheat and feed grain costs sharply increased, as is discussed on pages 18 and 19, farmers received an average of 28 percent per hundredweight more for their cattle than in 1972. Consumers paid 20 percent more for beef and veal in the retail store in 1973 than in 1972, and as a result beef and veal consumption dropped 6 percent.

Because farm production costs strongly influence farmers' incomes as well as retail food price levels, they are important economic indicators. In 1973 ERS undertook a program to provide production cost estimates for major U.S. agricultural commodities. The program involves periodic surveys and a cost-estimating procedure known as the Firm Enterprise Data System (FEDS) to provide a means of annually updating cost estimates between the years surveys are made. The surveys are more comprehensive--but also more expensive--cost estimates of production. A survey to gather cost data for 19 crops was made early in 1975 and has been supplemented annually since then. Producers of major commodities will be surveyed every 4 years on a rotational schedule to provide data to update and supplement the FEDS cost-estimating procedure.

The 1978 FEDS report provided final cost estimates for 1976, preliminary estimates for 1977, and projected estimates for 1978 for 10 major crops, including 8 feed and food crops--corn, sorghum, barley, oats, wheat, rice, soybeans, and peanuts. According to the report, 1977 per acre production costs (excluding land) for these eight crops increased an average of 4 percent over 1976 costs, ranging from a 9-percent increase for soybeans (most of it due to increased seed prices) to a 1-percent decrease for wheat and barley. For 1978, per acre production costs were expected to increase an average of 5 percent over 1977 costs, ranging from 2 percent for peanuts to 8 percent for rice and sorghum.

Generally, declining fertilizer and chemical prices in 1977 offset increases in prices of machinery, energy, and labor. Energy costs have substantially increased since June 1973 when the Organization of Petroleum Exporting Countries (OPEC), an international oil cartel, began increasing its oil prices. By January 1974 all OPEC countries' oil prices averaged about four times as high as they were the previous year.

HOW THE DEMAND FOR FOOD AFFECTS PRICES AND VICE VERSA

Domestic demand for food is based on more predictable factors than is supply. The demand usually changes in relation to changes in population and income levels. For example, from July 1, 1967, to July 1, 1976, the U.S. population increased about 8 percent, while food consumption increased about 15 percent. During the same period, disposable personal income, as reported by the Department of Commerce, increased 115 percent, while food expenditures were increasing by 107 percent.

However, the quantity of individual foods demanded can change rapidly as a result of such factors as sudden sharp price changes either for the food itself or for substitute or complementary foods. Also, overall demand can shift as a result of (1) reports that a certain food may be injurious to health or (2) a trend toward diet programs or better nutrition.

The table below, prepared from USDA-published information, shows the effect of a sudden price change on per capita consumption of beef and veal, pork, and poultry.

	Beef and veal		Pork		Poultry	
Year	Price	Per capita consumption	Price	Per capita consumption	Price	Per capita consumption
1972	137	107	122	105	110	114
1973	164	101	162	96	155	107
1974	169	108	161	104	147	109

Note: These figures are indexes; 1967 prices and consumption = 100.

As the table shows, sharp increases in the retail prices of meat in 1973 caused a decrease in the per capita consumption levels. Price increases in 1973 were so sharp that many consumers joined in a national boycott of meat and the Federal Government imposed price ceilings. Per capita consumption levels increased in 1974 even though meat prices remained at much higher levels than in 1972. Most of the 1974 consumption increases can probably be attributed to growing affluence and a return by consumers to a long-term trend of increasing the amount of red meat in their diets.

Even though a commodity's price remains the same, a change in demand can occur if prices of certain other commodities change. For example, the demand level for whole wheat bread depends in part on the relationship of its price to the price

of other types of bread. If the prices for other types of bread increase while the price of whole wheat bread remains the same, or increases less, the demand for whole wheat bread should increase at the expense of other types of bread. Commodities with this type of price-demand interrelationship are called substitute goods. Other examples include hot dogs and hamburger, beef and pork, and peas and other vegetables.

Another price-demand interrelationship is that which relates to what are commonly called complementary goods. For example, if the price of cereal increases or decreases, one could expect a corresponding increase or decrease in the demand for milk.

Thus, a commodity's price, coupled with the price levels of other commodities, plays a major role in determining the demand for that commodity. Because a price rise for a commodity affects not only the demand for that commodity but for other commodities as well, it is difficult to accurately quantify the impact of a price increase.

Another factor that can determine the demand for certain commodities is the time of year. For example, the demand for turkeys is higher in November and December than during other months. This increase in demand for turkeys causes the retail price of turkey to peak in November.

Changes in demand can also be caused by changing philosophies of the American consumer or a discovery concerning an effect a food may have on the human body. For example, a finding that a high cholesterol level--cholesterol is a fatty alcohol found in animal foods--is harmful to the human body probably caused many persons to reduce their intake of various high cholesterol foods. A public trend toward more dieting or eating more balanced, nutritional meals can also increase the demand for certain foods and decrease the demand for others.

Thus, total demand for food is generally predictable--based on population growth and income level changes. The mix of food demanded, however, can change based primarily on price and the price relationships of the various foods available in the marketplace.

INCREASED FOOD MARKETING COSTS ARE A MAJOR REASON FOR HIGHER FOOD PRICES

Rapidly escalating food marketing costs have contributed heavily to food price increases in this decade. U.S. consumers spent $76 billion more for domestically produced farm foods in 1977 than in 1970. Of this increase, $31 billion, or 41 percent,

occurred during 1973-74. USDA statistics for the period 1949-77 indicate that the dollar increase in consumer expenditures of this 2-year period was unprecedented.

According to USDA, since 1970 the retail price index for imported foods and seafood increased 145 percent while the index for domestically produced foods increased only 57 percent. However, because only about 20 percent of total consumer expenditures for food are for imported foods and seafood, the impact on consumers was not as great.

The following table, prepared from USDA-published information, shows how the annual changes in consumer expenditures for domestically produced food from 1970 through 1977 were divided between the food marketing industry and farmers.

Year	Consumer expenditures	Marketing bill	Farm value	Annual change in Consumer expenditures	Annual change in Marketing bill	Annual change in Farm value
	(billions)					
1970	$106	$ 71	$35	$ -	$ -	$ -
1971	111	76	35	5	5	0
1972	118	79	39	7	3	4
1973	135	84	51	17	5	12
1974	149	93	56	14	9	5
1975	161	106	55	12	13	-1
1976	172	116	56	11	10	1
1977a/	182	125	57	10	9	1
Total increase				$76	$54	$22

a/1977 data is preliminary.

An analysis of the above data shows that higher marketing charges accounted for almost three-fourths of the $76 billion increase in consumer expenditures from 1970 through 1977. More than half of the $22 billion increase in farm value occurred in a single year--1973; since then, 87 percent of the increase in consumer expenditures for U.S. farm food has been caused by higher food marketing charges.

The following table, prepared from USDA-published data, shows the breakdown of food marketing industry charges for 1970 and 1977 and the amount and percent of increases from 1970 to 1977.

Components of the Bill for Marketing Farm Foods, 1970 and 1977

Item	1970	1977 (note a)	Increase Amount	Increase Percent
	-----(billions)-----			
Labor	$32	$ 62	$30	94
Packaging	9	16	7	78
Transportation	5	10	5	100
Business taxes	3	5	2	67
Other (note b)	18	24	6	33
Profit before taxes	4	8	4	100
Total	$71	$125	$54	76
Income taxes	$ 2	$ 3	$ 1	50
Profit after taxes	$ 2	$ 5	$ 3	150

a/Estimated.
b/See footnote, p. 6.

The above data indicates that on a percentage basis, profits both before and after taxes rose as much as or more than any other element. In amount, however, profits are relatively insignificant compared with labor costs which account for about 50 percent of the food marketing bill.

According to USDA, rising wages of food processing and marketing employees will continue to exert upward pressure on food prices during 1978. Such wages are expected to increase 7 to 8 percent as a result of prior settlements, cost-of-living adjustments, renegotiated agreements, increases in the minimum wage to $2.65 an hour, and higher social security taxes.

In 1978 major collective bargaining agreements covering about 250,000 food marketing workers will expire, mostly for retail food store employees. Although only one in nine of these workers is included in major collective bargaining agreements, these agreements have potentially far-reaching effects on the food industry because wages of nonunion and management employees tend to follow changes in collective bargaining agreements. New wage settlements in 1978 will be strongly influenced by attempts to protect workers from further inflation and the possible loss of purchasing power.

Further, the food industry has had to be more responsive to a growing list of cost-increasing services demanded by consumers, including additional types of label information, more convenience foods, and an ever-increasing number of prepackaged products. Food produced by the farmer must be converted into a form consumers are willing to purchase; it must be delivered to a place where the consumer may obtain it; and it must be available at a time when the consumer wants it.

Prices for food eaten away from home have also continued to rise. As disposable income increases, consumers tend to eat away from home more often. The prices of food eaten away from home, which are influenced by rising consumer demand and by costs in the nonfarm sector of the food system increased about 8 percent in 1977.

It appears reasonable that the more food the consumer can buy directly from the farmer, the less effect rapidly rising food marketing industry costs will have on consumer expenditures for food. The Congress enacted the Farmer-to-Consumer Direct Marketing Act of 1976 (Public Law 94-463, 90 Stat. 1982) on October 8, 1976, to encourage the marketing of agricultural commodities at any marketplace, such as roadside stands and city markets, which will enable farmers or farmer organizations to sell directly to consumers or consumer organizations. This is intended to lower the cost and increase the quality of food purchased by consumers while providing increased financial returns to farmers.

The act provides for a 2-year program to end September 30, 1978. It directs the Secretary of Agriculture to provide funds appropriated for this program to State departments of agriculture and USDA's extension service to conduct or facilitate activities which will initiate, encourage, develop, or coordinate methods of direct marketing within or among the States.

According to USDA regulations published in July 1977, funds were to be allocated to the States on the basis of USDA-approved State project proposals. For fiscal year 1977, when $500,000 was appropriated for this program, USDA received over 50 proposals from 40 States, the District of Columbia, and Puerto Rico. It approved and funded seven proposals involving eight States. For fiscal year 1978 the Congress made $1.5 million available for this program; as of May 1978 USDA had approved and funded 16 proposals involving 17 States and Puerto Rico.

A bill, S. 2833, to amend, improve, and clarify Public Law 94-463 passed the Senate in May 1978 and was referred to the House Committee on Agriculture for consideration. The

proposed amendment would (1) expand the definition of agricultural commodities covered under the act to include livestock (whether on the hoof or butchered), (2) extend the program for 3 additional fiscal years, and (3) increase the maximum allowable appropriation to $3 million a year. The amendment would also direct USDA to approve State proposals and allocate funds on the basis of the relative importance of agricultural production to the State and the economic plight of farmers of the State in comparison with other States.

In August 1978 the House Committee on Agriculture sent to the full House a bill, H.R. 12101, which would (1) extend Public Law 94-463 for 1 year until September 30, 1979, and (2) set the maximum allowable annual appropriation at $1.5 million. The bill would not change any other provision of the act.

MAJOR RECIPIENTS OF ADDITIONAL FOOD DOLLARS

Available statistics and studies show that a majority of the additional consumer expenditures for food in 1973 went to farmers. In 1974 most of the increase was received by the food marketing industry. As the table on page 26 shows, increases since 1974 have gone almost entirely to the food marketing industry.

Recipients of the additional food dollars spent in 1973

In 1973 consumer expenditures for food increased about $17 billion over 1972 expenditures. Available USDA statistics indicate that the farm industry received about $12 billion, or 71 percent, of the increase. USDA statistics indicate that the farm industry's 1973 realized net income also increased $12 billion--from $18 billion to $30 billion, an increase of about 67 percent--over 1972 levels.

Because the 2.8 million farms in the United States in 1973 varied in size and crops grown, it would be misleading to assume that all farms shared equally in the large increase in realized net income. Available statistics indicate that in 1973 realized net income for farms with sales over $100,000 annually (about 4 percent of the total farms in 1973) increased an average of $40,677, or 74 percent, from 1972 levels. On the other hand, realized net income for farms with sales under $20,000 (65 percent of the total farms in 1973) increased an average of only $336, or 14 percent, from 1972 levels.

Farmers growing crops received a larger share of the increased net income than livestock producers. Crop producers'

income levels increased about 61 percent in 1973, while livestock producers' income levels increased about 29 percent.

After 1973 farmers' total net income decreased each year through 1976. (See table, p. 33.)

Recipients of additional food dollars spent in 1974

Consumer expenditures for U.S. farm-produced food in 1974 increased about $14 billion over 1973 expenditures. (See p. 26.) The food marketing industry received about $9 billion, or 64 percent, of the increase. USDA statistics indicate that about 47 percent of the industry's increased revenue went to pay additional labor costs. Before-tax profits increased almost $1 billion, or an amount equal to about 9 percent of the additional food dollars received.

ERS stated that of the $9 billion food marketing industry increase, the higher costs of marketing services constituted 95 percent and the remaining 5 percent was accounted for by a slightly larger volume of food marketed. These two factors were partially offset by a decrease in the level of services--including a reduction in the consumption of highly processed foods and less eating out.

The largest amount of the industry's revenue went to the wholesaling sector, followed in order by the retailing, processing, and transportation sectors and public eating places.

Profits in the food marketing industry

On October 18, 1976, in testimony before the California Assembly's Special Subcommittee on California's Food and Agricultural Economy, the deputy administrator of ERS stated that on the basis of earnings performance of food companies, profits cannot be logically used as a major explanation for the magnitude of the increase and the upward trend of marketing costs or retail food prices. He added, however, that the apparent reasonableness of average industry earnings should not be used as the basis for justifying the profit levels of individuals or groups of firms operating in selected markets or marketing specific commodities. An analysis of the tables on pages 26 and 27 shows that before-tax profits accounted for only 7 percent of the marketing cost increase from 1970 through 1977 and 5 percent of increased consumer expenditures.

Profits are reported in various ways, but the two most common are as (1) a percentage of sales and (2) a percentage of return on stockholders' equity. Food retailers usually

present their earnings as a percentage of sales. Historically, most food retailers have reported earning slightly less than 1 cent profit after taxes per dollar of sales. The retailers' rate of profit on sales is about one-third lower than the food processors' rate, but supermarkets usually turn over their inventories about 15 to 20 times each year while processors turn their inventories over far less frequently.

The following table shows the percentage of before-tax profits on sales of food and various other nondurable goods for manufacturing corporations before and during the 1972-74 period. The ratio of profit to sales for the food and kindred products industry was the lowest of all nondurable industries 5 of the 7 years reported.

Relation of Manufacturing Corporations' Before-Tax Profits to Sales of Nondurable Goods, 1968-74 (note a)

	1968	1969	1970	1971	1972	1973	1974
Food and kindred products	4.9	4.9	4.8	4.9	4.6	4.8	4.6
Tobacco manufacturers	11.4	10.7	11.2	11.5	11.0	11.6	16.7
Textile mill products	6.1	5.7	4.1	4.6	4.8	5.3	6.2
Paper and allied products	8.2	8.1	5.7	4.3	6.8	9.4	12.2
Printing and publishing	7.8	9.0	8.0	7.9	8.7	8.7	8.5
Chemicals and allied products	12.5	12.1	10.7	10.8	11.2	12.3	15.1
Industrial chemicals and synthetics	11.2	10.7	8.5	8.5	9.3	11.7	15.3
Drugs	18.	18.5	17.2	17.0	17.8	18.6	20.9
Petroleum and coal products	12.0	11.7	11.0	9.5	8.5	11.1	15.6
Rubber and miscellaneous plastic products	8.3	7.0	5.1	6.6	7.4	7.2	8.9
Total nondurable	8.4	7.9	7.3	7.2	7.2	8.2	10.9

a/1974 data is for the first 6 months of the year.

Source: "Controls and Inflation," Marvin H. Kosters in association with J. Dawson Ahalt, American Enterprise Institute for Public Policy Research, Dec. 1975, p. 56.

A March 1978 publication 1/ indicated that the Federal Trade Commission had reported that the profit rates for all food retailing corporations with annual sales over $100 million were considerably below the average for all retail trade corporations. According to FTC, after-tax profits of food chains averaged about 10 percent of stockholders' equity in 1976 and in the first 9 months of 1977, while profits of all retail trade corporations averaged about 15 percent. The profit performance for food processors was slightly higher than the average return in all manufacturing industries.

The table below, which was prepared from ERS-published data, shows the profits of the marketing bill components for 1970-76.

Profits of Marketing Bill Components
1970-76

Year	Processing	Wholesaling	Retailing	Public eating places	Total
	(millions)				
1970	$1,966	$ 648	$ 719	$270	$3,603
1971	2,046	784	690	376	3,896
1972	1,983	984	446	562	3,975
1973	2,618	1,274	776	689	5,357
1974	3,182	1,428	853	761	6,224
1975	3,867	1,950	1,553	872	8,242
1976a/	4,122	1,655	1,433	1,051	8,261

a/Preliminary.

The above data shows that profits of all components, except retailing, more than doubled in the 1970-76 period, with retailing profits increasing 99 percent. Total food marketing profits increased about 129 percent during this period. From 1975 to 1976 profits for the processing and public eating places components increased 7 percent and 21 percent, respectively, while profits for the wholesaling and retailing components fell 15 percent and 8 percent, respectively.

1/"Developments in Marketing Spreads for Food Products in 1977," Economics, Statistics, and Cooperatives Service, USDA, Agricultural Economic Report No. 398, p. 24.

Farm income

Because of rapidly escalating farm production costs (see p. 22), farmers--particularly those operating small farms--have been especially vulnerable to inflation. The following table, prepared from USDA-published data, shows net farm income in current dollars and in 1967 dollars and the loss of purchasing power caused by inflation from 1970 through 1976.

Total Net Farm Income

Year	Current dollars	1967 dollars	Cost of inflation
	(billions)		
1970	14.2	12.2	2.0
1971	14.6	12.1	2.5
1972	18.7	14.9	3.8
1973	33.3	25.1	8.2
1974	26.1	17.7	8.4
1975	24.5	15.2	9.3
1976	18.1	11.0	7.1
1977	20.6	11.3	9.3

An analysis of the above data shows that in current dollars, farmers' net income in 1977 was about 45 percent above that in 1970. In 1967 dollars, however, it was actually 7 percent less in 1977 than it was in 1970.

One measure of how farmers' gross income compares with that of the rest of the food industry is the farmers' share of the retail cost of farm foods. The following table shows an index of the changes in the retail cost of USDA's market basket of farm foods since 1967. It shows also the portions of the retail cost shared by the food marketing industry and farmers.

Farm and Food Industry Shares
of USDA Market Basket Cost
1967-77

Year	Retail cost index	Food marketing industry's share	Farmers' share
		-----(percent)-----	
1967	100	61	39
1968	103.6	61	39
1969	109.1	59	41
1970	113.7	61	39
1971	115.7	62	38
1972	121.3	60	40
1973	142.3	54	46
1974	161.9	57	43
1975	173.6	58	42
1976a/	175.4	61	39
1977a/	179.2	61	39

a/Preliminary.

According to the above data, which was obtained from information in USDA's "Agricultural Outlook" for January-February 1978, farmers in 1976 and 1977 appeared to be about as well off economically in relation to the rest of the food industry as they were in 1967 but not as well off as they were from 1972 through 1975. Such is not the case, however, because the above data is based on gross income and does not recognize the impact of increased production costs. (See p. 22.)

INFLATION AND FOOD PRICE INCREASES

Do high food prices cause inflation or does inflation cause high food prices? The truth seems to be that each feeds on the other. In the last half of the 1960s, a rise in the rate of inflation occurred in the United States. By the end of 1970, inflation had proved to be persistent. During 1972 the food price problem was largely confined to meat. By 1973 it had spread to many other food products. The following table, prepared from BLS data, shows the percentage changes in consumer prices for selected components for various periods from January 1969 through December 1974.

Percentage Changes in Consumer Prices, 1969-74 (note a)

Period	All food	Meat, poultry, fish	Nonfood commodities	Energy products (note b)	Services	All items
1/1/69-12/31/69	7.2	11.2	4.5	3.1	7.4	6.1
1/1/70-12/31/70	2.2	-0.6	4.8	3.6	8.2	5.5
1/1/71- 8/31/71	4.7	2.2	2.6	0.7	4.5	3.6
9/1/71-11/31/71	1.3	6.6	1.0	-0.7	3.1	2.0
12/1/71- 1/31/73	6.7	13.0	2.5	2.4	3.5	3.7
2/1/73- 6/30/73	20.8	39.6	4.6	18.3	4.3	8.3
7/1/73- 8/31/73	c/0.9	c/-13.5	3.0	2.5	5.3	c/3.8
9/1/73- 4/30/74	c/17.9	c/5.9	11.1	62.1	9.5	c/11.5
5/1/74-12/31/74	11.7	3.6	12.6	3.9	12.5	12.2

a/Data was collected for the periods shown to facilitate analysis of price control phases. Except for the first two periods and for the "Services" component, the percentages represent seasonally adjusted compound annual rates.

b/Index is calculated as a weighted average of the indexes for gasoline, motor oil, fuel oil, and coal using Dec. 1972 weights.

c/For these components price changes were measured using July 1973 instead of Aug. 1973 to reflect the early release from the 60-day freeze on food prices on July 18, 1973.

For five of the nine periods shown in the above table, the inflation rate for food exceeded the rate for all items. In the early part of 1973, food--especially meat, poultry, and fish--and energy dominated the inflation picture. In the last 4 months of 1973 and the first 4 months of 1974, the food inflation rate was considerably higher than the rates for nonfood commodities and services, but food did not exert nearly as much inflationary pressure as energy products. The cartel of major oil exporting countries was able to increase crude petroleum prices during this period by curtailing production. 1/

1/"Controls and Inflation," Marvin H. Kosters in association with J. Dawson Ahalt, American Enterprise Institute for Public Policy Research, Dec. 1975.

Earlier efforts to control inflation

From August 15, 1971, to April 30, 1974, mandatory controls on wages and prices were a component of the Government's economic stabilization policy. Consumer price inflation initially declined from an annual rate of slightly below 4 percent in the 8 months preceding controls to about 3 percent during the first year of controls, but rose to 11.5 percent in the 8 months before controls were ended and to 12.2 percent in the 8 months after controls were removed.

Raw agricultural commodities were exempt from the controls but limits were generally placed on processing and distribution margins. A freeze on prices in June 1973, including food prices, was not very effective because of large personal income increases, strong consumer demand, decreasing food supplies, and a decline in the value of the dollar. The resulting market disruptions led to relaxation of food price controls on processors, wholesalers, and retailers.

The full effects of these controls during the 1971-74 period are difficult to determine because other strong economic and political factors were simultaneously affecting the economy. The report referred to in the footnote on page 35, from which the above discussion is adapted, stated that

> "a more significant impact on inflation by controls that place limits on wage and price increases could only have been achieved if there had been a more pronounced subordination of other important goals than was considered acceptable under the Economic Stabilization Program."

New price index shows dramatic "basic necessities" inflation

A price index prepared by a private organization, the National Center for Economic Alternatives, and released June 10, 1978, showed that food, energy, medical care, and shelter--which account for nearly 70 percent of the consumption expenditures for 80 percent of the population--rose at a double-digit annual rate in the quarter ending March 31, 1978: food, 4.1 percent (18.7 percent annual rate); shelter, 2.3 percent (11 percent annual rate); medical care, 2.1 percent (8.4 percent annual rate); and energy, 1.8 percent (7.8 percent annual rate). Nonessentials--that is, all other goods and services combined--went up 1.5 percent in the same period (3.9 percent on an annual basis).

The codirectors of the Center said that contrary to widespread opinion, factors other than wage increases have

been the primary sources of inflation in the prices of basic necessities. They said that food price rises in early 1978, for example, were due to the reduced supply stage of the beef cycle, poor harvests of certain vegetables due to bad winter weather, and previous excessive world feed grain demand. They recommended measures to prevent price rises due to extraordinary shocks--such as poor harvests, cold winters, and cartel energy pricing--or structural shocks--such as increased energy-intensive processing of food.

Current efforts to control inflation

In an April 1978 address to the American Society of Newspaper Editors, the President announced his plans to reduce inflation. He pointed out that the problem is international in scope and that concerted efforts with other nations are essential. He said that the primary reason for our problems with the balance of trade and the decreasing value of the dollar--both important contributors to inflation--is the increase in energy costs. Ten years ago we were paying about $2 billion a year for imported oil; this year oil imports will cost us more than $45 billion.

The President said that to help fight inflation, we must conserve energy and reduce oil imports, increase efficiency and productivity, eliminate waste, and expand our exports. He proposed to

--reduce Government expenditures where they are too high;

--work to reduce the budget deficit;

--limit Federal wage increases and urge State and local governments and the private sector to do likewise;

--avoid or reduce Government purchases of noncritical goods and services whose prices are rapidly rising;

--require that all new or renegotiated Federal contracts which contain price escalation clauses reflect the principle of deceleration;

--cut the inflationary costs which private industry bears as a result of Government regulations;

--explore regulatory changes to improve the efficiency of regulated industries;

--urge congressional budget committees to report regularly to the Congress on the inflationary effect of pending legislation;

--reexamine excessive Federal regulation of the trucking industry;

--veto any farm legislation, beyond what he had already recommended, that would lead to higher food costs or budget expenditures;

--explore economical ways to sustain expanded timber harvests and thus obtain relief from rising costs of housing construction;

--support legislation to contain hospital costs and deregulate airlines;

--urge restraint in price increases for goods and services; and

--develop a special program to deal with individual sectors of the economy, including housing, medical care, food, transportation, energy, and the primary metals industry where Government actions have the greatest potential for reducing inflation.

The Administration's early efforts to implement the President's anti-inflation program emphasized discussions with business and labor seeking voluntary restraint in price and wage increases. Such a program can be successful only if the desired restraints are universally adopted. If it is successful, it should aid materially in the Administration's efforts to control inflation. As the President indicated in his April 1978 announcement, the Federal Government's own actions can and do strongly influence the direction that inflation will take.

The President said that members of his Cabinet would work individually and also with the Council on Wage and Price Stability to develop and to announce early action to reduce inflation within their own areas of responsibility.

Because of the size of the national budget, fiscal policy can be an important instrument of economic stabilization. If taxes are too high, a general contraction of the economy may be forced and a recession may result. If taxes are too low, an inflationary excess of purchasing power may be kept in circulation. The Government's fiscal policy affects private investment, private saving, and private consumption. It can therefore exert an important influence on the growth

of the economy, the level of resource utilization, and the level of prices. 1/

A study by the Brookings Institution

Each year the Federal budget presents in great detail the Government's programs and their costs. It explains the tax policies the Administration proposes and how the budget will affect the economy. 2/ In the ninth of an annual series of books published by the Brookings Institution, various authors analyzed the 1979 budget and evaluated the budgetary implications of the decisions in the budget. The book points out that the outlook for the President's anti-inflation program is not encouraging because its wage and price control provisions are weak and that the condition of the economy in the years ahead will depend heavily on the reaction of Government officials to pressure to raise expenditures and reduce taxes.

According to the book's editor, the Food and Agriculture Act of 1977 provides considerable flexibility. If the Administration emphasizes building commodity reserves and keeping prices low, budget expenditures will be high in most years. On the other hand, if it supports farm prices by maintaining smaller reserves and withholding land from production, budget costs would decrease but food prices would be higher.

CONCLUSIONS

Many factors, such as weather, crop disease, and pests, which affect food supply and thus retail food prices, are very unpredictable and difficult to control. The nature of crop and livestock production does not often allow for a quick remedy to any supply shortages caused by these factors.

Government programs, such as cropland set-aside programs, commodity purchase and disposal programs, export sales programs, and marketing orders affect the supply of agricultural commodities available in the marketplace. Even with the proper balance of these Government programs for any given year, shortages in production or in the marketplace can occur if

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1/Lee, Maurice W., "Macroeconomics: Fluctuations, Growth, and Stability," pp. 453-454, Richard D. Irwin, Inc., Oct. 1966.

2/Joseph A. Pechman, editor, "Setting National Priorities, The 1979 Budget," The Brookings Institution, Washington, D.C., 1978, p. viii.

the effect of weather, crop disease, and/or pests on agricultural production is more severe than estimated when decisions are made on the programs. Primary causes of rising food prices in 1972 and 1973 were (1) worldwide agricultural shortages caused primarily by adverse weather and (2) the delay by Government officials in calling for all-out agricultural production in answer to such shortages. Since then, higher marketing costs have contributed heavily to higher food prices.

A major problem throughout this decade has been the high rate of inflation which has caused food prices, as well as prices of other goods and services, to steadily increase. In 1978 inflation remains one of the greatest challenges to the initiative and resourcefulness of our Government's leaders.

Although some of the anticipated effects of the President's anti-inflation program have been disputed and much of it has yet to be instituted, it is a step toward increased Government involvement in determining the causes of inflation and remedial actions which can be taken to slow the rate of inflation. Increased movement toward these goals is important to the American economy.

CHAPTER 3

WHY RETAIL PRICES DON'T ALWAYS DECLINE WHEN THE FARMER GETS LESS FOR THE RAW COMMODITY

The sharp increases in food prices beginning in 1973 and the continuing increases or lack of decreases since then have led to charges of unfair pricing policies in the food marketing system. One of the major concerns is that increases in farm prices are more readily passed on to the consumer than farm price decreases, or that there is an undue lag in passing farm price decreases along to the consumer.

Our research during this review indicated that there are four principal reasons why a food's retail price does not always decline when the farmer gets less for the raw agricultural commodity.

--When a product's farm value represents a small percentage of its retail price, as in the case of products requiring a high degree of processing and/or special handling, a substantial drop in the farm value would have little or no impact on reducing the product's retail price.

--A decrease in a product's farm value may be partially, completely, or more than offset by increases in food marketing costs; that is, the costs of assembling, transporting, processing, wholesaling, and retailing the product.

--Various retail pricing methods, such as (1) following competitors' prices, (2) setting gross profit margins by department rather than for each product, (3) letting retail margins increase somewhat when wholesale or farm prices fall and absorbing some of the cost increases when prices rise, and (4) running specials at lower prices or offering cents-off coupons rather than reducing the established prices, are based on factors other than just product cost and may result in no reduction in a particular product's regular retail price in response to a drop in its farm price.

--In areas where market concentration is heavy (that is, where a few manufacturers, retail stores, or food chains account for a high percentage of total food sales), price competition may be limited and there is less likelihood that a drop in a commodity's farm price will be passed on to the consumer.

One or any combination of these conditions, which are discussed in more detail in the following sections, could affect the responsiveness of retail food prices to decreases in farm value. The possible combinations of these conditions and the lack of specific and timely data on changes in the cost and profit components at the various levels of the food industry (as discussed on p. 51), however, make it difficult, if not impossible, to determine precisely why a product's retail price does not always decline when the farmer gets less for the raw commodity.

PERCENTAGE OF RETAIL PRICE REPRESENTED BY FARM VALUE

A product's farm value is the amount of money attributable to the quantity of the agricultural commodity needed to produce a unit of the retail food, usually more than a 1-to-1 ratio. For example, about 2.4 pounds of live beef are required to produce 1 pound of beef at the supermarket. The remainder is either lost, unusable waste, or used for byproducts, such as lubricants and soap made from tallow. To compute farm value, USDA obtains the farm price and by using a conversion factor and a byproduct allowance, adjusts the price to reflect the quantity of the farm product needed to produce a unit of the retail food.

The percentage of the retail price represented by the farm value varies for food products. According to 1977 average data, the farmer's share of the retail prices for 47 of the 64 foods in USDA's market basket ranged from 6 percent to 65 percent. (See app. II.)

When a product's farm value represents a small percentage of the retail price--as in the case of such products as canned goods, which require a high degree of processing, or fresh produce, which requires special handling--a drop in the farm value may have little or no impact on the retail price. Labor and packaging costs generally account for a high portion of the retail price of processed commodities. Refrigeration, special handling, and spoilage costs generally account for a high portion of the retail price of fresh produce. Conversely, if a product's farm value represents a large percentage of the retail price, as is usually the case with meat and poultry products, a large drop in the farm value could have a substantial impact on the retail price.

The following table illustrates the potential impact on the retail prices of hypothetical 50-percent decreases in the farm values of (1) a product--a 12-ounce box of cornflakes--for which the farmer's share is a small percentage of the retail price and (2) a product--a dozen eggs--for

which the farmer's share is a high percentage of the retail price.

Description	Box of cornflakes	Dozen eggs
Retail price (note a)	55.6¢	82.3¢
Farm value (note a)	3.5¢	53.8¢
Farmer's share of retail price (note a)	6%	65%
Potential reduction in retail price if farm value is reduced by 50 percent (note b)	2¢	27¢

a/See app. II.
b/Rounded to nearest cent.

As is obvious from the table, the potential for and degree of responsiveness of the retail price to a decrease in a product's farm value depends on the percentage of the retail price attributable to its farm value.

As indicated in appendix II, the farmers' shares of the retail prices of meat and poultry products are higher than for most other food products, and therefore meat and poultry products have a higher potential for a drop in retail prices to occur in response to a drop in farm values. However, as discussed in the following sections, other factors can affect the retail pricing policies for these and other products.

DECREASES IN FARM VALUE CAN BE OFFSET BY INCREASES IN FOOD MARKETING COSTS

The price the consumer pays for any food product reflects both the farm value of the raw commodity and the charges by the various segments of the food marketing industry to cover their costs and profits. These charges relate not only to converting the raw commodity into a form the consumer will purchase and delivering it to a place where the consumer may buy it, but also to providing, particularly at the retail level, various amenities and services which consumers demand or desire.

Because the raw commodity is only one input into the food marketing process, a decrease in a product's farm value may be partially, completely, or more than offset by cost increases in other food industry segments. According to USDA food price statistics, practically all of the rise in consumer expenditures for food in 1977 resulted from

costs incurred by food marketing firms in assembling, processing, transporting, wholesaling, and retailing food products.

Assembling includes procuring raw agricultural commodities and collecting them either at a processing point or at an intermediate handling point off the farm. Assembling charges usually average 2 to 3 percent of the retail price.

The amount of processing varies by commodity. The more a commodity is changed from the time it leaves the farm until it reaches the consumer, the higher the processing cost and the smaller the farmer's share of the retail price. For instance, processing costs make up about one third of the retail price for a loaf of bread, while they are less than 15 percent of the retail price for beef and pork, broilers, and fluid milk. Labor and packaging materials, the largest cost items in processing, represent one-half or more of all processing costs.

Transportation costs vary depending on a product's perishability, the transportation mode used, and the distance between the production area and the market. For example, in 1977 the cost of transporting a truckload of lettuce from California to New York exceeded the lettuce's farm price; the cost of transporting a truckload of potatoes from Idaho to Washington, D.C., was about 45 percent of the potatoes' farm price; and the cost of transporting a truckload of apples from Washington State to Washington, D.C., was about one-fourth of the apples' farm price.

Wholesalers purchase and store large quantities of processed foods and fresh produce and resell these foods to various retailers. Wholesaling charges usually range between 5 and 8 percent of the retail price for most food products.

A typical supermarket operation's retailing charges on the average represent about 20 percent of the retail price. Retailing cost and profit margins vary widely among the thousands of foods stocked, reflecting the amount of store handling; shelf space occupied; special equipment needs, such as refrigeration; spoilage; and volume of sales. Labor costs usually represent half the retailing charges. All other retailing costs, individually, are relatively small.

The following table, prepared by USDA, shows the farm value and the breakdown of labor and other charges, including profit, for the five marketing segments for a 1-pound loaf of white pan bread in 1975.

WHITE PAN BREAD: COMPONENTS OF PRICE SPREADS PER 1-POUND LOAF, 1975

	Farm value		Assembly of wheat and flour milling 1/	Transportation of flour	Baker-wholesaler		Retailing	Retail price
	Wheat	Other ingredients			Processing	Wholesaling		
				Cents				
Labor	-	-	.43	-	4.11	7.02	3.2	-
Packaging	-	-	.03	-	2.12	.11	.2	-
Transportation	-	-	.29	-	-	.05	-	-
Business taxes	-	-	.04	-	.14	.06	.2	-
Depreciation	-	-	.08	-	.54	.17	.1	-
Rent	-	-	.01	-	-	.09	.1	-
Repairs	-	-	.02	-	.10	.08	0	-
Advertising	-	-	.02	-	-	.56	.4	-
Interest	-	-	.05	-	.03	.04	0	-
Energy	-	-	.06	-	.32	-	-	-
Other and unallocated	4.5	2.3	2/ .15	.44	2/ 3/ 3.01	2/ 2.50	.1	-
Profit	-	-	.26	-	.75	.90	.2	-
Total	4.5	2.3	1.46	.44	11.12	11.58	4.6	36.0

1/ Price spread attributed to handling wheat at country receiving points, transporting it to flour mill, milling the wheat, and wholesaling the flour.
2/ Residual, includes items such as telephone service, janitorial supplies, contributions, and other miscellaneous items.
3/ Includes cost of nonfarm ingredients such as yeast, yeast food, dough conditioners and stabilizers, etc. (0.7 cent) and merchandising, handling and processing of nonfarm ingredients other than wheat (0.8 cent).
Note: Dashes mean not estimated.

Retail bread prices remained at about 35 1/2 cents for a 1-pound loaf throughout 1977 despite sharp drops in farm prices of wheat. The farm value of the quantity of wheat going into a 1-pound loaf of bread averaged 2.6 cents in 1977--about 1 cent lower than in 1976 and about 2 cents below the 1975 price. The wheat farmers' share of the retail price of bread dropped to about 7 percent in 1977--the lowest share since 1932.

During 1977 the farm value of wheat in a 1-pound loaf of bread varied greatly. It bottomed out at 2.2 cents in June when the farm price of wheat dropped to about $2 a bushel. By the end of the year the farm value was up to 2.8 cents as wheat prices increased to $2.40 a bushel. Back in February 1974 a record farm value of 6.9 cents was reached because of high wheat prices resulting from the worldwide wheat shortage.

In 1977 farm values for bread ingredients other than wheat--vegetable shortening, lard, nonfat dry milk, and sugar--accounted for 42 percent of the total farm value for all ingredients going into a loaf of bread compared with only 24 percent in 1970. The following table, prepared from data obtained

from USDA, shows the farm value, marketing costs and profits, retail price, farmer's share, and marketing industry's share of the ingredients in a 1-pound loaf of white bread from 1970 through 1977.

White Bread: Farm Value, Marketing Costs and Profits
Retail Price, Farmer's Share, and Marketing Industry's Share

Year	Farm value: Wheat (note a)	Farm value: Other ingredients (note b)	Farm value: All ingredients	Marketing costs and profits (note c)	Retail price of 1-pound loaf	Farmer's share of retail price: Wheat	Farmer's share of retail price: All ingredients	Marketing industry's share of retail price
	(cents)					(percent)		
1970	2.6	0.8	3.4	20.8	24.2	11	14	86
1971	2.6	0.9	3.5	21.3	24.8	10	14	86
1972	2.9	0.9	3.8	20.9	24.7	12	15	85
1973	4.1	1.4	5.5	22.1	27.6	15	20	80
1974	5.4	2.5	7.9	26.6	34.5	16	23	77
1975	4.5	2.3	6.8	29.2	36.0	12	19	81
1976	3.8	1.8	5.6	29.6	35.3	11	16	84
1977	2.6	1.9	4.5	31.0	35.5	7	13	87

a/Payment to farmers for wheat (0.867 pounds) needed to produce flour for a 1-pound loaf of bread. Based on average farm prices for hard winter and spring wheat in 10 States leading in production of these wheats.

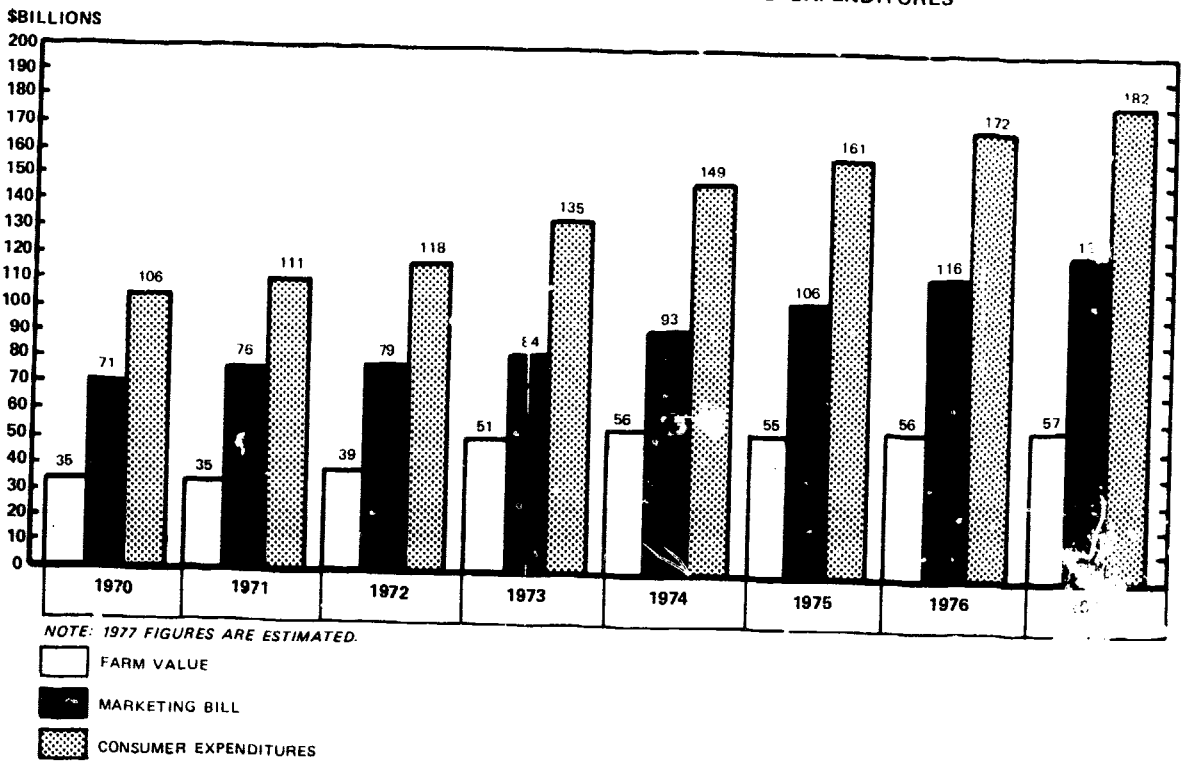
b/Payment to farmers for other-than-wheat ingredients, such as nonfat dry milk, shortening, and sugar.

c/Commonly referred to as the farm-retail price spread.

The impact of rising food marketing costs and profits (marketing bill) on total consumer expenditures for U.S. farm-produced foods during a period of relatively stable farm values is illustrated by the chart on page 47. Expenditures for imported foods and seafood products, which accounted for about 20 percent of consumer expenditures for food in 1974, are not included in the chart. From 1970 through 1977 consumer expenditures for U.S. farm-produced foods increased about 72 percent. During the same period the amount of these expenditures received by the food marketing and distribution industry increased 76 percent, while the farm value increased about 63 percent.

As the chart indicates, the farm value remained relatively stable from 1975 through 1977. Total consumer expenditures for food for the period, however, increased about $33 billion, or 22 percent. Most of the increase was received by the food marketing industry. Therefore, although the farm value remained relatively stable during this period, consumers paid considerably more for food because of increases in food marketing industry costs and profits.

FARM-FOOD MARKETING BILL AND CONSUMER FOOD EXPENDITURES



The following examples--based on statistics gathered by USDA on the breakdown of the retail price into farm value and marketing costs--illustrate the impact on beef and pork prices of a decline in the farm value and an increase in food marketing costs.

--In 1976 the average retail price of Choice beef decreased only about 7 cents a pound from the average price in 1975, even though the amount of the retail price accounted for by the farm value decreased by 15 cents a pound. Marketing costs and profit increases of about 8 cents a pound offset over 50 percent of the effect that the decrease in farm value could have had on the retail price of Choice beef.

--In 1976 the average retail price of pork was only about 1 cent a pound less than the 1975 average price, even though the amount of the retail price accounted for by the farm value decreased by 8.4 cents a pound. The increase in marketing and distribution costs of 7.7 cents a pound almost completely offset the effect that the decrease in farm value could have had on the retail price of pork.

RETAIL PRICING METHODS VARY AND ARE OFTEN BASED ON FACTORS OTHER THAN JUST PRODUCT COST

Retailers use various methods in determining a product's retail price. These include (1) setting prices at levels comparable to competitors' prices--a major consideration, (2) setting gross profit margins by department rather than for individual products, (3) letting retail margins increase somewhat when wholesale or farm prices fall and absorbing some of the cost increases when prices rise, and (4) running more frequent specials at lower prices or offering cents-off coupons rather than reducing the established prices. These pricing methods, while apparently widespread, are not always used in all stores, for all products, or at all times.

These pricing methods make the determination of retail price responsiveness to changes in farm prices more difficult not only because of their variety but also because the methods consider factors other than just product cost in determining retail prices. Therefore, using these pricing methods could dilute or entirely disregard farm value changes and may result in no change in the established retail price in response to a farm value change.

Retailers and trade association officials told us that the various pricing methods are used because of the competitive nature of the retail food industry. If a retailer does not consider competitors' prices, for example, the retailer could lose business by charging higher prices than competitors. Also, letting margins increase when wholesale or farm prices fall and absorbing some of the cost increases when prices rise reduces the number of price changes. Retailers believe that frequent retail price increases result in consumer resentment and should be avoided as much as possible. Retailers told us that the use of gross margins by department, rather than computing margins for each food item, is necessary because of the vast number of types and sizes of food products sold--currently estimated between 6,000 and 8,000. They said that the time and paperwork needed to compute individual margins would be too great and too costly.

INCREASING MARKET CONCENTRATION COULD REDUCE THE OPPORTUNITY FOR RESPONSIVENESS

Increased concentration of market power at the food retail and manufacturing levels, according to some studies, has reduced competition, caused inefficiencies, and inflated such nonproduction costs as advertising and product research. It also may have restricted retail price changes when farm prices decreased.

Market concentration refers to the extent to which only a few companies or other business entities account for a major share of the sales or production in a market area or commodity group. Commonly, when market concentration is substantial, the interdependence of these firms is great and they tend to avoid those actions most likely to produce competitive reactions--especially price rivalry--which could lead to reduced profits for all.

There is a growing amount of evidence that market concentration is high enough in certain market areas or commodity groups to limit the amount of price competition. In such circumstances, competition occurs in terms of product variations, package design, promotions, and other advertising. Such competition increases the costs incurred by the food marketing industry and thus decreases the possibility that a drop in a commodity's farm price will be passed on to the consumer.

Whether market concentration has in fact been the cause of delay or failure in adjusting retail prices when farm prices decrease is the subject of considerable controversy. Some studies indicate that market concentration leads to higher retail prices, reduced efficiencies, and higher nonproduction costs.

--In March 1977 the Joint Economic Committee published a report 1/ based on a study done for the Committee by consultants. The report said that between 1948 and 1972 the share of grocery store sales controlled by the largest retailers (grocery chains) had risen from 34 percent to 57 percent and that as the market concentration in a locality increased, grocery prices also increased. In 1972 the four largest grocery retailers in 194 metropolitan areas accounted for an average of 52 percent of the grocery sales. In one-fourth of these metropolitan areas, they accounted for 60 percent or more of sales. The report said also that concentrated market power tends to result in inflated costs and inefficiencies.

This study stimulated considerable controversy. Its validity was questioned by food industry representatives

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1/"The Profit and Price Performance of Leading Food Chains, 1970-74," a study prepared for the use of the Joint Economic Committee by the members of the University of Wisconsin Food System Research Group of NC 117, Mar. 1977.

and others but was staunchly defended by its supporters. At the hearings at which the report was presented, a Committee member called attention to the fact that although the food industry sharply criticized the report for "insufficient data," the Committee and its consultants had experienced great difficulty in collecting data from the food industry.

--A paper prepared by a Federal Trade Commission staff member and included in a March 1975 report 1/ published by the Subcommittee on Agricultural Production, Marketing, and Stabilization of Prices, Senate Committee on Agriculture and Forestry, stated that competition in food manufacturing is increasingly controlled by a few large corporations whose special expertise includes creating new product variations, advertising and promoting them, and using field sales personnel to convince retailers to give priority shelf space to their new products.

--A 1977 report by the Council on Wage and Price Stability 2/ tentatively concluded that large multiregional bakers are less efficient in the production and distribution of bread than smaller owner-operated wholesale bakers. However, the market concentration of the large multiregional bakers had increased since 1963 even though their prices were a few cents higher than those of the smaller bakers.

On the other hand, a consultant study 3/ done for the Council and published in November 1976 concluded that generally wholesale and retail food prices do not respond more rapidly to farm price increases than to farm price decreases. The study concluded also that the speed of response does not vary with the degree of concentration in the processing

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1/"The Market Functions and Costs for Food Between America's Fields and Tables." The paper entitled "Competition in Food Retailing and Manufacturing" was prepared by Russell Parker, Assistant to FTC's Director for Special Projects, and begins on p. 77 of the Subcommittee's report.

2/"A Study of Bread Prices," Executive Office of the President, Council on Wage and Price Stability, staff report, Apr. 1977.

3/"The Responsiveness of Wholesale and Retail Food Prices to Changes in the Costs of Food Production and Distribution," Executive Office of the President, Council on Wage and Price Stability, staff report, Nov. 1976.

industry. However, the consultant stated that the study results did not allow one to conclude that the magnitude of food margins is justified by the costs of processing, distributing, and retailing. This study did not include a full analysis of profitability and competition across the food industry.

Two similar bills, S. 2071 and H.R. 6098, were introduced in the 95th Congress, 1st session, to establish a commission composed of members of the legislative and executive branches and private members to conduct a comprehensive study of laws, regulations, policies, and any other U.S. Government practices which could have a significant impact on competition including, but not limited to, antitrust laws, exemptions to antitrust laws, patent laws, internal revenue laws and regulations, the National Labor Relations Act, regulatory policies, and Federal contracting and bidding practices.

The bills defined 11 major U.S. industries, including the food industry, which the commission would study to determine the extent and nature of competition within the industries. The commission would be authorized to hold hearings, secure all needed information from any department or agency of the Government, and issue subpoenas requiring industry officials to appear at hearings or to provide evidence related to any matter which the commission would be empowered to study or investigate.

S. 2071 would direct the commission to transmit its final report to the Congress not later than 5 years after enactment; H.R. 6098 would require the commission to transmit its final report not later than 3 years after enactment. As of August 1978 no action had been taken on the bills by the subcommittees to which they were referred.

AVAILABLE DATA NOT TIMELY OR SPECIFIC ENOUGH TO ALLOW INTERPRETATION OF PRICE CHANGES

Congressional sources and an ERS official have stated that the farm and food price data the Government currently collects is not timely or specific enough to be used in determining if undue lags occur in adjusting food prices following changes, particularly decreases, in farm prices. USDA has tried to better define cost and profit components of the farm value-retail price spread--the portion of a product's retail price received by the food industry. According to the ERS Administrator, however, the resulting data has been tentative and incomplete, thus limiting its usefulness for analyzing changes in food marketing costs and prices.

The major problems in obtaining more precise data for determining if undue lags exist and for what reasons are (1) the industry's unwillingness to supply needed information and (2) the estimated high cost which would be incurred by industry in supplying the needed information on a timely basis and by the Government in collecting and analyzing such information.

The Congress appropriated $100,000 for fiscal year 1974 for ERS to research and provide information on the cost and profit components of margins at all food industry levels. ERS has carried on this research each year since 1973 and publishes such information annually. Such data has been published in "Developments in Marketing Spreads for Agricultural Products" and a related series of publications entitled "Cost Components Of Farm-Retail Price Spreads." ERS stated that the information in these reports sheds light on certain questions, including whether farm value-retail price spreads are increasing more rapidly than the costs of performing marketing functions.

These reports break down the farm value-retail price spread for over a dozen food items (16 in 1975 through 1977), including beef, eggs, milk, and bread, into five functions--assembly and procurement, processing, intercity transportation, wholesaling or warehousing, and retailing. The cost components report further allocates each function's portion of the spread to about a dozen cost and profit components, including labor, packaging, business taxes, advertising, and energy.

ERS uses annual cost and profit data estimates to break out these totals. However, because farm prices change frequently throughout the year, we believe that a determination of retail price responsiveness to such changes should be based on a much shorter time frame, such as analyzing weekly or monthly changes in farm and retail prices.

In 1975 the Subcommittee on Domestic Marketing and Consumer Relations, House Committee on Agriculture, held hearings to consider the information available to the Congress and the public, on an up-to-date basis, regarding where in the food marketing chain lags occur between changes in farm prices and comparable changes in retail prices and whether such lags are justifiable.

The Subcommittee concluded that Government-published data on the food marketing system was not specific or timely enough to allow meaningful interpretation of price changes and profit margins throughout the system, and therefore to determine when undue lags in price adjustments occur. The

Subcommittee said that data was needed to monitor retail price adjustments in response to changes in farm prices, especially in times of volatile farm prices.

During these hearings, the ERS Administrator stated that the data collected on cost and profit margins was pieced together from fragments of information and therefore was incomplete and tentative. He added that ERS made no claim of a high degree of precision with respect to the data reported.

These hearings also isolated certain problems which need to be solved before monitoring of retail price responsiveness could be successful. These included (1) the need for industry cooperation in supplying needed data and (2) the estimated high cost to the industry in supplying the data needed and to the Government in collecting and analyzing the data.

In September 1975 a private consulting firm submitted a report to USDA on the feasibility of routine collection and analysis of supermarket retail and wholesale food prices and margins. The report concluded that it was feasible to collect such data from retailers and wholesalers provided that the reporting requirements were kept simple and reasonable and that a third party would be used to summarize the data so that the detailed data would not be released directly to the Government. The consulting firm based its conclusion on the results of interviews with 3 wholesalers and contacts with 20 food chains with annual sales ranging from $130 million to over $2 billion.

In April 1977, the Office of Management and Budget (OMB) approved USDA's plan to conduct a survey to provide data on prices, margins, and quantities of food and related products sold at wholesale and supermarket levels and to analyze the factors causing the changes in prices and margins. USDA said that this survey was necessary because of the demonstrated need for the information and the inadequacy of existing data. According to USDA the existing data on prices and margins was available only from secondary sources and was very weak and fragmentary.

Subsequently, ERS asked a consultant to collect price and margin data on a monthly basis for about 900 food items from a number of small, medium, and large supermarkets and wholesalers. The consultant was to tabulate the data and send the summarized data to ERS for analysis.

An official of the Economics, Statistics, and Cooperatives Service (into which ERS has been merged) told us in June 1978 that the consultant was having limited success in getting the food retail chains to supply the data. He added that 10 to 15 of the top 20 food chains had been contacted and none of these chains had agreed to cooperate. Generally, these chains are hesitant to cooperate because of (1) a fear that the data supplied could be used against them in legal actions and (2) the high cost involved in providing such data. Near the close of our review, ESCS told us it was considering terminating the consultant contract.

PROPOSED LEGISLATION TO MONITOR FOOD PRICE CHANGES AND STUDY THE FOOD INDUSTRY

The impact of food marketing industry charges for costs and profits on the prices consumers pay for food is a growing concern as reflected in various bills introduced in the Congress in 1977 which would provide for monitoring price changes from farmer to consumer either by a temporary commission or by a permanent bureau. House bills 256, 497, and 2132, 95th Congress, 1st session, would establish a Bureau of Agricultural Statistics within USDA to monitor changes in prices from the farm level to purchase by the consumer and make recommendations every 6 months to correct situations in which retail prices for certain foods are increasing during periods of decreasing farm prices.

The Bureau would obtain information about

--the prices producers received for agricultural commodities used for food,

--the prices processors received for food processed from agricultural commodities,

--wholesale prices of food items, and

--retail prices of food items.

None of these bills discuss the frequency of data reporting or the method by which the proposed Bureau would obtain the needed price information. The bills would direct the Bureau to recommend to the Congress legislation providing for mandatory reporting of the information needed.

Another bill, S. 1223, would establish a temporary National Commission on Food Production, Processing, Marketing, and Pricing to study and appraise the economic structure of all segments of the food industry. The Commission would be required to submit a final report of its findings,

conclusions, and legislative recommendations to the President and the Congress not later than 2 years after enactment. The bill would authorize the Commission, as it deems necessary, to conduct hearings and require written and documentary evidence to be furnished by the food industry and other sources. The bill would not authorize the Commission to examine food industry records or to verify the data submitted.

As of August 1978 no action had been taken on any of these four bills by the subcommittees to which they were referred.

CONCLUSIONS

Retail prices will not be very responsive to farm value changes in the case of products requiring a high degree of processing and/or special handling and where the farm value represents a small percentage of the retail price. For other foods, it appears that rising food marketing industry costs and profits would be the most likely reason why retail prices might not be responsive to farm value changes. However, it is difficult to determine that this is the reason because USDA-published data on industry costs and profits is not timely or specific enough to allow such a determination.

USDA's breakdown of the farm value-retail price spread into marketing functions and related cost and profit components is based on annual cost and profit component estimates. Whether a product's retail price is responsive to farm value changes, however, must be determined by analyzing data during a much shorter time frame. Farm and retail prices fluctuate throughout the year, often resulting in changing the reported monthly farm value-retail price spread. Although food marketing industry costs have increased each year in this decade, they do not increase uniformly each month.

Monthly data on food industry cost and profit components would have to be available to determine if rising food marketing industry costs or increased profits were responsible for any lack of retail price responsiveness. However, a private consultant under contract to ERS/ESCS has had limited success in getting food marketing industry firms to cooperate in providing monthly price and margin data. Bills introduced in the Congress would establish a bureau or commission to monitor food prices and the food industry. The bills, however, would not provide these organizations direct access to industry records for verifying the data to be submitted by the food industry.

Because of the food marketing industry's past lack of cooperation in voluntarily supplying data on margins, it appears that if such information is found to be needed, the Congress will have to pass legislation directing the food industry to report such data to USDA or to a separate organization set up by the Congress for that purpose. The Congress should also provide for adequate safeguards to protect the confidentiality of such records.

RECOMMENDATION TO THE CONGRESS

We recommend that if the Congress wishes to establish a bureau or commission to monitor food prices and the food industry, it provide (1) such bureau or commission with the authority needed to assure access to the records of the food industry from the farmer to the consumer and (2) for adequate safeguards to protect the confidentiality of such records.

RECOMMENDATIONS TO THE SECRETARY OF AGRICULTURE

We recommend that the Secretary of Agriculture direct ESCS to assess possible ways in which the industry could be required to submit monthly data on cost and profit margins in an effort to improve the accuracy of USDA publications relating to marketing costs.

We also recommend that the Secretary, after completing such an assessment, develop proposed legislation which would make such data reporting mandatory.

AGENCY COMMENTS AND OUR EVALUATION

In its comments (see app. IV), USDA agreed that improved data is needed on retail prices, margins, and quantities of food products purchased and that such data should be available on a monthly basis. USDA said that it may well be that improvements in the quality of data available for use will entail implementing a mandatory reporting program. It pointed out, however, that a mandatory system would have its negative side effects--industry resistance and possible refusal by some firms to provide data for other surveys and reporting programs which are voluntary but very important in USDA's total research program.

USDA added that if a mandatory reporting program is desired by the Congress, it might be more satisfactorily administered by an existing regulatory agency which has the necessary resources to deal with the expected enforcement problems. It said that it would assist in developing such a program but did not view the legislative initiation or

operation of the program as an appropriate function for USDA.

During hearings in 1975 (see p. 52), the Subcommittee on Domestic Marketing and Consumer Relations, House Committee on Agriculture, expressed a different view. In its report in 1975, the Subcommittee concluded that ERS was the logical agency to assume primary responsibility for the expanded data collection needed to monitor the relationship between farm price changes and subsequent adjustments in the marketing chain. The report added that to be successful in accomplishing this monitoring task, ERS must coordinate with other Federal agencies.

CHAPTER 4

WHAT ABOUT THE FUTURE?

The impact of rising food prices on the American consumer during this decade has highlighted the need to find ways to slow the rate of food price increases. Looking ahead, the basic question is whether food prices are likely to continue rising as rapidly as they have during the first 8 years of this decade. Answering this question definitively is obviously difficult because so many of the key variables--inflation, weather, crop disease, pests, technology, and Government policies and programs--affecting the outcome are somewhat unpredictable and, in some cases such as weather and disease, largely uncontrollable. However, changes in Government policies, greater consideration of the effect of proposed Government actions on food prices, and more rapid adoption by the food industry of improved technology already available appear to offer some hope of holding prices down.

The Government and the food industry need to continually examine their roles in the food system, identify problems and possible improvements, and make changes where warranted. Some potential improvements that could help to either decrease food price levels or slow the rate of price increases are discussed in this chapter. They are (1) the relaxation or modification of certain Federal transportation regulations which serve to increase food marketing costs and (2) more rapid adoption by the food industry of such available technology as computerized checkout systems at the retail level, methods to decrease the amount of food loss or spoilage, and standardization of containers used in the food industry.

Also, Government decisionmakers need to consider the effects of their proposed actions on food industry costs and thus on food prices. Certain actions now being discussed or formulated by the Congress and/or the executive branch would, if implemented, increase the cost to market food. These actions, which are discussed beginning on page 68, include (1) nutritional labeling for all food products, (2) drained weight labeling, (3) percentage of characterizing ingredients labeling, (4) mandatory unit pricing, (5) mandatory open dating, and (6) more stringent noise and water pollution standards.

Although these actions, if implemented, would either provide more information to the consumer to assist in purchasing foods or improve the environment or working conditions, they would also increase food industry costs. Because all or part of such costs are invariably passed along to the consumer, both the beneficial and detrimental effects of

such proposed actions need to be considered in deciding whether to implement them.

CHANGING CERTAIN TRANSPORTATION REGULATIONS COULD HELP REDUCE COST OF TRANSPORTING FOOD

According to USDA estimates, the cost of transporting agricultural commodities and finished food products in 1977 amounted to $10.4 billion, or 8 percent of the USDA-computed marketing bill for getting U.S. farm-originated foods from the farm to the consumer. Any improvements in transportation practices which would reduce the cost of food delivery would benefit suppliers, distributors, and particularly consumers who pay the bill.

Certain changes in Interstate Commerce Commission regulations governing the trucking industry could help reduce the cost of transporting not only food but also other goods and could contribute to energy conservation. Under existing regulations, ICC limits the types of cargo that nonregulated agricultural commodity haulers can carry and prohibits intercorporate hauling by trucks of private companies whose primary business is other than transportation when compensation is involved. As a result, trucks often return empty to their home bases, causing an inefficient use of equipment, fuel, and labor.

Whether these regulations could be changed without serious damage to existing regulated truckers is a matter of considerable dispute. 1/ Further studies are needed to identify the consequences of such changes.

ICC regulatory authority

ICC, which regulates the surface transportation industry, is an independent Federal agency with broad responsibilities for insuring that the United States has an adequate and efficient transportation system under private ownership. Although common carriers (those that hold themselves out to serve the public) must obtain operating authority from ICC before they are able to transport a particular class of goods over a particular route, ICC, by law, does not have complete regulatory authority over all trucks. For example, trucks moving intrastate, trucks carrying certain agricultural commodities interstate, and trucks used in furthering a

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1/For further information on transportation regulatory issues in dispute, see our staff study "Issues in Regulating Interstate Motor Carriers," CED-78-106, June 20, 1978.

primary business enterprise other than the transportation-for-hire business do not need to obtain ICC operating authority. This includes manufacturers and retailers that have their own trucks.

ICC regulations, however, limit the types of cargo that otherwise unregulated haulers can carry and require compensated transportation between private companies--even between a parent company and its subsidiary or between two subsidiaries of the same parent company--to be performed by haulers with appropriate ICC operating authority. Critics have contended that these regulations, as well as ICC controls restricting entry into the trucking field, are responsible for trucks traveling many miles empty.

As far as we were able to determine, no comprehensive study has been made to estimate the total dollar impact on food transportation costs of trucks traveling empty. However, a transportation task force appointed by the former Federal Energy Administration estimated that in 1975 the overall cost of transporting food would have been reduced by $300 million if regulations had been changed to reduce the number of empty miles traveled by trucks used in furthering a primary business other than transportation. Our review did not disclose any study that estimated the dollar savings for reducing empty truck miles traveled by carriers of raw agricultural commodities, although about 425 million tons of farm commodities--the equivalent of 7 million rail carloads--are marketed each year.

Some studies have been made, however, of the extent to which trucks are traveling empty.

--A 1973 study by the Department of Transportation showed that in a random sample, 33 percent of the nonregulated trucks were empty when passing through weighing stations.

--Our analysis of an ICC study showed that in 1976 26 percent of the trucks driven either interstate or intrastate by haulers of raw agricultural commodities or privately owned trucks were traveling empty.

These studies did not determine, however, the reasons why the trucks were traveling empty.

Many agricultural commodity haulers can carry only certain types of cargo on return trips

All types of motor carriers can haul unmanufactured agricultural commodities which are exempt from ICC regulation.

However, those without ICC operating authority can haul only exempt commodities. Because these haulers are often unable to find a load of unprocessed agricultural commodities for their return trips, commonly known as backhauls, a substantial number of them are running empty part of the time--a waste of equipment, fuel, and labor. More efficient use of trucks on backhauls could help reduce food transportation costs.

Section 203(b)(6) of the Interstate Commerce Act (49 U.S.C. 303(b)) exempts from ICC regulation the transportation of agricultural commodities but not manufactured products thereof. The primary test to be used to determine if a commodity is in the exempt class is known as the "continuing substantial identity" test. This test evolved from cases decided before ICC and the courts, beginning around 1948, concerning whether agricultural commodities that had undergone processing would still be exempted.

The courts consistently held that the congressional intent was that agricultural commodities do not lose their exemption by incidental processing but only by manufacturing. The courts ruled that processing and manufacturing will merge at some point, but where the commodity retains a continuing substantial identity through the processing stage, it has not been manufactured within the meaning of section 203(b)(6).

In 1958 an amendment to section 203(b)(6) incorporated, with certain modifications, Administrative Ruling No. 107 of ICC's Bureau of Motor Carriers, which substantially restricted the agricultural commodity exemption by listing exempt and nonexempt commodities as then determined by ICC. Including this ruling in the law (1) precluded judicial review of ICC's determination that many items were nonexempt and (2) added to the nonexempt category certain previously exempt items, such as frozen fruits and vegetables and bananas. For commodities not included on the list, the test continues to be the continuing substantial identity test.

Although all types of motor carriers participate in interstate hauls of exempt agricultural commodities, studies indicate that a majority of such haulers have no ICC operating authority and thus can haul only exempt commodities. For example, in a 1974 study done for USDA, a western university found that 69 percent of the 6,582 haulers of exempt commodities responding to a mail survey had no ICC operating authority. Also, a 1976 ICC study of trucks operating over interstate highways found that 950, or 73 percent, of 1,301 trucks loaded with exempt agricultural commodities had no ICC operating authority. Because these exempt haulers usually carry agricultural commodities from rural areas to high-density population centers for processing and consumption,

they often have difficulty finding a load of exempt commodities for their return trips.

According to an official in USDA's Agricultural Marketing Service's Transportation and Warehouse Division, the haulers' frequent inability to find a return load affects consumer prices because the costs of returning empty are charged to the original shipper and eventually passed on to the consumer in the form of higher retail prices. The official said that rates charged shippers could be reduced by deregulating the exempt haulers' backhauls, thus allowing them to haul regulated commodities back to the rural areas. He said that as the round trip revenue would increase for these haulers, the rates charged for shipping the agricultural commodities should decrease.

This official told us that one of the difficulties in coming up with regulatory or legislative alternatives to correct this problem is the lack of information about the exempt commodity haulers. In 1977 the Transportation and Warehouse Division was conducting a study to categorize the types of information that needed to be known about these haulers before such alternatives can be proposed.

In addition, in July 1977 the Secretary of Transportation submitted to the Office of Management and Budget an options paper and a background paper prepared by a Federal task force on motor carrier regulation reform. The papers pointed out that there is little public pressure for reform of motor carrier regulation because the transportation costs of goods are invisible to the retail purchaser. The papers discussed the difficulty of minimizing empty backhauls and stated that regulated carriers have a better opportunity to minimize empty backhauls than do unregulated carriers, especially haulers of exempt commodities. According to the papers:

> "Because the regulated carriers are experiencing a much better traffic balance, considerable examination and great care should be taken to insure that we 'contain' and reduce the empty backhaul problems of the exempt hauler without 'spreading' and increasing the problem within the unregulated segment of the industry."

In his letter submitting the papers to OMB, the Secretary of Transportation said that statistical data on exempt haulers and private truck fleets was inadequate and that better data must be developed before legislative initiatives can be taken.

Prohibition on intercorporate hauling also causes empty backhauls

Manufacturing and retailing companies whose primary business is not transportation may transport their own goods in their own trucks without ICC operating authority, because this is considered private transportation. According to ICC's interpretation of its regulatory authority based on numerous Federal court decisions, however, compensated transportation between companies--even between a parent company and its subsidiary or between two subsidiaries of the same parent company--is not private transportation. This type of transportation is commonly known as intercorporate hauling and must be performed by haulers with appropriate ICC operating authority.

Although these companies could seek ICC operating authority, the Federal task force on motor carrier regulation reforms referred to on page 62 said that the high cost of even applying for operating authority discouraged unregulated carriers from requesting it. According to the task force, "The application process frequently consumes several years of lawyers', economists', and management's time, at very high hourly rates."

The prohibition against compensated intercorporate hauling has caused many inefficient transportation situations which increase transportation costs in both food and other industries. For example:

--A company with 54 subsidiaries estimated that its trucks are empty during 28 percent of the miles traveled. The company estimated that if intercorporate hauling was allowed, it could save 80,000 gallons of fuel annually.

--Another company's trucks, used for northbound shipments from North Carolina to the New England area, return to North Carolina empty. A subsidiary's trucks, used for southbound shipments from the New England area to Georgia, return to the New England area empty. The company estimated that these trucks travel empty about 165,000 miles annually because the parent and subsidiary are not allowed to haul each other's goods.

--An official of a large food processing firm told us that the firm could save about $640,000 annually if intercorporate hauling was permitted.

Food costs are increased not only by empty miles traveled by trucks delivering food but also by empty miles traveled

by trucks delivering anything that becomes part of food costs, such as containers, packaging and packing material, and machinery, equipment, and supplies used in the food industry.

The ICC prohibition on intercorporate hauling has been criticized by many, including the Council on Wage and Price Stability, the Department of Transportation, USDA, and the task force appointed by the former Federal Energy Administration to study food transportation. These critics believe that transportation costs could be appreciably reduced if intercorporate private hauling was allowed. In addition, these critics believe that if such hauling was allowed, the loss of cargo suffered by common carriers would be limited.

On the other hand, an ICC Commissioner said that the Interstate Commerce Act and court rulings do not allow ICC to administratively authorize intercorporate hauling and that the law would have to be changed to provide it such authority. Some ICC officials believe that if intercorporate hauling was allowed, the resultant diversion of cargo from ICC-regulated carriers could have a detrimental effect on the regulated carriers' services and on rates for small shippers. ICC's Chairman, however, has stated that considering the size and diversity of many conglomerates, it is likely that balanced private trucking operations could be achieved if intercorporate hauling was allowed.

Thus, there is considerable disagreement as to the effect on the transportation industry--regulated and nonregulated carriers--if intercorporate hauling was allowed. In our report entitled "Energy Conservation Competes With Regulatory Objectives for Truckers" (CED-77-79, July 8, 1977), we discusses the need for additional data on the advantages and disadvantages of intercorporate hauling. A study of the projected effect of authorizing intercorporate hauling to (1) determine the benefits to industry, (2) estimate the possible effect on consumer prices, and (3) compare the adverse effect on regulated carriers with the benefits to private haulers would be helpful in making an informed judgment on the need for allowing intercorporate hauling.

Reducing the number of empty backhauls would aid in conserving energy supplies

The 1973 oil embargo emphasized the Nation's dependence on oil and the need for a fully coordinated and comprehensive energy program which stresses energy conservation. ICC recognizes the importance of energy conservation and has relaxed some regulatory requirements, such as allowing greater use of superhighways and greater freedom to piggy-back (transport truck trailers on railcars). ICC has also eliminated some

gateway requirements which had forced truckers to travel through certain cities, called gateways, even though shorter routes were possible.

In our July 1977 report mentioned above, we concluded that truckers could conserve energy by reducing miles traveled with empty trucks. The amount of energy which could be saved by allowing intercorporate hauling alone would be large. For example, a large corporation with 15 private fleets said it could reduce empty mileage by 50 percent and annually save over 11 million miles and 2 million gallons of fuel.

We said that ICC measures to reduce energy use by trucks had been limited because ICC was guided by its traditional regulatory objectives of protecting existing regulated truckers and making certain that service is adequate. We recommended that the Congress enact legislation which would (1) show whether energy conservation or the traditional regulatory objectives were more important and (2) allow ICC to change its regulations to authorize intercorporate hauling if it does not otherwise conflict with the national priorities established.

In commenting on our report in September 1977, ICC's Acting Chairman said that one of the primary causes of empty mileage is generally considered to be a natural imbalance of traffic between various economic markets. He added that a majority of the ICC Commissioners believed that, if unavoidable traffic imbalances exist, the burden should be borne by exempt and private truckers rather than the regulated common shippers who have a duty to provide responsible service to all shippers, on demand and without discrimination. The Acting Chairman said that ICC believes that claims of energy savings that would result from authorizing intercorporate hauling should be viewed cautiously and that sufficient data is not yet available to permit a definitive conclusion that intercorporate hauling would necessarily result in substantial energy savings.

In February 1978 we were told that ICC and the Department of Transportation were discussing the joint funding of a consultant's proposed study to determine the reasons for and possible solutions to trucks traveling empty in selected geographic corridors.

Other transportation-related matters affecting the agriculture and food sectors

In May 1978 the Administrator of USDA's Agricultural Marketing Service testified before a Subcommittee of the Senate Committee on Agriculture, Nutrition, and Forestry

that there are numerous problems within the general transportation system that are causing the transportation needs of agriculture to be unmet. She said that some of the problems and policy issues that needed to be addressed included

--rail abandonments;

--rural roads and bridges;

--independent owner-operators;

--regulatory reform and modernization;

--the agricultural trucking exemption and agricultural cooperative trucking exemption policies;

--railroad mergers;

--railroad labor work rules;

--seasonal rail rates;

--railcar shortages;

--high freight rates;

--service to and from rural areas;

--truck size and weight limitations; and

--lack of uniform State regulations for truck permits, licenses, and registration.

The Administrator said that the Secretary of Agriculture was vitally interested in improving USDA's capability to provide an innovative transportation assistance program to agricultural producers, shippers, and rural communities and that he was reviewing USDA's transportation activities with the view toward a better coordinated and more efficient use of existing resources and capability to meet the special needs of agricultural transportation.

On June 8, 1978, the Senate passed S. 1835 which would require the Secretary of Agriculture to conduct a study of the adequacy of the Nation's transportation system to meet the needs of American agriculture. The bill would require the Secretary to

--publish and widely distribute an initial report on the study results with the Secretary's recommendations within 180 days of the effective date of the act;

--announce and hold public hearings on the report within 45 days after publication;

--publish and widely distribute a summary of the testimony presented at the public hearings within 120 days after the report is published;

--within 420 days after enactment, publish a revised report containing recommendations for a railroad system adequate to meet the needs of American agriculture;

--review the revised report at least every 3 years, and make appropriate revisions;

--report to the Congress annually on the capability of all forms of transportation in this country to meet the needs of American agriculture and rural development; and

--to the extent permitted by law or regulation, participate as an advocate for an efficient and economical transportation system in the proceedings of any Federal agency that the Secretary determines will likely affect American agriculture or rural development.

GROWING CONCERN ABOUT ECONOMIC COSTS OF SOME REGULATORY OBJECTIVES

The public, the business community, the Congress, and the President have all expressed concern about the current state of regulation, especially about the continued appropriateness of some regulatory objectives and their alleged imposition of substantial economic costs on society.

In a report entitled "Government Regulatory Activity: Justification, Processes, Impacts, and Alternatives" (PAD-77-34, June 3, 1977), we (1) raised questions to be considered when regulatory agency activities are reviewed and (2) developed a structure for reviewing regulatory activities. We pointed out that regulation of the trucking industry is an example of regulation for the benefit of special groups and that ICC's regulation of motor freight is alleged to have induced inefficiency by producing excess trucking capacity. We concluded that a study which covered the basic justification for existing regulations, the benefits and costs caused by the regulations, and analyses of operational alternatives would require the commitment of substantial resources. We also concluded that a reform program adopted in response

to such a thorough review should yield benefits that are commensurate with its costs.

A bill, S. 600, which was introduced in the Senate in February 1977, would reorganize Federal regulatory agencies to (1) prevent excessive, duplicative, inflationary, and anticompetitive regulation and (2) make regulation more effective and responsive to public interest. The bill would require the President, over a period of 8 years, to submit at least once in each Congress a plan to prevent unnecessary or harmful regulation which, among other impacts, has led to inflationary consumer prices. Such a plan for food, consumer health, and safety regulations would have to be submitted no later than the end of April 1985. A plan for the transportation sector would have to be submitted no later than the end of April 1981.

In late May and early June 1977, the Subcommittee on Intergovernmental Relations of the Senate Committee on Governmental Affairs held hearings on S. 600 and subsequently referred the bill to the full committee. A majority of witnesses agreed with the bill's purposes. Witnesses included Representatives and Senators; private groups, such as Common Cause; and regulatory agency and other executive branch officials. As of August 1978 no further action had been taken on the bill.

In 1975 the Secretary of Agriculture in commenting on H.R. 11998, a bill which would have established a National Commission on Food Costs, Pricing and Marketing (a forerunner of S. 1223 discussed on p. 54), said that the bill should contain a requirement for the Commission to assess the impact on the efficiency of food marketing of existing local, State, and Federal laws and regulations. The Secretary added that although many of these regulations are intended to protect consumers and wage earners and to promote competition, in many cases they impede marketing efficiency and raise food prices, possibly without providing the protection originally intended.

NEED TO CONSIDER EFFECTS OF GOVERNMENT ACTIONS ON FOOD INDUSTRY COSTS

Certain actions now being discussed or formulated by the Congress and/or the executive branch would, if implemented, increase food industry costs. The increases probably would be passed on to the consumer in the form of higher retail prices. The chart on page 69 shows these actions; their anticipated effects on the industry; their intended benefits to society; and where available, their estimated costs if implemented nationwide.

Proposed Government Actions That Could Affect Food Costs

Action	Effect on food industry	Benefits to society	Estimated cost (note a)	Status at end of 1977
Mandatory nutritional labeling	Initial increase in labeling costs and more frequent label changes for processors of packaged food products	Provide consumers with information to prepare nutritionally well-balanced meals	Initial cost--0.4 percent of sales; annual cost--0.2 percent of sales	Food and Drug Administration already requires nutritional labeling on those products which contain added nutrients or for which nutritional claims are made in labeling or advertising
Drained weight labeling:				
Plan A (note b)	Increase in costs to processors due to additional production steps	Consumers would be advised of product weight minus liquid in the can	$100 million annually	Under consideration by FDA
Plan B (note c)	Increase in costs to processors due to additional production steps	Consumers would be advised of product weight minus liquid in the can	$10 million annually	Under consideration by FDA
Percentage of characterizing ingredient labeling	Purchase of additional machinery by processors	Provide consumers with a method of comparison shopping	Not yet estimated	FDA now requires some foods to be so labeled; bills now before the Congress would increase the number of foods to be so labeled
Mandatory unit pricing	Increase in retailers' costs for labor, equipment, and supplies	Provide consumers with a method of comparison shopping	0.17 percent of grocery sales	Currently voluntary but a mandatory program is being considered by the Congress
Mandatory open dating	Increase processors' costs by more frequent return of products superseded by fresher products	Provide consumers with a method to determine product freshness	Not yet estimated	Voluntary program frequently used on processed meats, poultry, dairy, and bakery products
More stringent noise pollution standards	Increase in food processing industry's capital costs needed to decrease noise levels	Less damage to food industry workers' hearing	$1.7 billion to decrease allowable noise level from 90 decibels to 85 decibels	Under consideration by the Occupational Safety and Health Administration
More stringent water pollution standards	Increase in food processing industry's costs needed to meet and maintain compliance with these standards	Cleaner water	$100 billion for all U.S. industries for a 10-year period ending 1985; no separate estimate for food industry available	Standards to be fully implemented by 1983

a/The sources of the estimates are identified on the following pages.

b/Plan A would require the processor to determine the product weight after can had rested for 30 days and liquid had been drained.

c/Plan B would require canning industry to weigh the products before they are canned.

Whether the benefits of such actions to society outweigh their costs is a policy matter for consideration by the Congress and the President. Before implementing such regulatory actions, however, their effects on food prices should be considered along with anticipated benefits, such as consumer protection or education, environmental upgrading, and a higher level of worker health and safety, to help ensure that benefits will be commensurate with the costs.

Nutritional labeling

On the basis of certain studies 1/ which addressed some basic questions about consumers' interest in nutritional labeling and their ability to understand and use it, a nutritional labeling program was developed by FDA and implemented in 1973 to provide sufficient information for consumers to prepare nutritionally well-balanced meals. The food industry worked with FDA in designing the program. Compliance with this program is voluntary, except for those products (1) which are fortified--one or more nutrients added that were not present or were present in small amounts in the food before processing--or (2) for which nutritional claims are made in labeling and advertising. The number of food products that have nutritional labels as a result of FDA's program is not known. Some Federal officials and others have suggested, and some bills have been introduced in the Congress to require, mandatory nutritional labeling on all or most food products.

The label of a product included in FDA's program must show the percentages of those nutrients contained in the product which are needed to maintain a good nutritional diet for most healthy Americans as based on recommended daily allowances established by the National Academy of Sciences-National Research Council. This organization has stated that eight nutrients--protein, vitamin A, vitamin C, thiamine, riboflavin, niacin, calcium, and iron--should be a daily part of a person's diet.

1/These studies included (1) Raymond C. Stokes and Rafael Haddock, "Interim Report of the First Two Phases of the Consumer Research Institute/FDA Nutritional Labeling Research Program," Aug. 1972; R.J. Lenahan, J.A. Thomas, D.A. Taylor, D.L. Call, and D.I. Padberg, "Consumer Reactions to Nutrition Information on Food Product Labels," Search Agriculture, 1972, vol. 2, no. 15; and "National Cooperative Nutrition Survey," conducted by National Cooperatives, Inc., in 1971.

Some consumers apparently would be willing to pay a little more for their food if the nutritional labeling program were expanded. For example, in 1976 the published results of a Gallup poll stated that about one-half of the women interviewed supported an expanded nutritional labeling program even though it was mentioned that such a program could add 3 cents an item to their food costs. The additional consumer food costs were not based on the results of a study but were used so that the interviewees would have to balance the additional costs involved with the benefit of an expanded program when making their decision.

In 1975 the Grocery Manufacturers of America, a food industry trade association, asked various companies to supply it with cost estimates to start and maintain a nutritional labeling program. These companies had already adopted nutritional labeling or were planning to do so. On the basis of their replies, the association estimated that it would cost 0.4 percent per dollar of retail sales to start the program and about 0.2 percent of retail sales to maintain it. In November 1975 the Federal Trade Commission proposed regulations under which various types of nutritional information must be presented if the food being advertised is claimed to be nutritious, wholesome, nourishing, or providing energy or if advertisements make comparative nutritional claims. No final action on these proposals had been taken as of June 1978.

Our report entitled "Food Labeling: Goals, Shortcomings, and Proposed Changes" (MWD-75-19, Jan. 29, 1975) included the results of a survey of officials from various consumer groups. Officials of all these groups stated that nutritional labeling is necessary, but opinions varied on whether it should be mandatory or voluntary. Of those officials who stated that a voluntary program was best, some said that they believed that the pressure of the marketplace would force processors to show nutritional labeling because the products that do would have a competitive advantage. Officials supporting both voluntary and mandatory nutritional labeling agreed that there is a need to educate the public on the meaning and use of the nutritional information.

Two bills introduced during the 95th Congress would require nutritional labeling of all foods. H.R. 42 was introduced in the 1st session; S. 3117, in the 2d session. As of August 1978 no action had been taken on either bill.

Drained weight labeling

FDA is considering two drained weight labeling plans for fruits and vegetables, both of which would require the

canning industry to list on each can the weight of the food in the can. This weight would be different from the net weight shown because the weight of the liquid in the can would not be included.

One plan would require the food's weight to be determined after sample cans had rested for 30 days and the liquid had been drained. Canners have opposed this plan, asserting that it would be too costly and wasteful. They said it would cause millions of cans to be opened and their contents thrown away each year in making the desired weight determinations. FDA has estimated that this plan would cost consumers about $100 million a year.

The other plan would require that the canning industry determine the weight of the fruits and vegetables before the liquid is added and the product is canned. FDA has estimated that this plan would cost consumers about $10 million annually.

The adoption of either plan would help consumers determine the weight of the actual food product in the can. Some advocates indicate that drained weight labeling is necessary in conjunction with unit pricing in order to determine which brand is the best buy.

In 1977, at the recommendation of the National Canners Association, a number of fruit and vegetable canners announced that they would begin a voluntary "solid content" labeling program. The solid content weight--the weight of the solid product placed in the can during filling--will be shown on the label along with the net weight. Such labels were expected to be on the retailers' shelves within 1 year. At least one major food processor has included solid content weights on some of its products sold in retail stores.

FDA officials said that they would determine the success of the National Canner Association's program by the number of participating canners and the canners' willingness to share information on the results of their program with FDA.

Characterizing ingredient labeling

Most food labels list ingredients in order of predominance but do not show the amount or percentage of characterizing ingredients, such as the amount of beef in beef stew or apples in apple pie. The amount of the characterizing ingredient could have a material bearing on the price or consumer acceptance of a product.

Significant differences can exist, however, among two competing products. For example, in our January 1975 food

labeling report (see p. 71), we reported the results of a comparison of various brands of 12 meat and poultry products and 9 fruit and vegetable products which showed that the amount of (1) poultry in canned poultry soup differed by 143 percent, (2) poultry in poultry chow mein differed by 125 percent, and (3) apples in frozen apple pie differed by 38 percent. The other products had smaller differences, although six additional products had more than a 12-percent difference in the amount of characterizing ingredients.

Before 1973 FDA regulations required only that most food labels list ingredients in order of predominance. In March 1973 FDA established regulations (21 C.F.R. 102) to require percentage of characterizing ingredient labeling for products where it would have a material bearing on price or consumer acceptability or where such information may prevent deception.

In answer to a recommendation in our food labeling report, the Secretary of Health, Education, and Welfare said FDA would promulgate or consider promulgating regulations to require the percentage of characterizing ingredient labeling when (1) a food contains less characterizing ingredient than is usually expected, (2) the product's name implies that it contains more of an ingredient than it actually does, or (3) a product is a substitute for other foods but contains less of the characterizing ingredient than the foods for which it substitutes. In a December 1977 staff study, 1/ we reported that labels of most products of the types mentioned above still did not show the percentage of characterizing ingredients.

Our research for this report did not disclose any estimate of the food industry's additional cost if percentage of characterizing ingredient labeling was required on many food products. Industry officials said that such a requirement would increase costs because more stringent controls would be needed to insure consistency between the product and the label. They contend that the packaging machinery for most products would not insure an accurate percentage of ingredients and that costly upgrading or replacement of equipment would be needed to achieve accuracy and consistency. Some industry officials said that this problem could be resolved if the percentages were based on recipes rather than on the finished product.

1/"National Nutrition Issues," CED-78-7, Dec. 8, 1977, p. 34.

Various bills introduced in the 95th Congress would expand the number of foods requiring percentage of characterizing ingredient labeling. These include House bills 42 and 327 in the 1st session and Senate bill 3117 in the 2d session. As of August 1978 no action had been taken on any of these bills.

Mandatory unit pricing

Unit pricing is intended to provide consumers with a method of comparison shopping. Tags showing the price per unit of measure (such as cents per ounce, pound, or quart) are affixed to either the grocery shelf or the food package. Unit pricing, now a voluntary program, has been widely implemented in certain areas. Some bills introduced in the 95th Congress (House bills 71, 514, and 4590) would make unit pricing mandatory for retail food stores whose annual gross sales exceed $250,000. As of August 1978 no action had been taken on these bills.

Many consumers appear to get the most for their food expenditures when unit pricing is available to them. For example, a study 1/ published in 1973 of consumer behavior in a simulated supermarket shopping situation showed that the average percentage of correct choices was not only higher when unit pricing was provided but the average shopping time was significantly less.

The April 1977 issue of Progressive Grocer, a trade magazine, indicated that by the end of 1976, 66 percent of the chain supermarkets (operators of 11 or more stores) and 40 percent of the independent supermarkets (operators of 10 or less stores, including country, general, and delicatessen stores) had converted to a unit pricing system. The magazine pointed out that the growth rate of unit pricing in retail stores had slowed but nevertheless could be considered a fixture in the retail trade.

1/Robert D. Gatewood and Robert Perloff, "An Experimental Investigation of Three Methods of Providing Weight and Price Information to Consumers," Journal of Applied Psychology, vol. 57, no. 11 (1973), pp. 81-85.

A study 1/ of the costs of unit pricing programs has estimated the annual cost of providing unit pricing to be as much as 0.17 percent of grocery sales for an average supermarket. Although these additional costs would apparently be passed on to the consumers in the form of higher grocery prices, consumers could offset these costs by using unit pricing to select lower unit cost purchases.

In our January 1975 food labeling report (see p. 71), we recommended that the Congress amend the Fair Packaging and Labeling Act (15 U.S.C. 1451) to establish a unit pricing program, including guidelines for the design and maintenance of unit pricing information and the education of consumers about its use and benefits.

Mandatory open dating for all products

Open dating is intended to provide consumers with a means to readily identify food product freshness, especially for perishable and semiperishable foods. Food manufacturers for years have dated their products to provide themselves an inventory control and to aid retailers in controlling the rotation of stock on their shelves. This information, however, was usually in codes which consumers could not readily decipher.

USDA developed a voluntary program for dating processed meats and poultry which went into effect in December 1974. Packers deciding to use this practice must comply with the guidelines in USDA regulations. The regulations simply require that when an open calendar date is shown on a product, it must be clearly designated as a "packing," "sell by," or "use by" date. Open dating is also widely used on virtually all bakery and dairy products and on grocery products which are considered perishable or semiperishable.

Several methods of open dating are in use, including

--a pull date, the last day on which the retailer should sell the product as fresh;

--a use by date, the date by which the product should be consumed;

1/T. David McCullough and Daniel I. Padberg, "Unit Pricing in Supermarkets: Alternatives, Costs, and Consumer Reaction," Search Agriculture, Cornell University, Ithaca, New York, vol. 1, no. 6 (Jan. 1971). Study financed by Consumer Research Institute, Inc.

--a quality assurance date, the last date the process feels that the product freshness is at peak quality and

--a pack date, the date the product was canned or packed.

In our 1975 food labeling report (see p. 71), we recommended that the Congress eliminate consumer confusion and facilitate consumer value comparisons by amending the Federal Food, Drug, and Cosmetic Act (21 U.S.C. 301) to establish a uniform open dating system for perishable and semiperishable foods.

There was disagreement among the industry officials we interviewed about the preferred method of open dating. An official told us that the pack date method is preferred because such factors as temperature and humidity can increase or reduce a "sell by" or "use by" date by as much as 50 percent. Further, an official of a firm which processes cookies and crackers believes that a "pull" or "use by" date would lead customers to always select the freshest product even though other packages have pull dates which are within the company's estimated 6-month shelf life for the product. Thus, product returns would be increased.

Some officials we interviewed said that mandatory open dating would increase costs--return allowances and return transportation. The cookie/cracker firm mentioned above, for example, estimated that open dating would increase its annual costs by $50,000 to $100,000. However, we are not aware of a nationwide or industrywide estimate of increased costs due to an open dating system for perishable and semiperishable foods.

More stringent environmental and worker safety standards will appreciably increase costs

The Environmental Protection Agency has developed certain standards for air and water pollution which must be met at progressive levels by specified times. For example, industry was required to achieve by July 1, 1977, effluent limitations 1/

1/Effluent limitations are restrictions established by a State or the EPA Administrator on quantities, rates, and concentrations of chemical, physical, biological, and other constituents discharged from point sources.

for point sources 2/ by applying the best practicable control technology available, as defined by the EPA Administrator, or any more stringent limitations necessary to meet water quality standards.

The Council on Environmental Quality's 1977 annual report stated that 3,400 of the Nation's 4,000 major industrial dischargers complied with the July 1, 1977, deadline. EPA has granted the other 600 industrial dischargers a 21-month extension to meet the standards. Industry will also have to achieve additional requirements to meet national water quality goals.

In 1977 the Council on Environmental Quality estimated that private industry would spend, between the beginning of 1976 and the end of 1985, $100 billion for necessary capital investment and for operation and maintenance to meet the standards. Most would be for water pollution abatement; about $37 billion would be spent for air pollution abatement. In 1976 the Council estimated that the food industry spent $165 million for air and water pollution abatement.

The Occupational Safety and Health Administration is responsible for improving worker health and safety. One of OSHA's responsibilities is to set mandatory standards for job safety and health for employees of all businesses which are not covered by specific Federal legislation, such as the Coal Mine Health and Safety Act. Actions taken to meet the OSHA standard for noise levels in the work area (29 C.F.R. 1910.95) have been costly to American businesses and could become more costly if more stringent noise level standards, now being considered by OSHA, go into effect. The maximum noise level permissible differs depending on the duration of time the employee is subjected to the noise. The maximum noise level for an 8-hour day is 90 decibels. A consultant study done for OSHA estimated food industry costs of $575 million to meet the 90-decibel standard.

The National Institute for Occupational Safety and Health, an OSHA research arm, has recommended, and OSHA is considering lowering the maximum noise level for an 8-hour day to 85 decibels. The Institute's research report estimated that meeting an 85-decibel standard would cost the food industry $1.7 billion.

2/Point sources are any discernible, confined, and discrete conveyance from which pollutants are or may be discharged.

INCREASED EFFICIENCIES COULD REDUCE FOOD MARKETING COSTS

In an industry as large and complex as the food marketing industry, there are various opportunities to improve efficiency and thus lower costs. Three such opportunities are to (1) increase the use of computerized checkout systems at retail outlets, (2) reduce food loss, and (3) move toward more standardization and modularization of food packaging and shipping containers.

In each of these areas, the Federal Government has played or can play a role, as follows.

--Several bills have been introduced in the 95th Congress (House bills 71, 902, 514, 4279, 4280, 4281, and 4590) which would make it mandatory to affix a price on each item regardless of the retail checkout system used. Such a requirement would, by industry estimates, decrease the savings of computerized checkout systems by 23 percent. As of August 1978 no action had been taken on these bills.

--USDA research programs have demonstrated that certain technically and economically feasible procedures will help reduce food losses. Some of these procedures have not been widely implemented in the industry, in part because USDA has not adequately disseminated information on them. USDA research efforts in the food loss area should also be increased

--A successful program to standardize and modularize food packaging and shipping containers requires coordinated action by various levels of the food industry. Many food industry officials are reluctant to cooperate with each other because of possible Federal antitrust action.

Because high priority should be given to providing food at reasonable prices, the Federal Government should carefully consider how it can best help the food industry in attempts to increase efficiency. Such possible actions are discussed in the following sections.

Increased use of computerized checkout systems would decrease retailers' operating costs

A computerized checkout system utilizes an optical scanner, an electronic keyboard terminal, and an in-store computer to help perform checkout functions as well as certain inventory control functions. The use of a computerized checkout

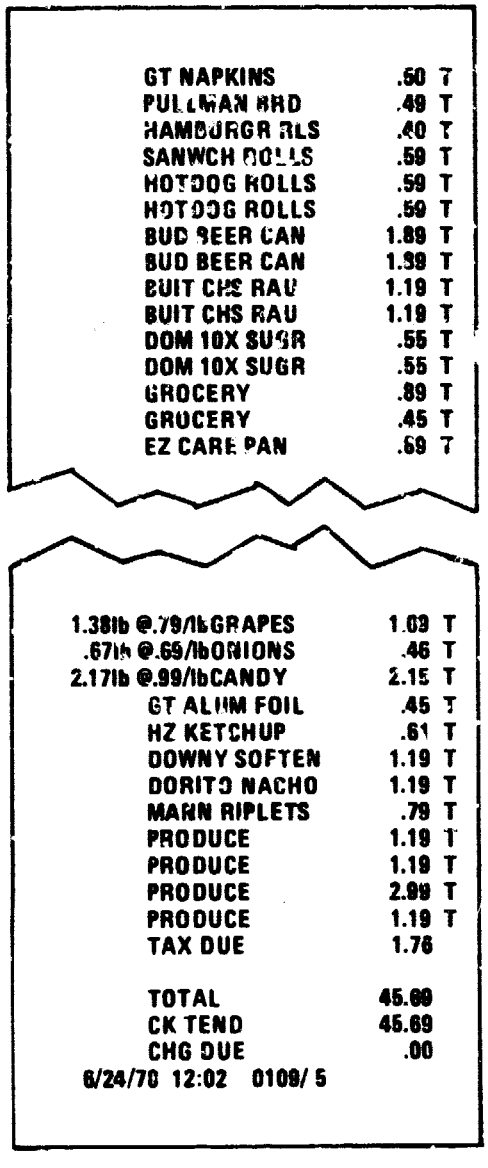
system was made possible by the adoption of the Universal Product Code (UPC). UPC is a coding system used by most food manufacturers to provide each individual product with its own unique identification number. The UPC allows retailers to program computers to translate patterns of lines on product labels into prices. Items at the checkout counter pass by an electronic scanner which reads the code and automatically rings up the programed price on the cash register. Manufacturers accounting for at least 70 percent of total retail food sales have included the UPC patterned lines on their product labels. As of March 1978, however, only 226 stores nationwide had computerized checkout systems, according to a retail trade organization.

During a 1974 symposium on UPC before the Consumer Subcommittee, Senate Committee on Commerce, a consultant firm estimated that if 7,800 food retail stores implemented the computerized checkout system and 75 percent of the products were UPC coded, the stores would realize net savings of $149 million annually. Industry representatives at the symposium were hesitant to translate what part, if any, of these annual savings would be passed on to the consumer in the form of lower food prices. They said that the system would increase productivity in the distribution process and at least reduce the upward pressure on food prices. They admitted that because of increases in other cost factors which also determine retail prices, implementation of UPC did not necessarily mean a decrease in food prices.

One aspect of the system that has been the subject of considerable dispute is the elimination of item pricing. Retailers believe that with shelf pricing and detailed checkout tapes similar to the one shown on page 80, there is no need to stamp the price on individual cans or packages. Many consumer groups, however, believe that individual item pricing should continue. These groups believe that this will (1) allow the consumer to visually cross-check the price shown on the register with the item price and (2) discourage any lag period between changing of prices in the computer and on the shelf. Food industry spokesmen have stated that continuing to price mark each item will decrease the systems' savings by about 23 percent.

A 1971 preliminary study made jointly by USDA's Agricultural Research Service (ARS) and the Indiana State University indicated that a computerized checkout system which included an optical scanner to read the product identification code could reduce operating costs by 5.5 percent. The savings estimate was based on a laboratory evaluation that assumed a representative supermarket with annual sales of $4 million.

EXAMPLE OF DETAILED CHECKOUT TAPE



GT NAPKINS	.50 T
PULLMAN RRD	.49 T
HAMBURGR RLS	.40 T
SANWCH ROLLS	.59 T
HOTDOG ROLLS	.59 T
HOTDOG ROLLS	.59 T
BUD BEER CAN	1.89 T
BUD BEER CAN	1.39 T
BUIT CHS RAU	1.19 T
BUIT CHS RAU	1.19 T
DOM 10X SUGR	.55 T
DOM 10X SUGR	.55 T
GROCERY	.89 T
GROCERY	.45 T
EZ CARE PAN	.69 T
1.38lb @.79/lbGRAPES	1.09 T
.67lb @.69/lbONIONS	.46 T
2.17lb @.99/lbCANDY	2.15 T
GT ALUM FOIL	.45 T
HZ KETCHUP	.61 T
DOWNY SOFTEN	1.19 T
DORITO NACHO	1.19 T
MARN RIPLETS	.79 T
PRODUCE	1.19 T
PRODUCE	1.19 T
PRODUCE	2.99 T
PRODUCE	1.19 T
TAX DUE	1.76
TOTAL	45.69
CK TEND	45.69
CHG DUE	.00

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LEGEND:

1.38lb = QUANTITY PURCHASED

@.79/lb = PRICE PER POUND

GRAPES = ITEM PURCHASED

1.09 T = TOTAL ITEM PRICE

Industrywide savings were estimated at from 1.2 percent to 1.5 percent of retail sales.

The study report said that once manufacturers place the code on the grocery item, the need for price marking and repricing by those stores using a computerized checkout system could be eliminated. The study report added, however, that provision would have to be made to promote customer acceptance and confidence in shelf pricing rather than individual item pricing. Customer confidence could be developed by (1) providing display cards with accurate price information, (2) pricing as well as coding each item for a period of time after initial implementation, and (3) providing customers with product price information scanners at various strategic aisle locations throughout the stores. These aisle scanners would be on line to the computer. The shopper would place the item up to the scanner and product information, including the price, would appear on the display.

By March 1978 six States--Connecticut, Massachusetts, Rhode Island, New York, Michigan, and California--had passed laws requiring item pricing. Also, several bills introduced in the 95th Congress (see p. 74) would amend the Fair Packaging and Labeling Act (15 U.S.C. 1453) to require that a retailer affix the total selling price to a product by means of a stamp, tag, or label before selling the product or offering or displaying it for sale. All of these bills have been referred to a Subcommittee of the House Committee on Interstate and Foreign Commerce, which as of August 1978, had taken no action on them.

Because computerized checkout systems apparently will provide net savings to the food industry regardless of whether item pricing is retained, the industry should be encouraged to implement such systems in as many stores as possible. It remains to be seen whether these savings will be used to decrease food prices, lessen future food price increases, increase the retail industry's profits, or be invested in store improvements or food industry research.

Minimizing food loss would increase food supply and decrease costs

In our report entitled "Food Waste: An Opportunity to Improve Resource Use" (CED-77-118, Sept. 16, 1977), we said that (1) although comprehensive systemwide data on U.S. food loss was lacking, such loss had been estimated to be of considerable magnitude and (2) food loss carries a price tag, which is paid largely by the consumer. In commenting on the report, USDA agreed that food loss was an important area and one that merited more attention in the context of today's problems.

USDA said that current estimates of waste, both in quantity and value, were based on very limited information and agreed with our recommendation that it undertake a comprehensive study of both the magnitude and causes of food loss.

We said that in preparing the report we had not found any material indicating that business was knowingly overlooking opportunities to conserve food at an acceptable cost--a cost equal to or less than the value of the saved food. However, we added that some methods that ARS indicated were technically and economically feasible to reduce food losses had not been widely implemented. ARS provided the following examples.

--A new method of transportation refrigeration allows for a flow of refrigerated air, which substantially reduces transportation food losses caused by inadequate refrigeration and permits heavier loading. Losses could be reduced by 50 percent to 100 percent under the new method. In 1975 perishable food loss claims paid by American railroads were about $32 million, of which two-thirds were directly related to inadequate refrigeration.

--Several studies have shown that improved sanitation and temperature control at the retail level for fresh meats and produce could save between $157 million and $500 million annually in retail meat sales and in addition decrease by 52 to 104 tons at each supermarket the amount of fresh produce thrown away annually.

--A method to reduce loss of peaches from decay and deterioration during transportation and marketing by precooling, waxing, and treating the peaches with fungicides could save $15 million annually.

--A method of using light transmission to sort apples would eliminate crates of apples being sold at a discount simply because the crates contained apples of mixed maturity. If this method were nationally implemented, the uniform maturity of the apples in a crate would reduce retail apple spoilage loss, which now ranges from about 1 percent to 5 percent of the apples crated.

According to ARS, one of the many factors that contributed to the limited use being made of these methods was a lack of adequate demonstration, education, and training needed to inform industry as to the practicality and potential savings of research findings. According to several ARS officials, ARS was not active in demonstrating its research results

due to a lack of funds, the high cost of demonstrating some research on a commercial scale, and a consideration that its emphasis was not on promoting research results. One ARS researcher said that, without demonstrations and if ARS relied on industry to take the lead, implementation of loss-reducing research could take 10 or 20 years.

The comprehensive study of both the magnitude and causes of food loss recommended in our September 1977 food waste report could include determining (1) the economies involved in increasing efforts to disseminate by commercial demonstration and other means the results of successful research to reduce food losses and (2) if and in what area(s) additional research in food loss prevention might be warranted.

Standardization of containers used by the food industry would decrease costs

Food is packaged in containers of various shapes and sizes. These in turn are generally placed inside large secondary containers designed to fit the packages they contain with as little empty space as possible. These secondary containers are then shipped to a wholesaler or retailer warehouse. At the warehouse different secondary container sizes must be mixed to prepare shipments to individual food stores. The variety of these container sizes in the mix inhibits productivity growth and forestalls technological improvements because they require additional steps in warehouse handling and make it difficult to develop fully automated handling equipment.

In a report entitled "Redesigning Shipping Containers to Reduce Food Costs" (CED-78-81, Apr. 28, 1978), we said that an opportunity exists to increase efficiency in the food marketing system by substantially reducing the number of different size containers and selecting sizes in geometric proportion to each other. The process of converting to geometrically proportioned containers is called modularization. The following indicates the magnitude of the number of shipping containers currently in use.

--A consulting firm counted 2,587 different shipping containers in the dry goods section of a warehouse that stocked 5,000 items.

--A study team for the National Association of Food Chains identified 547 different types and sizes of containers for shipping fresh fruits and vegetables. The study covered 49 commodities.

--ARS determined that 69 different container sizes were used for 42 beef and pork products.

In 1974 the National Association of Food Chains asked a consultant to study the benefits and implications of a modularized system of containers in U.S. food distribution. The consultant projected a range of savings attributable to modularization in each of four different types of warehouses, as follows.

Type of warehouse	Estimated savings for each 100 cases shipped
Manual (pallets)	$1.73 ± 0.68
Manual (tow trucks)	.35 ± .12
Mechanized (pallets)	2.22 ± .94
Automated (carts)	.48 ± .21

As the table indicates, the range of savings in the two warehouses using pallets are higher than the savings in the warehouses using tow trucks or carts.

In 1972 the National Commission on Productivity estimated that 15 billion cases a year were handled by warehouses. Assuming that the 15 billion cases were distributed equally among the four types of warehouses and using the simple average--$1.19--of the midpoint amounts shown in the table, the savings on 15 billion cases would amount to about $178.5 million. Because there are other types of warehouses and because the mix of the types of warehouse actually in operation and the number of cases handled by each is unknown, it is not possible to further refine the industrywide savings of modularization.

It is expected that food manufacturers would bear the brunt of the cost to implement a modularized system of secondary containers. This added cost would probably be passed through the marketing system to the consumer. These manufacturers see the direct costs outweighing benefits, or see no benefits at all. On the other hand, wholesalers and retailers would incur little cost and receive most of the benefits. Many wholesalers and retailers believe that this inequitable benefit/cost relationship has caused manufacturers to be the primary obstacle to modularization in the food industry. Food manufacturers also believe that the food industry's growth has been predicated on product diversification and that modularization would tend to produce "sameness" rather than continued product diversification.

In 1972 the National Commission on Productivity concluded that a principal cause of the limited progress toward modularization was the fear on the part of food industry officials of possible Federal antitrust action if the food industry attempted to meet jointly to devise a modularized system. A consultant for the National Science Foundation agreed. The consultant concluded in a 1974 study that a great amount of cooperation would be necessary from all segments of the industry to implement a modularized system and that food industry officials were hesitant to cooperate with each other because of possible antitrust implications.

A wholesaler/retailer representative told us that several food industry committees had been formed in the past to study modularization but that efforts were terminated each time because of the antitrust risk. Despite the concern about antitrust action, apparently no one in the food industry had discussed antitrust implications with the Department of Justice and/or FTC.

Department of Justice and FTC representatives have indicated that a move toward modularization by all segments of the food industry would not be automatically viewed as having antitrust implications. A key factor in the Federal agencies' determinations of antitrust activity would be the potential effect of the standard once it is promulgated. In fact both the Justice Department and FTC have offered guideposts to be followed when promulgating standardmaking procedures to avoid antitrust implications.

The Justice Department's views on the contention that the fear of violating antitrust laws poses a major obstacle to effective private standardmaking activity were summed up in a Justice official's speech to the American National Standards Institute. The official said:

> "I must confess a certain inability to comprehend the contention. How precisely does antitrust doctrine deter desirable private standardmaking activity? * * * In fact, I am forced to conclude that such contentions are either based upon a misconception of antitrust law and theory or represent an attempt by certain industries to use antitrust as an excuse for inaction dictated by private economic considerations."

CONCLUSIONS

At what rate will food prices rise in the future? Answering this question definitively is obviously difficult because of the unpredictability of so many key variables--inflation, weather, disease, technology, and Government

policies and programs. Some of these variables are largely uncontrollable, and all will continue to present problems. However, improvements, where warranted, in the Government and food industry roles in the food marketing system appear to offer some hope for holding food prices in check.

An important Federal role in the food system deals with regulatory programs. Many have expressed concern about the current state of regulation. One possible improvement in Federal regulations affecting the food industry would be to relax or modify certain ICC regulations which cause many truckers to drive many miles with empty trucks. This constitutes an inefficient use of their equipment, fuel, and labor resources. The additional cost of these inefficiencies is included in the prices consumers pay for food. Adoption of the recommendation in our July 8, 1977, report (see pp. 64 and 65) could help decrease energy use and lower transportation costs for intercorporate hauling.

Several Federal actions now being discussed or formulated would enhance or increase consumer information and protection, worker safety, and environmental protection. At the same time, however, they can be expected to increase food industry costs. These actions include nutritional labeling, drained weight labeling, percent of characterizing ingredient labeling, mandatory unit pricing, mandatory open dating, and more stringent noise and water pollution standards. In a previous report we recommended that the Congress establish a unit pricing program (see p. 75) and a uniform open dating system for perishable foods (see p. 76). In considering these and other such actions, especially during times of rising food prices, the Congress and the executive branch need to place special emphasis on the possibility that the proposed action may increase food prices.

The food industry also needs to take advantage of opportunities to decrease food costs and increase food marketing efficiency. Some potential opportunities are (1) expanding the use of computerized checkout systems at retail stores, (2) reducing food loss, and (3) moving toward greater standardization of primary and secondary containers used to package and transport food.

The Federal Government should assist the industry in implementing these improvements by (1) better disseminating the results of successful food loss reduction research, (2) encouraging industry efforts to standardize containers and giving additional guidance so that industry can avoid violating antitrust laws, and (3) making sure that any actions taken to protect consumer interests do not unnecessarily impede the greater use of computerized checkout systems.

Although these improvements, if implemented, would decrease industry costs, the amount of the savings which would be passed on to the consumer, if any, cannot be estimated.

RECOMMENDATIONS TO THE SECRETARIES OF AGRICULTURE AND TRANSPORTATION AND THE CHAIRMAN, INTERSTATE COMMERCE COMMISSION

We recommend that to assist in lowering food transportation costs, the Secretaries of Agriculture and Transportation and the ICC Chairman direct their respective staffs to initiate and coordinate an indepth study of exempt agricultural haulers, including, but not limited to (1) their number, (2) to what extent and why they travel empty, (3) the estimated cost of traveling empty, and (4) possible ways to reduce miles traveled empty. If the study results indicate that the economy of the exempt hauler needs immediate attention, the Secretaries and the Chairman should develop proposed legislation to modify existing regulations.

We also recommend that the Secretary of Transportation and the Chairman of ICC provide for a study of the projected effect of authorizing intercorporate hauling to (1) determine the benefits to industry, (2) estimate the possible effect on consumer prices, and (3) compare the possible adverse effect on regulated carriers and the benefits to private haulers.

RECOMMENDATION TO THE DIRECTOR, OMB

We recommend that the Director, OMB, implement and oversee a coordinated Federal effort to assist the food industry in implementing those efficiency-increasing actions discussed in this report.

AGENCY COMMENTS AND OUR EVALUATION

In its comments (see app. IV), USDA said that the cost-increasing effects of transportation regulations had been of concern to USDA for years, and that because more knowledge on some aspects of the problem was needed, it substantially agreed with our observations and conclusions on this subject. USDA said it would initiate discussions with the Department of Transportation and ICC about needed research potentials and resources available for this task.

In its comments (see app. V), ICC said that it (1) strongly supported our recommendations on performing indepth studies to assess the impact of and potential alternatives to existing regulations on exempt carriers and intercorporate hauling and (2) would be happy to cooperate with USDA and the Department of Transportation in accomplishing these studies. ICC

believes that the accomplishment of such studies would benefit it in reaching future decisions.

In its comments (see app. VI), Transportation expressed agreement with our observations and conclusions concerning transportation regulations and said it stands ready to work with us and other Federal agencies to formulate constructive solutions to the problems discussed.

Transportation stated, however, that a key regulatory issue not addressed in our report was whether an agricultural commodity exemption of some type should be extended to the railroad industry. It said that the most meaningful analysis of existing regulatory problems for exempt and private carriers would involve an attempt to assess the impacts of various reform possibilities on competing sectors of the motor carrier and railroad industries. Although we did not address this issue in our review, we agree that including the issue in an analysis of existing regulatory problems would be appropriate.

OMB did not provide us with written comments before our report was finalized. However, its draft comments, which were read to us over the telephone, indicated that OMB favors revision of transportation regulations and is working toward that end.

USDA agreed that, in addition to transportation regulations, new technology and current or proposed product regulations were high potential areas for investigation as a means of reducing the magnitude of future food price increases. It said, however, that there was no good rationale to suggest that net weight labeling and other techniques designed to enhance the consumer decision process would materially increase food prices. It added that requiring firms to provide more information about costs per unit may enhance price competition for some products and result in lower prices.

Our discussion of these proposed actions was included to emphasize that, before implementing such regulatory actions, their effect on food prices should be considered along with anticipated benefits. As we stated on page 69, the question of whether the benefits of such actions to society outweigh their costs is a policy matter for consideration by the Congress and the President.

Concerning the implementation of efficiency-increasing actions discussed in this report, USDA agreed that the industry-wide adoption of certain technical innovations would likely reduce marketing costs. It said that it had supported research

on technology development and adoption for years, but that it has become more difficult over time to obtain public funds to do such research.

USDA added that certain problems exist which affect the adoption of new technology. These problems include the

--need for industry to fully depreciate its present capital investments plus the fixed costs of new equipment;

--need for the industry rather than individual firms to adopt new technology such as standardization and modularization; and

--possibility that only large firms may be able to adopt the new technology, thus causing a further concentration of market power.

We agree that industry and the Government need to consider and solve these problems. However, as we state in this chapter (1) a consulting firm and a joint study made by ARS and a university concluded that a computerized checkout system would decrease retailing operating costs and result in a net savings, (2) ARS told us that certain technically feasible methods to reduce food loss which had not been widely implemented were also economically feasible, and (3) a study done by a consultant for the National Association of Food Chains estimated that the adoption of container standardization would result in a savings to the wholesaling industry.

Because these technological changes apparently could result in net savings, both industry and Government should give a high priority to identifying and solving all problems hindering their implementation.

CHAPTER 5

USDA FOOD PRICE STATISTICS: DO THEY REALLY TELL US WHAT WE PAY FOR FOOD?

Food price statistics published by USDA have been widely used as indicators of the performance of the food production and marketing industries and of consumer spending for food. Although these statistics, some of which have been recently discontinued, are considered to be the best available information on these subjects, several problems related to their collection, analysis, and presentation have limited their reliability and usefulness. Nevertheless, USDA has not adequately cautioned those who use the statistics about their limitations.

INTEREST IN FOOD PRICE STATISTICS

Food price statistics have long been of interest to farmers, consumers, industry, the Congress, and the executive branch. Consumers are concerned with the rate at which food prices increase. Farmers believe the prices they receive for their products are too low when compared with their production costs. Both farmers and consumers frequently voice concern about the difference between the farm price and the price consumers must pay and about the failure of food prices to decline when farm prices fall.

In 1862 the Congress created the Department of Agriculture to acquire and publicize useful information on agricultural subjects. Since then the Congress has often shown its concern about agricultural commodity and retail prices. In 1921, for example, the Congress created the Joint Commission of Agricultural Inquiry to investigate, among other subjects, the reason for the difference between the prices producers were paid for agricultural products and their ultimate cost to the consumer. In 1946 the Congress directed USDA to increase the attention paid to measuring and analyzing this difference in prices. Subsequently, the Congress has funded USDA attempts to derive and study the magnitude of the difference between the farmers' price and the retail price.

Also, the Congress established the National Commission on Food Marketing in 1964 to study and appraise the changes taking place in the food industry. This bipartisan commission, which consisted of five Senators, five Representatives, and five public members, operated until July 1, 1966, when its authorizing legislation expired. Currently, there is a bill before the Congress which would authorize a similar study.

In response to the interest in food price information, USDA publishes several food price statistics. During the period covered by our review, these included:

--The farm value-retail price spread: the difference between the price paid for a food product by consumers and the payment farmers received for an equivalent quantity of the farm product. The spread represents an estimate of the food marketing cost--the total amount received by marketing firms for assembling, processing, transporting, wholesaling, and retailing the product.

--The percentage of disposable income spent for food: the overall percentage of consumers' income available for spending that is spent for food.

--The retail cost of the market basket: a measure of changes in the retail price over a period of years for a fixed basket of U.S. farm-originated foods bought in chain, large independent, and small retail food stores.

--The marketing bill: an estimate of the total charges for marketing all domestic farm-originated foods bought by U.S. civilian consumers, including foods consumed away from home.

FARM VALUE-RETAIL PRICE SPREAD

Through June 1978 USDA's Economic Research Service periodically computed a farm value-retail price spread that measured changes in food marketing costs for the 64 foods 1/ contained in the market basket. It published spread data for 47 of these foods at least quarterly; spread data for 11 of the 47 foods was also published monthly. An ERS official told us that ERS did not publish spread data for the 17 remaining foods primarily because the data on their farm values was not considered reliable enough to use in the aggregate market basket computations.

After June 1978 USDA temporarily discontinued publication of farm value-retail price spreads for most market basket foods because the Bureau of Labor Statistics, from which it obtained much of the retail price data, stopped publishing

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1/The ERS market basket contained 65 foods until Nov. 1973 when home-delivered milk was dropped because adequate retail price information was unavailable.

monthly average retail prices for individual foods. (See p. 99.) Spreads are still being published, however, for beef and pork.

The farm value computed for the spreads is not the same as the farm price received by the farmer. For comparison purposes, ERS adjusts the farm prices it obtains to (1) reflect the equivalent quantity of the farm product needed to produce a unit of the retail food, usually more than a 1-to-1 ratio, and (2) deduct from the farm price the amount paid for any byproducts.

Farm value-retail price spreads are not measures of the food industry's gross margins. A price spread is the difference between prices or values at two market levels for a specific product. On the other hand, a gross margin is the difference between the total cost of the products purchased and the gross receipts from the final sales of the products sold by a firm or group of firms performing the same function. Price spreads are normally greater than gross margins for any single marketing firm because spreads include all costs incurred and profits realized by all marketing firms involved in getting the product from the farmer to the consumer.

The farm value-retail price spreads have been the best estimates available of the total value added by the food marketing industry for individual farm commodities. However, we noted the following problems in the collection and comparison of farm value and retail prices which detracted from the reliability of published spread data.

--Retail prices collected by BLS and used in calculating the spreads did not adequately reflect the influence of retailer price specials.

--Much farm price information collected by USDA is not based on a statistically sound sampling method.

--In calculating the spreads, ERS not only ignored the lag between the time products were sold at the farm level and the time they were priced at the retail level but compared farm values with past or current--not future--retail prices.

Retailer specials not adequately represented in retail price data

For its retail price calculations ERS primarily used the nationwide average retail prices collected by BLS. ERS officials told us these retail prices were used because they were the best available information. BLS retail prices, however,

tend to be overstated because (1) until January 1978 BLS collected retail prices for 3 days during the middle of the week and thus prices did not include retailer weekend specials and (2) in computing the average retail prices, BLS did not assign added weight to special prices to reflect the additional volumes usually sold at those prices. The inclusion of more special prices and assigning a higher weight to special prices would have had the effect of lowering the retail price used in the farm value-retail price spreads.

Until January 1978 BLS collected food price data only on the first Tuesday, Wednesday, and Thursday of the month, although according to industry sources, the greater number of special-priced foods was available on Thursdays, Fridays, and Saturdays. Beginning in January 1978, BLS attempted to include more weekend specials in its computations by extending the price collection period to all weekdays throughout the month. 1/ However, BLS still did not consider the additional volumes usually sold when foods are special-priced. Over the last 5 years, the lack of volume data tended to overstate average retail prices even more because food retailing industry studies of consumer preferences indicate that since 1973 consumers have been taking increased advantage of specials.

The inadequate representation of retailer specials was discussed in a 1966 report of the National Commission on Food Marketing. 2/ The Commission reported that BLS prices overstated actual average retail prices for several items. The Commission estimated that in 1964 the overstatement of reported retail prices was 7 cents a pound for beef, 3.6 cents a pound for lamb, 4.1 cents a pound for pork, 3.8 cents a pound for veal, 1.5 cents a pound for frying chickens, and 6 cents a pound for turkey.

1/From January 1978 through June 1978, BLS published two indexes for food--each based on one of the two collection periods. Beginning in July 1978 BLS only collected retail food price data throughout the month.

2/"National Commission on Food Marketing, Cost Components of Farm-Retail Price Spreads for Foods," Tech. Study No. 9, Washington, D.C., June 1977, pp. 5-6.

Following the Commission's report, a 1968 ERS study 1/ of the effect of weekend prices on reported U.S. average food prices concluded that, if weekend prices were included, it would not appreciably lower the U.S. average prices. The study pointed out, however, that it only partially answered the question the Commission raised, because the study did not attempt to determine the actual volumes sold at special prices and calculate appropriate weights to reflect increased volume buying of special-priced foods.

In July 1969 ERS published the results of a study 2/ which reviewed the relationship between the price effect--the lowering of a food price during a special sale--and the volume effect--the increase in sales of a food that is special-priced--on the average retail prices for beef and pork. ERS obtained data for the 6-month study from 20 food chain divisions located in 5 cities. ERS stated that the cities chosen for the study--Philadelphia, Detroit, Chicago, Denver, and San Francisco--were used to reflect geographic variation, a sizable block of population, and centers of varying sizes.

On the basis of the 1969 ERS study's results and agreements with 40 retail food chain divisions to supply ERS with weekly regular and special prices for beef and pork, ERS began to adjust BLS-reported prices for beef and pork to better reflect retailer specials. A January 1976 report prepared by a task force sponsored by the American Agricultural Economics Association and ERS 3/, however, questioned ERS's adjustments. An ERS official told us that the task force thought that these adjustments, based on the 1969 ERS study, understated the effect of specials in calculating the beef and pork price spreads. Thus, the retail prices and the spreads for these meats were higher than they would have been if specials had been adequately considered.

1/"Effect of Weekend Prices on U.S. Average Food Prices," Henry T. Badger, Marketing Economics Division, ERS, ERS-397. Article was reprinted from the Marketing and Transportation Situation, Nov. 1968, pp. 29-38.

2/"Effects of Specials on Composite Meat Prices," Lawrence A. Duewer, Agricultural Economics Research, vol. 21, no. 3, July 1969, pp. 70-71.

3/"Review and Evaluation of Price Spread Data for Foods," prepared for the Economic Statistics Committee, American Agricultural Economics Association and ERS, Washington, D.C., Jan. 1976.

Using the same procedures as used in the 1969 study, ERS made another study from November 1974 through June 1975 to update the price and volume effects of beef and pork specials. The unpublished results showed that the price and volume effects of specials were only slightly different than those shown by the 1969 study. As of June 1978, the Economics, Statistics, and Cooperatives Service (into which ERS has been merged) had not incorporated these revisions in its beef and pork spread computations.

We also noted certain problems in ERS's 1969 and 1974-75 studies, as follows.

--The retail chain divisions reported total combined volumes of beef and of pork sold at their regular and, if appropriate, special prices. Because the volumes sold at each price were not reported, ERS assigned the entire week's volume to the special price. This served to overestimate the effect of specials, thus underestimating the retail price.

--The cities included in the studies were not scientifically selected and therefore cannot be considered as representative of the country. Thus the use of the data collected for these cities to adjust nationwide average data may have affected the accuracy of ERS's adjustments of beef and pork prices reported by BLS.

Much farm price information is not collected on a statistically sound sampling method

The farm price information ERS uses to compute farm values for 55 of the 64 food items in the market basket is obtained from USDA's Statistical Reporting Service. The prices for the remaining items are collected by ERS and USDA's Agricultural Marketing Service. The farm price information needs to be accurate and representative not only because it is used in computing farm value-retail price spreads, but also because it is used by industry, economists, farmers, farm organizations, and the Government for such purposes as projecting future price trends, administering Federal programs involving billions of dollars in price-support payments to farmers, computing agriculture's contribution to the gross national product, and measuring farmers' economic well-being.

Problems in SRS's method of collecting information on the prices received by farmers, however, may seriously affect the reliability of the prices it reports.

Until January 1977 SRS used a subjective, nonprobability sample in determining the recipients of monthly questionnaires

sent to farmers for reporting prices received for farm food commodities. Each month SRS field offices, generally located in each State, mailed questionnaires to various farmers and other sources knowledgeable of farm prices and requested current farm prices being received for specific commodities. It was left to SRS's 44 individual field offices to decide how many questionnaires would be sent and to whom.

An SRS official said that SRS headquarters had not issued any criteria to the field offices on farm price data gathering procedures, including criteria on the method of selecting questionnaire recipients and the number of questionnaires to be mailed. In January 1977 SRS started using a probability sample to collect farm prices for six major grains--corn, soybeans, sorghum, barley, oats, and wheat--and plans to expand probability sampling to all crops in fiscal year 1979. However, ESCS (into which SRS was merged in January 1978) still primarily uses a mail survey questionnaire to collect farm price information.

In 1957--20 years before its initial attempt to use probability sampling to collect farm price information on grain--SRS published a short- and long-range plan for collecting information on prices farmers received for products and paid for everything needed to produce those products. The plan defined certain problems in using both the nonprobability sampling technique and mail questionnaires to determine prices received by farmers. It said that:

--It was virtually impossible to maintain continuity in reporting.

--It was frequently difficult to secure enough reports to give statistical validity.

--The statistician was always involved in a struggle of trying to use inadequate and unrepresentative samples.

--Results of a mail survey questionnaire were less dependable than the results of a substantial sample properly selected from actual transactions.

--It was virtually impossible to assign valid measures of precision to data collected in the nonprobability sample.

The plan concluded that a thoroughly modernized and scientific price collection system--a probability sample design--would improve very substantially the quality of data collected on prices received by farmers. The plan included (1) a long-range

recommendation to supplement the existing data collection program by using an objective probability sample and (2) short-range recommendations to initiate a probability sample for collecting prices received by farmers in several States distributed geographically; to evaluate the results of this sample; and if determined to be successful, to expand this program to cover all States as rapidly as possible.

To improve its information collection methods, SRS asked for and received appropriations of $310,000 for fiscal year 1977. The SRS Administrator said that this increase would permit SRS to start incorporating modern sampling methods in collecting agricultural price statistics. He also said that of all the major statistical series SRS published, the price series was the only one not done on the basis of probability sampling. He added that because of this, no statistical basis was available to measure the quality of the survey responses. Only minor improvements have been made in the price estimating program since 1957 because SRS gave higher priority to improving production estimates.

In commenting on this matter (see app. IV), USDA said that if proposed funding is granted for fiscal year 1980, probability sampling will be expanded to livestock and livestock product prices.

Time lags not accounted for properly in computing spreads

Before July 1978 retail food price information used by ERS to compute most of the farm value-retail spreads was collected only in the first week of the month, whereas farm price information generally represented, and still does, monthly average prices or midmonth prices. Beginning in July 1978 BLS collected retail food price information only throughout the month. (See p. 93.) In computing the monthly farm value-retail price spreads, ERS generally compared the average retail prices and average farm prices collected in the same month. Such a method of comparison does not adequately consider the normal lag period between farm and retail levels.

The market basket food items have varying time lags between the farm level and the retail level. These lags vary due to differences in where the commodity is produced and where it is consumed, the wholesale inventory levels, the amount of processing the commodity undergoes, and the market channels it goes through before reaching the retail level. An ERS official told us that no information is available on the average lag period for the various market basket items.

The January 1976 task force report (see p. 94) pointed out that ERS's reports on the farm value-retail price spreads have a built-in lag--farm values lagged nearly 2 weeks behind retail prices. The task force report said that perhaps it would be perferable to compare retail prices in one month with farm values in the preceding month for spread computations. Subsequently, several ERS officials told us that using the preceding month's farm price would not approximate the lag for many products. ERS's method of comparing retail prices with farm prices collected the same month, however, compounds any problem resulting from failure to consider lags between the farm and retail levels.

Computing the farm value-retail price spreads by using the preceding rather than the current month's farm value can show quite different results. For example, the following table compares the spreads using current and previous months' farm values for a pound of fresh tomatoes in 1976.

Month	Farm value (note a)	Retail price (note a)	Farm value-retail price spread using farm value of: Current month (note a)	Preceding month (note b)
	(cents)			
1975				
December	24.8	61.2	36.4	-
1976				
January	22.9	60.5	37.6	35.7
February	17.4	54.2	36.8	31.3
March	25.8	57.4	31.8	40.0
April	27.9	66.2	38.3	40.6
May	16.3	60.3	44.0	32.4
June	28.6	52.6	24.0	36.3
July	23.2	62.2	39.0	33.6
August	21.3	46.4	25.1	23.2
September	17.1	47.4	30.3	26.1
October	27.6	59.5	31.9	42.4
November	33.3	61.7	28.4	34.1
December	24.8	65.0	40.2	31.7

a/USDA farm value-retail price spread data.
b/Our calculation.

As the table shows, the spreads can differ markedly depending on which month's farm value is used. The spread for March, for example, shows a decrease of 5 cents from the February level using the current month farm value. If the

preceding month's farm value is used, the result would be an increase of 8.7 cents.

ERS officials said that during periods of relatively stable farm prices, failure to consider a time lag would not affect the trend movement of the price spreads. However, these ERS officials agreed that during periods of fluctuating farm prices, price spreads would show a different trend than if time lags would have been considered. An accurate determination of the movement of spreads is especially important because spread data is often used by the Congress, USDA, and others in determining reasons for retail price changes. Although it may not be technically or economically feasible to determine the average lag time for each product, using the preceding month's farm prices would at least recognize that a lag exists between the farm and retail levels. It should also generally result in more reliable spread analyses.

Publication of spreads for most foods has been temporarily discontinued

After publishing the June 1978 farm value-retail price spreads, ESCS temporarily discontinued publishing spreads for all individual food items except beef and pork because BLS, from which ESCS obtains most of its retail price information, had temporarily discontinued publishing monthly nationwide average retail prices for individual foods. ESCS is able to publish beef and pork spreads based on monthly retail price information it receives from retail stores. (See p. 94.)

A BLS publication 1/ noted that demands on BLS's resources caused by the recent extensive revision of the Consumer Price Index had delayed the development of a revised method to compute nationwide average retail food prices based on the new collection methods used for the revised CPI.

Previously for the CPI, BLS collected retail food prices for very specifically defined foods, such as vitamin D, grade A, homogenized milk in half-gallon containers. The brand to be priced in each store was its largest volume seller. Generally, BLS combined all retail prices collected throughout the country for a particular food in calculating a nationwide average price.

Under the retail price collection method for the revised CPI, the foods for which prices are to be collected are more

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1/"Estimated Retail Food Prices by City," BLS monthly publication, Jan. 1978, p. 10.

broadly defined, such as whole fresh milk. BLS field agents who are responsible for collecting the prices each month obtain volume of sales information from the retailers for each size and type of a particular food. After assigning weights to each size and type, based on the volume of sales data, the agents randomly select the items for which they will collect prices each month. Thus, one agent may collect prices for half-gallons of milk each month, while another may collect prices for quarts of milk.

Because of the various container or package sizes of the food item priced, BLS can no longer use its previous method of combining all prices collected for a particular food item to determine a nationwide average price. BLS plans to examine the price data currently being collected to determine if enough like items are being sampled to compute new nationwide average retail prices. An ESCS official said that until BLS develops a revised method to compute such prices, ESCS will discontinue publishing spreads for most individual foods.

In June 1978 a BLS official told us it would take 6 months to 1 year to determine if prices are being collected for a sufficient number of like items to calculate nationwide average retail food prices. The official added that if a sufficient number of like items are not included in the sample, but the Congress believes that nationwide average food price data is necessary, the Congress would have to appropriate additional funds for this purpose.

PERCENTAGE OF DISPOSABLE INCOME SPENT FOR FOOD

Before 1977 ERS published the percentage of disposable income spent for food which it computed from the Department of Commerce's national income accounts for disposable personal income and food expenditures. Generally, disposable income is the income available to a person after certain items, such as social security and income taxes, are deducted from gross income. ERS simply divided total disposable personal income into total food expenditures to compute this percentage. This percentage was one of the measures the Government used to gage the economic well-being of the Nation.

Since 1977, ERS has continued to publish disposable personal income and food expenditure totals, but it has discontinued publishing the percentage of disposable income spent for food, because of complaints questioning the representativeness of the figure as a typical family's food expenditures. Data on food expenditures by income level and/or family size would be of interest to the Congress and others.

According to the ERS figures presented below, the percentage of disposable income spent for food increased in 1974 and 1975 from the 1973 level. However, the figures show that the average person spent a lower percentage of disposable personal income for food in 1971 through 1977 than in 1970.

Year	Disposable personal income (note a)	Food expenditures (note a)	Percent of income
	(billions)		
1970	$ 685.9	$118.6	17.3
1971	742.8	122.0	16.4
1972	801.3	130.6	16.3
1973	901.7	146.8	16.3
1974	984.6	166.9	17.0
1975	1,084.4	184.8	17.0
1976	1,185,8	199.5	16.8
1977	1,309.2	218.4	b/16.7

a/Department of Commerce national income accounts. Food expenditure figures include expenditures for food eaten away from home.

b/Figure computed by us.

Although USDA officials frequently used the percentage figure in testimony and in official speeches to indicate the small percentage of disposable income needed to buy food, USDA sources stated at other times that:

--The percentage could not be considered as being indicative of an average family's food expenditures.

--The importance of the statistic was whether it was increasing or decreasing rather than the actual percentage.

--The disposable personal income figures, as published by Commerce, were not synonymous with income available to families for allocation among the various commodities and services in the marketplace.

In computing disposable personal income, Commerce includes seven basic components: wages and salaries; proprietors' income; rental income; other labor income; dividends; interest; and transfer payments, such as old age, survivor, disability, and health insurance benefits. The resultant income figure includes income received by nonprofit institutions, private

trust funds, and health and welfare funds as well as by individuals.

Commerce's food expenditure totals are based on estimates by business and Government agencies rather than on a survey of individual households. Estimates for a benchmark year (the year in which a census of manufacturers and business is taken) are developed by a commodity flow method--the values of transportation and distribution services are added to the producer's value to arrive at total consumer purchases. Estimates for other than census years are derived by interpolation and extrapolation using annual retail food sales estimates.

Because of the way Commerce's estimates are derived, they have been questioned as to both amounts and concept. The Congressional Research Service, after a 1972 study of food expenditures as a percentage of disposable income, concluded that the overall percentage may have merited consideration as an indicator of year-to-year changes when accompanied by details about prices, incomes, and distribution of income, but that the percentage was not an informative figure that was representative of the food costs for most Americans.

Various others have pointed out that percentage of income spent for food varies substantially depending generally on family income levels. For example:

--A July 1968 ERS report on food consumption, prices, and expenditures concluded that the percentage of income spent for food varies widely among families of different sizes and incomes.

--A former Chairman of the President's Council of Economic Advisors suggested that some poor families were spending 40 to 50 percent of their incomes for food.

--A survey by a Community Action Agency in Dade County, Florida, in November 1973 showed that the poor in the county spent about 66 percent of their incomes for food while the near poor (those earning just above the poverty level of $4,320 for a family of four) spent about 29 percent of their incomes for food.

--A survey taken by the Home Testing Institute in 1973 indicated that about 34 percent of the families earning less than $9,000 annually spent more than 25 percent of their incomes for food.

--BLS presents an annual breakdown of three hypothetical family budgets for a precisely defined urban family of four: a 38-year-old husband, his wife, a boy of 13, and a girl of 8. The budgets represent the cost of three hypothetical lists of goods and services that were specified in the mid-1960s to portray three relative standards of living--described as lower, intermediate, and higher. Between autumn 1976 and autumn 1977, the hypothetical family needed to spend $8,657 to buy the food and services specified in the lower budget; $13,039 for those in the intermediate budget; and $17,948 for those in the higher budget. About 37, 31, and 29 percent of these amounts, respectively, represented food costs.

--A report by the staff of the former Senate Select Committee on Nutrition and Human Needs concluded in 1974 that the national income accounts used by USDA to compute the percentage of disposable income spent for food bore no relationship to the situation faced by most families.

--A USDA study found that between 1972 and 1974 the prices of relatively lower priced foods increased at a greater rate than the prices of relatively higher priced foods. To the extent that the diets of the lower income groups contain more lower priced foods than diets of higher income groups, the food expenditures of lower income groups probably increased at a higher rate.

The following table, prepared from BLS data, shows the percentage of income spent for food by various income groups in 1972 and 1973. The incomes listed in the table are before-tax incomes and thus are higher than the corresponding disposable incomes that would have been available to families for their use. However, even when using before-tax incomes, the survey results show that in 1973, the percentages of income spent for food for all groups with incomes of less than $12,000 were higher than the USDA-computed percentage of disposable income spent for food--16.3 percent.

PERCENT OF MONEY INCOME (BEFORE TAXES) SPENT FOR FOOD AT HOME AND AWAY[1] ALL FAMILIES AND SINGLE PERSONS, CONSUMER EXPENDITURE INTERVIEW SURVEY, 1972 AND 1973

INCOME	1972	1973	1973 AS A PERCENT OF 1972
	Percent		
Under $3,000	40	50	123
3,000-3,999	30	30	101
4,000-4,999	25	26	106
5,000-5,999	23	24	105
6,000-6,999	20	20	101
7,000-7,999	19	20	105
8,000-9,999	17	18	107
10,000-11,999	16	17	103
12,000-14,999	15	15	102
15,000-19,999	13	14	105
20,000-24,999	12	13	105
25,000 and over	8	9	112
All families[2]	15	16	102

[1] Includes meals as pay and food on vacation. [2] Includes those not reporting complete income.

Because of complaints questioning the representativeness of the percentage of disposable income figure as a typical family's food expenditure, USDA has discontinued publishing the figure. ERS officials said that the figure as computed (1) was not indicative of an average family's food expenditure and (2) did not consider such factors as family size and income level.

Although data on food expenditures by income level and/or family size would be of interest to the Congress and others, a USDA official said that the expense to collect such data might be prohibitive. USDA has not, however, made a study of data needs and the cost of data collection.

OTHER USDA FOOD PRICE STATISTICS

ERS publishes two other statistics in the food price area--the retail cost of the market basket and the marketing bill. ERS officials have stated that these statistics are more significant in measuring long-term changes than month-to-month changes.

These statistics, however, are frequently misused. The retail cost of the market basket is often mistakenly cited as an average family's cost for food when, in fact, it measures price changes over time only for the 64 foods in the market basket. The marketing bill, which estimates the total dollar amount charged by the food marketing industry for processing, transporting, wholesaling, and retailing U.S. farm-originated foods, is often used as a basis for determining 1-year or shorter term changes in marketing costs. Because of the numerous instances of estimated and extrapolated data used to compute the marketing bill, ERS believes that the

bill is more effective as a basis for determining long-range changes in marketing costs.

Retail cost of the market basket

The retail cost of the market basket is intended as an estimate of the cost at particular times of the 64 U.S. farm-originated foods comprising the market basket. ERS developed this statistic to measure price changes over time for these 64 items. The types and quantities of food in the basket are held constant so that only price changes are measured. However, some users of the statistic have mistakenly referred to it as the average expenditure for food by U.S. families. Even USDA has made that mistake.

For example, in its March 1976 "Fact Book of U.S. Agriculture," USDA described the market basket as the quantity of U.S. farm-produced foods purchased annually by a typical urban household. This fact book is intended to be used by reporters, editorial writers, farm organization leaders, agribusiness managers, and others who speak or write about agricultural matters.

The 64 market basket foods include 58 of the 96 foods that were identified in a 1960-61 BLS survey as being representative of the foods most often purchased for home use. BLS uses these 96 foods to compute the food portion of its CPI. The 58 foods chosen by ERS are those representative of the U.S. farm-produced foods most often purchased for home use and 6 additional foods that ERS includes primarily to continue the farm value-retail price spread series for these foods.

The basket does not include imported foods and seafood products which, according to the January 1976 task force report (see p. 94), accounted for almost 20 percent of consumer expenditures for food in 1974. Also, the cost of food purchased in away-from-home eating places is not considered in the market basket. According to a September 1977 ERS publication, in 1975 and 1976 consumers spent 25 percent of their food dollars for food eaten away from home. Thus, the retail cost of the market basket is considerably less than an average family's food expenditures.

The 1960-61 BLS survey, which was used in market basket calculations through June 1978, obtained data on annual household food purchases from about 4,900 urban wage earner and clerical families and single workers living alone. The survey represented about 45 percent of the total U.S. population. Data from a more recent consumer expenditures survey, conducted by BLS for calendar years 1972-73 and representing

about 80 percent of the total U.S. population, was initially scheduled to be ready in April 1977 for use to revise both the CPI and the ERS market basket. Due to delays in processing the vast amount of data gathered, however, the revised CPI was first published in February 1978 for the month of January 1978.

In July 1978 BLS discontinued publishing average retail food prices which were based on the 1960-61 survey. A BLS official said that BLS is working on procedures for computing and publishing the revised CPI national average retail food prices, which are based on the 1972-73 survey. BLS is hoping to complete the project by the end of 1978.

BLS and ERS sources have said that because the CPI and the ERS market basket only measure price changes, they represent a price index and not a cost-of-living index. BLS and ERS are aware, however, that the basket and the CPI are often viewed as cost-of-living indexes. A cost-of-living index would more closely reflect what food consumers are currently buying and at what prices. For the market basket or the CPI to measure the cost of living, the foods they include would have to be revised more frequently to reflect changes in consumer buying habits.

In a 1975 BLS report, 1/ the BLS Commissioner said that BLS's experience in conducting the 1972-73 survey made clear the need for a more modern method of updating the CPI. He noted that rapid rises in food prices since that survey may have produced shifts in consumer buying patterns. The shifts would not be covered by the 1978 revisions to the CPI. The Commissioner suggested that the CPI be revised more frequently than about once every 10 years, as is now the case. By conducting more frequent surveys, the CPI would be based on more current data.

In 1975 BLS suggested to OMB that a continuous consumer expenditure survey be conducted and that one of the uses of such a survey could be to revise the CPI more frequently. In a March 1976 letter to the Secretary of Labor, OMB supported the concept of continuous consumer expenditure surveys but suggested that because the CPI had achieved wide application

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1/"The Consumer Price Index: How Will the 1977 Revision Affect It," a speech given by Julius Shiskin, Commissioner of Labor Statistics, before the Economic Club of Detroit on Oct. 20, 1975. The speech was reprinted as a U.S. Department of Labor, Bureau of Labor Statistics, report by the same name, Report 449.

in Government and industry and changes in it would affect a large segment of the population, the past procedure of updating the CPI every 10 years should not be changed without consultation with and general concurrence of the parties affected by the index.

In July 1978 a BLS official told us that BLS's fiscal year 1979 budget request contained a proposal to do continuous consumer expenditure surveys but that BLS is not now considering using such surveys to update the CPI more frequently.

In the 1975 BLS report, the Commissioner also said that very few studies had been made to analyze the actual numerical difference that would result if a cost-of-living index were developed and compared with the CPI. The Commissioner speculated that there would be little difference in stable economic periods but that in turbulent economic periods, such as the early and mid-1970s, the difference could be significant.

In our opinion, statistics such as the CPI are most useful during turbulent economic periods. Revising the CPI to more closely reflect a cost-of-living index could enhance its value to Federal decisionmakers considering actions to stabilize the economy. Pending further consideration by the executive branch of the need for and practicality of such revision, however, USDA and BLS should make clear to the public and the Congress what the current CPI and market basket represent and their uses and limitations.

Marketing bill

The marketing bill is an ERS estimate, compiled and published annually, of the total charges by food marketing firms for processing, transporting, wholesaling, and retailing U.S. farm-originated foods purchased by civilian consumers. It represents the difference between their expenditures for these farm foods and the farm value of these foods. These expenditures include expenditures for food purchased in retail stores; the cost of food purchased in restaurants and other away-from-home eating establishments; and the value of food served by schools, hospitals, and other institutions whose primary purpose is something other than serving food. Excluded are items such as seafood products, imported foods, and foods served on military installations.

The marketing bill statistics show (1) the distribution of consumer expenditures between the marketing system and farmers and (2) the division of marketing costs among or between

--marketing agencies, such as processors, wholesalers, and retailers;

--individual cost components, such as labor, transportation, and packaging;

--commodity groups, such as beef, pork, fresh fruits, processed fruits, fresh vegetables, and processed vegetables; and

--food eaten away-from-home and food purchased for use at h

Much of the data ERS uses in calculating the marketing bill is collected by other agencies for other purposes. These other data sources include the Bureau of the Census, BLS, SRS, Interstate Commerce Commission, Internal Revenue Service, and various trade publications. The collecting agencies use various data bases and analyze and present the data to fit their needs.

An ERS official responsible for computing the marketing bill said that the different data bases and methods used in analyzing and presenting the data cause problems in combining this data for use in ERS's marketing bill. Also, much of the marketing bill data is based on benchmark data--census year data--which is extrapolated and estimated for the years between censuses. However, the farther away from the census year the less reliable such data becomes.

The January 1976 task force report (see p. 94) concluded that the quality of data collected and used in developing the marketing bill weakens the bill's accuracy. It added that the bill's greatest weakness lies in the number of adjustments made using outdated information. The report discussed the feasibility of USDA collecting much of the data to be used in the marketing bill rather than relying on secondary sources. However, the task force concluded that the magnitude of effort and cost involved for USDA to collect all the needed information to publish a marketing bill would appear to make such an effort uneconomical.

The task force stated also that because of the data problems, the marketing bill should only be used to give a general description of the changes taking place in the food industry over a period of years. In addition, an ERS official said that the bill is more effective when used to measure long-term trends rather than as a basis for determining 1-year or shorter term changes in marketing costs. The task force report said that the bill's users must recognize the weaknesses

and shortcomings of the data or else misinterpretation as to what the data actually shows may result.

In publishing the 1976 marketing bill as part of a 6-page article in its October 1977 "Agricultural Outlook," USDA did not mention the data's limitations and weaknesses. In 1970 USDA published "Major Statistical Series of the Department of Agriculture, " Vol. 4, which discusses methodology uses, sources of data, and limitations for use of marketing bill statistics. In late 1976 ERS began drafting a bulletin to be distributed to all marketing bill recipients, which would discuss data problems inherent in the bill and the bill's suggested uses. An ERS official told us, however, that the bulletin probably would not be ready for distribution until late 1978.

CONCLUSIONS

USDA publishes several food price statistics which have been widely used as indicators of the performance of the food production and marketing industries and of consumer spending for food. Although these statistics, which are based on data collected by numerous agencies, are considered to be the best available information on these subjects, several problems limit their reliability and usefulness.

In developing farm value-retail price spreads, retailer specials have not been adequately considered, much farm price information has not been collected on a statistically sound sampling method, and time lags have not been accounted for properly. USDA and BLS recognize these problems and have either studied the feasibility of, proposed, or implemented certain steps to improve their data. These problems, however, are still evident because

- --data is not collected on volumes sold at regular and special prices,
- --SRS still has a way to go in extending the use of probability sampling to determine farm prices, and
- --ERS believes that comparing retail prices with the preceding month's farm prices is not feasible because the lag would not approximate the lag for many products.

Publication of the farm value-retail price spreads for most individual food items has been temporarily discontinued. These spreads were the best estimates available of the total value added by the food marketing industry for individual commodities. Thus, the spreads should again be published as soon as BLS nationwide average retail food prices become

available. In addition, ESCS should also correct the above-mentioned problems which affect the reliability of the spreads so that when they are again published, they will more closely portray actual market conditions.

USDA officials used the percentage of disposable personal income spent for food to indicate the small amount of disposable income needed to buy food. In 1977 USDA discontinued publishing this percentage because it could not be considered as being representative of an average family's food expenditures. USDA agrees that presenting data on food expenditures by income level and/or family size would be informative. Although USDA believes that the expense to collect such data would be prohibitive, it has not determined this by studying the data needs or the cost of data collection.

USDA is aware also that its two other statistics in the food price area--the retail cost of the market basket and the marketing bill--have certain limitations in their data bases and that they are frequently misused. It does not, however, adequately inform those who use these statistics about their limitations. In 1970 USDA published a bulletin dealing with the uses and methodology of these statistics, but confusion and misuse of the statistics continues. ERS began late in 1976 to draft a bulletin explaining the data problems in the marketing bill. However, recent ESCS estimates are that it will not be published until late 1978. We suggest that enunciation of the suggested uses and data limitations of these food price statistics when they are published could help to decrease their misuse and add to their value as statistical tools to measure price changes and the performance of the food industry.

Recognizing the need to develop a more modern method of updating the CPI so that it would be based on more current data, BLS submitted a proposal to OMB to revise the CPI more frequently. However, OMB has suggested continuing the procedure of updating the CPI every 10 years. The need for and practicality of more frequently updating the CPI should be further considered.

RECOMMENDATION TO THE CONGRESS

If BLS is unable to revise its method of computing nationwide average retail food prices because of changes in its retail price collection procedures, we recommend that the Congress direct BLS to institute a program of retail price collection which would allow (1) the continued publication of BLS nationwide average retail prices for many individual commodities and (2) the farm value-retail price spreads to be published by USDA.

RECOMMENDATIONS TO THE SECRETARY OF AGRICULTURE

We recommend that the Secretary of Agriculture direct ESCS to obtain information on the quantities sold at various special and regular prices from those retailers who submit weekly beef and pork prices to ESCS. Such information should be used by ESCS when publishing the farm value-retail price spreads for beef and pork or in adjusting BLS retail prices for beef and pork if BLS again publishes such prices.

We also recommend that, if ESCS again publishes farm value-retail price spreads for individual foods, the Secretary direct it to improve the accuracy of such spreads by instituting a system which considers, in computing the farm value-retail price spread for all or most products, a time lag which exists between the time a product is sold at the farm and the time it is priced by the retailer. Such a system could be based on (1) an approximation of the average time lag, (2) a study which determines the average time lag, or (3) some other method if found to be the most efficient and economical alternative.

We recommend also that the Secretary direct ESCS to determine the data needs and cost of data collection required to calculate and publish the percentages of disposable personal income spent for food by income level and/or family size. If economical and feasible to provide such percentages, the Secretary should direct ESCS to begin gathering and analyzing the data and publishing the resultant percentages as soon as practicable. If such percentages cannot be economically or feasibly provided, but USDA finds it necessary to resume publishing percentages of disposable income data similar to that published before 1977, the Secretary should direct USDA personnel to clarify the applicability and limitations of the percentage of disposable income data whenever it is used in official publications, speeches, or testimony.

We further recommend that the Secretary direct ESCS to increase efforts to inform the users of its statistics on the retail cost of the market basket and the marketing bill about what these statistics show and their uses and limitations.

RECOMMENDATIONS TO THE SECRETARY OF LABOR

We recommend that the Secretary of Labor direct BLS to determine the additional labor and cost that would be involved in instituting a retail price collection system which would note the quantities sold at regular and special prices. If such a system is found to be economical and practicable,

the Secretary should direct BLS to assign appropriate weights, based on quantities sold at regular and special retail prices, when computing average retail prices for use in the CPI and for use by ESCS in computing the farm value-retail price spreads.

We recommend also that the Secretary direct BLS to increase efforts to inform users of the food portion of the CPI about what it shows and its uses and limitations.

RECOMMENDATIONS TO THE SECRETARIES OF AGRICULTURE AND LABOR

We recommend that the Secretaries of Agriculture and Labor direct their staffs to identify areas of common data needs and explore the feasibility of adjusting data collection and data presentation methods to better accommodate both users.

RECOMMENDATION TO THE SECRETARY OF LABOR AND THE DIRECTOR, OMB

We recommend that the Secretary of Labor and the Director, OMB, further consider updating the CPI more often than every 10 years to recognize shifts in consumer buying patterns.

AGENCY COMMENTS AND OUR EVALUATION

In its comments (see app. IV), USDA said that our report (1) properly identifies some important problems which limit the usefulness of present statistics and (2) recommends several actions which, if taken, would contribute significantly to improving USDA's ability to monitor and report the relevant indicators of food price changes on a timely basis.

USDA believes that better data and increased frequency of reporting prices at all levels is needed before formally considering time lags between the farmer and retailer when presenting farm value-retail price spread data. USDA considers time lags an open issue and says it will evaluate recent changes in ESCS and BLS price reporting programs to determine their appropriateness in lagging prices.

We believe that although it may not now be technically or economically feasible to determine lags for each product, the use of the preceding month's farm prices in computing the spreads would at least recognize that a lag exists between the farm and retail level and would generally result in more reliable spread analyses.

USDA said that although conceptually possible to implement, the reporting of volume data for price specials

and nonspecials would significantly increase the cost of a price reporting program. USDA said that this problem has long plagued ESCS and agreed to lend support to any effort directed toward resolving this problem.

We believe that collecting data on the volumes sold at special and nonspecial prices for beef and pork should not significantly increase cost because a weekly price reporting program to determine the price effect of specials is in place and could be modified to include volumes sold at each of the reported special and nonspecial prices. (See p. 94.)

USDA agreed that reporting food expenditures by income class would be desirable to assist in evaluating and administering food programs, determining food assistance target groups, and analyzing the demand for food. USDA said, however, that to do such an analysis on a regular basis would require a new recurring survey.

USDA also concurred that ESCS needs to increase its efforts to ensure that users are better informed as to the uses and limitations of marketing spread statistics and marketing cost statistics.

Labor did not provide us with written comments, but the Assistant Commissioner of BLS's Office of Prices and Living Conditions discussed Labor's views with us. He said that no one, including the users of BLS statistics, had defined for BLS what an average price is; what specifics it should cover in terms of kind, quality, grade, size, or quantity; and what it would be used for. He believes that all that is needed is a benchmark price and that the CPI could be used for that benchmark. He said that for BLS to service a need, that need first must be defined. We believe that BLS's comments indicate a need for closer cooperation between USDA and BLS to identify areas of common need and develop data collection and presentation methods to better accommodate both major users.

The Assistant Commissioner said also that before determining the cost of a retail price collection system which would note the quantities sold at special and regular prices, someone should determine to what extent consumers purchase additional quantities at special prices. We agree and had assumed that Labor would make such a determination in ascertaining whether such a system is economical and practicable.

The Assistant Commissioner said further that BLS will be doing consumer expenditure surveys annually.

In its draft comments (see p. 88), OMB expressed satisfaction with the present food price collection system.

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1977 FARM VALUE-RETAIL PRICE SPREADS FOR SELECTED FOODS (note a)

Commodity	Retail value	Farm value		Marketing industry share	
	Cents	Cents	Percent	Cents	Percent
Eggs, large grade A (doz.)	82.3	53.8	65	28.5	35
Butter (lb.)	133.1	84.2	63	48.9	37
Turkey (lb.)	72.9	44.5	61	28.4	39
Pork (lb.)	125.4	73.4	59	52.0	41
Beef, Choice (lb.)	138.3	79.9	58	58.4	42
Lamb, Choice (lb.)	187.0	106.1	57	80.9	43
Milk, fresh (1/2 gal.)	83.9	45.8	55	38.1	45
Chicken, frying (lb.)	60.1	33.0	55	27.1	45
Cheese, American process (1/2 lb.)	86.0	41.4	48	44.6	52
Milk, evaporated (14 1/2 oz.)	36.3	17.1	47	19.2	53
Vegetable shortening (3 lb.)	161.7	71.0	44	90.7	56
Tomatoes, fresh (lb.)	67.8	28.2	42	39.6	58
Beans, dried (lb.)	42.2	17.3	41	24.9	59
Cabbage (lb.)	24.6	9.8	40	14.8	60
Peanut butter (12 oz.)	73.4	28.9	39	44.5	61
Sugar (5 lb.)	108.1	42.5	39	65.6	61
Onions (lb.)	29.1	11.0	38	18.1	62
Salad and cooking oil (24 oz.)	107.0	39.3	37	67.7	63
Margarine (lb.)	57.2	20.5	36	36.7	64
Carrots (lb.)	32.8	11.4	35	21.4	65
Peppers, green (lb.)	69.6	24.5	35	45.1	65
Ice cream (1/2 gal.)	135.2	46.1	34	89.1	66
Apples (lb.)	39.0	12.8	33	26.2	67
Lettuce (head)	47.6	15.0	32	32.6	68
Celery (lb.)	34.0	10.7	31	23.3	69
Cucumbers (lb.)	39.9	12.4	31	27.5	69
Orange juice, frozen (6 oz.)	34.6	10.5	30	24.1	70
Rice, long grain (lb.)	40.0	11.5	29	28.5	71
Potatoes (10 lb.)	149.7	41.2	28	108.5	72
Flour, white (5 lb.)	84.6	21.3	25	63.3	75

APPENDIX II

Commodity	Retail value	Farm value		Marketing industry share	
	Cents	Cents	Percent	Cents	Percent
Oranges (doz.)	129.1	32.3	25	96.8	75
Grapefruit (ea.)	23.3	4.8	21	18.5	79
Lemons (lb.)	43.4	9.2	21	34.2	79
Peaches, canned (No. 2 1/2)	61.2	12.9	21	48.3	79
Peas, canned (No. 303)	38.3	7.4	19	30.9	81
Pears, canned (No. 2 1/2)	71.6	12.6	18	59.0	82
Peas, frozen (10 oz.)	37.4	6.5	17	30.9	83
Corn, canned (No. 303)	32.8	5.2	16	27.6	84
Potatoes, french fried, frozen (9 oz.)	28.1	4.4	16	23.7	84
Bread, white (lb.) (note b)	35.5	4.5	13	31.0	87
Tomatoes, canned (No. 303)	37.6	4.5	12	33.1	88
Lemonade, frozen (6 oz.)	23.1	2.7	12	20.4	88
Spaghetti, canned (15 1/4 oz.)	27.9	3.0	11	24.9	89
Cookies, sandwich (lb.)	104.1	10.4	10	93.7	90
Bread, whole wheat (lb.)	59.8	4.3	7	55.5	93
Beets, canned (No. 303)	34.4	2.4	7	32.0	93
Corn flakes (12 oz.)	55.6	3.6	6	52.1	94

a/Preliminary USDA figures.

b/Data shown is for all ingredients. For the wheat in a 1-pound loaf of white bread, the farm value was 2.6 cents and the farmer's share of the retail price was 7 percent.

SERVICES PROVIDED AND ESTIMATED COSTS CHARGED BY THE FOOD INDUSTRY FOR BEEF AND FRESH AND PROCESSED TOMATOES

The method of producing an agricultural commodity and the marketing services needed to transform the commodity into a marketable food product and deliver it to the consumer differ substantially for various foods. Generally, the more complex the producing, transporting, processing, and retailing services needed to transform the commodity into a finished food product, the higher the cost. Higher costs usually are translated into higher retail prices.

Before judging whether high or rising food prices are justified, it is important to be aware of the services provided and their costs. The following sections discuss these services and costs for producing and marketing beef and fresh and processed tomatoes.

The production and marketing methods discussed here should not be construed as the only methods used. Also, the estimated costs charged for production and marketing are based on a review of available studies and discussions with food industry officials and may not necessarily be actual transaction amounts. Nevertheless, the information presented is sufficiently typical to demonstrate the complexities involved in producing and marketing food needed to feed over 213 million U.S. citizens spread over 3.6 million square miles.

THE CATTLE AND BEEF MARKETING SYSTEM

Meat is central in the American diet, and beef is the consumer's overwhelmingly favorite meat item. Per capita consumption of beef totaled a record 129 pounds in 1976, up 16 pounds since 1970. The Department of Agriculture has estimated that per capita consumption of beef was 126 pounds in 1977.

The basic job of the U.S. cattle and beef marketing system is to move cattle from 2 million to 3 million farms, ranches, and feedlots to the consumer. Over the years the steps between the cattle producer and the consumer--the feeder cattle industry, feedlots, beef slaughtering and processing, and retailing--have become increasingly specialized.

Most of the cattle that make up our beef supply are born and spend the first part of their lives on the ranges of the West or the grass pastures of the South. They are usually sold to cattle feeders in the Corn Belt, Colorado, California,

or the Southwest where they are placed in feedlots from 4 to 9 months. Feeders then sell these "finished" cattle to packers directly or through auction or terminal markets. Packers in turn sell to retailers, wholesalers, restaurants, or institutions.

No one weight standard for cattle or beef governs when to sell to the feedlot, packer, or retailer. However, over the years certain norm or average weight figures have emerged. Producers of feeder cattle often sell to the feedlot when the cattle weigh from about 500 to 700 pounds. In turn, the feedlot will sell to the packer when a steer calf weighs about 1,000 pounds. Subsequent processing by the packer and the retailer separates salable meat from fat, bone, and byproducts. The final retail cuts from a 1,000-pound carcass usually weigh about 440 pounds.

Feeder cattle

The production of beef cattle is an old industry. However, the large-scale marketing of feeder cattle designed specifically for further feedlot finishing is a relatively new development. Beef calves are produced in many different types and sizes of enterprises (commonly called cow-calf operations) in all parts of the United States.

Calves feed on the natural seasonal growth of grasses, clover, and other plants, although hay, feed, and supplemental protein sources are needed during the winter months to provide adequate year-round feeding.

Sale to the feedlots occurs at different times depending on the location of the cow-calf operation. For example:

--In the western Corn Belt (parts of Iowa and Illinois), the southwest high plains of Texas, and the intermountain area (Nevada and parts of Utah, Idaho, Oregon, and California), calves are sold late in the fall.

--In the southeast (parts of Alabama, Georgia, South Carolina, and North Carolina) calves are sold early in the fall.

The number and weight of the calves sold to feedlot operators vary depending on various factors such as the calves' breeds, age at which they are sold, environmental conditions, death loss, and management practices. As a general rule, calves sold to a feedlot operator will weigh between 500 to 700 pounds.

Cattle feeding industry

The development of the cattle feeding industry (commonly known as feedlots) has occurred since the 1930s. By 1977, 83 percent of the steers and heifers commercially slaughtered were finished on feed.

Cattle feeders are of two general kinds:

--Farmer feeders, which usually operate feedlots with a capacity of less than 1,000 head. These comprised about 99 percent of the total number of feedlots in 1974 but marketed only 35 percent of the cattle.

--Commercial feeders, which usually operate feedlots with a capacity of over 1,000 head. In 1974 these feeders marketed 65 percent of the total cattle even though they comprised only 1 percent of the total feedlots.

Cattle put feed to three uses: (1) maintaining body functions, (2) growth, and (3) fattening. All animals need feed for maintenance. If nutrients over maintenance requirements are available, growth occurs; if additional nutrients are available, fattening proceeds.

Feedstuffs consumed by livestock are roughages and protein concentrates. Roughages include hay and silage. Concentrate feed--grains and oilseed meals--contain large amounts of nutrients in relation to bulk.

The time needed to fatten a steer calf to 1,000 pounds varies with the quantity and quality of the feed used. A 1969 USDA report indicated that a steer calf weighing 400 to 450 pounds when put on feed would take 275 days to weigh 950 to 1,000 pounds if fed about 5 pounds of roughages and 14 pounds of concentrates daily.

The packing and retail industry

The packing industry takes the cattle that come from farms and feedlots, slaughters them, and processes them into carcasses or smaller cuts and/or meat products and byproducts. At one time most major meat-packing plants were located in metropolitan areas, usually a long distance from the supply of cattle. However, the advent of modern refrigerated transportation and technological advances in private communcations systems and production equipment in the late 1940s and early 1950s allowed the packing industry to move operations closer to the cattle feeders.

The range of packer activities include converting cattle into carcasses; dividing carcasses into halves, quarters, and primal cuts (e.g., chuck, rib, loin, round); and grinding, mixing, curing, and smoking beef into a vast array of products. Also, some packers have established processing facilities which further break the carcasses into subprimal, or retail cuts; for example, splitting a primal round into top round, bottom round, and sirloin tip. These cuts are generally sealed in vacuum-type bags and placed in a box for shipment to the retail store. This type of meat is referred to by some as "boxed beef."

During livestock processing, a large volume of valuable products besides meat is produced. On the average, cattle will dress out about 62 percent as carcass beef, or 620 pounds of carcass beef from a 1,000-pound steer. Much of the remaining 38 percent, or 380 pounds, is used to make a variety of byproducts, such as leather, felt, and inedible fats for soap. Whether the carcass is broken down into retail cuts by the packer or retailer, the final weight of the beef sold at retail from a 1,000-pound steer (or a 620-pound carcass) is about 440 pounds.

The retail cuts of beef usually sold by the retail store are shown in the chart on the next page.

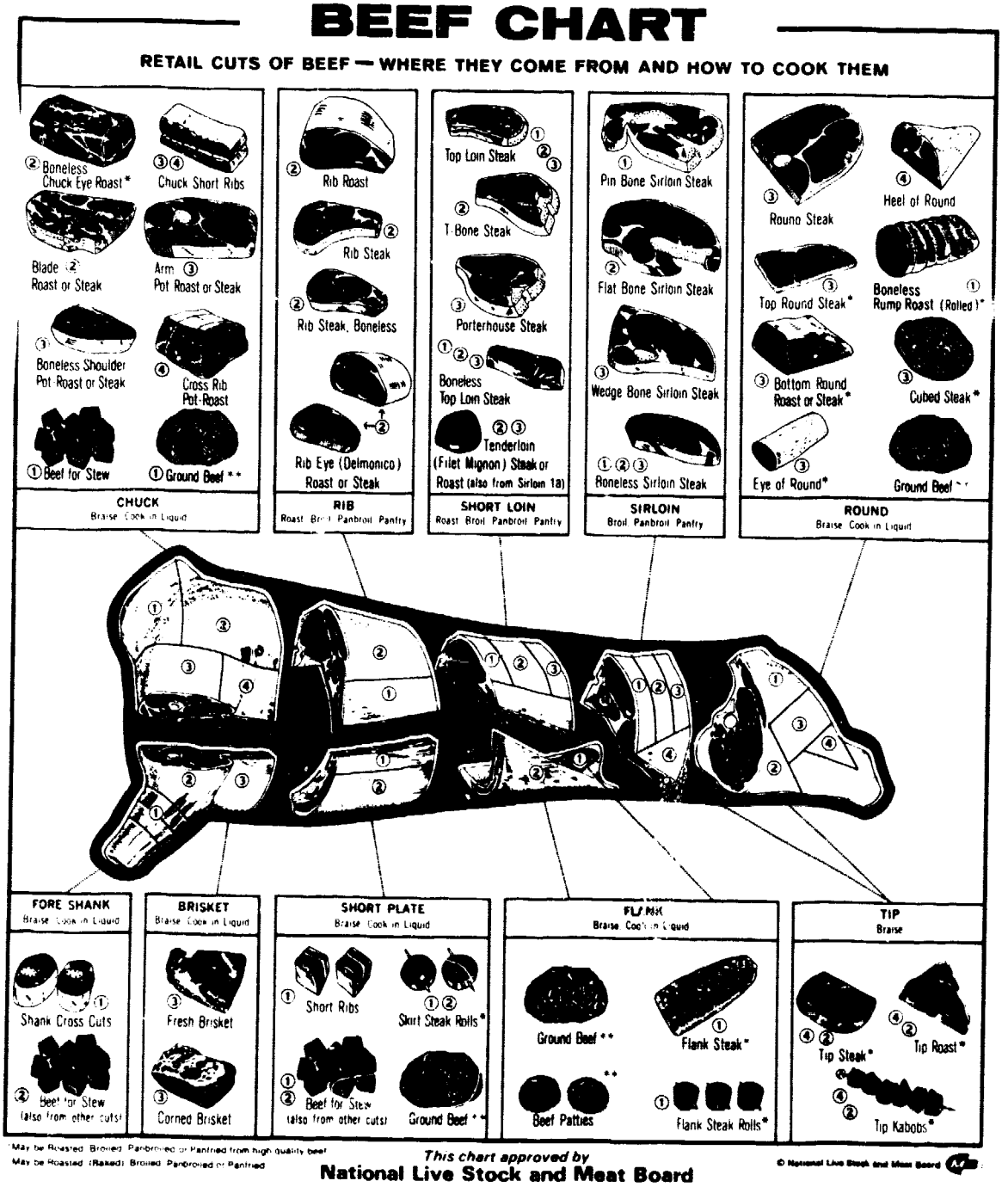
Prices received and costs incurred by industry

A July 1972 report 1/ detailed the selling prices and costs applicable to various processing steps involved in the cattle and beef industry. The prices used in this study were actual quoted prices wherever possible. Otherwise, estimates of direct costs were made.

A summary of the cost information is presented below for a 500-pound feeder calf produced on a Rocky Mountain cattle ranch; purchased by a feedlot in the fall of 1971; sold to a packer in Omaha, Nebraska; and retailed in the Northeast.

1/"Meat Prices and the Public Interest," a study by the Subcommittee on Livestock and Grains of the House Committee on Agriculture, July 5, 1972.

APPENDIX III



APPENDIX III

Industry segment	Cattle or beef weight at sale	Direct cost	Selling price	Gross margin
Feeder calf producer	500 lbs.	$137.85	$181.30	$ 43.45
Feedlot operator	1,000 lbs.	329.40	351.70	22.30
Packer	a/620 lbs.	b/333.70	336.04	2.34
Distributor	-	350.73	354.73	4.00
Retailer	a/440 lbs.	426.10	532.45	c/106.35

a/Weights calculated by us based on USDA conversion factors.

b/Packer's costs were decreased by $28.40 to reflect the value of the byproducts.

c/Retailer's gross margin is overstated because retailer's costs do not include such costs as building, equipment, management, utilities, land, advertising, taxes, and checkout labor.

The Subcommittee's report indicated that less than 25 percent of all meat sold was processed by a distributor (commonly known as a "terminal wholesaler," or "breaker.") A distributor usually breaks down the primal cuts received from the packer, after aging and before sale to a retail outlet.

The Subcommittee stated that by portraying these figures, it was not attempting to indicate that the net profit in every case will necessarily follow the amount of gross margin for each industry sector. However, the Subcommittee stated that it is an inescapable conclusion that gross margins are far higher percentagewise in retail stores than at any other area of the beef industry.

In March 1978 the Economics, Statistics, and Cooperatives Service published a report 1/ which included a cost breakdown for a pound of Choice beef sold at retail during 1976 and 1977, which is presented below.

1/"Developments in Marketing Spreads for Food Products in 1977," Agricultural Economic Report No. 398.

Components of Choice Beef Price Spreads, 1976 and 1977 (note a)

	Choice beef per pound at retail	
	1976	1977
	(cents)	
Farm value (note b)	77.9	79.9
Assembly and procurement (note c)	1.7	1.7
Processing	7.7	8.1
Intercity transportation	1.3	1.3
Wholesaling	9.1	8.5
Retailing (note d)	41.2	38.8
Retail price	138.9	138.3

a/1977 data is preliminary.

b/The farm value is the gross return to farmers for the quantity of farm product equivalent to the unit sold at retail minus the imputed value of byproducts.

c/Assembly and procurement deals with the costs incurred to get the product from the farm to some local collection point, such as a livestock auction.

d/Instore costs only. Headquarters and warehousing expenses are included in wholesaling.

Retail prices for Choice beef averaged $1.38 per pound for 1977, about the same as a year earlier. Retail prices fluctuated within a narrow range during most of the year but rose in December to a high for the year of $1.45 per pound. Retail beef prices roughly corresponded to movements in livestock prices at the farm level in 1976. Farm value of beef averaged about 3 percent higher than in 1976, mainly because of rising prices of Choice slaughter cattle in the fourth quarter. Unlike other recent years, there was a decline in the farm value-retail price spread for Choice beef which had the effect of increasing the farmers' share from 56 percent in 1976 to 58 percent in 1977.

PRODUCING AND MARKETING TOMATOES FOR THE FRESH MARKET

Fresh tomatoes, produced commercially in 26 States, are available year-round in the United States. U.S.-grown

tomatoes account for the major portion of the 12 pounds of fresh tomatoes consumed per capita each year. Imports, mainly from Mexico, are an important source of the domestic supply during the winter and spring.

In 1976 the total U.S. production of tomatoes for the fresh market amounted to over 2.1 billion pounds. California produced 31 percent of this total.

The following is a composite summary of how tomatoes from San Joaquin and Merced Counties in California are often marketed in the Midwest and east coast areas. These two counties produced about 6 percent of the total U.S. production in 1975. The entire marketing process generally takes between 10 and 13 days.

The data used in the summary was obtained from (1) discussions with certain growers in the two counties, (2) discussions with shipper-packers, transporters, and retail store officials, (3) USDA publications, 1/ and (4) the California State Department of Agriculture.

The costs shown are not based on actual transactions, but rather are approximations based on average U.S., California, and/or Merced and San Joaquin Counties data. The information is presented to give some indication of the charges levied for the services performed by the agricultural producer and the various segments of the food marketing industry which deal with tomatoes for the fresh market.

Grower

Tomato growers in San Joaquin and Merced Counties produce a type of mature, green fresh market tomato known as "Ace" which is bred specifically for the commercial market. The tomatoes are picked green so that they can better withstand shipping to the marketplace and survive a longer shelf life in the retail stores.

The tomatoes grown in these counties are usually harvested and shipped to market from late June to mid-November. Almost all domestically marketed tomatoes during October and November are shipped from California.

1/"How Fresh Tomatoes are Marketed," Agricultural Marketing Service, USDA, Marketing Bulletin No. 59, Oct. 1976, and various issues of "Agricultural Outlook."

The grower (1) prepares the land, (2) plants the tomato crop, (3) fertilizes, irrigates, and protects the crop during the growing period, and (4) delivers the crop to a shipper-packer plant.

When the crop reaches a mature green state, it is harvested and hauled by the grower to a shipper-packer plant. In many cases, the grower in San Joaquin and Merced Counties owns all or part of such a plant. If the mature green tomatoes, when ready to be harvested, are not harvested and delivered to the shipper-packer within a week, many of the tomatoes will be too ripe to sell when they reach the marketplace.

Shipper-packer

The shipper-packer receives, washes, dries, and waxes the tomatoes. The tomatoes are also sorted by grade and size and any damaged tomatoes are removed. The mature green tomatoes are then packed in ventilated cardboard containers which usually hold 30 pounds of tomatoes. The shipper-packer prepares these tomatoes for sale and arranges transportation to market; the tomatoes are also gassed with ethylene to promote ripening. As tomatoes ripen they release this same gas naturally.

The shipper-packer usually sells these tomatoes to terminal market receivers or national and regional retail chain store receivers. These sales are completed (1) through field buyers who work for the receivers, (2) through brokers who serve as buying agents in the field for several receivers, or (3) directly with the receivers. Normally, the tomatoes are sold before shipment. Occasionally, when tomatoes are ready to be shipped but are not yet sold, the shipper-packer will use a broker as a selling agent to find a buyer for the shipment during transit. The alternative to shipment would be spoilage.

The shipper-packer generally arranges for the transportation of the tomatoes, although occasionally the receivers will arrange their own transportation.

Transportation

Mature green tomatoes are transported by refrigerated railcar or truck. In 1976, 67 percent of the California tomatoes shipped to major receivers in Boston, New York, Philadelphia, Chicago, Houston, and San Antonio were shipped by trucks.

If trucks are used to transport the tomatoes, the shipper-packer will use a trucker broker--an agent of independent contract truckers--to locate trucks for shipment. Payment for the trucker broker's service are usually paid by the trucker involved.

Receivers and retail store

The tomatoes are delivered to a wholesaler-repacker or a chain store receiver. When these shipments arrive, the 30-pound containers will include tomatoes which are green, pink, and red. The receiver will break down the 30-pound containers by the color of the tomatoes and repack the tomatoes, either for immediate shipment to a retail outlet in the case of the red tomatoes or for further storage if the tomatoes are pink or green.

According to an official of a national retail chain, the basic retail operations for fresh tomatoes involve storage, display, and sale. The tomatoes are delivered to the retail store in the night or early morning. The store's produce manager inspects the fruit, sorts the tomatoes by degree of ripeness, and immediately displays the ripest tomatoes. He stores the less-ripe tomatoes until they are ready to display.

Cost information

The following cost data was obtained from various sources which used different bases in compiling their cost data; for example, the average retail price for fresh tomatoes (1) nationwide or (2) in New York City. Thus, the data presented should be viewed as approximate guides to the costs of services provided by the industry.

The results of a study 1/ of how much each of the various segments of the food industry charged for services relating

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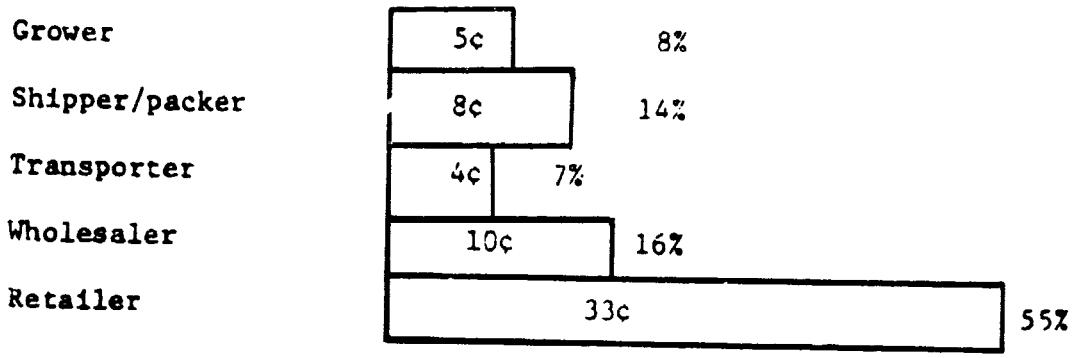
1/"Trends in Production and Marketing of California Fresh Market Tomatoes," by the Cooperative Extension, an education agency of the University of California, and USDA, 75-BL/1871, Apr. 1974.

APPENDIX III

to the sale of a pound of fresh tomatoes selling for 60 cents in New York City in 1972 is shown in the chart below.



The study did not consider spoilage in arriving at its figures. Losses occur at all industry levels. On the basis of USDA statistics, 118 pounds of tomatoes would need to be harvested by the grower for every 100 pounds of tomatoes sold by the retail stores.

Most of the tomatoes found in retail markets during October are from California. The October 1977 farm value-retail price spread showed a retail price for fresh tomatoes of about 60 cents a pound and a farm value of 21.3 cents.

The farm price used for the spread is the price charged at the first point of sale. A USDA official told us that for fresh tomatoes the farm price is the free on board shipping point price, which covers such costs as grading the tomatoes, the container costs, and transportation from the farm to the shipping point.

USDA applies a conversion factor of 1.18 to the farm price to derive the farm value. Thus, the October 1977 farm value of 21.3 cents was calculated based on a farm price of 18 cents a pound.

Concerning the large add-on by the retail sector, officials of a large retail chain told us that they did not allocate cost or calculate markups on individual commodity items but by departments, such as produce and meat. These officials informed us that their goal is to achieve a 54-percent markup on delivered produce cost to cover their handling, distribution, shrinkage, selling, and overhead costs and their profit.

In discussing rising costs experienced by the food marketing industry in supplying fresh tomatoes for the retail shelf,

we were told that the three biggest cost increases have been for labor, packaging, and energy costs.

THE INCREASING IMPORTANCE OF TOMATOES GROWN FOR PROCESSING

Tomatoes used for processing follow a different path to market than fresh tomatoes. These tomatoes are canned or used to make products such as tomato paste, sauce, puree, and catsup. These tomatoes are important to U.S. agriculture and the consumer because (1) tomato production constitutes about 63 percent of the total production of the 10 major vegetables used in processed foods and (2) the long-term trend is toward eating more processed and fewer fresh tomatoes.

Between the beginning of 1959 and the end of 1974, the per capita consumption of fresh tomatoes decreased by 1 pound while per capita consumption of processed tomatoes increased by 4 pounds. By the end of 1975, the per capita consumption of tomatoes used for processing was more than double that of fresh tomatoes.

In 1975 the United States produced 8.5 million tons of tomatoes for processing. Of this production California growers produced 7.3 million tons, or 86 percent, of the total tomatoes used for processing.

Grower

The number of farms in California growing tomatoes declined from 2,724 in 1959 to 800 in 1975 even though the acreage producing tomatoes used for processing more than tripled. Thus, the average acreage per farm producing tomatoes used for processing increased from 35 acres in 1959 to 374 acres in 1975.

One of the principal causes for this increase is the high investment costs of automatic tomato harvesters. In 1975 these harvesters sold for about $100,000 each. This high investment cost has forced growers into buying and planting more acreage in tomatoes in an attempt to recover investment costs. One grower told us that a potential farm investor should buy at least 1,100 acres of farmland if the principal crop to be grown is tomatoes for processing. Also, the potential farmer should grow other crops to offset bad years in tomato production.

Most growers of tomatoes used for processing enter into contracts with a cannery before the planting season. Tomatoes

used for processing are planted in California from December to July and harvested from June through October. Frequently, the planting and harvest time for a grower is decided by an agreement between the grower and the canner. This is done to (1) provide canneries with a steady flow of tomatoes and (2) help the grower plan his planting and harvesting.

The contract between the grower and the cannery usually includes (1) price per ton to be paid to the grower by the cannery, (2) reasons for which a truckload of tomatoes can be rejected by the cannery--for example, if more than 1 percent contains worms, and (3) the maximum number of tons the cannery is required to accept if the cannery is working at full capacity. For example, some of the 1976 contracts stated that the cannery did not have to accept more than six-tenths of a ton of tomatoes per acre, per day, excluding Sundays.

Since 1974 the California Tomato Growers Association, which represents the interests of about 65 percent of the growers in negotiations with the canneries, has negotiated with seven or eight of the largest canneries to agree on certain minimum conditions applicable to tomato sales, such as price and circumstances under which a shipment can be rejected by the canner. Each grower member of the Association then contracts with an individual cannery; but the provisions in such contracts are subject to the minimum conditions negotiated with the Association.

After the tomatoes are harvested, they are shipped by truck to the processor. This transportation is provided by (1) an independent trucker hired either by the grower or the cannery, (2) a grower-owned truck, or (3) a truck owned by the cannery. The cannery will pay the transportation costs.

Food marketing industry

California canneries process about 79 percent of the tomatoes grown for use in processing. At the cannery the first steps involved after the tomatoes are delivered include inspecting, sorting, peeling, slicing, and otherwise mechanically preparing the tomatoes for canning. Once the product is ready, it is placed in the container. The container is hermetically sealed and conveyed to a cooker or retort where it is heat sterilized. The container is then labeled, cased, palletized, and moved to a storage area.

If the cannery has a surplus of tomatoes on hand, it will store the processed tomatoes in a large sterilized tank

or drum for later use. Processors told us that they have 50,000- to 100,000-gallon tanks and 55-gallon drums in which the tomatoes, now in liquid form, can be stored. Tomato products stored in such tanks last up to 2 years.

The tomato products can be labeled with the processor's own label or with a wholesaler's or retailer's label (commonly known as private labels). Sometimes the processor will hire an independent seller-broker to find retail chain stores and wholesale buyers for its products. The services provided by the seller-broker include (1) acting as the buyer for the processor, (2) advertising new and old product lines to past and potential buyers, (3) providing up-to-date market information to the canning companies, and (4) arranging for shipment of the canned tomato products from the processor to the buyer.

The processor pays the seller-broker a commission of only 2 percent to 2.5 percent for private label sales rather than the usual 5 percent because the seller-broker does not need to advertise when the canned tomato products are sold under private labels.

Officials of a nationwide food chain told us that most of the canned tomato products they buy are grown and processed in California. The officials told us that they purchase all canned fruits and vegetables, including tomato products, either through a broker or directly from the processor.

The officials told us that all canned fruits and vegetables they purchase are delivered to the retail store in the following manner if interstate transportation is necessary.

--The canned fruits and vegetables are transported by railroad to a consolidated warehouse owned by the chain.

--At the warehouse these cases of canned fruits and vegetables are separated into shipments to the chain's various food distribution warehouses across the country.

--The shipments are broken down at the distribution warehouses for delivery by the chainstore's trucks to its retail stores.

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Cost, cost increases, and selling prices for the grower, processor, and retailer

In 1977 USDA estimated the following breakdown of the retail prices for California whole tomatoes (No. 303 can) for 1976 and 1977. As the data shows, the processing share increased more than any other share from 1976 to 1977.

Year	Farm value (note a)	Assembly and procurement	Processing	Intercity transportation	Wholesaling	Retailing	Retail price
	(cents)						
1976	4.0	0.7	17.8	3.2	2.1	7.3	35.1
1977b/	3.9	0.6	21.1	3.4	1.5	6.8	37.3

a/Farm value is the amount of money attributable to the quantity of an agricultural commodity needed to produce one unit at the retail level. In the case of processed tomatoes, the relationship is 1.515 pounds at the farm needed to produce one No. 303 can at retail.

b/1977 data is preliminary.

Officials of some food marketing industry firms told us that their labor, packaging, and transportation costs have substantially increased. One canner showed us cost data which indicated that the can used for the tomato cost more than the tomatoes. For example, in 1975 the can cost 5.4 cents; the tomatoes, 4.6 cents.

U.S. DEPARTMENT OF AGRICULTURE
ECONOMICS, STATISTICS, and COOPERATIVES SERVICE
WASHINGTON, D.C. 20250

August 15, 1978

Mr. Henry Eschwege
Director, Community and Economic
Development Division
U.S. General Accounting Office
Washington, D.C. 20548

Dear Mr. Eschwege:

Thank you for the opportunity to review and comment on your proposed report to Congress entitled, "What Causes Food Prices to Rise and What Can Be Done About It." Our review includes the comments and requested changes by all the affected agencies in the Department. We defer comments on recommendations to Congress, Secretaries of Labor and Transportation, Chairman of the Interstate Commerce Commission, and Director of the Office of Management and Budget.

We concur with the recommendation to the Secretary of Agriculture that an in-depth study of the "backhaul problem for haulers of agricultural commodities" is needed. We agree that significant improvements in the present system of monitoring changes in prices from the farm to the retail level will require better and more timely data. If Congress concludes that a mandatory reporting program is required, we would prefer that it be administered by an existing regulatory agency with the experience and resources necessary to deal with the expected enforcement problems. We also agree that there needs to be a better system for monitoring the effect of food price increases on target groups in the population.

Our review is composed of three parts: (1) comments on the recommendations for the Secretary of Agriculture; (2) general comments about the report; and (3) requested changes, including corrections which are written on the attached manuscript.

Sincerely,

KENNETH R. FARRELL
Administrator

Attachment

APPENDIX IV

COMMENTS ON THE RECOMMENDATIONS TO THE SECRETARY OF AGRICULTURE OF THE GAO PROPOSED REPORT TO CONGRESS ENTITLED "WHAT CAUSES FOOD PRICES TO CHANGE AND WHAT CAN BE DONE ABOUT IT"

The following comments concern only the recommendations to the Secretary of Agriculture. We defer comments to Congress and other government agencies for all other recommendations.

The recommendation to the Secretaries of Agriculture and Transportation and the Chairman of the Interstate Commerce Commission for an indepth study of the problems of "haulers of raw agricultural products driving many miles empty" is germane. Several studies recently have contributed to our knowledge of this problem, but there are still some aspects of the problem for which more knowledge is needed if efficient and equitable improvements are to be made. We will initiate discussions with the Department of Transportation and the Interstate Commerce Commission in the near future about needed research potentials and resources available for this task. We have cooperated with these agencies in the past on transportation studies of mutual interest and plan to do so in the future.

We agree that improvement of price and marketing statistics would be beneficial in increasing the understanding and awareness of the market performance of the food industry. Within available resources and practical data considerations ESCS has improved and expanded its statistics on food prices and cost. Many of the limitations addressed in the Recommendation to the Secretary have been considered in the past. We welcome continued support and suggestion by GAO and others in order to improve ESCS statistics and their use.

Probability sampling for collecting farm prices for grains and fibers began in January 1977 and will be expanded to all crops in FY 1979. If proposed funding is granted for FY 1980, probability sampling will be expanded to livestock and livestock product prices.

To accomplish the recommended matching of price data to marketing lags for each product would require an increased frequency of reporting prices at each level. Recent changes in price reporting programs at BLS and ESCS will improve the matching of prices according to marketing lags. ESCS will evaluate these improved price statistics for their appropriateness in lagging prices.

We agree that improved data on retail prices, margins and quantities of food products purchased are needed and that such data should be available on a monthly basis. As the GAO report points out, through an

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intermediary private research firm USDA has undertaken a major effort to obtain such data voluntarily from the industry. As of July 1978, that attempt has not been successful. In refusing to cooperate, firms have expressed concerns about the costs of providing the data and have questioned the ability of either the research firm or USDA to protect the confidentiality of the data. It may well be that improvements in the quality of such data available for use by public agencies will entail implementation of the mandatory reporting recommendation offered by GAO.

However, such a mandatory system would have its negative side effects. The program would likely be resisted by many companies as has been the case with the Federal Trade Commission's line of business reporting program. In addition, a mandatory program may cause some firms to become hostile and refuse to provide data for other surveys and reporting programs which are voluntary but very important in the total USDA research program. If such a mandatory program is desired by the Congress it might be more satisfactorily administered by an existing regulatory agency which has the necessary resources to deal with the expected enforcement problems. We would provide substantial assistance in the development of such a program but do not view the legislative initiation or the operation of the program as an appropriate function for USDA.

We agree that reporting food expenditures by income class would be desirable and useful. Such information would assist in evaluating and administering food programs and help in determining food assistance target groups and analyzing the demand for food. Existing information is based on sporadic one-time surveys and not always collected on a comparable basis. Therefore, to do such an analysis on a regular basis would require a new recurring survey.

We concur with the recommendation that ESCS increase its efforts to insure that users are better informed as to the uses and limitations of marketing spread statistics represented in the Market Basket and marketing cost statistics represented in the Marketing Bill series.

The price specials measurement problem has long plagued ESCS. While conceptually possible to implement, the reporting of volume data for price specials and non-specials would significantly increase the cost of a price reporting program and respondent burdens. In addition, the collection of volume data along with prices would require agencies to significantly modify their enumeration procedures. Obviously, we will lend support to any effort directed toward resolution of this problem.

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GENERAL COMMENTS ON DRAFT OF GAO PROPOSED REPORT TO CONGRESS ENTITLED "WHAT CAUSES FOOD [illegible] TO CHANGE AND WHAT CAN BE DONE ABOUT IT"

The report provides a good description of the factors associated with rising food prices and suggests some ways to hold such increases down. The report also properly identifies some of the important problems which limit the usefulness of present statistics on these subjects. Several recommendations are made which, if followed, would contribute significantly to an improvement in the capability of USDA to monitor and report the relevant indicators of food price changes and food industry profitability on a timely basis. The report does not address the costs of obtaining better data (including industry resistance) but rather recommends that the agencies involved conduct studies to evaluate what the costs would be.

Detailed comments by subject matter specialists in the Department have been made on a returned copy of the manuscript. Careful consideration should be given to the editorial changes, substitutions, or deletions made to clarify the report. All Department data were reviewed and the latest available have been incorporated. In addition, the following general comments are organized according to Chapter.

Comments on Chapter 1

The chapter provides a good overview of the food price inflation issue and adequately describes the role of USDA as it relates to food prices and product availability. The discussion of price trends over time (p. 2) could be strengthened by pointing out that in each of the years when food prices have contributed in a significant way to overall inflation it was the result of shortages in raw product, either domestically or internationally or unusual worldwide demand conditions. Since 1970, for example, shortages of coffee, sugar, fish, wheat and meat have all contributed in a significant way to food price increases.

The chapter should be revised to include a discussion of the early 1978 situation. Such a discussion would highlight once again the importance of product availability to food prices. The footnote on page 14 should be changed to reflect the official date of the ERS-SRS merger (January 1, 1978).

Comments on Chapter 2

The chapter examines the major factors influencing changes in food prices--product availability, marketing costs and consumer demand. The discussion could be strengthened by addressing more directly and more fully the complexity of the food production, marketing and consumer purchase process. For example, the interrelationship between the increased consumption of marketing services and changes in the income and lifestyle of consumers is becoming more important in explaining the relative increase in marketing costs. Given these changed conditions, it no longer seems appropriate to simply dismiss consumer demand as "more predictable." In recent years, the prices of nonalcoholic beverages (coffee, tea, soft drinks, cocoa, etc.) have contributed significantly to food price inflation--much more so than the domestically produced farm foods. Increased demand for these products is contributing to increased food prices generally.

The effect of government programs on product availability is correctly addressed but the discussion fails to capture the complex nature of program administration under production and price uncertainty The policy thrust in the early 1970's was to reduce the surplus stocks accumulated during the fifties and sixties. Simultaneously, farm support emphasis was placed on income support through direct payments, rather than price supports and the resultant accumulation of government stocks.

The result of this policy was a rapid increase in commodity prices when worldwide weather conditions caused serious crop shortfalls and high demand for U.S. grains.

The 1972-75 situation with respect to food prices and Government policy was much more complex than the report's emphasis on the supply control provisions. The discussion does not reflect the complexity of all the conflicting objectives that are addressed in policy decisions. It does not point out the widespread pressure that exists when stocks build up, or the long-standing U.S. policy objective of reliance on the open market as the mechanism for price determination and for guiding resource allocations by producers. The report gives the impression that efforts to expand markets were ill-advised without fully describing the rapid changes in supply/demand conditions. Neither does it take full cognizance of the continuing dependence on export markets for U. S. grains.

In the section entitled "Government Programs Can Assist Farmers Without Limiting Supply" the cost to the Government is not raised as

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an issue. The section "Farm Production Costs are Increasing" does not come to any conclusion.

The "seasonal nature" section is very shallow. The 60 to 100 day period is incorrect for corn (120 days or more). For livestock the report talks about conception to slaughter, but does not mention that the supply of breeding stock is fixed in the short-run. Also, consideration should be given to the short-run supply reduction of holding back breeding stock (pp. 21 & 22).

The chapter could be improved by carefully distinguishing the conceptual difference between supply and demand as schedules and production and consumption as quantities. This subtle but important distinction is particularly necessary when discussing the effect of government programs. When price is supported at above equilibrium levels, the amount produced will exceed the amount consumers are willing to remove from the market. In such cases, government must either purchase and store the excess production or find ways to prevent farmers from producing more than consumers will buy at the supported price. Price support programs and production control programs are usually not independent, as is implied on p. 18. Even with the present programs, which support farm income through direct government payments, it is not possible to ignore the potential need for production control in order to keep government costs at reasonable levels.

The distinction in concepts would also appear to improve the section discussing demand starting on p. 34. While it is true that a price change for a product will have an effect on the consumption of that product, it will not affect its demand. On the other hand, price changes for substitute or complement products will affect the demand for that product--and, as a result, will influence the amount that gets produced.

While the section discussing increased food marketing costs is technically correct for the domestically produced farm foods, it helps to perpetuate a myth about marketing costs by ignoring the contribution of foreign foods and fish to overall food price increases. Since 1970, the retail price index for those foods has increased 145 percent. Price increases for the domestically produced farm foods increased 57 percent during the same period. 1977 is the best example in recent times. Food prices that year increased 6.3 percent above 1976 levels. Two-thirds of that increase (about 4 percentage points) is directly attributed to the price increases for coffee, tea and other foreign foods and fish. Once again, product availability and not marketing costs, explains a significant proportion of overall food price increases. The product availability argument also holds true for early 1978. Care should also be exercised so as not to imply that the farmer's share of the food dollar suggests anything about the financial well-being of farmers (pp. 47-48).

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Comments on Chapter 3

The chapter correctly points out the most obvious reasons that retail food prices are not always responsive to changes in farm product prices. The discussion, however, largely ignores the fact that seldom do retail prices increase as fast or as much, as farm prices do. As is correctly pointed out in a phrase under "retail pricing strategies," margins do tend to narrow when farm prices go up.

We concur that present procedures, including data, are not ideally suited to the monitoring task. Historically, it has been difficult to get the needed data on prices, margins and quantities to do the job better. As the report states, USDA has been unable to get cooperation from even a small sample of retail food chains in a pilot effort to improve this capability and is now seriously considering aborting its most recent attempt to obtain better data on a voluntary basis.

The current market basket statistics procedures were designed to estimate price spreads for U.S. farm-originated foods on a quarterly and annual basis. But in recent years, because of the extreme variation which has occurred in prices, we have been monitoring price spreads on a monthly basis. Publishing price spreads on a quarterly (or longer) basis does make the data less sensitive to the lag problem.

Ideally, to measure lags in pricing between farm and retail, one should trace changes in prices and marketing charges for equivalent quantities of farm food products as they flow through each step of the marketing system. In the past, we have not thought it practical to do this because of lack of current information and the variability in the lags among products. This variability is due to differences in location of production and consumption, product form, market channels, and quality. To accomplish a matching of prices to marketing lags for each product will, as the report indicates, require more frequent reporting of prices at transaction points in the system.

Comments on Chapter 4

We agree that transportation regulations, new technology and current or proposed product regulations are high potential areas for investigation as a means of reducing the magnitude of future food price increases. The cost increasing effects of current transportation regulations has been a matter of concern to USDA for a number of years. Based on our research and experience in this area, we are in substantial agreement with the observations and conclusions in the report.

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In discussing the set of proposed regulations relating to nutrition information, product pricing and labeling, the GAO report neglects to indicate the potential price reducing effects that may result. Requiring firms to provide more information about costs per unit may enhance price competition for some products and result in lower prices. There is no good rationale to suggest that net weight labeling and other techniques designed to enhance the consumer decision process will materially increase food prices.

We agree that the industry wide adoption of certain technical innovations would likely reduce marketing costs. For years, USDA has supported research on technology development and adoption. However, it has become more difficult over time to obtain public funds for such research. Some have argued strongly that such research should be funded by the industry.

In addressing the issue of technology adoption though, the GAO report largely neglects the problems and costs of adoption. For most firms, the use of present technology is the result of a series of capital investment decisions made over the years. To bring about widespread adoption of new technology would require full depreciation of present capital plus the fixed costs of new equipment. There is an additional problem of firm versus industry actions. Technological investment that makes economic sense for the industry may not be sound for any one firm. Without industry adoption of the UPC, scanning equipment would never make sense for a single firm. Different package sizes introduced by one firm may be evidence of innovation and competition but for the total industry is likely more costly than standardized packaging. Finally, the report neglects the potential price increasing influences of technology adoption. Often it is only the large firms who are able to adopt the new technology. If technology adoption is meaningful for only a few big firms, the result may be a further concentration of market power.

The chapter, and indeed the entire manuscript, largely ignores the potential government programs have to insure adequate supplies of food over the long run. Such policies as the grain reserve, crop insurance, disaster payment programs, etc., all help to reduce producer uncertainty and, in the long run, help to reduce the year-to-year fluctuation in product availability--the most important factor behind the rapid food price increases in this decade.

Comments on Chapter 5

The GAO report correctly states that at the present time lags are not considered in the calculation of price spreads between farmer and consumer. It also makes the valid observation that USDA does not now

formally consider the existence of the lag between farm and retail prices when presenting its spreads data. From time to time, each of these issues has been internally considered. Our conclusion has been that until better data are available incorporation of these concepts, while theoretically valid, would not be particularly meaningful. We do, however, consider this to be an open issue.

ESCS is currently implementing an improved program for collecting farm prices which is based on sound statistical sampling procedures. The improvements began in FY 1977, when probability sampling was initiated for major grains and cotton. In FY 1978, a marketing channel survey was conducted to obtain data for efficient sample designs and to help make certain that all market channels are given proper weight for estimating commodity prices. Plans for FY 1979 are to complete the probability samples for all crops. If additional funding is approved for FY 1980 we will expand the improved sampling methodology to include the livestock and livestock product area.

We agree with the GAO conclusion that publishing the percent of disposable income spent on food is not a particularly meaningful concept for at least two reasons. First, the Department of Commerce's food expenditure series is not complete--it only approximates personal consumption expenditures for food. USDA has made significant progress in developing a new Total Food Expenditure series. When completed, this series will hopefully provide the basis for a new system of food expenditure monitoring. Second, the percent of disposable income spent on food does not provide any information about the distribution of food expenditures by income class. The GAO report incorrectly states that USDA has no plans to collect the data needed to make such an assessment. The 1977-78 USDA Nationwide Food Consumption Survey will provide a point-in-time indication of the distribution by income class. In addition, we have reported the data from the 1972-74 Consumer Expenditure Survey in USDA publications which also addresses this distribution.

Such data are very costly. But we have studied the need and the costs associated with collecting such data from a cross-section of U.S. families on an interval as short as one month. To date, OMB has not been responsive to such data requests. OMB concerns stem largely from the costs and reporting burden of the procedure, but also regards the statistical problems involved as serious.

We agree that there is confusion about the various statistics used to monitor food price changes. Some of the confusion is evident at places in the GAO report itself. USDA is making an attempt to do more to explain the shortcomings of its statistics. The uses and limitations

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of the market basket and marketing bill statistics have been described in special reports (i.e., Agricultural Marketing Costs and Charges: How They are Constructed and Used, Vol. 4, Agr. Handbook 365, Farm-Retail Spreads for Food Products, Price Spreads and Margins are Not the Same, and The ABC's of Marketing Margins.) (p. 156).

We take full cognizance of the fact that these efforts may not be sufficient in view of the recent widespread use of the statistics. We would be responsive to any specific suggestions on how we might communicate better with our clientele.

APPENDIX V

Interstate Commerce Commission

Washington, D.C. 20423

OFFICE OF THE CHAIRMAN

AUG 18 1978

Mr. Henry Eschwege
Director
Community and Economic Development Division
United States General Accounting Office
Washington, D.C. 20548

Dear Mr. Eschwege:

Subject: Draft Report, "What Causes Food Prices to Rise and What Can Be Done About It"

Thank you for the opportunity to review and comment on chapter 4 of your proposed report to Congress on food prices. Although we disagree with many of the observations and conclusions reached in the chapter, the ICC strongly supports the performance of the studies recommended. We should point out, however, that these studies are primarily transportation-oriented and do not seem to us to have the potential to have a significant impact on food prices. The figures presented in the GAO draft report itself indicate that only 8 percent of the total food cost is attributable to the cost of transportation. Therefore, a decrease in transportation cost of an amount as high as 10 percent would result in only 8/10 of a percent reduction in the cost of food to the consumer. This figure is less than the current monthly increase in food prices.

The draft report deals with the alleged increase in costs resulting from empty backhauls caused by ICC regulations or the Interstate Commerce Act. This has been, and continues to be, a highly controversial subject. Identifying the true cause of a "empty backhaul" is an extremely difficult problem. It involves the identification of producing and consuming elements within the geography of the United States, an analysis of the equipment being used for the movement and its usefulness for the transportation of other commodities, an analysis of time needs for the use of the equipment, an awareness of the driver's potential personal requirement to return to home base, and a recognition of the existing regulatory policies that are in effect to mitigate the likelihood of

Mr. Henry Eschwege

necessary empty backhaul. Exempt haulers or owner-operators providing exempt transportation under section 203(b)(6) of the Interstate Commerce Act currently have the ability to trip-lease equipment to regulated carriers for transporting regulated loads in the direction of the origins of initial exempt loads. Agricultural cooperative trucklines operate under an additional exemption provided for in section 203(b)(5) of the Act adopted to bring motor carrier regulation into conformity with the Agricultural Marketing Act of 1929 to ease both the production and distribution of agricultural products. This exemption provides that the ICC will not regulate the transportation of commodities which are normally regulated under certain conditions. Specifically, the cooperative's trucks may transport, free of economic regulation, products produced, distributed, and consumed by its members, as well as certain traffic for nonmembers which is incidental to and contributes to the cooperative's effectiveness. This exemption has been construed to assist materially in improving the balance of operations.

The ICC study on "Empty/Loaded Truck Miles on the Interstate Highways During 1976" was issued in April 1977. This study, referenced on page 86 of the draft report, showed that regulated carriers had 16.2 percent of total miles empty, exempt carriers 21.2 percent, and private truckers 27.3 percent. Perhaps the draft report erroneously adds up the latter two figures. The difference between regulated carriers and exempt haulers is not particularly great. A conclusion of the report, supported by other studies as well, is that one of the primary causes of empty mileage is the natural imbalance of traffic between various economic markets. Deregulating the backhauls of exempt haulers might have little effect on their overall percentage of empty backhauls. In summary, we feel any conclusions regarding causes of empty backhaul should be withheld until completion of the recommended study. This study into the exempt agricultural hauler should be broad enough to inquire into all the causes of equipment and labor underutilization in agricultural transportation. A measure of empty mileage only would not confront the major problems associated with the empty backhaul problem.

The Commission staff task force on "Improving Motor Carrier Entry Regulation" issued a report in July 1977 recommending that the Commission consider a complete overhaul of the agricultural exemption in the Act, and, in doing so, seek the advice and cooperation of the Department of Agriculture and other agencies to assist in the rationalization of the exemption. This recommendation is being held pending determination on the Commission's legislative

Mr. Henry Eschwege

proposal (contained in S.2269, 95th Congress), and also included in the Commission's legislative proposal to Congress of February 10, 1978, recommendation number 14. Under the proposed bill, the Commission would have the same authority related to modes other than rail that it has been granted under the 4-R Act. This authority would enable the Commission to exempt from regulation carrier operations found not to be of major significance in carrying out the National Transportation Policy. Affirmative action on the proposed bill should result in positive initiatives to assist unregulated agricultural haulers to achieve more balanced operations.

The second major facet of the empty backhaul problem addressed in the draft GAO report relates to intercorporate hauling. On this subject the Commission's basic premise has been that private carriage undermines the regulated for-hire industry, and, in doing so, injures the public which is largely dependent upon regulated carriers for its transportation requirements. Since there are more than 100,000 private carriers and approximately 18,000 regulated carriers competing along with a large number of exempt haulers for a finite amount of traffic, the Commission has believed that if conglomerates are allowed to use their giant, private fleets to serve all their affiliates, the expansion of private carrier traffic would reduce the size of the regulated carrier industry and significantly impair its ability to render a satisfactory level of service to the general public. Further, it has remained Commission policy that for-hire carriers and the shipping public not operating private fleets should not have to bear the risk of less efficient operations merely to make private carrier operations more efficient on backhauls. That kind of policy shift will probably cause diversion of traffic from for-hire carriers, creating greater imbalances in their operations, underutilization of equipment, and a reduction in revenues. The obvious result would be less service at a higher cost for shippers too small to engage in private carriage. Studies performed by both DOT and FEA have not clearly defined the extent to which the private carrier backhaul problem is related to present Commission regulation or company policies unrelated to regulation. Moreover, the effect of any relaxation of that policy on the operations of the transportation industry has not been established. The problem is to determine how much traffic would be diverted from common carriers to private fleets without altering significantly the number of vehicle-miles operated and whether positive effects on either carrier costs or energy consumption would result. This is why the recommended studies of the draft report are appealing and should be pursued.

APPENDIX V

Mr. Henry Eschwege

Page 93 of the draft report provides "Despite these changes, however, it appears that ICC actions continue to be guided mainly by its traditional regulatory objectives rather than by concern for maximum energy conservation." Ex Parte No. 55 (Sub-No. 22), Implementation of the Energy Policy and Conservation Act of 1975, was opened on August 23, 1976, and concluded during June 1978. This rulemaking proceeding established new regulations in 49 CFR 1106 that provide in part, ". . . Energy findings and conclusions are integrated into decisions, opinions, or orders in proceedings involving a major regulatory action as defined in this part. The Commission interprets the provisions of EPACA as supplemental to its existing authority and as a mandate to view traditional policies and missions in the light of national energy objectives and, if necessary, to change these policies to promote greater energy conservation and efficiency among carriers subject to Commission jurisdiction.. . ."

In summary, the Commission reiterates its strong support for the performance of the recommended studies, and will be happy to cooperate with both the Department of Transportation and the Department of Agriculture in the accomplishment of these studies. Certainly, the problems raised in the draft report have been long-standing, but the divergence of opinions regarding the impact of empty backhaul, as well as its cause, is substantial. The accomplishment of broad, well-planned, and quantified studies to assess the impact and potential alternatives to existing regulations on exempt carriers and on intercorporate hauling would certainly benefit the Commission in reaching its decisions in the future.

Sincerely yours,

A. Daniel O'Neal
Chairman

APPENDIX VI

OFFICE OF THE SECRETARY OF TRANSPORTATION
WASHINGTON, D.C. 20590

ASSISTANT SECRETARY
FOR ADMINISTRATION

AUG 25 1978

Mr. Henry Eschwege
Director
Community and Economic
Development Division
U.S. General Accounting Office
Washington, D.C. 20548

Dear Mr. Eschwege:

In response to your letter of July 14, 1978, this is the Department of Transportation's (DOT) reply to Chapter 4 of the General Accounting Office draft report "What Causes Food Prices to Rise and What Can Be Done About It."

The role of the transportation sector and freight cost should not be overlooked when considering the overall price of goods and inflationary trends in our economy. For this reason, DOT is particularly pleased with GAO's explicit recognition and discussion of transportation factors in this report on food price increases.

In regard to the specific transportation issues raised in the GAO report -- namely, the effect of certain transportation regulations on food costs -- the Department of Transportation agrees that such regulations need to be clearly examined as to their effect on transport costs in the food sector, and overall. The DOT is especially concerned about the backhaul problem and the role of exempt owner-operators and private carriers, as discussed in the GAO report. We feel that the report describes the background and significance of these problems very well, recognizing both the constraints of the present regulatory situation and the intrinsic difficulties of formulating new regulations that can bring about net improvements in the industry without severe short-term disruptions.

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In light of the above, we further agree with the GAO that more analysis is necessary in order to adequately address and resolve the existing regulatory problems for exempt and private carriers. Such analysis could take several forms. In our view, the most meaningful analysis would involve an attempt to assess the impacts of various reform possibilities on competing sectors of the motor carrier and railroad industries. While this analysis might well entail the collection of some additional information about exempt motor carriers, a considerable amount of information already is available about these carriers. The first order of priority should be to use this information, in combination with existing information on other types of carriers, in order to develop some reasonable assessments about the possible magnitude of traffic shifts which alternative regulatory reform proposals might induce among different classes of carriers.

A key regulatory issue which might be addressed in this context is the current question of whether an agricultural commodity exemption of some type should be extended to the railroad industry. Such an exemption could have profound implications for the net cost of food transportation. The failure to consider the railroad sector and rail regulatory issues is a critical omission in the report.

In conclusion, we congratulate the GAO on its perception in addressing several key transport regulatory issues which impact on cost of food products to the American consumer. We stand ready to work with the GAO and with other federal agencies to formulate constructive solutions to the transport problems discussed in the report.

If we can assist you further, please let us know.

Sincerely,

Edward W. Scott, Jr.

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