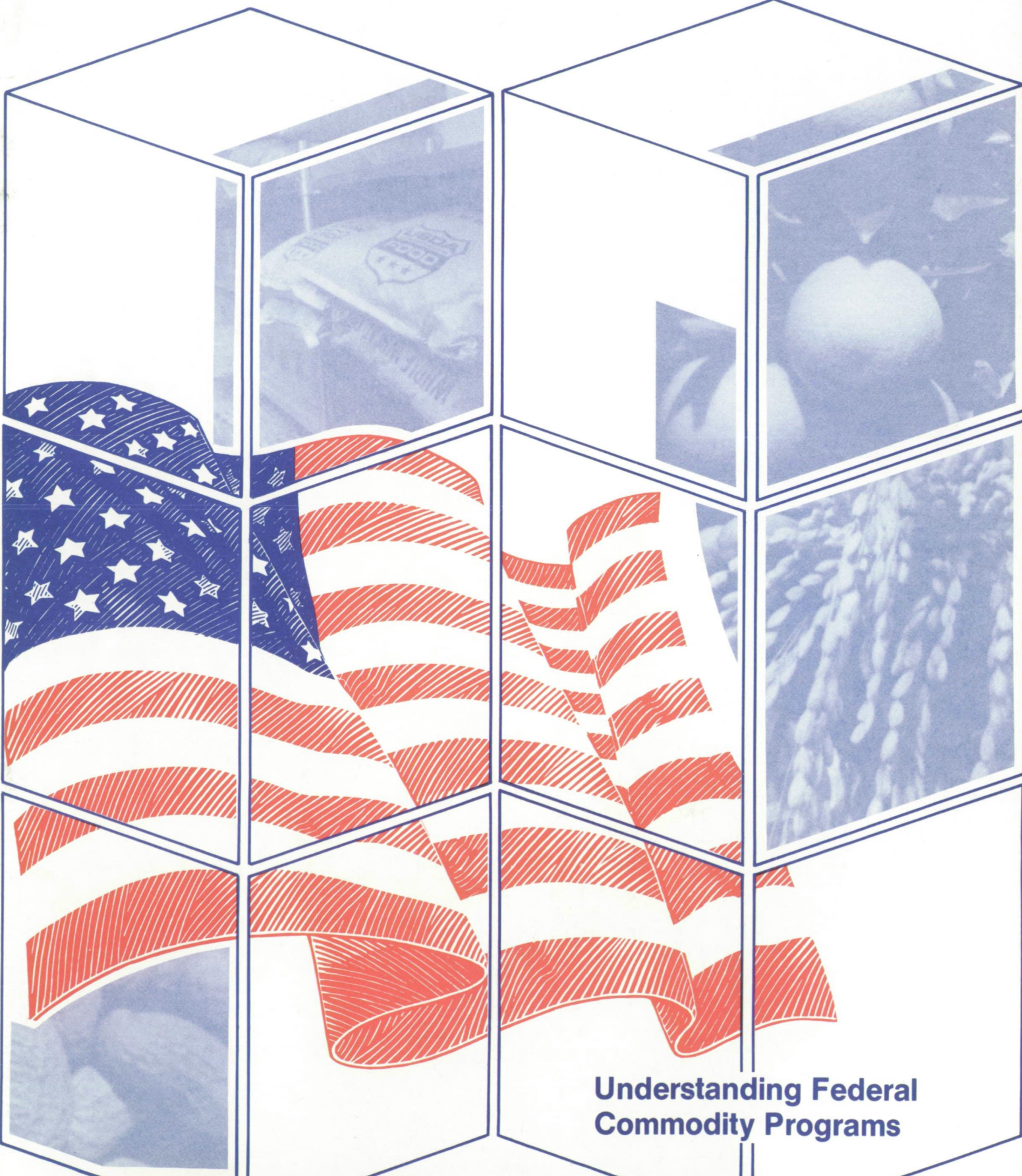


# National Food Review

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**Understanding Federal  
Commodity Programs**



# Contents

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# The Peanut Program and Its Effects

James Schaub

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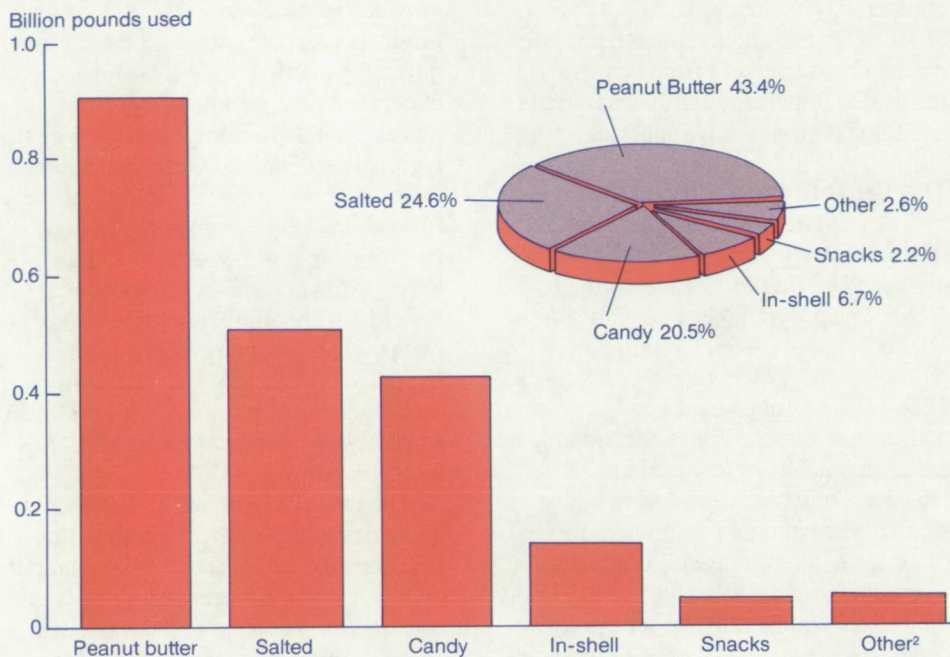
The United States is the world's third largest producer of peanuts, and Americans eat a lot of them, about 8.5 pounds per person annually. Peanut butter is a national favorite, accounting for more than 40 percent of the peanuts we eat (figure 1). Peanuts are also an important ingredient in America's three most popular candies, which are Snickers, Reese's Peanut Butter Cups, and Peanut M&M's according to *Candy Marketer* magazine. As consumers, we are accustomed to a steady, wholesome supply of peanuts and peanut products at reasonable prices. Yet, most of us are probably unaware that the supply and price of peanuts have been affected by Government programs for more than 50 years.

The Federal peanut program supports the price received by farmers and raises the prices consumers pay for peanuts and peanut products. The program does these things without large Government outlays, using quotas and two-tiered pricing instead.

## History of the Peanut Program

Peanuts have been under voluntary or mandatory programs since April 1934. A variety of programs operated in the 1930's and 1940's. During this time, the basic components of the post-World War II peanut programs appeared. For instance, in 1934 Congress designated peanuts, along with several other crops, as basic commodities requiring price support. Current law designates corn, cotton, peanuts, rice, tobacco, and wheat as basic commodities. Regional growers' associations were organized in 1937 to serve as agents for the Commodity Credit Corporation (CCC), the Federal organization that provides funding for

Figure 1. Peanut Butter Is an American Favorite<sup>1</sup>



<sup>1</sup>Peanut use in primary products, marketing year 1986/87 (August 1-July 31), in-shell basis. <sup>2</sup>Includes grated or granulated peanuts and peanut flour.

price and income support programs. In 1941, three important program provisions were established. Price supports were tied to parity, an equity concept based on the idea that an agricultural commodity should have the same purchasing power it had in 1910-14. Marketing quotas (which limit the quantity producers may sell) were implemented, and a referendum was established to allow growers to periodically vote on the program's continuation.

From 1949 to 1977, the peanut program consisted of mandatory acreage allotments (which limit the acres that may be planted to peanuts) and marketing quotas, with the minimum price support set at 75 percent of parity and ranging as high as 90 percent. In the

Food and Agricultural Act of 1977, the parity concept was dropped, and a two-tiered price support system was established. The new system, which remains in use, distinguished between "quota peanuts" and "additional peanuts." Quota peanuts were marketed under a national quota and used for domestic food products and seed. Sales of additional peanuts were restricted to exports or crushing for oil and meal. Higher price support loan rates were offered to producers for quota peanuts, while additional peanuts received a lower loan rate. The Agriculture and Food Act of 1981 eliminated acreage allotments and gradually reduced the national marketing quota to 1.1 million tons in 1985.

The domestic peanut price support program has been protected since 1953

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by a federally set annual import quota of about 1,000 tons, which is quite small compared with the marketing quota. In 1980, when a drought reduced domestic production 42 percent from year-earlier levels, the import limitation was eased and 200,000 tons were imported.

### The Current Peanut Program

The current peanut program continues the two-tiered price support program for quota and additional peanuts through 1990. The program became mandatory after a January 1986 referendum in which peanut growers approved it for the 1986-90 marketing years.

Because acreage allotments no longer exist, anyone may grow peanuts. However, only those producers with a share of the national marketing quota (their farm quota) may sell peanuts for domestic food and related uses. By law, the national quota must be set at a level equal to domestic food, seed, and related uses, but not less than 1.1 million tons. The 1988 quota is 1.402 million tons.

The Food Security Act of 1985 apportioned the 1986 national quota among States based on their 1985 allocations. Individual farm quotas were then granted to farms that had a quota in 1985. Growers can acquire quotas two other ways. They may buy or lease another owner's quota, or they can establish a history of producing and marketing additional peanuts. When a State's quota is increased, farmers who grew and marketed additional peanuts in 2 of the preceding 3 years are entitled to a share of the increase.

Peanut prices are supported by offering loans to growers through the regional growers' associations. This means that producers receive loans at the price support rates in effect for quota and additional peanuts. To get a loan, a grower places peanuts in storage arranged by the regional association. Once this is done, the grower no longer has control of them. Instead, the peanuts are part of a pool controlled by the association and the CCC. Growers who have placed peanuts under loan are eligible for dividend payments if association revenues from selling peanuts in the pool exceed costs of running the loan program. Losses are absorbed by the Government as a CCC budget expense.

The national loan rate for 1988-crop quota peanuts is \$615.27 per ton. Support rates for 1987-90 crops are required by law to equal the preceding year's rate adjusted for increases in the estimated costs of production, except those for land, during the previous year. Increases are limited to 6 percent. The quota support rate was increased for 1988 because the 1987 cost of producing peanuts rose above 1986 levels.

The support rate for 1988-crop additional peanuts is \$149.75 per ton. This rate is set to ensure no loss to the CCC from the sale or disposal of these peanuts placed in the loan pools. The rate takes into account the demand for peanut oil and meal, the expected prices of other vegetable oils and protein meals, and the demand for peanuts for export.

Additional peanuts become available for domestic food use if they are "bought back" after being put under CCC loan. The price of these buy-backs must cover

all Government costs and cannot be less than the quota loan rate. This program provision is valuable because it provides a supplemental source of peanuts should the quota supply be inadequate. Also, these sales generate revenues to offset operating costs of the peanut program.

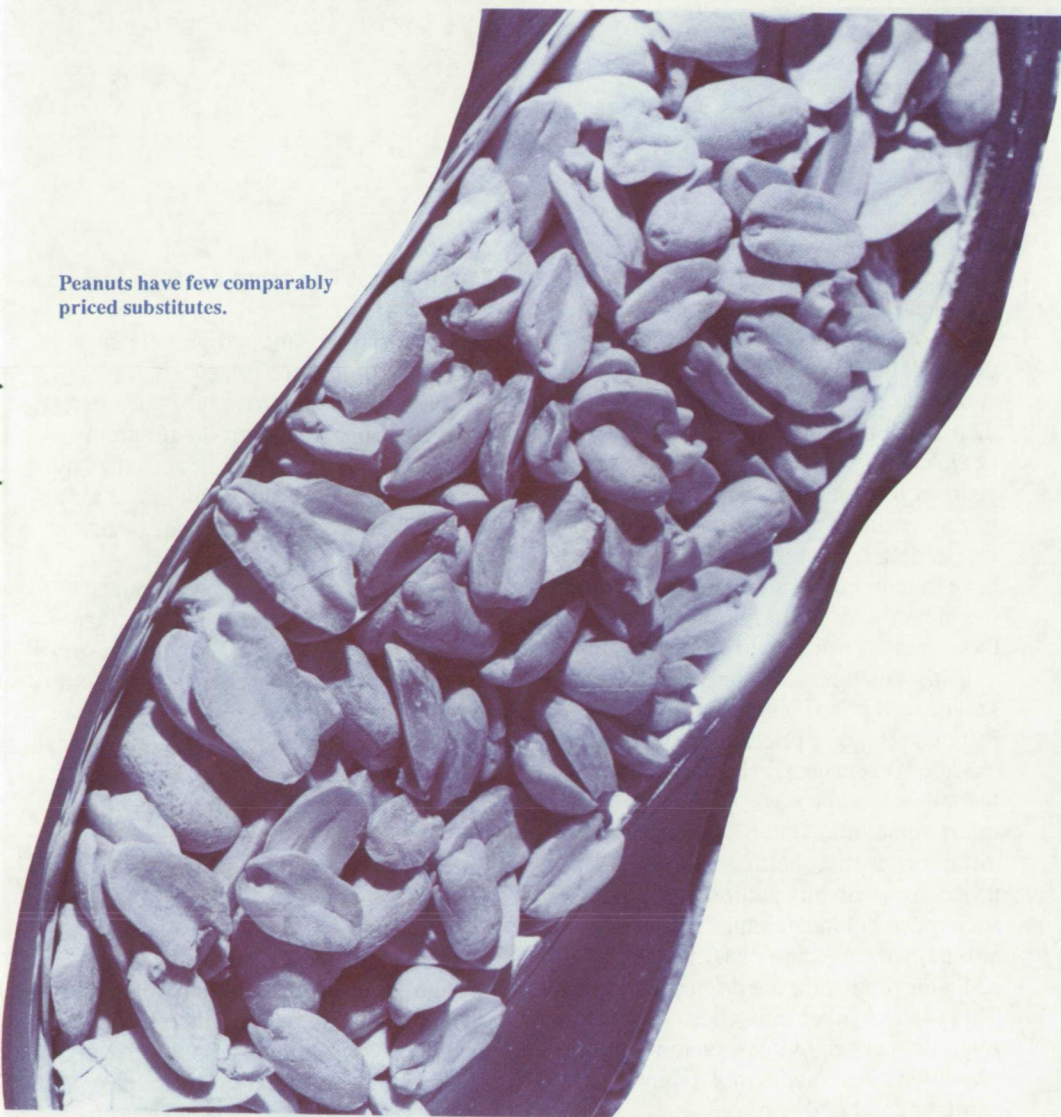
The peanut program is administered by three regional growers' associations, which serve as agents for the CCC. These associations keep records of quota and additional peanut marketings, arrange warehousing for CCC loan peanuts, and operate the price support loan program.

Each year's quota and quota support rate combination, however, does not necessarily correspond to a quantity and price that domestic peanut buyers desire. If the quota support rate is higher than the price that domestic processors are willing to pay, some quota peanuts will go under loan at CCC's expense, and the quantity of peanuts consumed will be below the quota level. On the other hand, if the selling price for peanuts is above the quota support rate, there will be no incentive for producers to put quota peanuts under loan. Such has been the case in recent years.

Annual net CCC farm-related expenditures for the peanut program averaged \$30 million in the 1960's, \$61 million in the 1970's, and \$10 million during 1982-86. Under the current program, the costs to taxpayers should be minimal because quotas now are set to equal expected domestic food and related demand. Furthermore, the loan rate for additional



Peanuts have few comparably priced substitutes.



peanuts is substantially below the market price. It is also below the current crush value. This means that few peanuts should go under loan and that CCC should be able to dispose of acquired peanuts at no loss.

However, the peanut program could cost the Government, taxpayers that is, substantially more money if the national marketing quota was much larger than what processors would want to buy at the quota loan rate. Growers would then place large quantities of quota peanuts under loan, and the Government would be obligated to buy the peanuts at the quota loan rate.

### How the Peanut Program Affects Consumers

In supporting the price farmers receive, the peanut program raises the price consumers pay. In the same vein, by imposing marketing quotas, the program reduces the supply of peanuts available to consumers.

The quota loan rate puts a floor under the price peanuts can be sold for in the domestic market. It is difficult to say what peanut prices would be without the program because the program has existed for so long. We do know that in 1986, when the quota loan rate was \$607 per ton, it cost about \$420 to produce a ton of peanuts. This reflects the break-even,

long-run average price necessary for growers to cover all costs of production and, thereby, continue to grow a crop. Therefore, a free market price would be closer to \$420 per ton than \$607. However, even this cost estimate may be questioned because farmers have adjusted their production practices and marketing strategies in response to the constraints and opportunities provided by the peanut program. Furthermore, a free market system would entail shifts in the location of production, which is now determined largely by the quota system.

The program reduces consumer purchases by limiting supply and, therefore, raising prices. This in turn, leads to smaller quantities demanded. But the national quota is not an absolute limit. Supply can be augmented through purchases of additional peanuts that had been placed under loan. And in years of extremely tight supply, such as the 1980/81 marketing year, the restrictions on imports may be eased.

Although a lower free market price would increase consumption, the size of the increase would be modest compared with the current level of consumption. This is because consumer demand for peanuts and peanut products, like the demand for many food products, is relatively insensitive to price changes. It has been estimated that a 10-percent decrease in peanut prices would increase total consumption just 2.3 percent. In terms of 1986/87 consumption levels, a 10-percent decrease in price would have added about 48 million pounds to the 2,073 million pounds consumed that year. Yet how consumers respond to price changes varies among peanut products. For example, peanut candy demand appears to be more price sensitive than peanut butter demand.

However, in general, peanut demand is relatively insensitive to changes in



prices because peanuts, and especially peanut butter, have few good and comparably priced substitutes. Other nuts, such as almonds and cashews, are more expensive, and none of them make a good substitute for the peanut butter in a peanut butter and jelly sandwich.

Another reason for the limited response to price changes is the fact that peanuts and peanut products generally account for a relatively small portion of a consumer's budget. That is, spending on peanuts is small compared with spending on many other foods and consumer products. Buyers are less likely to adjust their spending on commodities that are considered small purchases.

### **How the Program Affects Processors**

Peanut processors are the middlemen between growers and consumers. Their livelihood depends on a reliable supply of raw peanuts and a predictable demand

for processed peanuts and peanut products. Although the domestic marketing quota attempts to match supply and demand, bad weather can lead to shortages and higher prices that can curb demand. Bad weather cannot be anticipated when setting the quota, so in years of low yields processors have to pay more than the minimum quota loan rate to obtain peanuts. Processors then have to either absorb these costs, resulting in narrower profit margins, or pass the increased price on to consumers.

Although consumers are relatively insensitive to price changes, they do respond to higher prices by reducing purchases. This is nearly the same situation that other food processors and manufacturers sometimes find themselves in. A difference is that shelling firms and processors who buy additional peanuts for export, but later cannot sell them abroad, are subject to penalties if they sell their product in the domestic market. This is a risk other industries do not face. Even with normal yields, unanticipated growth in consumer demand may lead to shortages and higher prices.

### **The Peanut Program and Producers**

The Federal peanut program is intended to support the price farmers receive and thus improve their incomes. Farmers strongly support the program even though it restricts their activities by limiting the quantity of peanuts that may be marketed for domestic food, seed, and related uses.

Farmers benefit from the peanut program because prices are higher than they would be without it. The quota support rate is currently higher than the total cost of producing peanuts. Program benefits accrue to quota holders whether or not they produce peanuts, because farm quotas may be rented to other growers. Quota rents vary widely among States, but they average about \$125 per ton in the Southeast.

Most other commodity programs support the price of agricultural products through a system of loans and deficiency payments that are underwritten by U.S. taxpayers. With peanuts, however, very little support is derived from Government outlays. Instead, consumers support the program by paying higher prices. ■



# Government Programs for Rice: What They Mean to Producers, Processors, and Consumers

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The economic environment for rice has been changing as U.S. producers, processors, and consumers adjust to the market-oriented policies of the 1985 Food Security Act. The rice provisions went into effect on April 15, 1986, and will continue to influence the industry through the marketing of the 1990 crop.

## Overview of the 1985 Act

The 1985 Food Security Act amended the Agricultural Act of 1949 to require marketing loans for the 1986-90 rice crops. It also provided that commodity loans, target prices, and deficiency payments be offered to producers who participate in the rice program. Loan rates and target prices are being lowered over time. An acreage reduction program can be implemented in years when rice supplies are excessive.

The 1985 farm legislation continued the price support program under which producers can pledge their rice as collateral and obtain nonrecourse loans from the Commodity Credit Corporation (CCC). Loans are available only to producers who participate in the program and who agree to comply with other program provisions. The loan is non-recourse in that producers can keep the money if the market price is below the loan rate. The Government has no recourse and must take title to the rice. If the market price is above the loan rate, producers pay off their loans (including storage costs) and keep the rice. The loan rate was set at \$7.20 per hundred-weight (cwt) for the 1986 rice crop,



Marketing loans made U.S. rice more competitive in 1986/87.

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\$6.84 per cwt for 1987, and \$6.63 per cwt for 1988 (*table 1*). The rate will be subject to further reductions in crop years 1989-90, but cannot go below \$6.50 per cwt.

The concept of a target price was introduced into Federal commodity programs in the 1970's to guarantee a specific level of return—per bushel, pound, or in the case of rice, hundred-weight—to participating producers. Congress establishes a target price for

individual commodities (wheat, feed grains, cotton, and rice) above the loan rate. Eligible rice producers in the program receive deficiency payments from the CCC at a rate equal to the difference between the rice target price and either the loan rate or the 5-month-average market price (August through December). If the 5-month-average is below the loan rate, producers receive the full difference between the target price and the loan rate. If the 5-month-

average price is above the loan rate, they receive only the amount by which the target price exceeds the average market price. Under this scheme, the payment rate falls to zero if the 5-month-average market price reaches or exceeds the target price.

Target prices are an important determinant of the income of participating producers. In the 1986/87 marketing year, deficiency payments to program participants were based on a payment rate of \$4.70 per cwt and totaled \$500 million.

Marketing loans, which were introduced for rice by the 1985 Act, represent a new concept in commodity programs. When the world price of rice falls below the loan rate, the marketing loan provisions allow producers to repay their loans at a reduced rate. This allows farmers to receive the total loan value. It also helps exporters to purchase rice at or near its world-market value. Repayment rates for 1986- and 1987-crop marketing loans were set at the world price or 50 percent of the loan rate, whichever was higher. For redemption purposes, the current world market price for rice is announced by USDA on a weekly basis.

The marketing loan has generally made U.S. rice more competitive in domestic and international markets. It has reduced the domestic market price, and, thereby, increased demand and raised the volume of rice processed by U.S. millers. Marketing loans have been popular in all sectors of the rice industry. However, they have increased Government costs. Thus, U.S. consumers have benefited from lower prices, but they have paid more as taxpayers as a result of higher program costs incurred by the CCC.

Producers in the rice program must comply with acreage reduction provisions established each year by the Secretary of Agriculture. The 1986 and 1987 acreage reduction requirements

**Table 1. Rice Program Payments Have Become an Important Part of Farm Income**

Item	Marketing year <sup>1</sup>			
	1984/85	1985/86	1986/87 <sup>2</sup>	1987/88 <sup>3</sup>
<i>Thousand acres</i>				
<b>Acreage</b>				
Base	4,160	4,234	4,199	4,183
Reduced	785	682	1,272	1,256
Diverted	0	559	0	0
Total planted	2,830	2,512	2,381	2,352
Harvested	2,802	2,492	2,360	2,330
<i>Dollars per hundredweight</i>				
<b>Prices</b>				
Target price	11.90	11.90	11.90	11.66
Loan rate	8.00	8.00	7.20	6.84
Price received by farmers				
5-month average	8.14	7.73	3.87	5.71
12-month average	8.04	6.53	3.75	( <sup>4</sup> )
Deficiency payment rate	3.76	3.90	4.70	4.82
<i>Million dollars</i>				
<b>Income factors</b>				
Market value of production	1,119	881	500	926
Deficiency payments	380	375	500	550
Marketing loan payments	0	255	396	314
Marketing certificate payments	0	0	19	—
Diversion payments	0	93	0	0
Total	1,499	1,604	1,415	1,790

— = not applicable. <sup>1</sup>The crop and marketing year for rice runs from August 1 to July 31. <sup>2</sup>Preliminary.

<sup>3</sup>Projected as of June 9, 1988. <sup>4</sup>Projected to be between \$7.00 and \$7.25.



were set at 35 percent. This means that a producer with 100 acres of eligible cropland could plant just 65 acres of rice and had to "set aside" 35 acres to receive loans and deficiency payments. The acres removed from production can only be planted in a cover crop—to protect the land from wind and water erosion—unless the Secretary designates otherwise. Because the demand for rice has increased and CCC stocks have declined, the acreage reduction requirement was reduced to 25 percent for the 1988 crop year.

### Programs Affecting Rice Exports

While marketing loans have bolstered the competitiveness of U.S. rice worldwide, there are other USDA programs that have expanded the volume of our rice exports. The most important one for the industry was introduced following enactment of the Agricultural Trade Development and Assistance Act in 1954. This legislation, commonly known as Public Law (P.L.) 480, became a major vehicle for exporting farm products abroad. Under this Act, surplus farm products may be shipped overseas for emergency relief, sold for foreign currency, or bartered for strategic materials. The 1985 Act continued the P.L. 480 program and its market development and humanitarian objectives.

The CCC operates a number of commercial export promotion programs in addition to P.L. 480. The most important one for rice is the Export Credit Guarantee Program (GSM-102). Under this program, the CCC guarantees repayment of private credit extended to importers in specified countries for the purchase of designated U.S. agricultural commodities, such as rice. Credit can be extended for up to 3 years.

P.L. 480 shipments and GSM credit exports have accounted for as much as 50 percent of rice exports in recent years. Although these arrangements have

proven to be very successful in developing and sustaining our overseas markets in the past, efforts to cut Federal program costs may lead to reduced P.L. 480 assistance.

The 1985 Act also established the Export Enhancement Program (EEP) to help U.S. exporters compete with subsidized exporters. This program allows the CCC to award bonuses in the form of generic certificates (redeemable for CCC-owned commodities) to exporters, who in turn sell specified U.S. commodities in targeted countries at prices below what they would be without the certificates. The EEP has not been used extensively for U.S. rice because the marketing loan has already made it competitive in world markets, and most other exporters do not subsidize rice exports.

Another export promotion program that has benefited rice is the Targeted Export Assistance (TEA) Program. This program helps U.S. exporters counter unfair trade practices by foreign competitors and importers by helping to promote various commodities overseas. The thrust of the program for rice has been to promote U.S. rice in countries that have the potential to develop into commercial markets.

### Program Impacts on U.S. Rice Producers

The U.S. rice program raises producers' incomes. It also tends to lower their costs of production, increase the value of their land, and complicate the production-planning process. In addition, producers benefit from Government-assisted export programs that reduce surplus stocks and increase market prices.

The 1985 Act resulted in increased program participation by rice producers, and the lower market prices precipitated by marketing loans have virtually eliminated rice production by nonparticipating farmers. The income enhancement provided by deficiency payments has become a vital component of

producers' annual incomes. In addition to the marketing loan provisions, marketing certificates are issued when the world price goes below the minimum loan repayment rate. Consequently, the total return to participating producers will not decline even if the world price drops below the minimum repayment rate. In the 1987/88 marketing year, prices are expected to rebound to the \$7.00-7.25 per cwt range, which may reduce participation in the 1988 rice program.

### Program Impacts on Rice Millers

The 1985 Act greatly expanded the volume of rice processed by U.S. millers. Total use expanded from 124.5 million cwt in 1985/86 to 161.7 million cwt in 1986/87, a 30-percent rise (*table 2*). Much of this increase reflected greater export demand. Shipments abroad totaled 85.4 million cwt in 1986/87, up 45 percent from the previous year. P.L. 480 shipments increased about 6 million cwt, while commercial exports increased about 20 million cwt. Both commercial and P.L. 480 shipments will decline in 1987/88 as a result of higher market prices. (Because P.L. 480 programs are on a fixed budget, higher prices mean lower volume shipments.)

The expansion in domestic use and exports that occurred under the current rice program has permitted the milling industry to improve efficiency by expanding its output. However, the surge in 1986/87 did not involve the construction of new mills because the industry already had a significant amount of excess capacity due to a drop in rice use during the early 1980's. When the program began, many of the major rice milling firms returned to full operating capacity.

Lower prices for rough rice during the first year marketing loans were in effect, greatly enhanced the profitability of milling operations. Millers used this opportunity to put additional resources into



**Table 2. Rice Exports Reached 85 Million Hundredweight in 1986/87**

Item	Marketing year <sup>1</sup>			
	1984/85	1985/86	1986/87 <sup>2</sup>	1987/88 <sup>3</sup>
<i>Million bushels</i>				
<b>Supply</b>	187.3	201.8	213.3	182.3
Beginning stocks	46.9	64.7	77.3	51.6
Production	138.8	134.9	133.4	127.7
Imports	1.6	2.2	2.6	3.0
<i>Million hundredweight</i>				
<b>Utilization</b>	122.6	124.5	161.7	150.8
Domestic	52.5	62.3	69.3	74.0
Food	35.8	45.6	51.7	55.0
Seed and industry	2.8	2.6	2.6	3.0
Brewer's use	13.9	14.1	15.0	16.0
Exports	62.1	58.7	85.4	70.0
Commercial	49.0	44.9	65.4	54.0
P.L. 480	13.1	13.8	20.0	16.0
Residual	8.0	3.5	7.0	6.8
<b>Ending stocks</b>	64.7	77.3	51.6	31.5
Commercial stocks	20.4	33.7	42.9	31.5
CCC inventory	44.3	43.6	8.7	0

<sup>1</sup>The crop and marketing year for rice runs from August 1 to July 31. <sup>2</sup>Preliminary. <sup>3</sup>Projected as of June 9, 1988.

product development and to advertise and promote existing, as well as new products. Aggressive marketing by millers and rice industry organizations has promoted rice as a healthy, versatile food that can be used in many dishes. Lower prices for milled rice encouraged processors to develop and market new food products, including a large variety of flavored rice blends. These products are easy to prepare, and they have encouraged consumption of rice.

The growth in export demand reflects a number of factors that ultimately benefit millers by increasing volume. First of all, with marketing loans improv-

ing the competitiveness of U.S. rice in world markets, the industry can promote rice abroad on the basis of its quality. Second, the favorable credit terms offered by the CCC under the GSM-102 Credit Guarantee Program, in conjunction with promotional and market development efforts by the Rice Council, have expanded our export markets. Promoting the quality image of U.S. rice will continue to be essential to developing and maintaining markets for our rice.

### Program Impacts on Consumers

Lower market prices for rice have also spurred growth in domestic consumption. Per capita consumption has climbed from 9.3 pounds in 1985 to 12.9 in 1987. Large users—like restaurants,

foodservice institutions, and firms marketing frozen food entrees, cereals, soups, and snack foods such as rice cakes—have benefited not only from lower prices but also from an increase in consumer preference for rice.

However, individual consumers have not seen a large enough price decline to encourage them to substitute rice for other products. During the year following the adoption of marketing loans, the U.S. average retail price of white, long-grain, uncooked rice declined from 45 to 39 cents per pound, about 13 percent. Statistical analysis indicates that a 10-percent drop in retail rice prices yields less than a 1-percent increase in consumer use.

Yet other nonprice factors have helped make rice an increasingly popular menu item. In recent years, the preferences of American consumers appear to be changing away from animal-based products and toward more grain-based foods. Many health groups have encouraged Americans to increase their consumption of the complex carbohydrates found in grain products like rice. These factors, combined with new, easy-to-prepare products, have increased the consumer's options and encouraged more frequent use of rice products.

Increases in the Asian and Hispanic segments of the U.S. population have contributed to greater rice consumption, as has the growing popularity of rice among consumers of traditional American cuisine. Since the 1984/85 marketing year, per capita rice consumption (excluding use in beer) has jumped nearly 40 percent. Rice used to make beer continues to grow steadily, but use is mainly determined by changes in beer consumption and the market share of companies that prefer rice to corn as a brewing ingredient. ■



# U.S. Dairy Programs

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The dairy industries of most developed countries are extensively regulated. Many subsidize part or all of their domestic production and frequently their exports. Imports are restricted by practically all major dairy-producing countries. Consequently, only about 5 percent of world milk production enters world trade in the form of cheese and other dairy products.

The U.S. dairy industry, influenced by several Government programs, is no exception. Dairy product imports are curtailed by quotas and have averaged less than 2 percent of U.S. annual milk production, or about 3 percent of our consumption of manufactured dairy products. Most imports are made up of specialty cheeses and casein. Exports of as much as 2 percent of U.S. milk production are mainly concessional sales or food aid donations from Government supplies.

One reason the United States restricts imports is to prevent other countries' subsidized dairy products from directly, or indirectly, increasing dairy product purchases by the Commodity Credit Corporation (CCC) under the Federal dairy price support program. If imports were unlimited, the United States would be supporting the price of dairy products worldwide.

## The U.S. Dairy Industry

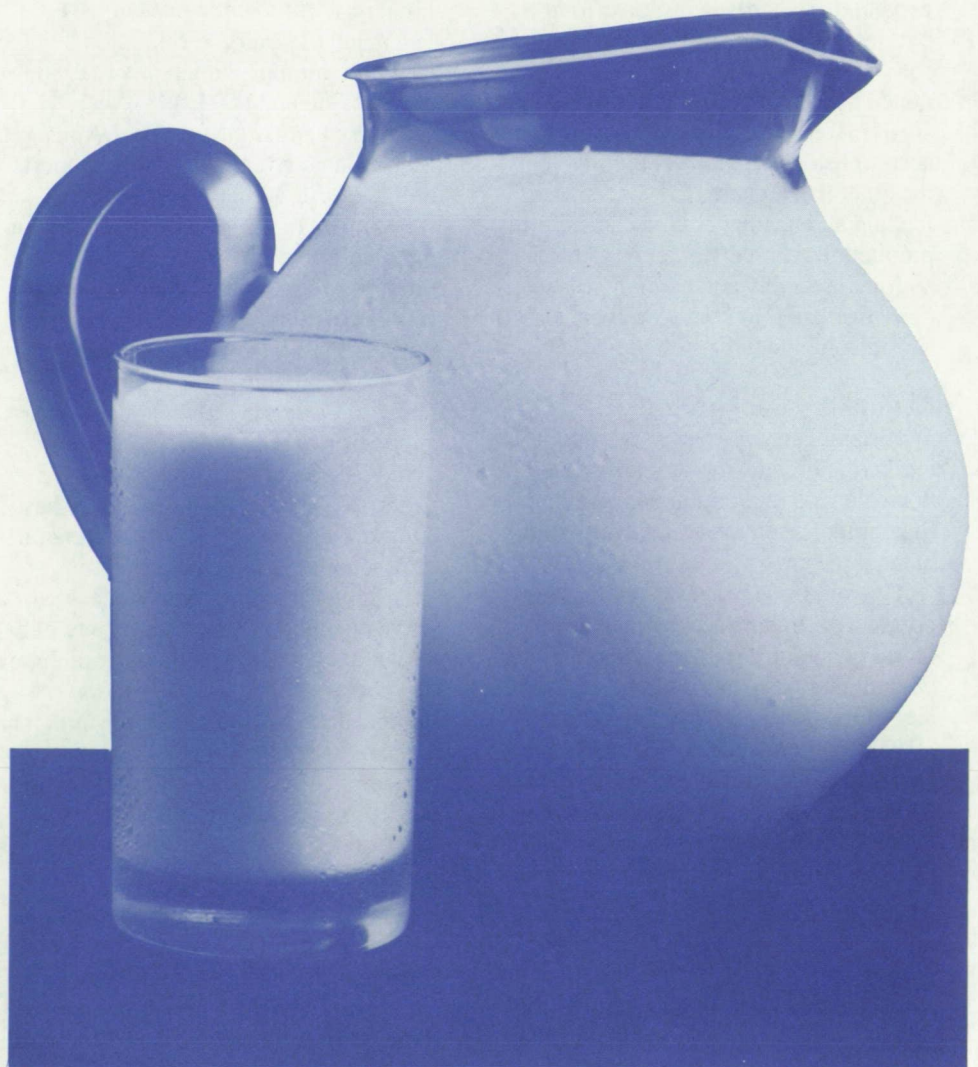
Milk is bulky, highly perishable, and subject to bacterial and other contamination. So, it must be produced and handled under sanitary conditions. It also must be marketed quickly, either for drinking or for manufacturing into storable products, such as cheese, butter,

and nonfat dry milk. Prices—even though influenced by Government programs—allocate raw milk supplies among competing demands, such as the fluid milk and processing markets, and give production and marketing signals to dairy farmers, processors, and marketing firms.

The ability of market prices to efficiently coordinate these economic activities depends in part on the inherent

characteristics of milk and its products. Most of these characteristics are not unique to milk, but in combination, they create unique conditions and problems. They include:

- Extreme perishability of the raw product. There is a high potential for transmitting diseases in raw milk. It must be transported, refrigerated, and pasteurized quickly.
- Highly inelastic demand. This means that changes in quantities purchased are



Over 88 percent of the total U.S. milk supply is Grade A. Courtesy of American Dairy Association

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relatively small when prices change.

- ③ Bulkiness. At 87 percent water, milk takes up considerable space.
- ③ Continuous production. The biological process of milk production requires, among other things, skilled workers daily.
- ③ Unsynchronized seasonality of production and demand. Production is highest in the spring, while consumption is strongest in the fall.
- ③ Biological lags in output. It takes about 30 months for a newborn calf to become a cow and begin producing milk. Therefore, it takes the industry a while to expand dairy herds in response to increases in demand. In the shorter run, some additional milk output can be obtained by more concentrate feeding, and small increases in cow numbers can be accomplished with slower culling. On the other hand, decreased concentrate feeding and heavier culling can cut milk production relatively quickly.
- ③ Joint assembly and hauling. Most dairy farmers find it is more cost effective to combine their milk to market it.

## Regulatory Background

Federal dairy price supports and milk marketing orders, import restrictions, domestic and international food aid, and State milk regulations directly affect the industry.

Overall, these programs play an important role in the pricing and marketing of milk and dairy products. Most Federal dairy regulations evolved from legislation enacted in the 1930's and 1940's. For instance, the Agricultural Marketing Agreement Act of 1937, as amended, provides for classified pricing in fluid milk markets under Federal milk marketing orders. The Agricultural Act

of 1949 established the ongoing dairy price support program.

While there have been significant changes in marketing orders, the basic structure of the dairy price support and import control programs remained nearly the same from 1949 to 1981.

Since 1981, three major departures from traditional dairy price support policy have occurred. First, price supports were removed from parity. Second, voluntary supply management provisions were added. The Dairy Diversion Program, which operated from January 1, 1984, through March 31, 1985, and the Dairy Termination Program, running from April 1, 1986, through September 31, 1987, were authorized under the new provisions. Finally, changes in dairy price supports on January 1, 1988, 1989, and 1990, were linked to projected annual Government purchases. If purchases are projected to be under 2.5 billion pounds (milk equivalent), the support rate goes up 50 cents a hundredweight (cwt). Conversely, if purchases look like they are going to be over 5 billion pounds, the support price goes down 50 cents. To avoid burdensome supplies in these 3 years, the Secretary of Agriculture has authority to establish another diversion or production termination program.

Many of these legislative changes were attempts to reduce the supply of excess milk and cut Government purchases and costs. In 1983, dairy farmers produced over 10 percent more milk than consumers were willing to buy at the supported prices. The excess milk supply problems continue, albeit at a lower level, and there are signs that lower prices will be needed in coming years if

price is used to balance supply and demand.

## How the Dairy Price Support Program Works

Because milk is a perishable commodity, the Government indirectly supports the price farmers receive for it by buying dairy products. Specifically, the CCC buys surplus butter, nonfat dry milk, and cheddar cheese from processors at specified prices.

The support price—currently \$10.60 per hundredweight for milk containing 3.67 percent butterfat—is what the Government would like farmers to receive from processors for Grade B milk used in making manufactured products. The CCC sets its purchase prices for butter, nonfat dry milk, and cheese using a formula that combines the support price with margins, or "make allowances," to cover the costs of processing milk into these products. The margins are calculated so that dairy farmers, on average, should receive the support price for Grade B milk (*see sidebar*).

The actual prices received by dairy farmers depend on many factors other than the support level. Plant location, the type of product manufactured, the quantity of milk delivered, its butterfat content, local competition between processors for milk, and plant operating efficiency all play a role. Prices to farmers for Grade B milk are free to move above or below the support level depending on local supply and demand.

Another Federal program, milk marketing orders, regulates the prices of Grade A (fluid) milk. However, since most fluid milk prices are based on those



### Federal Price Support Purchases

The Federal Government supports milk prices through purchases of butter, nonfat dry milk, and cheddar cheese. The following example illustrates the connection between the prices USDA pays for these dairy products and the price support rate for milk, currently \$10.60 per hundredweight (cwt).

Smith and Jones are average dairy farmers living near Plainville, USA. Dairyman Smith sells milk to the local processing plant that makes butter and nonfat dry milk. For each hundredweight (100 pounds) of milk he sells, the plant makes 4.48 pounds of butter and 8.13 pounds of nonfat dry milk. With the CCC prices of but-

ter and nonfat dry milk set at about \$1.32 and 73 cents per pound, respectively, the products made from Smith's 100 pounds of milk are worth \$11.82. However, the plant's allowance for manufacturing these products is \$1.22 per cwt, leaving \$10.60 to Smith for his milk.

Jones sells milk to the cheese plant on the other side of town. For every hundredweight of milk purchased, the plant manufactures 10.1 pounds of cheese and 6 pounds of whey solids. The CCC pays about \$1.15 per pound for the cheese. The whey is worth 33 cents, making the market value of the products made from Jones' milk equal to \$11.97. Since the plant's allowance for manufacturing the cheese is \$1.37 per cwt, Jones will receive \$10.60 per cwt for the milk.

paid for Grade B (manufacturing) milk, the price support program undergirds all dairy prices.

### How Federal Milk Marketing Orders Work

Milk marketing orders were first instituted to ensure that local markets had adequate supplies of higher quality Grade A milk for beverage uses. They were also designed to raise dairy farmers' incomes during the Depression, provide stability and orderliness in fluid

milk markets, and establish reasonable prices for consumers.

Federal milk marketing orders set minimum prices that processors must pay for Grade A milk in markets covered by the orders. The 43 Federal milk marketing orders operating January 1, 1988, regulate the handling and pricing of about 70 percent of all milk sold to plants and dealers, and about 81 percent of the Grade A milk marketed in the United States. About 88 percent of the Nation's milk supply is Grade A, and about 45 per-

cent of all Grade A milk sold is used for beverage products.

Federal milk marketing orders have two major characteristics: classified pricing of milk according to use and pooling or combining all revenue from the sale of milk in the area covered by an order. These revenue pools provide all producers with a single uniform, or "blend," price for milk that is supplied to plants regulated under the order.

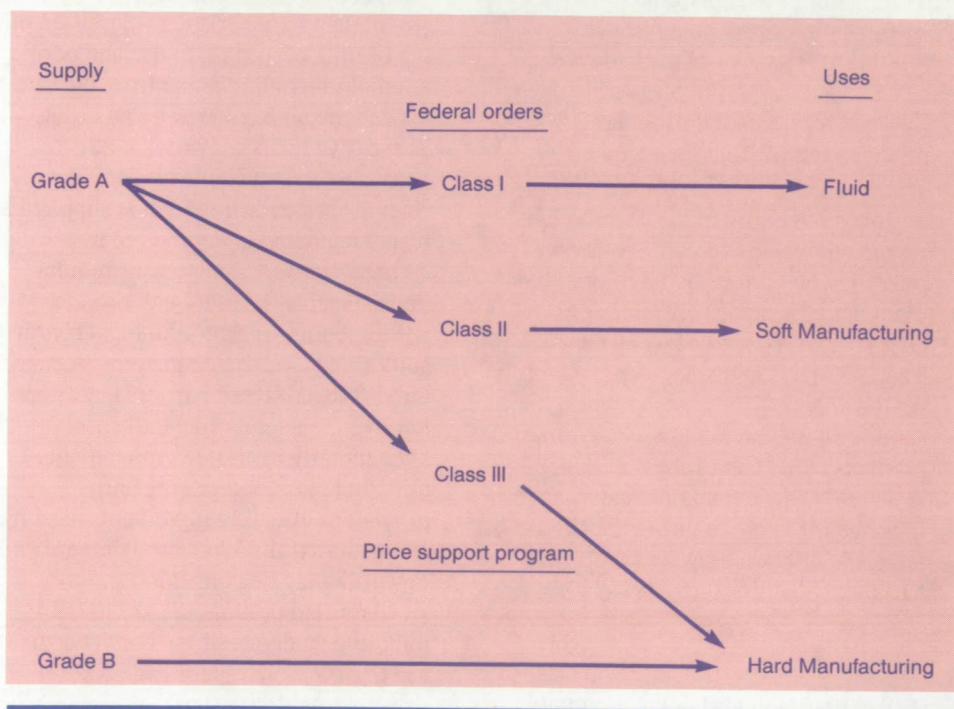
In earlier years, numerous regulations—such as sanitary and product specifications of State and local health authorities—restricted the movement of milk. Most of these barriers have been removed. Federal orders, themselves, do not generally restrict the movement of milk, but classified pricing and provisions affecting ingredients used for reconstituted fluid milk and unregulated raw milk may be constraining.

Classified pricing breaks Grade A milk into categories based on its actual use (*figure 1*). Grade A milk for beverages is designated as Class I. Most orders have two other classes. Class II includes milk used for soft (semiperishable) manufactured products including cream, ice cream, cottage cheese, and yogurt. Class III includes milk used for hard (storable) manufactured products like cheese, butter, and nonfat dry milk.

Minimum class prices for all Federal marketing orders are based on the average price of Grade B milk in Minnesota and Wisconsin, known as the



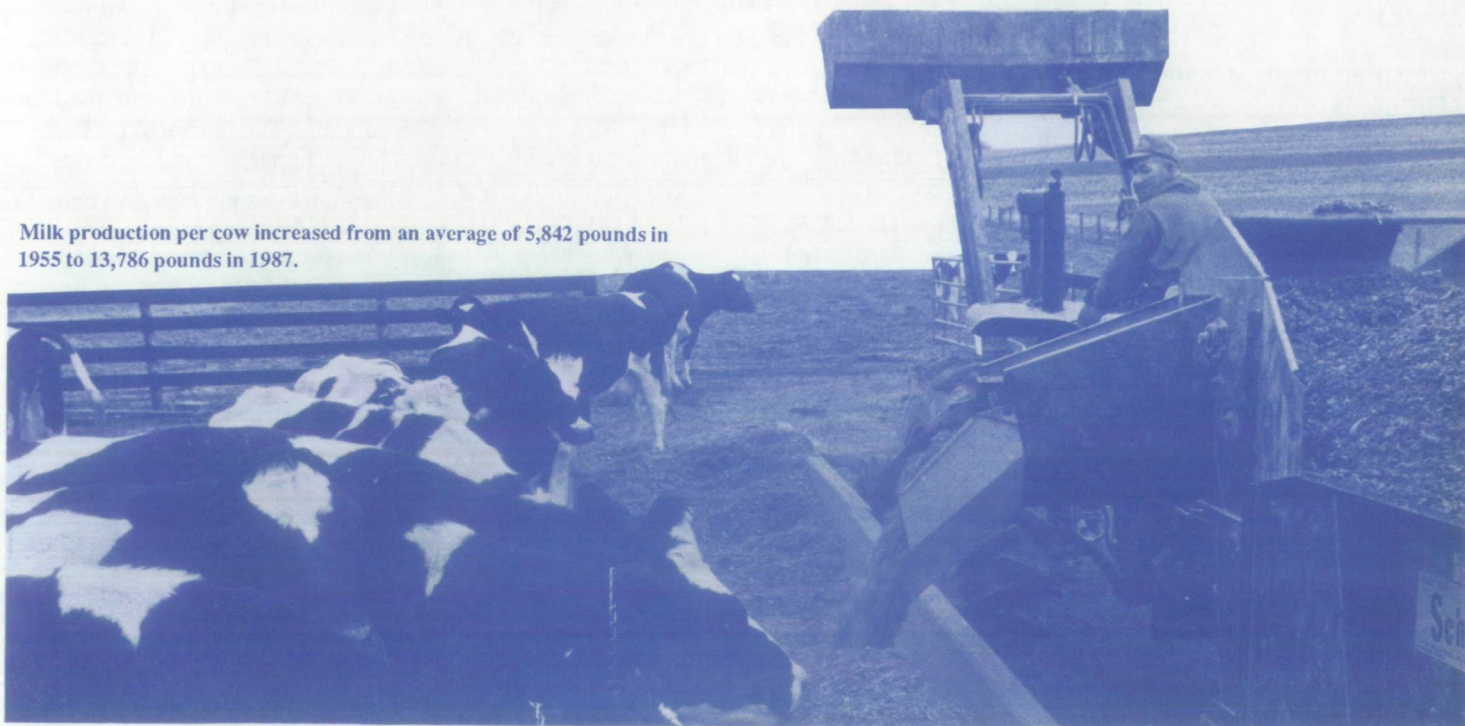
**Figure 1. Federal Marketing Orders Categorize Milk According to Use**



M-W price. With a few minor exceptions, Federal order prices for Grade A milk used in manufactured products are set at or near the M-W price. Minimum prices for Class I milk are higher than the M-W level by fixed differentials unique to each Federal order.

Since the 1950's, new interstate highways and improved transportation systems have allowed milk to be moved over longer distances. This has made fluid milk markets more interdependent and regional in nature. When Federal order pricing provisions were changed in the late 1960's to reflect this greater mobility, the Upper Midwest had the largest overall reserve supply of Grade A milk. Dairy farmers there produced more fluid milk than could be consumed in the region. Over time, however, other areas of the country—such as southwest Missouri, Kentucky-Tennessee, and the Northeast—began developing Grade A milk supplies in excess of local needs. The Federal order pricing system was not

Milk production per cow increased from an average of 5,842 pounds in 1955 to 13,786 pounds in 1987.



**Table 1. The Food Security Act of 1985 Mandated Higher Minimum Class I Differentials for Most Federal Milk Orders<sup>1</sup>**

Federal order	Mandated increase	Minimum Class I differential	Federal order	Mandated increase	Minimum Class I differential
<i>Dollars per cwt</i>			<i>Dollars per cwt</i>		
New England	0.24	3.24	Tennessee Valley	0.67	2.77
New York-New Jersey	0.30	3.14	Nashville	0.67	2.52
Middle Atlantic	0.25	3.03	Paducah	0.69	2.39
			Memphis	0.83	2.77
Georgia	0.78	3.08	Fort Smith	0.82	2.77
Alabama-West Florida	0.78	3.08			
Upper Florida	0.73	3.58	Central Arkansas	0.83	2.77
Tampa Bay	0.93	3.88	Southwest Plains	0.79	2.77
Southeastern Florida	1.03	4.18	Texas Panhandle	0.24	2.49
			Lubbock	0.07	2.49
Upper Michigan	0	1.35	Texas	0.96	3.28
Southern Michigan	0.15	1.75	Louisiana	0.81	3.28
Eastern Ohio-Western			New Orleans-		
Pennsylvania	0.15	2.00	Mississippi	1.00	3.85
Ohio Valley	0.34	2.04			
Indiana	0.47	2.00	Eastern Colorado	0.43	2.73
Chicago	0.14	1.40	Western Colorado	0	2.00
Central Illinois	0.22	1.61	Southwestern Idaho-		
Southern Illinois	0.39	1.92	Eastern Oregon	0	1.50
Louisville			Great Basin	0	1.90
Lexington-Evans	0.41	2.11	Lake Mead	0	1.60
			Central Arizona	0	2.52
Upper Midwest	0.08	1.20	Rio Grande Valley	0	2.35
Eastern South Dakota	0.10	1.50			
Black Hills	0.10	2.05	Puget Sound-Inland	0	1.85
Iowa	0.15	1.55	Oregon-Washington	0	1.95
Nebraska-Western Iowa	0.15	1.75			
Kansas City	0.18	1.92			

<sup>1</sup>Changes became effective May 1, 1986.

adjusted to reflect these changing Grade A supply conditions.

The 1985 Food Security Act legislated higher minimum Class I differentials in 35 of 44 Federal milk orders—primarily in southern milk-deficit markets east of the Rockies (*table 1*). Until these changes became effective May 1, 1986, the basic structure of minimum Class I differentials, especially the portion designed to reflect transportation

costs between markets, had remained unchanged since 1968.

The other major provision of Federal milk orders is marketwide pooling. Under this system, producers in each marketing order receive a monthly weighted average, or blend, price. Each processor operating under the order must pay at least the announced minimum marketwide blend price to producers delivering milk to the plant, regardless of how it is used (*see sidebar*).

## Reconstituted Milk

Federal marketing order provisions are applied to milk-derived ingredients that are used in reconstituted milk. This often makes the ingredients, nonfat dry or condensed milk and butterfat, more costly than without regulation. The pricing and accounting provisions are intended to balance costs among handlers. They also keep unregulated reconstituted milk from displacing locally produced Grade A milk in higher valued uses, and thus lowering producer blend prices. The rules treat milk as a highly perishable product and emphasize using local supplies to minimize the time between production and consumption. They encourage balancing daily and seasonal fluid needs with fresh reserves, even though techniques for prolonging the storage life and quality of processed milk ingredients have been developed. To the extent these provisions increase marketing costs and discourage longer distance movements, prices of fluid milk products for consumers in milk-deficit areas are increased.

## State Marketing Regulations

The States also play an important, albeit declining, role in milk regulation. Most State regulations cover setting milk prices at the producer, wholesale, or retail levels, licensing milk processors and distributors, and regulating unfair trade practices, product dating, identity standards, and sanitation (*table 2*).

Most producer price regulation occurs in the Federal milk marketing order system, where over 80 percent of the Grade A milk is priced. In January 1986, only 14 States regulated producer prices. The highest volume by far occurred in California, where the State's dairy industry has long been regulated. Price regulation at other than the producer



## Understanding Marketing Order Pricing

The pricing mechanisms in Federal milk marketing orders are complex. They set the minimum prices that processors must pay for milk based on how it is used. However, those minimum prices are not paid directly to producers. Instead, receipts are pooled by a market administrator and producers receive a weighted-average, or blend, price based on how the milk was used by processors during each month. To understand more clearly how orders work, consider this hypothetical Omaha order.

In April, there were three processing plants in the Omaha area regulated by the order. The cheese plant northwest of the city buys milk from dairyman Clark. Because it is regulated by the Omaha order, the plant must pay the Class III price of \$10.40 per cwt for milk, the same amount that unregulated processors in Minnesota and Wisconsin pay for Grade B milk (the M-W price).

East of town, another processing plant manufacturing ice cream buys milk from Clark's neighbor, Thompson. Like the cheese plant, the ice cream manufacturer is regulated by the order. Since ice cream is a soft dairy product, the plant pays the Class II price of \$10.50 per cwt for milk. The price is calculated using a product price formula and is usually about 10 cents over the M-W price.

A fluid processor south of the city buys milk from Miller. The marketing order requires the plant to pay the Class I price of \$12.50 per cwt. This is the sum of the Class I differential of \$2.00 and the February M-W price of \$10.50 (there is a 2-month lag in this calculation).

Even though the producers sell to different types of plants, they all receive the same price for their milk. The monthly blend price is calculated by multiplying the amounts used in each of the classes by their respective prices. Assume the cheese plant bought 40,000 cwt of milk, the ice cream plant purchased 20,000 cwt,

and the fluid milk processor, 80,000 cwt. Thus, the total volume and value of milk purchased during April was:

Class III	\$10.40	x	40,000 cwt	=	\$416,000
Class II	\$10.50	x	20,000 cwt	=	210,000
Class I	\$12.50	x	80,000 cwt	=	1,000,000
Totals			140,000 cwt		\$1,626,000

To get the blend price, total value is divided by total volume. Therefore, no matter where they sold their milk, Clark, Thompson, and Miller all received \$11.61 per cwt for the milk they sold during April.

In reality, most plants produce multiple products and over the year at least some milk must be used in beverage products or some bulk milk must be sold to fluid processing plants as Class I, in order to qualify as a "pool plant" under a Federal order. In any event, this same pooling concept applies to both the costs of processors and the receipts of Grade A dairy farmers. "Pool plant" rules are complex and vary by individual Federal orders and months of the year.

level is primarily a State function, where such regulations exist at all.

## How the Programs Interact

Federal milk marketing orders and the Federal price support program are closely interrelated. The reason is that Federal milk marketing order class prices are based on the M-W price. Since the M-W price reflects the market value of unregulated manufacturing grade milk, it tends to represent the supply and demand

balance for the entire industry (*figure 2*). When market prices are above the support level, the price support program is inactive. On the other hand, when milk prices fall to, or below, the support level, the CCC's purchases of butter, cheese, and nonfat dry milk tend to prevent further price declines, thus supporting the M-W price and all milk prices. In this situation, changes in the support price have a direct effect on all milk prices.

The M-W price, as the prime mover of class prices in all Federal order markets, provides a coordinating link be-

tween milk orders and the price support program. It assures that minimum class prices will not rise when large Government purchases might require a reduction in the support price. (Under the 1985 Food Security Act, increases in Class I differentials became effective at a time of excess milk supplies in the overall system and deviated from this basic concept.)

Processors in all States can rely on the Federal price support program as a

**Table 2. Twenty-Nine States Had Milk Marketing Regulations in January 1986**

State	Minimum prices established at			Trade practice regulations	Producer base <sup>1</sup>
	Producer level	Wholesale level	Retail level		
Alabama		( <sup>2</sup> <sup>3</sup> )	( <sup>2</sup> <sup>3</sup> )		
Arkansas				X	
California	X	( <sup>4</sup> )	( <sup>4</sup> )	X	X
Colorado				X	
Connecticut				X	
Hawaii	X				
Idaho				X	
Iowa				X	
Kansas				X	
Louisiana	( <sup>2</sup> )			X	
Maine	X	X	X	X	
Massachusetts	X	( <sup>2</sup> )	( <sup>2</sup> )	X	
Minnesota				X	
Missouri				X	
Montana	X	X	X	X	X
Nevada	X	( <sup>2</sup> )	X	X	X
New Jersey	X	( <sup>2</sup> )	( <sup>2</sup> )	X	
New York	X			X	
North Carolina	X	( <sup>2</sup> <sup>3</sup> )	( <sup>2</sup> <sup>3</sup> )	X	
North Dakota	X	X <sup>3</sup>	X <sup>3</sup>	X	
Oklahoma				X	
Oregon	X	( <sup>3</sup> )			X
Pennsylvania	X	X	X		
South Carolina	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	X	
Tennessee				X	
Vermont	( <sup>2</sup> )	( <sup>2</sup> <sup>3</sup> )	( <sup>2</sup> <sup>3</sup> )	X	
Virginia	X	X <sup>5</sup>	( <sup>4</sup> <sup>5</sup> )	X	X
Wisconsin				X	
Puerto Rico	X	( <sup>5</sup> )	( <sup>5</sup> )	X	

<sup>1</sup>State administers a base plan which affects farm production levels. <sup>2</sup>Authorized but not used. <sup>3</sup>Maximum pricing authorized but not used. <sup>4</sup>Authorized only in the event of price disruption. <sup>5</sup>Also establishes maximum prices.

Sources: "Recent Changes in State Milk Control Programs," *Dairy Situation and Outlook Yearbook*, DS-406, ERS, USDA, July 1986, and *State Milk Regulation: Extent, Economic Effects, and Legal Status*, Staff Report AGES860404, ERS, USDA, April 1986.

market for surplus milk. Thus, Government expenditures for dairy products are affected not only by Federal price support and marketing order provisions, but also by State programs. Since the Food Security Act linked annual changes in dairy price supports to projected annual Government purchases, there is renewed interest in regional milk production and in the effects of State and Federal programs on the prices received by farmers in different regions.

### Current Conditions

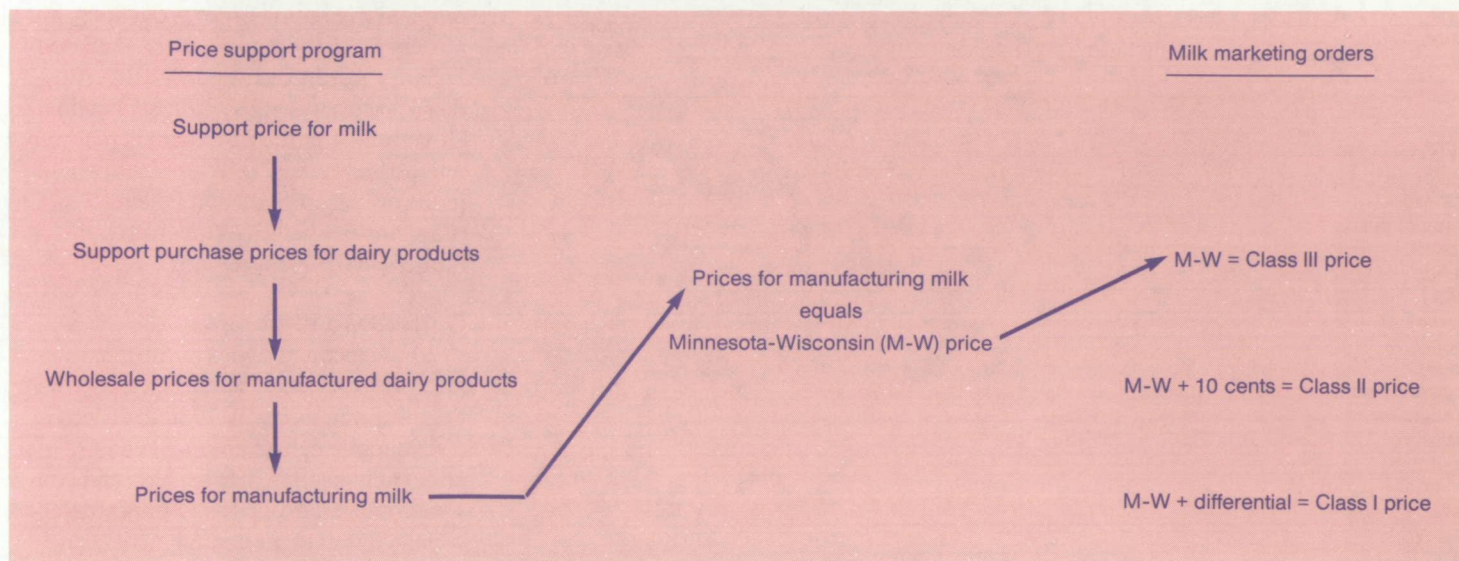
Many characteristics of the dairy industry have changed since Federal regulation began in the early 1930's. There is considerable debate among analysts, policymakers, industry leaders, and consumer interest groups as to the extent to which Government involvement is still needed. Some changing characteristics and conditions that influence the types and extent of Federal dairy programs are:

- Conversion from Grade B to Grade A milk production. Over 88 percent of the total U.S. milk supply is now Grade A, which meets the higher quality standards required for use in fluid products.

However, over half of this Grade A supply is used in manufactured products. As a result, the reserve supplies of Grade A milk are substantially larger than they were before milk was so heavily regulated. Furthermore, due to technological advances in production and increasing sanitation standards for Grade B milk, the additional costs of producing Grade A milk are negligible.

- Specialized and larger dairy farms. The industry has become more concentrated over the past three decades,



**Figure 2. The Minnesota-Wisconsin Price Links the Price Support Program and Marketing Orders**

with dairy farm numbers dropping from 2.8 million in 1955 to about 233,000 in 1987, and milk production rising from 123 million pounds to 142 million pounds. (Milk production per cow increased from an average of 5,842 pounds in 1955 to 13,786 in 1987.)

- Production shifts to the Southwest and West. Thirty years ago, the Upper Midwest was the major milk producing region, but the Southwest and West have since emerged as major producers. Although population patterns have closely mirrored these shifts, the lower milk production costs on large-scale specialized units is probably the driving force behind these shifts in production. Many specialized dairies purchase their feed, especially grains and concentrates that can be economically transported long distances. This provides more flexibility and timeliness in altering milk supplies to meet fluid market demand. The more

pasture-based production, usually associated with pre-1950's small herds of Holsteins and red barns dotting the rolling hills, was much more rigid in this regard.

- Reduced seasonality of milk production. Increased feeding of grain and concentrates, less reliance on pasture, and greater reliance on quality hay and forage has eliminated much of the early winter declines and early-summer increases in production. This more even flow of milk production has reduced the costs of processing and marketing. Concerns about having adequate Grade A supplies during the peak fall demand season have also been reduced.

- Changes in consumption. A smaller proportion of the total milk supply is used in beverage products. For example, cheese consumption has increased substantially, especially mozzarella for pizza. This has reduced the relative importance of fluid milk in consumers'

budgets and the proportion of total producer revenue derived from the perishable fluid market. It also reduced the relative significance of beverage products under Government programs—particularly the Federal milk order system.

- Population shifts among regions. For instance, the U.S. population has been moving from the "frostbelt" to the "sunbelt" during the last 20 years. While this may not be a prime factor in the changing location of milk production, it is especially important for processors and marketers of beverage products, since transportation costs on fresh milk are relatively high. In contrast, processed dairy products are shipped across country and around the world at relatively low costs. For example, a pound of cheese can be shipped from Wisconsin to Florida for about 5 cents, but the 10 pounds of milk (1.2 gallons) required to



make the pound of cheese would cost about 50 cents to transport. Thus, the location of fluid milk processing facilities is more sensitive to changes in population, while hard manufactured dairy product processing facilities are relatively more sensitive to sources of milk available for manufacturing.

- **Technological changes.** New production, processing, and marketing techniques have contributed to substantial changes in the productivity and structure

of the dairy industry. Research continues on new technologies that could have a major impact. Developments in feed additives, hormone injections, reproduction practices, and computers could be used to increase productivity and efficiency of milk output. Overall, this could lead to lower milk prices, lower returns to producers who do not adopt the new technology, and also major structural adjustments since fewer cows and fewer herds will be needed to produce an adequate milk supply.

Since milk is a relatively bulky product containing 87 percent water, the emerging technology for removing water or separating milk into its components has potential for improving the processing industry's efficiency. If changes in Federal order provisions accommodate such developments, the structure and location of the milk production and processing sectors could change considerably. ■

### A California Alternative

Thirteen percent, 18 billion pounds, of the milk produced in the continental United States in 1987 came from California dairy herds. In 1977, California produced only 10 percent, and in 1967, only 7 percent. In 1987, it ranked second among States in its proportion of total U.S. milk production, surpassed only by Wisconsin's 17 percent. New York followed with 8 percent of the total, and Minnesota with 7 percent. California surpassed Minnesota in 1971, and New York in 1972.

Because of the large increases in California milk production and the high proportion of the Federal purchases of surplus dairy products coming from there, the State's alternative dairy policy has attracted considerable attention in the debate over regional allocation of industry proceeds. For example, in the 1987 marketing year, 23 percent of the cheese, 27 percent of the butter, and 35 percent of the nonfat dry milk purchased under the Federal dairy price support program came from California.

California has set its own prices since its milk control program began in 1935. It is the major State-regulated milk pricing and marketing system in the Nation. California is geographically isolated from most other major producing areas and has low prices. Therefore, only a small amount of raw milk or packaged fluid products move across the State line.

Prior to August 1978, the State established fluid milk prices based on information received at public hearings. These prices remained in effect until evidence gathered at a subsequent hearing supported a price change.

In the late 1970's, consumer groups petitioned the State to cut fluid milk prices when it became apparent that production costs, particularly feed costs, were dropping. These pressures prompted producers to request a shift from specified prices to formula pricing. In August 1978, after a public hearing, the State adopted a formula to automatically determine the fluid milk price based on costs of production, dairy product prices, and consumers' spendable earnings.

Another difference in California pricing is the quota plan associated

with the fluid milk market. A milk pooling plan, initiated in July 1969, terminated the individual handler pool system and gave each eligible Grade A producer a production base and pool quota that represented historical shares of California's fluid milk market. The base and quota belonged to the individual producer and could be bought and sold without arbitrary restrictions by a third party. On a per-cow basis, the average market value of a quota in 1987 was \$1,650.

New producers and those who expand milk production and are not covered by the quota receive a different price for the milk they market over the base. This "over-base" price is running about 75 cents per cwt lower than the Minnesota-Wisconsin Grade B price. Currently, about 12 percent of the producers have no quota, so they receive the over-base price for all of their milk, which represents about 8 percent of the total California Grade A supply. Grade A milk makes up about 97 percent of California milk production.



## Fruit and Vegetable Marketing Orders

Glenn Zepp and Nicholas Powers

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In response to farmers' demands for higher prices during the Depression, Congress enacted legislation in 1937 authorizing marketing orders for certain commodities, giving growers unprecedented market power. Because orders may impede individual free choice on how to market output, opinions vary widely about the desirability of such orders as a marketing institution. Most farmers who grow commodities covered by orders support them. However, some growers dislike them, and most consumers never heard of them. Yet marketing orders regulate the quantity and quality of nearly all the fresh citrus, about 60 percent of domestically produced tree nuts, and many other fruit, vegetable, and specialty commodities consumed in the United States. Other than some administrative expenses, direct outlays do not show up in the Federal budget, so marketing orders have been called "farm programs you don't see" (*see sidebar*).

Federal marketing orders are producer-operated programs aimed at raising grower prices and incomes by regulating product marketing. Federal marketing orders are also used for fluid milk, but they are administered differently than for fruits and vegetables.

Marketing orders are sometimes controversial because they may have adverse, as well as beneficial, effects on growers and consumers. For instance, some producers claim that the California-Arizona citrus orders fail to enhance incomes and create inequities among growers by being less restrictive for those who sell in export markets. Orders may be rejected or terminated for lack of industry support. In June 1987, egg

producers rejected a proposed order calling for mandatory promotion assessments. The Secretary of Agriculture terminated orders for hops, tart cherries, and Florida Indian River grapefruit after producers voted not to continue them. Meanwhile, growers are proposing new orders for strawberries, European cucumbers, and Texas High Plains potatoes.

Consumers benefit directly from the quality standards provided by orders, such as those for Florida and Texas citrus that require fruit to meet minimum ripeness requirements. On the other hand, orders that regulate the flow of product to market, such as those for California-Arizona citrus, can uphold retail prices when supplies are large.

### Orders Hold Little Promise for Major Field Crops

Could marketing orders substitute for Federal price and income support programs covering the major field crops? The idea has considerable appeal because marketing orders involve no direct outlays from the U.S. Treasury. Besides, most producers covered by orders appear satisfied with the program.

However, in most cases, the organizational and administrative problems in establishing orders for various field crops would be extremely difficult. Most marketing order crops are grown by relatively small numbers of producers within defined geographic areas, whereas field crop production occurs over wide areas of the country and involves many producers. The diverse production and marketing conditions for field crops would make it difficult to develop regulations that most growers would agree to.

In addition, only the supply management regulations appear to

measurably improve grower prices, and then only when an industry can isolate its market from other suppliers. Because of specialized production regions and short marketing seasons for many perishable commodities, it is generally easier to isolate markets for horticultural crops than it is for the major field crops.

Field crop producers in other countries compete directly with U.S. producers through world trade. High tariff or nontariff barriers would be needed to restrict imports. Furthermore, if prices rose within the United States, grain users could circumvent the marketing restrictions by producing their own grain and selling it in a different form. Feedlot operators, for example, could grow their own corn and market it through fed cattle.

In short, despite their benefits for producers of many specialty crops, marketing orders do not appear to offer a workable alternative to the current price and income support programs for major field crops.

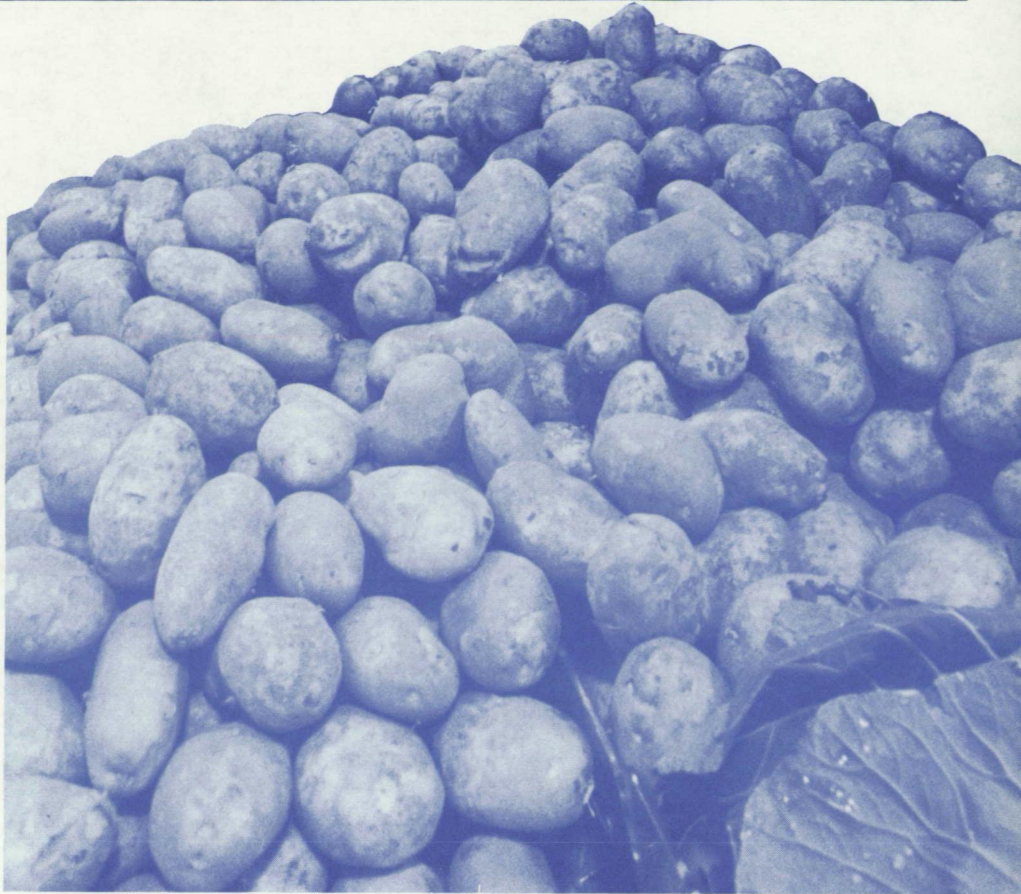
Zepp is an agricultural economist in the Fruits, Vegetables, Sweeteners, and Tobacco Branch, and Powers is an agricultural economist in the Food Marketing and Consumption Economics Branch, Commodity Economics Division.



## Orders Emerged from Co-op Movement

Marketing orders grew out of a 1930's farmers' cooperative movement aimed at combating low prices and chaotic marketing conditions. Fruit and vegetable cooperatives tried to raise prices by cutting sales and setting quality standards. Most attempts failed because nonparticipating producers and handlers benefited from the higher prices without restricting marketings or observing the quality standards. As a result, those that participated paid the full cost of holding products off the market without receiving proportional benefits. This inequity, known as the "free rider" problem, in part, led to Federal marketing order and agreement programs enacted as the Agricultural Marketing Agreement Act of 1937. The stated purpose is to provide "orderly marketing," establish parity prices for producers, and provide an orderly intraseasonal flow of products to market, while protecting consumer interests. The Act has been amended several times to include additional commodities and activities.

Growers request the Secretary of Agriculture to establish a marketing order on their behalf. The Secretary establishes a Federal order on the basis of evidence presented at a public hearing and on approval by two-thirds of the producers involved (three-fourths for California citrus fruits). Orders occasionally regulate marketing in several States (a cranberry order covers production in 10 States from Massachusetts to Washington), but more commonly apply only to production in a limited geographic area such as a group of States, one State, or a portion of a State (one order covers peaches grown only in Mesa County, Colorado). The law limits marketing orders to the smallest practical area. Sometimes they cover most of a commodity sold during a specific period of the marketing year.



Growers have proposed a new order for Texas High Plains potatoes.

After they are approved, orders are managed by administrative committees composed of growers, or growers and handlers. These committees recommend marketing regulations to the Secretary. USDA reviews recommendations and frequently requests modifications to better carry out the spirit of the 1937 Act. If the Secretary accepts a recommendation, USDA issues the necessary regulations which are binding on all handlers in the areas designated. Handlers are individuals or firms who sell and ship the product to buyers outside the regulated area. Handlers generally pack the commodity and may arrange for picking.

The Secretary can suspend or terminate an order if it obstructs or fails to support the declared policy of the Act. The Secretary must cancel an order when growers controlling at least half of the production and those representing a

majority vote against it. Some marketing orders require periodic referendums, in which growers vote on whether to continue the order. USDA encourages all orders to hold such referendums periodically. The Secretary is required to protect the public's interest by not taking actions which cause prices to rise too fast or too high.

Each order is tailored to the special problems for the commodity produced in the designated region. Some orders regulate the maximum amount that handlers may sell in certain markets (supply management), some specify minimum size, quality, or both, and others provide for collecting assessments to support product advertising and production and marketing research. Most orders provide for several of these activities. Currently there are 43 Federal marketing orders for horticultural crops. In addition,



numerous State marketing orders and agreements provide support for research and promotion and quality and packaging standards. For instance, the dancing raisins and California fresh strawberry promotions are supported by State commissions.

### Managing Supply

Marketing order legislation allows four types of supply management regulations which may help growers secure higher prices: producer allotments, market allocations, reserve pools, pro-rates, and market flow controls (*tables 1 and 2*).

*Producer allotment orders*, the most restrictive type of supply management, have caused vigorous debates among farmers. Intended to prevent price-depressing market gluts, these orders set the maximum amount of a product which can be sold in specific markets on behalf

**Table 1. Supply Management Is an Important Part of the Marketing Orders for Dried Fruits and Nuts**

Commodity and order	Supply management provisions					Quality provisions		Market supply activities		
	Producer allotments	Market allocations	Reserve pools	Pro-rates	Shipping holidays	Minimum grade	Minimum size	Production and marketing research	Market development	Package standardization
<b>Vegetables</b>										
Idaho-East Oregon potatoes						X	X			X
Washington potatoes						X	X			
South Oregon-North California potatoes						X	X	X	X	
Colorado potatoes						X	X	X	X	X
Maine potatoes						X	X			X
Virginia-North Carolina potatoes						X	X			
Idaho-East Oregon onions					X	X	X	X	X	X
South Texas onions					X	X	X	X	X	X
Rio Grande Valley Texas tomatoes <sup>1</sup>						X	X	X	X	X
Florida tomatoes						X	X	X	X	X
Florida celery	X			X	X	X	X	X	X	X
South Texas lettuce				X	X	X	X	X	X	X
Texas melons						X	X	X	X	X
<b>Dried fruits, nuts, and specialty crops</b>										
California almonds		X	X			X		X	X	
Oregon-Washington filberts		X				X	X			
Pacific Coast walnuts		X	X			X	X	X	X	
Far West spearmint oil <sup>1</sup>	X		X					X	X	
California dates		X				X	X	X	X	X
California raisins		X	X			X	X	X	X	
California prunes			X			X	X	X	X	X

<sup>1</sup>Order only, no marketing agreement.



of growers. Allotments are normally assigned to growers based on historical sales.

When allotments restrict sales, they take on a value of their own. Growers desiring to expand production or establish themselves as new producers must

lease or purchase allotments from existing growers in order to sell their output. New growers complain this unnecessarily raises their costs and gives established producers an unfair advantage. Public hearing records suggest that high allotment values may have contributed to the Secretary's suspension of marketing al-

lotments for hops. All of the remaining allotment orders—cranberries, Florida celery, and spearmint oil—provide for assigning some allotments to new and existing growers each season.

On the other hand, those who favor allotment orders point out that assigning marketing rights effectively prevents

**Table 2. Most Fruit Marketing Orders Contain Quality Control Provisions**

Commodity and order	Supply management provisions					Quality provisions		Market supply activities		
	Producer allotments	Market allocations	Reserve pools	Pro-rates	Shipping holidays	Minimum grade	Minimum size	Production and marketing research	Market development	Package standardization
Florida citrus					X	X	X			X
Texas oranges and grapefruit <sup>1</sup>						X	X	X	X	X
California-Arizona navel oranges				X			X	X	X	
California-Arizona Valencia oranges				X			X	X	X	
California-Arizona lemons				X			X	X	X	
Florida limes				X	X	X	X	X	X	X
Florida avocados					X	X	X	X	X	X
California nectarines						X	X	X	X	X
California pears, plums, and peaches						X	X	X	X	X
Georgia peaches						X	X			
Colorado peaches						X	X	X	X	
California kiwi fruit						X	X			X
Washington peaches						X	X	X	X	X
Washington apricots						X	X	X	X	X
Washington sweet cherries						X	X	X	X	X
Washington-Oregon fresh prunes						X	X	X	X	X
California dessert grapes <sup>2</sup>					X	X	X	X	X	X
California Tokay grapes				X	X	X	X	X	X	X
Pacific Coast winter pears						X	X	X	X	
Hawaii papayas						X	X	X	X	X
Cranberries (10 states) <sup>3</sup>	X	X								
Washington-Oregon Bartlett pears						X	X	X	X	X
California olives						X	X	X	X	

<sup>1</sup>Restricting handler deliveries is specifically prohibited. <sup>2</sup>Order only, no marketing agreement. <sup>3</sup>Grade and size specifications apply only to restricted portion of crop.



price-depressing market gluts and reduces the likelihood of costly crop abandonment by enabling growers to more easily plan their scale of production. However, allotments may raise consumer prices when they effectively reduce marketings.

Allotments in the cranberry order have never been used. Although allotments are set for the other two commodities, Florida celery and spearmint oil, their effectiveness in raising prices may be limited. Any attempt on the part of Florida celery growers to raise prices by reducing sales would likely be thwarted by increased marketings of California celery. Similarly, growth in imports and expanded domestic production in nonorder States would likely counter high spearmint oil prices caused by market order restrictions.

*Market allocations*, a second type of supply management, specify the proportion of output handlers can sell in certain markets. Such orders may raise producers' returns when supplies are diverted from a price-sensitive primary market (usually the fresh or domestic segments) to a less price-sensitive secondary market (usually processing or export segments).

Although they are generally less contentious than the allotment orders, market allocation orders also have detractors. Opponents charge that market allocations raise consumer prices and lead to excessive production. Proponents claim strategic allocation during years of abundant production can prevent drastic cuts in growers' average prices. In addition, allocations permit an industry with many small producers to develop marketing strategies, such as assuring buyers a reliable supply at steady prices and developing markets for new products. The almond order helped that industry develop exports and new products, such as almond butter.



Florida celery is one of three orders that provide producer allotments.

A third kind of supply control, *reserve pools*, may help farmers stabilize prices and quantities across seasons by storing excess production for sale during short-crop years. Many perennial tree crops, almonds being one example, frequently produce an abundant crop one season and a meager harvest the next. Consequently, prices may fall so low during abundant years that some production is abandoned, while years with short supplies mean sky-high prices.

Reserve pools set aside part of an excessively large crop so it can be sold when market conditions improve. Pool contents typically are sold in succeeding marketing periods; however, they may be exported or disposed of through nonfood uses, such as livestock feed. Because pools can provide greater year-to-year price and supply stability, they may benefit both growers and consumers. Also, by assuring processors a steady supply of raw product, the industry can better develop new markets. Yet, reserve pools can backfire on growers. If their trees produce a bounteous crop during the subsequent year, growers may have

to sell the previous year's reserve at a loss through secondary markets. This may have been a contributing factor in the vote by growers to discontinue the order for tart cherries.

*Market flow controls*, the fourth type of supply management, are directed at the problems that occur when shippers, making independent decisions, create short-term gluts and shortages and cause volatile prices. This volatility creates difficulty for retailers in planning promotions and raises their costs. By coordinating industry sales, growers can reduce revenue losses due to alternating high and low prices, and retailers can better pursue product promotion strategies.

Some commodities, like oranges and grapefruits, can be stored on the tree and harvested as needed for sale over an extended period. Market flow provisions smooth out shipments over the season and help alleviate price flip-flops. There are two kinds of market flow provisions, prorates and shipping holidays.

Prorates specify the maximum quantity a handler may ship to the regulated



market during a specified period, usually a week. If used during all or nearly all the season, prorates may have the effect of market allocation—limiting sales and raising prices in the regulated market and causing some product to be diverted to a secondary market (*see sidebar*).

The California-Arizona fresh citrus industry uses prorates extensively, but their use is controversial. Proponents claim the prorates reduce weekly price volatility and, therefore, are generally beneficial for both producers and consumers. Opponents argue that prorates unduly restrict decisions by individual handlers. Furthermore, opponents say that by diverting shipments to secondary markets, prorates are used to raise prices and cause over-investment in citrus production.

Shipping holidays, a weaker form of market flow control, temporarily prohibit commercial sales by handlers. This limits supply buildups in market channels during periods of limited trade activity, such as the week between Christmas and New Year's. For example, the Florida citrus industry sometimes uses shipping holidays to clear market channels of unsold fruit following the pre-Christmas volume peak.

### Quality Controls Improve Product Image

Farmers and consumers generally benefit from quality assurance. When consumers are spared the expense and disappointment of unexpectedly purchasing inferior quality products, they likely will purchase more in the future, thereby expanding demand. Growers then benefit from improved sales. In addition, reduced losses from spoilage and consumer rejection lowers marketing costs and may simultaneously raise producer prices and hold down retail prices.

Voluntary programs to improve quality have generally been unsuccessful.

One reason is that nonparticipating producers have reaped short-term benefits by selling inferior products at high prices. As a result, consumers buying the inferior goods perceived a drop in the product's overall quality and,

consequently, purchased less. Hence, participating growers, unable to realize the full benefits of their efforts, abandoned the programs.

Quality control orders establish minimum grade, size, or maturity require-

### Marketing Navel Oranges

To better understand how fruit and vegetable marketing orders operate, consider the following example.

Farmer Peterson grows navel oranges in California's San Joaquin Valley and contracts with a packer-handler, Oranges, Inc., to harvest, grade, pack, and market the fruit. Oranges, Inc., deducts a handling charge and pays Peterson what is left of the proceeds.

Navel oranges are excellent eating, so Oranges, Inc., likes to sell most of the crop in the fresh market, fetching the highest return. Small, scarred, or misshapen oranges that do not meet fresh market standards are sold to a processor, who turns them into juice concentrate. Since navels do not make good juice concentrate, processors pay a lower price for them.

Because Peterson's farm is in California, Oranges, Inc., must abide by the regulations of the Federal order for California-Arizona navel oranges. Under the order, the Navel Orange Administrative Committee, subject to USDA review and approval, determines the maximum weekly quantities that may be sold in the fresh domestic market (the industry's prorate) during a portion of the season. The Committee takes into account the expected supply and demand for oranges and recommends a prorate to avoid market gluts and ex-

cessively low prices. While initial prorates are determined at the beginning of the season, they can be adjusted upward as the season progresses. Oranges, Inc.'s share of the prorate is proportional to the share of total industry production which it has under contract with growers like Peterson.

Oranges, Inc., sells as many of its oranges in the fresh market as its share of the prorate permits. The remainder may be held for later sale, exported, sold for processing, or donated to charitable organizations. Peterson receives an average of Oranges, Inc.'s returns from all sales.

Experience has demonstrated that a glut of oranges depresses the fresh price more than an equal amount of oranges, if diverted, would reduce processing prices. Hence, if the order causes some oranges to be diverted to processing (most likely during a large crop year), Peterson's returns would rise. If this happens, consumers pay higher prices for fresh oranges.

However, there may be some benefits to consumers that offset potentially higher prices. Prorates may even-out supplies over the season resulting in smaller week-to-week swings in prices and quantities marketed. Greater stability probably lowers marketing costs and, eventually, retail prices.



ments which usually are enforced through mandatory Federal inspection paid for by handlers. Quality standards enable an industry to establish a positive product image by assuring buyers of a mature and desirable product. Standards for Florida and Texas citrus, for example, prevent handlers from shipping attractive but immature oranges and grapefruit.

Quality standards also are sometimes controversial. The kiwi fruit order, for example, has a "shape-of-fruit" standard, which some people claim excludes good, wholesome fruit from the market. Proponents, on the other hand, argue that misshapen fruit creates a poor image among consumers and thereby limits sales. Minimum quality regulations also may cause some people to forego purchases. Some buyers might have preferred to purchase a lower priced, below-standard product, such as small or misshapen fruit.

### **Industry Research, Promotion, and Marketing Standardization**

Some orders facilitate joint industry action to promote research, product promotion, and uniform marketing practices. These provisions are referred to as market support activities. Production and marketing research and commodity promotion require a large minimum expenditure to reach any degree of effectiveness. Yet they are a relatively small part of total costs if spread over all producers. However, voluntary research and promotion efforts in industries made

up of many small growers generally have failed for the same reason that cooperative efforts to enhance prices by regulating quantity or quality have failed—free-rider producers benefit from the voluntary program without paying any of the cost. Because of the required compliance, marketing orders enable industries consisting of many small farmers to charge all producers and spread the cost of joint research and promotion uniformly. For example, the costs for industry promotion of California pears, plums, and fresh peaches are paid by fees assessed at the handler level in proportion to the volume sold.

A second type of market support activity, pack and container standardization, assures buyers of shipment consistency and may reduce marketing costs. For example, the Florida tomato order requires that tomatoes be shipped in new boxes holding either 20 or 25 pounds net weight.

Market support regulations, as with supply management and quality controls, have not been spared controversy. The raisin, filbert, almond, and olive orders authorize programs which permit handlers who brand advertise to obtain credit for advertising expenditures, thereby reducing or eliminating their pro rata assessments for joint promotion programs. Opponents claim that the brand advertisers benefit from the industry advertising program without paying. The brand advertisers, on the other hand, argue that their advertising expands total demand and benefits the industry as well as themselves. Presently, only the almond order has an active program of crediting brand advertising.

### **If Farmers Gain, Who Pays?**

If orders raise farmer prices, and that is one of the law's stated purposes, who pays the cost? There is not always a clear-cut answer.

When an order helps correct a genuine market failure, such as eliminating immature but attractive looking fruit from the market, everyone gains. Similarly, everyone probably benefits if a regulation reduces extreme volume and price swings from week to week, thereby reducing marketing costs. Some of the savings probably are passed on to both growers and consumers.

Market support activities, which enable growers to fund research and advertising, tend to promote efficiency, which generally benefits both consumers and producers. Industry-supported research and some advertising also benefit consumers, as well as producers, by providing market information.

On the other hand, growers may be the only gainers from regulations that enforce quality standards for cosmetic attributes, such as size or shape, and certain groups of consumers may lose. For example, regulations that prohibit the sale of smaller or misshapen products penalize those buyers willing to purchase such items in exchange for lower prices.

The short-term effects of marketing orders may be different from the long-term effects. Controls such as market allocations—which, for example, divert output from the fresh domestic market to processing or export—may raise average farm prices in the short term and cause consumers to pay higher prices. However, elevated prices likely will cause farmers to expand capacity in the longer term, which may benefit consumers by providing insurance against shortages and extremely high prices during years with relatively small crops. ■

# The Evolution of USDA Surplus Disposal Programs

Norwood Allen Kerr

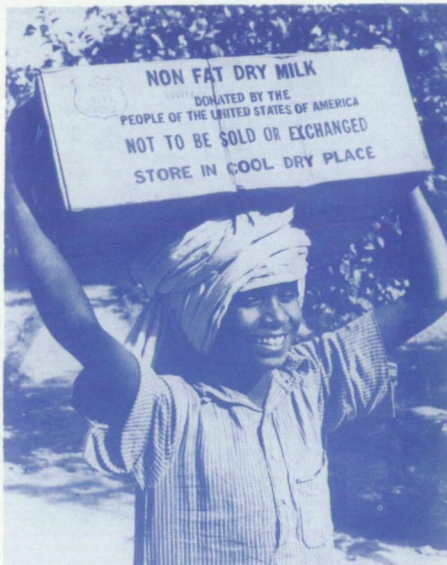
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Over much of the past half-century, the United States has stockpiled agricultural commodities in an effort to keep consumer prices and farmer incomes stable. The extensive domestic and foreign food donation programs that help improve nutrition and relieve hunger began in the 1930's as a way to dispose of these surplus commodities. Like the commodity price support programs that made Federal stockpiling necessary, surplus-disposal operations began originally as emergency measures. But, along with the support programs, they exist today, albeit with a change in emphasis as feeding the hungry at home and abroad took precedence over disposing of surpluses.

Direct distribution activities in the United States, along with concessional sales and donations to foreign nations, were traditionally relied upon to prevent surpluses from flooding regular commercial channels. A number of other programs—domestic food stamps and international export bonuses and other trade subsidies—indirectly expanded the commercial market for farm products. Food stamps for poor Americans and trade subsidies for foreign buyers, in effect, increase the purchasing power of these groups by making U.S. agricultural commodities available at substantial discounts.

## Depression Beginnings

One of the most vexing aspects of the Great Depression was widespread hunger in the midst of an oversupply of many basic agricultural commodities. To address the problem, Congress created the Agricultural Adjustment Administration in 1933 to carry out price support and



Public Law 480 authorized food grants for emergency famine relief programs abroad.

production control programs. Congress also chartered the independent Commodity Credit Corporation (CCC) to finance the purchase, storage, and disposal of price-supported commodity stocks. In the same year, a Federal Surplus Relief Corporation was created to acquire farm products that were not under formal support programs. These products were then distributed to families in immediate need of food. Both corporations came under direct USDA control later in the 1930's. Wheat flour was purchased and distributed on an emergency basis to a host of relief agencies beginning in October 1933. Programs to buy up and distribute hogs, cattle, sheep, butter, and cheese followed over the next 2 years. By December 1935, some 280,000 rail carloads of food had been donated under Federal emergency programs.

The authority and financial wherewithal to engage in longer term surplus disposal and humanitarian relief activities were bolstered when an addi-

tional provision, Section 32, was added to the Agricultural Adjustment Act in 1935. On the assumption that farmers accounted for just under one-third of the general population, Congress set aside 30 percent of the country's customs receipts for the Secretary of Agriculture to help maintain farmer incomes. Since then, Section 32 has funded a variety of price support and surplus disposal activities, including the purchase of perishable commodities—usually dairy and beef products and fats and oils—and their distribution at home and abroad. In 1956, Congress authorized additional appropriations to carry out Section 32 programs whenever customs receipts proved inadequate, but the authority has rarely been invoked.

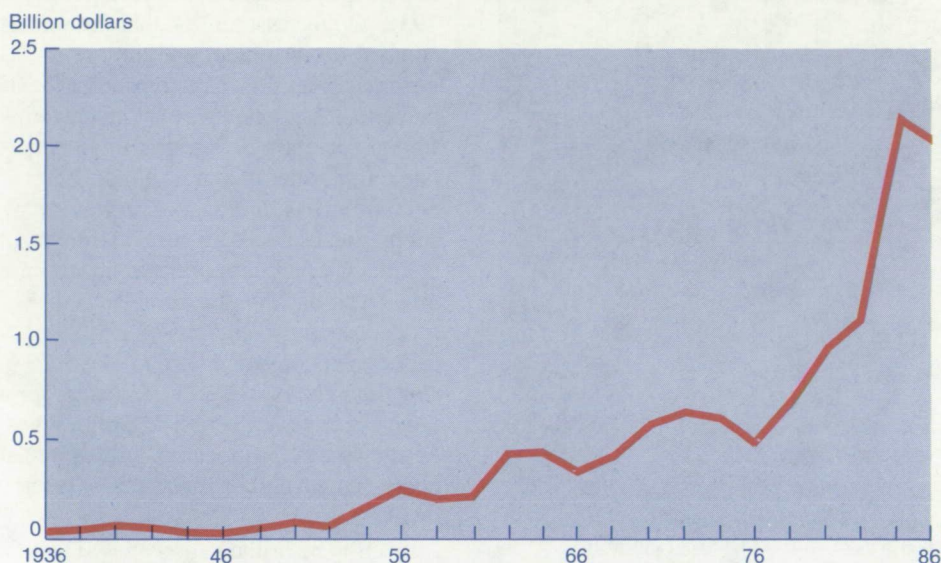
Section 32 dollars allowed USDA to purchase \$157 million worth of food and donate it through State relief agencies from 1936 through 1939 (*figure 1*). At the end of that period, a food stamp program began operating on a pilot basis and continued until the middle of World War II. Section 32 funds also financed the first years of a national school lunch program. Initiated in 1936, the program subsidized food service in State-supported educational institutions. USDA purchased and donated food valued at nearly \$59 million with Section 32 money between 1936 and 1943. After that time, direct cash grants from Section 32 receipts became the main source of Federal aid as farm surpluses disappeared in wartime.

## World War II and the Aftermath

World War II rapidly brought America out of its economic depression. Direct distribution of surplus foods to needy families became less necessary as the number of destitute on relief rolls diminished during the war-fueled

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**Figure 1. Domestic Commodity Donation Costs Hit a Peak in 1984<sup>1</sup>**

<sup>1</sup>Fiscal years. Includes donations and handling costs (but not administrative costs) under Section 32 of the Agricultural Adjustment Act Amendments of 1935, Section 416 of the Agricultural Act of 1949, Section 6 of the National School Lunch Act, and the Temporary Emergency Food Assistance Program.

Source: *Agricultural Statistics*, USDA, 1957, 1961, 1973, and 1987.

recovery. At the same time, cash grants from Section 32 and Federal appropriations played an ever-greater role in the Federal contribution to the school lunch program because of dwindling surpluses. The National School Lunch Act of 1946 recognized that fact by requiring the bulk of the Federal subsidies to be paid in cash, but it did continue commodity donations as a residual source of support. Also significant, the Act stopped limiting donations to those perishable commodities eligible for Section 32 purchase. This allowed USDA to purchase and distribute a wider range of foods needed by local schools.

American agricultural products played a large part in European war relief and post-war recovery efforts, thereby contributing to an awareness of their foreign policy importance. Congress authorized \$100 million worth of

commodity donations for war refugees in 1940 and 1941, and by 1948, 60 percent of the total value of farm exports was foreign-aid financed. In the next year, the Agricultural Act of 1949 amended CCC's charter to allow it to expand purchases and distributions. Sections 407 and 416 permitted the CCC to sell price-supported, surplus commodities, donate them to the needy here and abroad, and use them to barter for strategic materials—like bauxite, chromium, platinum, and zinc—to add to the Nation's stockpile. Five years later, in 1954, both sections were incorporated into new foreign aid legislation.

#### Public Law 480

The Agricultural Trade Development and Assistance Act of 1954 (P.L. 480) unified existing surplus-disposal techniques and foreign policy goals. The Act recognized the chronic excess capacity

of American agriculture and the dollar-shortage situation of many food-poor nations. Title I of the Act authorized concessional sales of surplus farm commodities at world market prices to foreign nations; payment was made in their own currencies. The United States would then use the local currency within the recipient country to buy goods and services or to grant or loan money back to the recipient to spur economic development. Title II authorized food grants for emergency famine relief programs abroad through foreign governments. Sections 407 and 416 of the Agricultural Act of 1949 were incorporated into Title III, reauthorizing donations of CCC stocks to American school children and the needy at home and abroad, as well as the barter of food stocks for strategic materials.

When CCC-owned commodities began to mount from the mid-1950's into the early 1960's, P.L. 480 programs were steadily extended and enlarged. Over the decade following its enactment, P.L. 480 sponsored nearly 26 percent of all U.S. farm exports. Title I concessional sales were valued at a total of \$7.9 billion from 1954 through 1964. In 1959, P.L. 480 was officially designated the "Food for Peace" program. A fourth title was added in the same year to allow the concessional sale of surplus commodities under long-term credit arrangements at what amounted to cut-rate prices. Payment had to be in U.S. dollars or local currencies which could be exchanged for dollars. Begun in 1962, the new program encouraged the exchange of commodities, and in the first 3 years, \$124 million worth of food changed hands. Income accruing to foreign governments from local sales was required to be spent on U.S.-approved uses. The value of Title II donations to foreign government agencies equaled \$618 million over the period 1954-64, and Title III donations, distributed through voluntary relief agencies over-



seas, were valued at a total of \$1.6 billion. Another \$1.6 billion worth of farm products was bartered for strategic materials over the 10-year period, at the end of which Title III barter virtually ended when stockpiles of strategic materials were deemed adequate (figure 2).

### Programs of the 1960's

In the 1960's, Americans awoke to the worldwide plight of the hungry and malnourished. As a consequence, both domestic and foreign food distribution programs were justified more on humanitarian grounds and less on the need to dispose of surpluses.

Domestic food assistance programs expanded tremendously with cash grants contributing an ever-larger portion of Federal help. Still, as late as 1970, commodity donations made up 37 percent of

the value of Federal expenditures in all feeding assistance programs within the United States. The variety of products USDA offered through direct distribution to destitute families expanded. The overall scope of the program, however, contracted since the pilot Food Stamp Program was revived in 1961 and made permanent 3 years later.

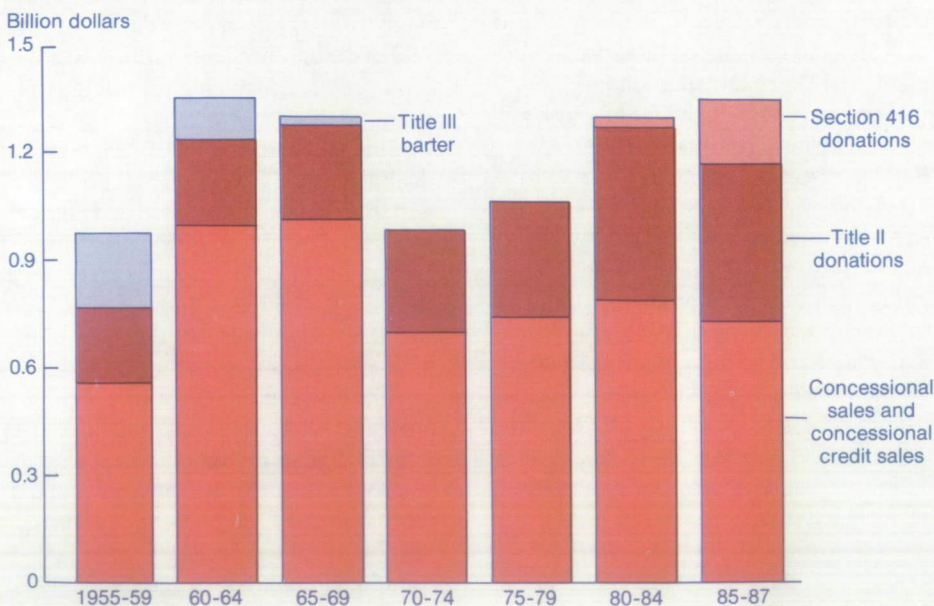
Food stamps replaced direct distribution of commodities in many counties. The number of people receiving free food declined from a monthly average of 6.4 million in 1962 to 3.5 million in 1969, yet annual Government costs for donated commodities remained at about \$250 million during the period because of inflation and increased individual allotments. The National School Lunch Program grew into a comprehensive child nutrition program over the decade, with cash grants absorbing most of the in-

creased costs. So rapidly did the effort expand, however, that the food donation component rose in value from \$182 million in 1962 to \$272 million in 1969.

Dwindling surpluses and the fear of worldwide famine caused by successive years of crop failures forced a restructuring of P.L. 480 programs in the mid-1960's. The 1966 Food for Peace Act dropped references to surpluses and emphasized self help. Thereafter, before approving new contracts, the President had to consider how income generated from P.L. 480 would be used by recipients to develop agricultural and rural resources. The revised legislation combined Titles I and IV, and directed that all sales for local currencies be phased out in favor of long-term credit sales for dollars. Local currencies could be used in repayment when a recipient nation lacked sufficient U.S. currency but only if these currencies could be freely exchanged for American dollars. As a result, the market value of long-term dollar and convertible currency credit sales rose from \$158 million in 1965 to \$535 million in 1972, while that of commodities sold for local currencies declined from \$1.1 billion to \$143 million.

As concessional sales declined in response to the new self-help and dollar-earning provisions of the revised P.L. 480, outright food donations rose. The Food for Peace Act folded the old Title III section authorizing food donations through private voluntary organizations and international agencies into Title II, which allowed government-to-government famine relief donations. Besides simplifying appropriation procedures, the enlarged Title II allowed the CCC to donate commodities not only from current stocks but purchased commodities as well. The value of donations for foreign relief increased between 1965 and 1972 from \$238 million to \$380 mil-

Figure 2. P.L. 480 Shipments Rose in the 1980's<sup>1</sup>



<sup>1</sup>Value of P.L. 480 commodities, Fiscal years.

Sources: Food for Peace: 1984 Annual Report on Public Law 480, Foreign Agricultural Service, USDA, 1985; Agricultural Statistics, USDA, 1987; Foreign Agricultural Trade of the United States, ERS, USDA, January-February 1988.



lion. Barter authority was continued in Title III but rarely exercised.

### Programs in the 1970's

In the 1970's, humanitarian assistance continued to be the primary justification for food distribution programs. As was true in the 1960's, aid in the form of food stamps and cash subsidies comprised more and more of the Federal Government's contribution to domestic food programs. By 1974, food stamp projects operated in every county so that direct food distribution to the needy was virtually confined to Indians on reservations, emergency disaster victims, and charitable institutions. The cost of commodity donations dropped from about \$282 million in 1973 to \$145 million in 1979. In contrast, the cost of purchasing and distributing commodities through the Nation's burgeoning child feeding and related nutritional supplement programs nearly tripled over the same period, leaping from \$258 million to \$765 million. Cash subsidies to the expanding child nutrition effort almost kept pace, while USDA food stamp costs rose even more rapidly. By 1979, the value of donated farm products accounted for less than 10 percent of total Federal expenditures on all domestic food programs.

In light of an exploding world demand for U.S. farm commodities in the 1970's, Food for Peace programs became increasingly oriented toward encouraging self help and relieving hunger. The role of P.L. 480 in total U.S. agricultural exports declined sharply. In 1965, P.L. 480-sponsored exports contributed 26 percent of the value of all U.S. agricultural exports. By 1972, that proportion dropped to 13 percent, then fell to 4 percent in 1979.

The actual value of farm products shipped under P.L. 480 authority rose over the decade, however. Inflation and long-term credit extensions boosted the

value of concessional sales from \$667 million to \$793 million between 1973 and 1979. More of those Title I sales went to the poorer nations, as legislative adjustments targeted aid to the world's poorest countries. Toward the same end, Title III of the Food for Peace Act was amended in 1977 to allow forgiveness of a Title I debt if the recipient country achieved specified development measures. Outright commodity donations under Title II increased from a value of \$287 million in 1973 to \$393 million in 1979.

### Programs in the 1980's

With the 1980's came an extended period of U.S. and worldwide recession, which resulted in a renewed need for both surplus disposal and hunger relief here and abroad. In 1981, Congress responded to these twin concerns by creating a small demonstration project for emergency distribution of commodities to organizations serving destitute Americans in areas where food stamp projects were also in place. President Reagan announced the Special Supplemental Dairy Distribution in December 1981, which was institutionalized as the new Temporary Emergency Food Assistance Program (TEFAP) in 1983. Nonfat dry milk, cheese, butter, rice, cornmeal, honey, and flour were released from CCC stocks. Nearly \$1.2 billion worth of farm products was distributed to the needy in 1986, compared with only \$130 million worth in 1980. By the time the program came up for renewal in 1988, dwindling CCC inventories of rice, nonfat milk, cheese, and honey were forcing a retrenchment of TEFAP activities.

In contrast to the variations in commodity distributions to needy families during the 1980's, the value of commodities donated through the child nutrition programs remained relatively

constant as inflation abated and the size of school lunch and auxiliary programs stabilized—\$846 million worth of food in 1980 versus \$847 million worth in 1986.

With the global economic downturn, commercial demand for American farm products stagnated, and P.L. 480's share of total U.S. agricultural exports rose slightly. The market value of products exchanged under long-term credit agreements declined from \$865 million to \$589 million between 1980 and 1986. However, donations to reduce U.S. surpluses and meet world food shortages increased dramatically by the middle of the decade. Section 416, which had become part of P.L. 480 Title II in 1966, was reactivated as a separate authority in 1982 to encourage donations of dairy products abroad. The Food Security Act of 1985 expanded Section 416 foreign donations to include all edible commodities held by the CCC. In 1985, when Section 416 donations were at their peak, \$279 million worth of commodities went for overseas relief. Title II of P.L. 480 made another \$699 million worth of farm products available for foreign distribution that same year.

Since then, the value of donations has declined as CCC stockpiles for Section 416 distribution diminished and authority for special emergency food relief for famine-plagued African nations expired. In 1987, only \$133 million worth of food was donated through Section 416, along with \$248 million worth under Title II.

Like domestic food distribution programs in the 1980's, the scale of overseas relief activity has remained responsive to the quantity of Government held commodities. Clearly, surplus disposal has continued as a major objective of commodity donation programs despite the growing importance of humanitarian assistance as a policy goal over the past quarter-century. ■



## It Helps to Know the Language

*Here are definitions of some important terms used in Federal commodity programs.*

**Acreage allotment.** An individual farm's share, based on previous production, of the national acreage needed to produce sufficient supplies of a particular crop; not currently used for any program commodity.

**Acreage Reduction Program (ARP).** A program in which farmers voluntarily reduce their planted acreage from their crop acreage base as a requirement for participation in the wheat, feed grain, upland and extra-long staple (ELS) cotton, and rice programs. Farmers are not paid for ARP reductions, although participation is necessary to be eligible for benefits like CCC loans and deficiency payments. Participating producers are sometimes offered the option of idling additional land under a paid diversion program, which gives them a specific payment for each idled acre.

**Agricultural Stabilization and Conservation Service (ASCS).** The USDA agency responsible for administering farm price- and income-support programs, as well as some conservation and forestry cost-sharing, environmental protection, and emergency programs.

**Class I milk.** Grade A milk for fluid milk products.

**Class II milk.** Grade A milk used to produce soft manufactured dairy products, such as cream, ice cream, cottage cheese, and yogurt.

**Class III milk.** Grade A milk used to produce hard manufactured dairy products, such as cheese, butter, and non-fat dry milk.

**Commodity Credit Corporation (CCC).** A federally owned corporation within USDA. CCC functions as the financial institution through which all money transactions are handled for agricultural price and income support and related programs.

**Conservation Reserve Program.** A long-range program under which farmers voluntarily contract to take cropland out of production for 10 years and devote it to conserving uses. In return, farmers receive annual rental payments for the contract period.

**Crop acreage base.** For the wheat, feed grain, upland and ELS cotton, and rice programs, the average number of acres planted for harvest and not planted because of acreage reduction and diversion programs during the 5 preceding crop years. Crop acreage bases are permanently reduced by the portion of land placed in the Conservation Reserve Program.

**Deficiency payments.** Government payments made to farmers who participate in wheat, feed grain, upland and ELS cotton, or rice programs. Payment rates (per bushel, pound, or hundred-weight) are based on the difference be-





tween a target price and the market price or the loan rate, whichever is higher.

**Federal marketing orders and agreements.** A means for agricultural producers to collectively influence the supply, demand, or price of particular commodities. When approved by a required number of a commodity's producers—usually two-thirds—the marketing order is binding on handlers of the commodity.

**Feed grains.** Any of several grains most commonly used for livestock or poultry feed, such as barley, corn, grain sorghum, oats, and rye.

**Grade A milk.** Milk produced under sanitary standards that qualify it for fluid (beverage) consumption.

**Grade B milk.** Milk not meeting Grade A standards. Less stringent standards generally apply.

**Loan rate.** The price per unit (bushel, pound, or hundredweight) at which the Government will provide nonrecourse loans to farmers so that they can hold their crops for sale at a later date.

**Marketing loan.** Authorizes producers to repay their nonrecourse loans at a lower "market" level.

**Marketing quota.** That quantity of a commodity that will provide adequate and normal market supplies. Quota

provisions have been suspended for wheat, feed grains, and upland cotton since the 1960's. Rice quotas were abolished in 1981. Poundage quotas are still used for domestically consumed peanuts, but not for exported peanuts.

**Nonrecourse loans.** Price-support loans to farmers that enable them to hold their crop for sale at a later date, usually within the marketing year. The loans are nonrecourse in that farmers can forfeit without penalty the loan collateral (the commodity) to the Government as settlement of the loan.

**Parity price.** The price per bushel, pound, or hundredweight that provides the same purchasing power, or exchange value in terms of goods and services, that the commodity held in the 1910-14 base period. Except for wool and mohair, parity is not currently used to set price support levels for any of the program commodities, but it is a part of permanent legislation, so it may be referred to from time to time.

**Payment limitation.** A limit set by law on the amount of money any one individual may receive in farm program payments, such as deficiency and diversion payments, each year under the wheat, feed grain, upland and ELS cotton, and rice programs. The basic limit is currently \$50,000. However, there are

program payments that are exempt from the \$50,000 limit—gains made from marketing loans, for example. The total limit of all such payments is \$250,000 per person.

**Permanent legislation.** The statutory legislation upon which many agricultural programs are based. For the major commodities, the legislation is principally the Agricultural Adjustment Act of 1938 and the Agricultural Act of 1949. Although frequently amended, these laws go back into effect if current amendments, such as the 1985 Food Security Act, lapse and new legislation is not enacted.

**Program commodities.** Federal support programs are available to producers of wheat, corn, grain sorghum, barley, oats, rye, ELS cotton, upland cotton, rice, milk, peanuts, soybeans, sugar, honey, wool, mohair, and tobacco.

**Target price.** A price level established by law for wheat, feed grains, upland and ELS cotton, and rice. If the market price falls below the target price, an amount equal to the difference (but not more than the difference between the target price and price-support loan level) is paid to farmers who participate in these programs. ■



# Recent Trends in Domestic Food Programs

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*Participation and program costs discussed in this article compare the October-December quarter of 1987 (the first quarter of fiscal year 1988) with the same period in 1986. Data for the most recent quarters are preliminary.*

Federal expenditures for food and nutrition assistance to needy persons increased 3.6 percent, from \$4.98 billion in the first quarter of fiscal 1987 to \$5.16 billion in fiscal 1988 (table 1). Costs of virtually all major programs increased except the food distribution programs, which distributed less food to schools and the Temporary Emergency Food Assistance Program. Much of the added costs were due to higher benefit levels reflecting inflation's effect on food assistance.

## Food Stamp Program

An average of 18.4 million persons participated in the Food Stamp Program monthly during October-December 1987, a 4.2-percent decline from a year earlier (table 2). However, total program costs increased 5.4 percent as benefits and administrative and other expenses rose.

Federal expenditures for benefits climbed \$140 million to \$2.79 billion in fiscal 1988. Average monthly benefits per person increased by \$4.34 to \$50.34, reflecting the annual cost-of-living adjustment. Administrative expenses rose by over \$9 million to \$258 million, while

other costs also increased from \$38 million to \$47 million. Total program expenditures rose from \$2.93 billion to \$3.09 billion.

First quarter fiscal 1988 costs for the Puerto Rico and Marianas Nutrition Assistance Programs increased from \$214 million to \$221 million because of the larger annual block grant appropriation.

## Child Nutrition Programs

Participation and costs in all child nutrition programs increased in the first quarter of fiscal 1988 from a year earlier. Cash payments for these programs were \$1.15 billion, up 2.2 percent.

Average participation per school day in the National School Lunch Program rose 0.5 percent to 24.6 million children

**Table 1. Benefit Costs of USDA Food Programs Rose in the First Quarter of Fiscal 1988<sup>1</sup>**

Programs	1986	1987	FY 1987 quarters <sup>2</sup>				FY 1988 <sup>2</sup>
			I	II	III	IV	I
Million dollars							
Family food							
Food stamps	10,605	10,500	2,646	2,697	2,639	2,517	2,786
Puerto Rico <sup>3</sup>	825	856	214	214	214	214	221
Food distribution							
Indian Reservations	47	49	12	13	12	12	11
Schools <sup>4</sup>	848	898	266	275	160	197	255
Other <sup>5</sup>	287	214	53	54	40	67	62
TEFAP <sup>6</sup>	846	846	218	210	208	210	212
Cash-in-lieu of commodities <sup>7</sup>	145	145	39	39	37	30	38
Child nutrition <sup>8</sup>							
School lunch	2,714	2,822	868	901	692	360	878
School breakfast	406	458	139	143	114	62	143
Child care and summer food	529	590	118	123	144	205	130
Special milk	15	15	4	4	4	4	5
WIC <sup>9</sup>	1,582	1,679	406	417	421	435	427
Total <sup>10</sup>	18,848	19,073	4,983	5,091	4,686	4,314	5,167

<sup>1</sup>Fiscal years, administrative costs are excluded unless noted. <sup>2</sup>Preliminary, quarterly data may not add to annual total due to rounding. <sup>3</sup>Puerto Rico transferred from Food Stamp Program to substitute Nutrition Assistance Program July 1, 1982—represents appropriated amounts. Includes block grant for Northern Marianas. <sup>4</sup>National School Lunch, Child Care Food, and Summer Food Service Programs, and schools receiving only commodities. <sup>5</sup>Commodity Supplemental Food Program, Nutrition Program for the Elderly, and donations to charitable institutions. <sup>6</sup>Temporary Emergency Food Assistance Program, initiated December 1981. <sup>7</sup>Child nutrition programs and Nutrition Program for the Elderly. <sup>8</sup>Cash Expenditures. <sup>9</sup>Special Supplemental Food Program for Women, Infants, and Children, includes administrative costs. <sup>10</sup>May not add due to rounding.

Source: Monthly data from the Food and Nutrition Service.

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in 1988. The number of free lunches declined slightly from 10.2 million to 9.9 million and reduced price lunches decreased from 1.66 million to 1.64 million. Paid lunches rose to 12.9 million in the first quarter of fiscal 1988, an increase of 3.5 percent. The relative proportions of lunches served free and at reduced price fell from 41.7 and 6.8 percent to 40.7 and 6.7, respectively. Paid lunches increased from 50.8 to 52.6 percent. Cash payments to the school lunch program rose 0.7 percent to \$875 million.

Participating schools received commodities worth 12 cents per meal in fiscal 1988, compared to 11.25 cents in fiscal 1987. Commodities valued at \$147.3 million were distributed, up 6.2 percent. Schools also received bonus commodities from Government surplus stocks. Bonus commodities worth \$106.1 million were distributed during the period, a 15.2-percent decline from the same quarter of fiscal 1987.

Participation in the School Breakfast Program increased 1.4 percent to 3.73 million in the first quarter of fiscal 1988. The number of free breakfasts rose from 3.065 million to 3.074 million, while reduced price breakfasts rose from 178,000 to 187,000 and paid breakfasts, from 434,000 to 467,000 per day. Approximately 81.9 percent of all breakfasts were served free in the first quarter of 1988, down from 83.3 percent. Total program costs amounted to \$145 million in the October-December quarter, a 4.6-percent increase from a year earlier.

**Table 2. Elderly People Accounted for the Increase in CSFP Participation**

Program	Average participation October-December <sup>1</sup>	
	1986	1987
<i>Millions</i>		
Food Stamp Program	19.2	18.4
School Lunch Program	24.3	24.6
School Breakfast Program	3.7	3.7
WIC	3.4	3.5
Child Care Food Program	1.2	1.2
<i>Thousands</i>		
Commodity Supplemental Food Program	175.6	211.9
Food Distribution on Indian Reservations	143.8	139.9
Nutrition Program for the Elderly	852.2	883.8

<sup>1</sup>First quarter of 1987 and 1988 fiscal years.

The Child Care Food Program continued to grow. Average daily attendance increased from 1.18 million in December 1986 to 1.22 million in December 1987, and the number of outlets grew from 105,292 to 113,402. Most of the increase took place in private day-care homes as opposed to institutional child-care centers. The total number of meals served rose 7.3 percent to 193.3 million. Federal cash expenditures rose by \$13 million to \$131.2 million. Total program costs, including commodities

and administrative costs, climbed from \$132.9 million to \$147.2 million over the same period.

Fifty-one million half-pints of milk were served in the first quarter of fiscal 1988, a substantial 29.3-percent increase from the previous year. This increase reflects a changed regulation that makes the Special Milk Program available to kindergarten students attending split-day sessions who do not have access to other meal services in schools. Increased participation, higher payment rates, and proportionately greater amounts of free milk all contributed to raise total program costs from \$3.7 million in fiscal 1987 to \$5.0 million a year later.

### Supplemental Food Program

Participation in the Special Supplemental Food Program for Women, Infants, and Children (WIC) averaged 3.46 million during October-December 1987, up from 3.40 million a year earlier. Approximately 31,000 more women and 47,000 more infants participated in the program than in the previous year, but 33,000 fewer children. The children's share of overall participation dropped from 49.0 percent to 47.5 percent. Monthly benefits in the WIC program averaged \$33.42, up from \$32.02 the previous year. Food costs totaled \$346 million, up 5.8 percent, and total program costs reached \$427.1 million, up 5.2 percent.

The Commodity Supplemental Food Program (CSFP) provides supplemental



food packages to low-income pregnant and post-partum women, children up to age 6, and elderly people. Average participation for the program increased from 175,600 to 211,900. All of the increase was accounted for by an average of 38,400 more elderly participants. Participation by women, infants, and children actually declined from 134,800 to 132,600. The total value of entitlement food distributed through CSFP increased 16.2 percent to \$9.73 million in the first quarter of fiscal 1988.

### Food Donation Programs

USDA provides food assistance to other programs to the diets of needy people. Food packages are distributed on a monthly basis to low-income families living on, or near, Indian reservations and the Trust Territories of the Pacific Islands. Average program participation dropped from 143,800 in fiscal 1987 to 139,900 in fiscal 1988, due in part to a Federal phase out of the program in two of the Trust Territories. Food costs, including bonus commodities, fell from \$12.2 million to \$11.5 million in the same period.

The Nutrition Program for the Elderly (NPE) is administered by the Department of Health and Human Services and receives donated foods and cash-in-lieu of commodities from USDA. Approximately 58.3 million meals were served under this program in the first quarter of fiscal 1988, compared with 55.4 million a year earlier. Total USDA expenditures for NPE were \$36.6 for the quarter, a 4.7-percent increase over \$34.9 million spent the previous year.

As one of its ongoing programs, USDA provides surplus and bonus com-

modities to charitable institutions. In the 1988 period, commodities valued at \$40.8 million were distributed to eligible institutions, such as orphanages and nursing homes not covered by other USDA programs. In comparison, \$38.2 million worth of commodities were distributed to these institutions in the first quarter of fiscal 1987.

Food costs for the Temporary Emergency Food Assistance Program (TEFAP) declined from \$218.1 million in fiscal 1987 to \$211.8 million in 1988.

This program distributes surplus USDA commodities through the States to needy people throughout the country. Due to the depletion of Government surplus stocks, honey, rice, and cheese are no longer offered through this program, and dry milk will be distributed on a month by month basis. Cornmeal, flour, and butter will continue to be distributed. TEFAP is presently due to expire at the end of fiscal 1988, although legislation is pending to continue the program. ■

WIC participation averaged 3.46 million people a month during October-December 1987.





# Food and Nutrition Legislation

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*Numerous food and nutrition bills have been introduced in the 100th Congress since November 1987. Two recently passed laws and several bills are described below.*

## Food Assistance

### P.L. 100-277

This legislation became law on April 4, 1988. It restores provisions for aid and trade missions which were unintentionally omitted from the Continuing Appropriations Act for fiscal 1988. The restored provisions strengthen Public Law 480 and the Surplus Commodity Disposal Program as market development tools. They also improve the use of donated food to enhance community, health, credit, agricultural, and other development efforts in poor countries. In addition, the Act extends the Farmer-to-Farmer Program until September 30, 1990, and exempts aid and trade missions from the Federal Advisory Committee Act, which would have slowed implementation.

### P.L. 100-356

This legislation, which becomes law June 28, 1988, amends the National School Lunch Act so that free school lunch eligibility is based on the nonfarm income poverty guidelines prescribed by the Office of Management and Budget. The Act ties income eligibility for free school lunches to the Food Stamp Program. Traditionally, this tie worked well because annual inflation adjustments were implemented on July 1 of each year. However, enactment of the Stewart B. McKinney Homeless Act (P.L. 100-77) changed the inflation ad-

justment date for food stamp eligibility to October 1 to coincide with the fiscal year. This forces schools to determine who is eligible for school lunches after the school year begins. P.L. 100-356 corrects this problem by moving the determination date back to July 1, when school is not in session.

### S. 2043—Sen. John Kerry (MA)

This bill would establish demonstration projects that provide coupons to participants in the Special Supplemental Food Program for Women, Infants, and Children, and the Commodity Supplemental Food Program, to use at farmers' markets. The purpose of the bill is to provide those who are considered nutritionally at risk with a means to procure fresh, nutritious foods from farmers' markets. The bill would also expand the awareness, and use of, these markets to increase fresh produce sales. The proposal is modeled after programs existing in Connecticut, Massachusetts, Vermont, and Iowa. Funding would come from States and Federal grants awarded by the Secretary of Agriculture.

### H.R. 3644—Rep. Dan Rostenkowski (IL)

The bill would replace the Aid to Families with Dependent Children Program (AFDC) with the Family Support Program. The new program would emphasize work, child support, and need-based family support supplements. The bill, which would amend Title IV of the Social Security Act, would encourage and assist needy children and parents to obtain the education, training, and employment needed to avoid long-term welfare dependence. The bill would also establish a commission to identify policies and definitions to be used in administering the Family Support Program. These policies and definitions would

then be compared with those used in the Food Stamp Program. The commission would then make recommendations to coordinate the two programs. H.R. 3644 is part of a major effort within the House to overhaul the welfare system (*see National Food Review*, Jan-Mar 1988, p. 32).

### S. 2147—Sen. John Melcher (MT)

The bill would ensure that enough dairy products are available for the Temporary Emergency Food Assistance Program (TEFAP) and other domestic food programs. It would establish domestic assistance as a priority over dairy export programs for reducing dairy surpluses. At the same time, the bill would extend dairy export programs to 1991. This bill was motivated by the decrease in dairy surpluses available for distribution and the expiration of the export programs at the end of 1988.

### S. 2244 and S. 2245—Sen. John Melcher (MT)

S. 2244 would extend the Temporary Emergency Food Assistance Act of 1983 for 2 more years, until September 30, 1990. S. 2245 is similar to S. 2147, but includes provisions to extend TEFAP, as well as the dairy export programs, to 1990.

### S. 2124—Sen. Rudy Boschwitz (MN)

The Child Care and Nutrition Enhancement Act would provide matching grants to States to improve their child-care service regulations. The bill would also increase funding for the Child Care Food Program. Breakfast reimbursements would be increased 3 cents to allow child-care providers to improve the nutritional quality of the meals. In addi-

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tion, the bill would also reimburse providers for an additional meal or snack.

**S. 2123—Sen. Edward Kennedy (MA) and H.R. 4060—Rep. Leon Panetta (CA)**

The Emergency Hunger Relief Act of 1988 would make changes to the Food Stamp, School Breakfast, Child Care Food, and Summer Food Service Programs. Under the provisions of the bills, Food Stamp Program benefit amounts would increase. The program's information activities and targeted services would be restored to those Americans most in need—especially low-income workers with children, the homeless, the disabled, the elderly, and those in rural areas. Also, the excess shelter cost deduction cap for food stamps would be phased out so that recipients could spend a larger portion of their income on housing before their food stamps are reduced. The household definition used in the Food Stamp Program would change so that recipients who move in with relatives would not lose their benefits.

Other changes would extend TEFAP until 1990, ensure the continued availability of surplus commodities to the homeless and other low-income Americans, extend the Community Food and Nutrition Program until 1993, increase the reimbursement for school breakfasts by 3 cents a meal so that schools can serve more nutritional breakfasts to poor children, allow centers participating in the Child Care Food Program to serve children an additional meal, and permit nonprofit organizations to administer the Summer Food Service Program so that greater assistance will be available to poor children when school is out. The proposed changes would be carried out over a 5-year period.

## Food Safety and Quality

**H.R. 3735—Rep. Charles Stenholm (TX)**

The bill would establish a research program to examine and enhance agricultural production and food processing systems. The bill authorizes the Secretary of Agriculture to issue competitive grants to private individuals, corporations, research institutions, and Government entities to conduct the research. The research program would:

- Establish a statistical framework to measure the extent to which microbiological and chemical agents in, or affecting, agricultural products pose significant risks to humans.
- Identify any agents that pose a significant human health risk under the statistical framework.
- Identify the means to avoid the causes of microbiological or chemical risks or to control or reduce such risks, including developing techniques for rapid identification of the agents and analyzing agricultural production, food processing, and distribution to determine intervention points to control any significant health risks.

**H.R. 4042—Rep. Jim Cooper (TN)**

The Fair Food Labeling and Advertising Act would establish labeling and advertising requirements for foods and drinks which are labeled "lite" or "light," or which make similar claims about fat, sodium, or calorie content. The bill would create a uniform standard for a product using this kind of labeling. In order to carry such a label, a product would have to have a one-third reduction in either calories, fat, or sodium from the level that would normally be in the food. The product label would also have to state which of the three was reduced to make it "lite." Businesses with annual

gross sales of \$500,000 or less would be exempt from these requirements. In addition, the bill would direct the Food and Drug Administration to officially define the term "low fat."

**H.R. 4441—Rep. John Conyers, Jr. (MI) and S. 2047—Sen. Strom Thurmond (SC)**

The bill would require health warnings on the labels of all alcoholic beverage containers. The labels would not create any legal restriction or penalty, but merely provide a cautionary notice. The labels would rotate among five specified warnings:

- The Surgeon General has determined that the consumption of this product, which contains alcohol, during pregnancy can cause mental retardation and other birth defects.
- Drinking this product, which contains alcohol, impairs your ability to drive a car or operate machinery.
- This product contains alcohol and is particularly hazardous in combination with some drugs.
- The consumption of this product, which contains alcohol, can increase the risk of developing hypertension, liver disease, and cancer.
- Alcohol is a drug and may be addictive.

**S. 2145—Sen. Robert Kasten, Jr. (WI)**

The Truth in Frozen Pizza Labeling Act of 1988 would amend the Federal Meat Inspection Act. The bill would require frozen meat pizzas to be prominently labeled with "imitation cheese" or "cheese alternate" if real cheese constituted less than 75 percent of the cheese content. The Secretary of Agriculture would establish "common or usual names" for ingredients resembling cheese. The effective date would be September 1, 1988. ■



## USDA Actions

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

**Requirements for New Poultry Inspection System Issued.** USDA issued final requirements for facilities and equipment to be used in the poultry Streamlined Inspection System (SIS). The SIS is a relatively new, cost-effective approach to poultry inspection that places more responsibility on the industry, according to Lester M. Crawford, administrator of USDA's Food Safety and Inspection Service (FSIS).

SIS is one of several new inspection processing systems implemented since 1979. After slaughter, SIS inspectors determine which birds are salvaged, reprocessed, condemned, retained, or passed subject to reinspection. Then plant employees, following the inspectors' directions, mark carcasses for trimming. After trimming, inspectors reexamine the carcasses to ensure the defects have been removed.

The final rule lists dimensions for inspection and reinspection facilities that are necessary to the new system. The rule has other equipment maintenance requirements to ensure proper lighting, handwashing facilities, adjustable platforms, and carcass selection devices at inspection stations.

Approximately 145 poultry plants use SIS to slaughter cornish game hens and broilers. While the costs of complying with the new requirements are expected to be minor, USDA estimates that the



Inspectors determine which birds are salvaged, reprocessed, condemned, retained, or passed subject to reinspection.

savings in overtime inspection costs and increased productivity will be substantial.

FSIS inspects meat and poultry for safety, wholesomeness, and accurate labeling. The agency also inspects premises, facilities, and equipment for cleanliness and sanitation. FSIS approves equipment for processing plants and blueprints for plant changes or alterations, and determines facility and equipment requirements for post-slaughter inspection systems.

**Field Trials To Test Herbicide Tolerance of Plants.** USDA has issued limited field trial permits to Calgene, Inc. of Davis, California, to test tobacco and tomato plants that have been genetically engineered to tolerate two herbicides, bromoxynil and glyphosate. These herbicides degrade rapidly in the environment and are less toxic to animals than

many others commonly used to fight weeds.

Weeds have always been one of the biggest problems in agriculture, competing with crops for both water and nutrients. Using herbicide-tolerant plants would allow farmers to spray for weeds without harming the crop. This could have an enormous economic impact on American agriculture in terms of higher crop yields and lower costs, according to James W. Glosser, administrator of USDA's Animal and Plant Health Inspection Service (APHIS). Genetically engineered plants have the potential to improve traditional methods of agricultural production. More advancements may come as similar plants make the steady but cautious transition from the laboratory to the greenhouse, to the field, and eventually to the marketplace.

### Inspection Regulations Revised.

USDA revised regulations covering the inspection and certification of rice, beans, peas, lentils, and processed grain commodities. The new regulations, which were issued under the Agricultural Marketing Act of 1946, remove the requirement that information gathered during an inspection be reported on the official certificate. The requirement is retained, however, if the commodity falls below the highest quality grade. The regulations also establish provisions for retesting nongraded commodities and permitting appeal inspections on new samples when insect fragments are found in original samples during initial inspections.

W. Kirk Miller, administrator of USDA's Federal Grain Inspection Service, said the regulations, which were last revised in 1976, "will combine and

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consolidate compatible regulatory requirements, simplify overall language, and establish conformity with current marketing practices."

**Final Guidelines on Collecting Beef Assessments Issued.** USDA announced a final rule governing collection of assessments under the Beef Promotion and Research Order. A \$1 per head assessment on cattle marketed in the United States has been collected since October 1, 1986. An equivalent assessment is made on imported beef and cattle. The funds finance a program operated by the Cattlemen's Beef Promotion and Research Board to strengthen retail beef sales.

Under the final rule, buyers in 41 States must remit the assessments to State beef councils that have been qualified by the Cattlemen's Beef Promotion and Research Board. Cattle buyers in the remaining States must send assessments directly to the Beef Board in Kansas City, Missouri. The rule designates 11 States where, in certain types of sales, inspectors checking the validity of brand-

ing marks on individual cattle traded will collect assessments, and cattle purchasers are not required to remit assessments to their State beef councils. The rule also specifies how cattle sales not subject to assessment are verified.

A referendum was held May 10 to determine if cattle producers and cattle and beef importers wanted the checkoff to continue. Almost 79 percent of those voting favored the program. Since the Beef Promotion and Research Act of 1985 does not provide for refunds after the passage of the referendum, producers and importers cannot receive refunds of assessments on cattle sold after May 27.

**Alternate Substances Allowed in Approved Meat Binder.** USDA now allows meat processors to use glucono delta-lactone as an alternate acidic substance in a dry binder for restructured meat products. The substance also can be used to adjust the acid level in other meat and poultry products.

Since August 1986, processors have combined 1 percent sodium alginate, 2 percent calcium carbonate, and 0.3 per-

cent lactic acid and calcium lactate to create a dry mixture that binds restructured meat patties, roasts, and other meat products. The rule allows processors to substitute 0.3 percent glucono delta-lactone for lactic acid and calcium lactate in the binder. The mixture cannot exceed 1.5 percent of the product's content, which is the level of dry mixture approved by the Food and Drug Administration as safe for use in food.

Glucono delta-lactone and other substances used in the binder must be included in a statement next to the product name. For example, a restructured beef nugget may be labeled "Beef nugget—chopped, shaped, and formed, sodium alginate, glucono delta-lactone, and calcium carbonate added."

Analytical data show that glucono delta-lactone does not affect the safety or wholesomeness of meat or poultry products when used in prescribed amounts and for approved purposes, according to Lester M. Crawford, FSIS administrator. The agency ensures that all ingredients used in meat and poultry products are safe and wholesome and that the products are accurately labeled.

**Lower Fat Allowed in Some Cooked Sausages.** USDA now allows meat processors to substitute water for fat to reduce the fat in hot dogs, bologna, and other cooked sausages, providing there is no loss of nutritional value. The change in the regulations reflects USDA's desire to facilitate the marketing of lower fat products.

These products can be labeled with the terms "lite," "light," or "lower fat" if they contain at least 25 percent less fat than similar cooked sausage products. The labels, however, must include a comparison that explains the term. For example, the label for lower fat hot dogs might state: "This product contains 20



A \$1 per head assessment on marketed cattle has been collected since October 1, 1986.



percent fat, while USDA allows 30 percent fat in meat hot dogs."

Current inspection regulations for cooked sausages restrict fat to 30 percent and added water to 10 percent. Under the new rule, the combination of fat and added water cannot exceed 40 percent of the product weight. The maximum fat content will continue to be limited to 30 percent. However, the water restriction will be removed so that processors can substitute some of the water for fat to produce a lower fat product. The protein content will remain unchanged.

**USDA Expands Repackaging and Relabeling Services.** Poultry and poultry products inspected at Federal plants can be repackaged and relabeled at certain warehouses and distribution centers under the supervision of USDA inspection personnel. Repacking and relabeling operations allow bulk shipments of federally inspected products to be divided into consumer packages and be labeled with brand names.

Previously, poultry products could only be repacked and relabeled at federally inspected plants. All cutting and processing of poultry is still limited to federally inspected plants.

Warehouses and distribution centers are often more conveniently located than federally inspected plants. Allowing certain facilities to repackage and relabel poultry products with inspectors present means savings in time and money and a safe product, according to Lester M. Crawford. Crawford, FSIS administrator, said "the savings in transportation costs could ultimately mean lower prices for consumers."

Processors must pay USDA to have an inspector present during repackaging and relabeling operations. This optional

service has been available previously to the red meat industry, but there was no regulation allowing it for poultry products.

#### **Mexican Fruits May Be Imported.**

USDA now permits apples, grapefruits, oranges, peaches, and tangerines from certain areas in the state of Sonora, Mexico, to be imported without undergoing treatment for fruit flies. The designated areas of Sonora are free from five types of fruit flies that exist in other parts of Mexico. The fruit is still subject to all other pest treatments and procedures required by USDA. In addition, each box of fruit exported to the United States under this procedure must be clearly labeled with specific information about its origin.

**Hot-Water Dip Allowed for Mexican Mangoes.** USDA has revised its Plant Protection and Quarantine Treatment Manual to allow a hot-water dip as a pest treatment for imported Mexican mangoes. The manual contains procedures for treating regulated agricultural products. Mexican mangoes must be treated before being imported to destroy fruit fly species that do not exist in the United States.

James W. Glosser, APHIS administrator, states "Recent research indicates that except for the Mediterranean fruit fly, which is occasionally present in the state of Chiapas, a hot-water dip destroys all the fruit-fly species that exist in Mexico." Entry of mangoes from Chiapas is still prohibited.

About 65 percent of the mangoes consumed in the United States come from Mexico. Imported Mexican mangoes were previously fumigated with ethylene

dibromide, a treatment now banned by the Environmental Protection Agency.

**USDA Changes Procedures for Imported Meat and Poultry Refused Entry.** USDA changed its procedures for handling imported meat and poultry that is refused entry into the United States, because it failed to pass U.S. inspection. Import inspectors with FSIS will permanently mark all consignments that do not pass inspection "U.S. Refused Entry." The markings will be stamped on each carcass or on each packing unit. Products that are refused entry must be removed from the United States, converted to animal food, or destroyed. Previously, such products were identified with temporary placards and had to be closely monitored by USDA employees. The new regulation eliminates the requirement that products refused entry be sealed before transport within the United States, since the permanent marking will readily identify them.

The rule also reinstates the practice of "controlled pre-stamping." Under this procedure, import inspectors can have the "U.S. Inspected and Passed" mark put on imported products before the inspection has been totally completed. This procedure is especially useful at cold storage facilities, so that meat and poultry can be stamped, and samples taken for testing and inspection. If there are no problems, the products do not have to be handled again. If the products do not pass inspection, the inspectors can remove the marks from the containers and stamp them "U.S. Refused Entry." The use of pre-stamping makes inspection at crowded dock storage facilities more efficient and limits the amount of handling of the products. ■



## Dialing the Experts

If you need information or data on anything from the food industry to world trade, the Economic Research Service has economists and other specialists who can help. Use the list below as your guide. The area code for all telephone numbers is 202.

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## In the News

### USDA to Study "Good Side" of Higher CO<sub>2</sub>

Amid forecasts that increased levels of carbon dioxide (CO<sub>2</sub>) in the air will heat up the climate and raise ocean levels, USDA scientists will examine future yield increases for crops. USDA plant and soil scientists will undertake the study as part of an experiment by the Department of Energy. It will be the largest study made of how 21st-century carbon dioxide levels could affect crops, according to W. Doral Kemper of USDA's Agricultural Research Service (ARS).

Agency studies to date, said Kemper, indicate that crop yields could increase approximately 50 percent if atmospheric CO<sub>2</sub> doubles in the next 100 years or sooner. The burning of fossil fuels has been primarily responsible for pushing CO<sub>2</sub> levels from 280 parts per million (ppm) in the mid-18th century to today's 345 ppm.

Carbon dioxide is essential in photosynthesis, and higher levels enhance this process of converting sunlight into energy in plants. All plants and crops may benefit from the extra CO<sub>2</sub>, including wheat, rice, and corn—the three major foods for the Earth's population—according to Bruce A. Kimball, a soil scientist at the agency's U.S. Water Conservation Laboratory in Phoenix.

For more details on the study, contact Bruce Kimball, ARS, (602) 261-4356.

### Biotechnology Center Dedicated

Albany, California, is the site of a new center for research on biotechnology for agriculture. The new Plant Gene Expression Center is expected to become a major source of research that plant breeders, geneticists, and other scientists can use to develop superior crops, accord-

ing to the Center's director, Dr. Gerald Still of ARS. The Center is a joint venture of ARS, the University of California at Berkeley, and the California Agricultural Experiment Station.

In citing examples of what could come from the research, Still stated consumers could get consistently high-quality foods, farmers could grow disease-resistant crops, and industry could use crop materials to develop new or improved products such as lubricants, films, or coatings.

For more information, contact Marcia Wood, ARS, (415) 559-6070.

### Committee on Microbiological Criteria for Food Established

In cooperation with the Department of Health and Human Services (HHS), USDA has established a National Advisory Committee on Microbiological Criteria for Foods. The committee will consist of experts in food science, microbiology, and other relevant disciplines. The members, appointed for 2 years, are from academia, industry, and various levels of government.

The committee's first task will be to develop a priority list of those foods and ingredients for which microbiological criteria would serve a useful purpose and which could be incorporated into food-safety programs on the national, state, and local levels, said Deputy Secretary of Agriculture Peter C. Myers. HHS Secretary Otis R. Bowen added the new committee "will be an excellent forum for Federal and State agencies involved in food safety to discuss problems of regulating the food supply with industry and academic representatives." Food and Drug Administration staff will also work closely with the committee.

USDA is responsible for the wholesomeness and safety of meat, poultry, and egg products intended for human consumption, while HHS is

responsible for the safety and wholesomeness of all other human foods and animal feeds.

For more information, contact Catherine M. DeRoever, USDA, Food Safety and Inspection Service, (202) 447-9150.

### Guayule Rubber Facility Opened

A prototype facility for producing natural rubber from guayule opened early this year on the Gila River Indian Community Reservation near Phoenix, Arizona. The facility is the result of a cooperative project between USDA and the Department of Defense to establish a domestic guayule natural rubber industry.

The United States is completely dependent on imported natural rubber. A domestic supply of guayule rubber could reduce our dependence on foreign sources of natural rubber and provide a new industry for the southwestern United States, according to Orville G. Bentley, USDA Assistant Secretary for Science and Education. Natural rubber is essential in applications that require elasticity, resilience, tackiness, and low heat buildup, such as the manufacture of automobile, bus, truck, and airplane tires.

For additional information, contact Dr. Richard Wheaton, USDA, Office of Critical Materials, (202) 535-0962.

### "Autumn Gold" Iceberg Lettuce Introduced

A new iceberg lettuce, developed by a USDA scientist, may be on the market within a year. "Autumn Gold" lettuce is resistant to a virus that causes small distorted heads and unhealthy looking leaves with a mosaic pattern of dark and light green. Besides the virus resistance, Autumn Gold can also withstand heat that can cause most iceberg varieties to form seed stalks, a process called bolting.

According to Edward J. Ryder of ARS, the new lettuce should appeal to

This report was compiled by Kathryn Lipton, an agricultural economist with the U.S. Agricultural Policy Branch, Agriculture and Trade Analysis Division.

consumers. "It has nicely formed, well-rounded heads that make it better looking than many iceberg varieties grown in the West for late fall or early winter harvest," he said. Growers will find the variety ideal for November and December harvest in the San Joaquin, Palo Verde, and Imperial Valleys of California and the desert farmlands of Arizona, Ryder said, adding that the variety also might be suited for planting in New Mexico and Colorado, States that are the fourth and sixth largest producers of lettuce.

For more information, contact Edward J. Ryder, ARS, (408) 755-2860.

### **Transportation Handbook Available**

USDA has published a handbook of recommendations to maintain the quality of fruits and vegetables, live plants, and cut flowers from tropical and subtropical climates during transportation. The Tropical Products Transport Handbook also outlines USDA requirements for importing pest-free foreign fruits, vegetables, and plants.

The areas that produce most of the perishable products, such as California, Florida, Texas, Hawaii, Puerto Rico, Mexico, and other countries in the Caribbean, face marketing challenges because of their distance from major U.S. markets in the eastern and central parts of the country. The USDA handbook should help growers, shippers, carriers, and receivers reduce post harvest losses and expand the markets for highly perishable, high-value products, said Martin F. Fitzpatrick, Jr., administrator of USDA's Office of Transportation.

Free copies are available through the Export Services Branch, USDA, Office of Transportation, (202) 653-6317.

### **Glucose Sweetens Calcium Absorption**

Ten grams of glucose sugar—about a teaspoonful—taken with calcium can increase the body's absorption of the mineral by nearly 25 percent, according to Richard J. Wood and Irwin H. Rosenberg of USDA's Human Nutrition Research Center on Aging. "Many women don't get enough calcium in their diets," Wood said. "Our findings indicate that glucose could be an effective way of enhancing intestinal absorption for this group."

In four human studies, Wood said, calcium absorption improved in men and women in their twenties through their fifties, including patients with gastrointestinal disease. Preliminary findings by Wood and Rosenberg, as well as other scientists, indicate that glucose alone, or in polymers—which are sold in drug stores under several brand names as calorie supplements, may also enhance absorption of zinc and magnesium. But more research is needed to confirm the results.

Wood indicated that more studies are needed for other sugars, including sucrose (table sugar), but he is more interested in the possibilities of complex starches because they are digested and absorbed more slowly.

The researchers are continuing to conduct studies in this area.

For more information, contact Richard J. Wood, Human Nutrition Research Center on Aging at Tufts, ARS, Boston, Massachusetts, (617) 556-3192.

### **Fat in Retail Beef Declines**

Closer trimming of retail cuts has resulted in a 27-percent decline in fat content in beef bought by consumers in the past decade, according to a recent USDA market basket study.

The study, in conjunction with research at Texas A&M University, also showed that there was 10 percent less fat in ground beef. The data come from surveys conducted in late 1987 and early 1988 in stores in Atlanta, Chicago, Dallas, Denver, Detroit, Houston, Los Angeles, New York, Philadelphia, Seattle, Tampa, and Washington, DC.

The study, funded by ARS, the Cattlemen's Beef Promotion and Research Board, and the Beef Industry Council, found that randomly selected retail cuts contained an average of 78.9 percent separable lean, 11.7 percent separable fat, and 9.4 percent separable bone and connective tissue. In 1985, USDA and the beef industry sponsored the National Consumer Retail Beef Study which indicated consumers found beef more desirable when fat was trimmed to one-fourth of an inch or less. As a result, retailers changed the fat trim on beef from the previous standard of one-half inch to no more than one-fourth inch. The recent market basket study indicates that the amount of external fat on all retail cuts now averages less than one-eighth of an inch.

From a nutritional point of view, this means that beef, rich in protein, iron, and zinc, is a nutritious food that contains less fat than many consumers may realize. According to USDA, the average price of USDA Choice beef in the first 2 months of 1988 was only 5 percent above the same period in 1985. And while recent smaller supplies of beef may mean higher prices in coming months, the 27-percent drop in separable fat in retail cuts indicates that consumers will still get more lean meat and less fat



for their dollars than they did in recent years.

Changes in cattle production and beef packaging and processing have also helped in providing consumers with leaner meat. The total amount of fat in Choice beef carcasses is down 8 percent from more than a decade ago. Separable fat will likely drop further as improvements in breeding, production, and feeding programs continue.

For additional information, contact Gary Beecher, Research Leader, Nutrient Composition Laboratory, ARS, Beltsville, MD (301) 344-2356.

### **Cornbread for Sandwiches**

Cornbread, usually a crumbly, rich bread that often accompanies southern-style meals, may be getting a new face. According to USDA food technologist Kathleen A. Warner, cornbread made with finely ground corn flour and wheat bread flour has a smooth, cake-like texture that is suitable for sandwiches.

"It really enhances the taste of a sandwich with turkey," says Warner.

Warner developed a recipe for bread that could be used by professional bakers. She says it is the gluten (wheat proteins) and yeast that make the new bread good for sandwiches. Traditional cornbread is usually low in gluten and contains no yeast.

Warner used bread flour made from hard red spring wheat, which contains high amounts of gluten, but any wheat bread flour can be substituted. All-purpose flour used by many home bakers is low in gluten and will not work.

The new bread was developed as a result of research conducted at the request of the American Corn Millers Federation (ACMF). Jack Swarthout, director of research for ACMF, says that the type of corn used to make beer and

grits should not be used for cornbread because the bread won't have much flavor. A richer flavor comes from other types of corn, especially from the germ portion that has been finely ground.

For more information, contact Kathleen Warner at (309) 685-4011.

### **Carbonated Milk Is Not Junk Food**

Milk. It has been bottled, pasteurized, homogenized, fortified, skimmed, powdered, flavored, and put into plastic containers. Now, in the interest of finding new ways to market surplus powdered milk, it has been carbonated.

Soda milk, developed by researchers at ARS's Southern Regional Research Center in New Orleans, is made by bubbling carbon dioxide through a mixture of water, powdered nonfat dry milk, and flavoring. The mixture is kept under pressure and bottled immediately so it remains carbonated.

"It is only a crude laboratory mixture, but it tastes great. You get that tingling, refreshing sensation of carbonation that you get in soft drinks, and you also get calcium, protein, vitamin C," says USDA food technologist Ranjit Kadan. So far, soda milk has been made in 2 flavors—strawberry, which remains fresh up to 6 months, and apricot, which lasts 2 to 3 months.

The carbonated beverage may spur milk consumption, says Kadan, but commercial companies will have to refine the process and add other flavors before soda milk will appear in supermarkets. Per capita milk consumption in the United States dropped 12 percent between 1975 and 1985, while soft drink consumption rose 68 percent. Carbonated milk could be a nutritional boost for children because it would provide a good source of calcium and other nutrients.

Kadan has developed another milk-based product that is a custardlike des-

sert. It is made with nonfat dry milk, rice flour, sugar, gums, and vegetable oil. It has a consistency similar to rice pudding and the French dessert, flan, but it has no cholesterol. Kadan and ARS have patented the custard. If it is developed commercially, it could be sold as a powder, like instant oatmeal, or in containers, like yogurt.

For more information, contact Ranjit Kadan (504) 286-4332.

### **Oatmeal Is Good For You**

Oats are not just good for horses. Recent research by ARS indicates that adding oats to daily diets can lower cholesterol levels in humans and may lessen the effects of diabetes.

The studies, sponsored by the oat industry, show that people with high serum cholesterol can significantly lower blood cholesterol levels by eating two ounces of oats a day. The ingredient suspected of being the cholesterol-lowering agent is beta-glucan. ARS says that oat varieties with naturally high beta-glucan levels could be selected to create a specialty crop that could provide a pharmaceutical source of the substance. There are also indications that oat fiber may help control diabetes by reducing swings in blood sugar through the slowing of carbohydrate digestion.

"We've always known oats had good nutritional value, but all of the new information coming out indicates it is better than expected," says Charles F. Murphy, program leader for ARS grain research. Oats, one of the most nutritionally balanced cereal grains, contain an excellent balance of amino acids, a high level of protein, and polyunsaturated fats, Murphy says.

For more details, contact Charles F. Murphy, ARS, (301) 344-1560. ■

## Reports of Interest

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### Consumer Demand for Dairy Products Has Increased

Rising consumer incomes and declining prices for dairy products caused most of the 2-percent average annual increase in per capita dairy consumption from 1983 through 1986. Advertising, concerns about health and nutrition, changes in demographics, and Government donations also affected consumption. But for most dairy products, these influences were small compared with the effects of changes in relative prices and consumer incomes. With the exception of cheese and lowfat milk, per capita consumption of dairy products in the United States either fell or remained stable for the two decades prior to the 1980's. Per capita consumption turned up, however, in the early 1980's. Consumption of items like lowfat milk and cheese showed further gains, and consumption of most other dairy products stayed the same or increased modestly.

This report examines dairy market characteristics, consumption increases, prices, personal incomes, and other factors affecting demand.

**Consumer Demand for Dairy Products.** By Richard C. Haidacher, James R. Blaylock, and Lester H. Myers.

March 1988. \$4.00. GPO Stock Number 001-019-00579-3.

### Differences in Food Costs Affect Food Stamp Benefits

Food stamp benefits vary with supermarket prices and household purchases. Within cities, supermarket prices typically vary by up to 7 percent, and as much as 25 percent. Actual household purchasing practices differ from Government recommendations; household food costs can be 5 to 8 percent above the cost of the federally recommended diet. For instance, consumption of meat, poultry, fish, and sugars and sweets exceeded USDA's Thrifty Food Plan (TFP) recommendations. In addition, there were fewer purchases of cereals, citrus fruits, vegetables, milk, cheese, and ice cream.

In 1982, actual consumption patterns raised the cost of a market basket of food by about 9.5 percent above what was recommended in the plan's market basket. Revisions in 1983 moved the TFP allocation closer to actual purchase practices. This report compares actual food purchasing practices of food stamp households with the recommended purchasing levels in the Thrifty Food Plan.

**Food Cost Variations: Implications for the Food Stamp Program.** By Paul E. Nelson, Jr., and James M. MacDonald. February 1988. \$3.00. GPO Stock Number 001-019-00557-2.

### Farm Counties Are Influenced by Their Farm Structures

Americans realize that sustained financial problems on farms can influence entire communities and regions whose economies depend on agriculture. The strong interdependence could translate into a rapid restructuring of the farm sector and farm-dependent communities. Concerned groups throughout the country's farm regions are consequently

exploring ways to cope with the restructuring process.

Large farm counties, where agriculture dominates the economy, are concentrated in the Plains, Midwest, and the Mississippi Delta. Small farm counties, with larger, more diversified economic bases, are concentrated in the Southeast.

This report identifies which counties are dominated by small- or large-farm agriculture, as well as counties which could go either way.

**Local Farm Structure and Community Ties.** By Thomas A. Carlin and Bernal L. Green. March 1988. \$1.50. GPO Stock Number 001-019-00555-6.

### U.S. Farm Profiles

The average U.S. farm at the end of 1985 operated 709 acres and had production expenses of about \$74,000, assets of \$325,000, capital investments of \$10,000, gross cash farm income of \$82,000, and debts equal to 22.5 percent of total assets. This statistical report tabulates information on farm production expenses, farm numbers and acreage, land use, farm labor, capital investments, and financial indicators.

**Farm Operating and Financial Characteristics, 1985.** By Mitchell J. Morehart. February 1988. \$7.50. GPO Stock Number 001-019-00571-8.

### Agriculture's Excess Capacity Is on the Rise

Excess agricultural capacity has been increasing since 1979. In 1986, it was about 9 percent and was valued at \$12.5 billion. Much of this is due to higher yields and increased use of agricultural resources.

Excess capacity in agriculture is defined as the difference between potential supply of farm output (actual production plus potential output from acreage reduction programs) and commercial



demand (total use adjusted for noncommercial exports) at prevailing prices. This report explains these differences.

***Excess Capacity in U.S. Agriculture: An Economic Approach to Measurement.*** By Dan Dvoskin. February 1988. \$1.50. GPO Stock Number 001-019-00559-9.

### **The European Community Deals With Restraints on Nongrain Feed Imports**

Nongrain feed imports into the European Community (EC) grew rapidly throughout the 1970's and early 1980's due to a shift to more intensive livestock production, increased use of compound feeds, null or low rates of duty on nongrain feeds, and high support prices for domestic feeds. However, the EC has proposed and implemented various measures to restrain imports of cereal substitutes. These measures include voluntary restraints on manioc imports, increased import levies on cereal brans, and import ceilings and levies on corn by-product feeds.

Proposed restrictions and levies on corn by-products have created friction between the United States and the EC and will likely be an issue during the Uruguay round of negotiations under the General Agreement on Tariffs and Trade.

Several recent studies show that reductions in EC grain prices would be more effective in raising EC grain consumption and cutting grain surpluses than would restrictions on nongrain feed imports.

This report describes these studies, EC trade patterns in nongrain feeds, and the role of nongrain feeds in the EC feed-livestock sector.

***Nongrain Feeds: European Community Trade and Policy Issues.*** By Stephen C. Schmidt and Walter H. Gardiner. January 1988. \$2.75. GPO Stock Number 001-019-00558-1.

### **Global Food Production on the Rise**

World food production in 1986 exceeded 1985's record by about 1 percent, despite declining output in Latin America, the United States, Western Europe, and Oceania. World food production generally increased faster than population from 1977 to 1986. Production of agricultural commodities rose at an annual compounded rate of about 2.3 percent but only 0.7 percent on a per capita basis.

This tabular report presents indices of total and per capita agriculture and food production for 1977-86 for 111 countries, 12 regions, and the world.

***World Indices of Agricultural and Food Production, 1977-86.*** By Charles E. Goode. March 1988. \$8.50. GPO Stock Number 001-019-00576-9.

### **Protecting the Nation's Erodible Cropland**

The Conservation Reserve Program (CRP), enacted in December 1985 as part of the 1985 Food Security Act, is a tool for protecting the Nation's most highly erodible and fragile croplands. The CRP's primary goal is to establish a reserve of 40-45 million acres by 1990 to assist owners and operators of highly erodible cropland to conserve and improve the soil and water resources of their farms and ranches.

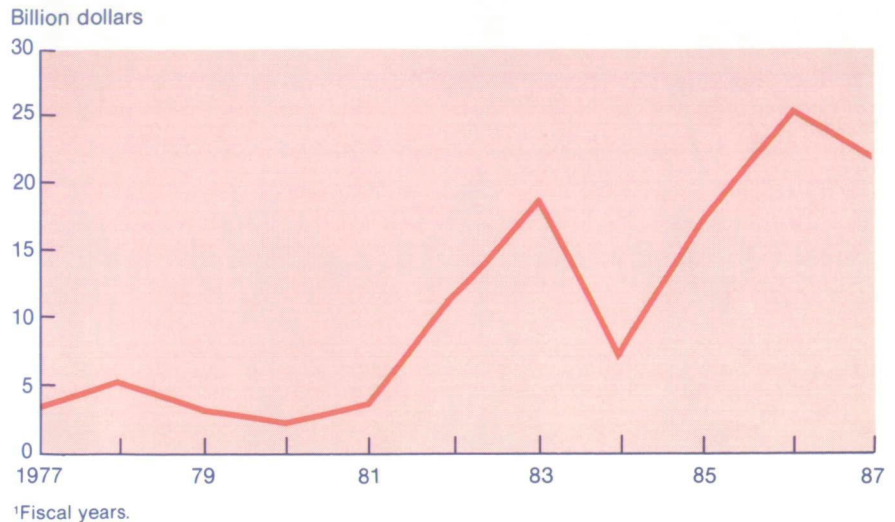
In fiscal 1987, 126,421 farms enrolled 13.8 million acres in the CRP, 779,000 acres of which were planted to trees. This report summarizes the accomplishments of the CRP for fiscal years 1986 and 1987.

***The Conservation Reserve Program: Implementation and Accomplishments, 1986-87.*** By Michael R. Dicks, Felix Llacuna, and Michael Linsenbigler. January 1988. \$6.00. GPO Stock Number 001-019-00573-4. ■

## Federal Commodity Program Costs

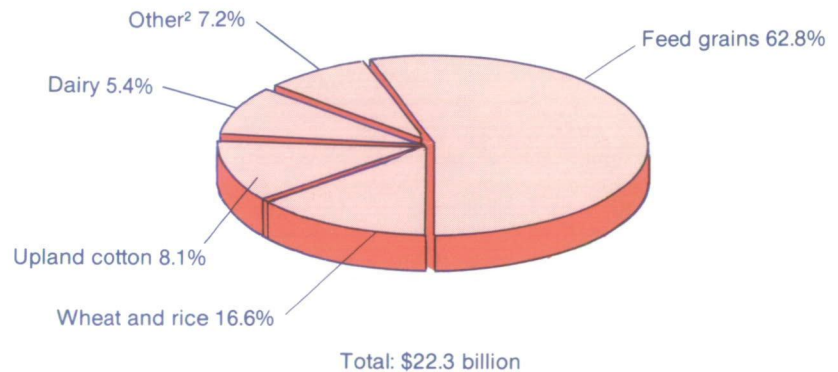
Federal outlays for agricultural price and income support programs reached a record \$25.7 billion dollars in fiscal 1986. This was up from \$4 billion in 1981 and more than double 1982's \$11.6 billion. However, outlays dropped to \$22.3 in fiscal 1987 and may decline another \$4.8 billion to \$17.5 billion in 1988.

### Costs of Price and Income Support Are Declining<sup>1</sup>



About three-fifths of the \$22.3 billion spent for price and income support in fiscal 1987 was for feed grains, with most of that—\$12.3 billion—going to the corn program. The remaining \$1.7 billion for feed grains went to grain sorghum, barley, and oats. Another 16.6 percent of 1987 outlays was for wheat and rice—\$2.8 and \$0.9 billion, respectively. Upland cotton and dairy accounted for most of the rest.

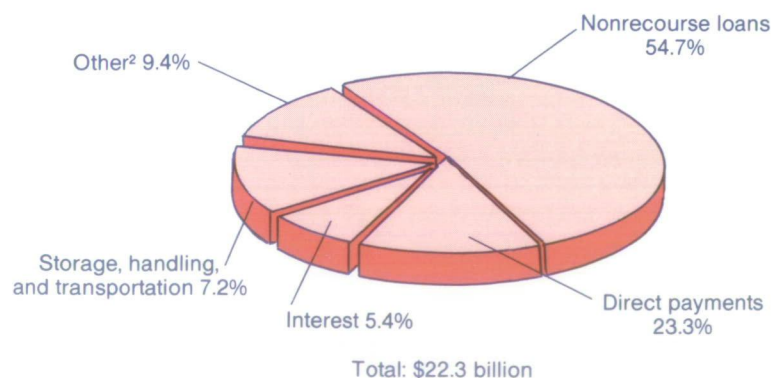
### Feed Grains Accounted for Most of the Costs in Fiscal 1987<sup>1</sup>



<sup>1</sup>Composition of outlays for price and income support, by commodity, fiscal 1987. <sup>2</sup>Includes interest and outlays for the Conservation Reserve and Dairy Termination Programs.

Nonrecourse loans provide the price support mechanism for most Federal commodity programs. In fiscal 1987, they accounted for 54.7 percent of the \$22.3 billion spent for price and income support. Direct payments—primarily deficiency payments made under the wheat, feed grains, Upland cotton, and rice programs for income support—made up another 23.3 percent. Storage, handling, and transportation costs and interest accounted for an additional 12.6 percent.

### Price Support Loans Are an Important Part of Federal Commodity Programs<sup>1</sup>



<sup>1</sup>Composition of outlays for price and income support, by support mechanism, fiscal 1987. <sup>2</sup>Includes interest and outlays for the Conservation Reserve and Dairy Termination Programs.

Source: Agricultural Stabilization and Conservation Service.



**United States  
Department of Agriculture**

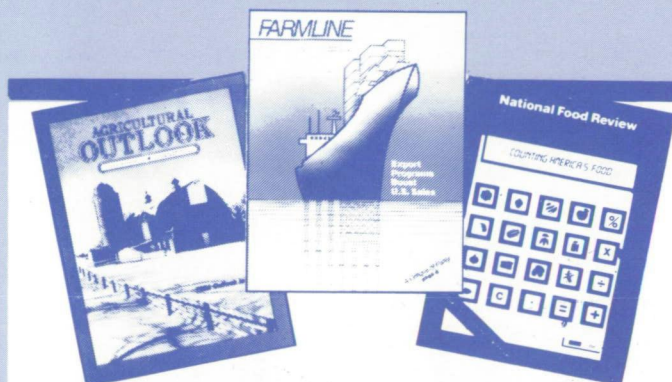
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