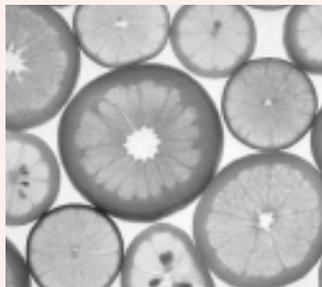


# AGRICULTURAL OUTLOOK



## 2 Briefs

*Specialty Crops: Citrus Production Unchanged in 2000/01; Good Quality Expected*

*Specialty Crops: 2000 U.S. Grape Crop to Hit Record High; Demand Up for Fresh Grapes & Wines*

## 5 Commodity Spotlight

*World Cotton Market: A Decade of Change*  
*Stephen MacDonald & Leslie Meyer*

*Americans Relish Cucumbers*  
*Gary Lucier & Biing-Hwan Lin*



## 13 Food & Marketing

*Food Assistance Programs & Poverty in Mexico*  
*Craig Gundersen, Mara Yañez, & Betsey Kuhn*

## 16 Resources & Environment

*Conservation Reserve Enhancement Program: Early Results from a Federal-State Partnership*  
*Mark E. Smith*



## 21 Special Article

*New Technology Raises Food System Productivity in APEC Economies*  
*William Coyle*

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### Statistical Indicators

28	Summary Data	45	World Agriculture
29	U.S. & Foreign Economic Data	46	U.S. Agricultural Trade
31	Farm Prices	50	Farm Income
33	Producer & Consumer Prices	55	Food Expenditures
35	Farm-Retail Price Spreads	55	Transportation
37	Livestock & Products	56	Indicators of Farm Productivity
41	Crops & Products	57	Food Supply & Use

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## Cotton . . . Cucumbers . . . Mexican Food Assistance

### Expanded Conservation Program . . . Food System Technology in APEC Regions

#### Food Assistance Programs & Poverty Rates in Mexico

A major food assistance initiative in Mexico—Progresa—is aimed at alleviating the chronic poverty faced by many Mexicans. About 40 percent of families in Mexico are poor, but this doesn't reflect the variation in poverty rates across states—from 21 percent to 63 percent. The five most rural states are those with the highest poverty rates, while several of the states with relatively low poverty rates are near the U.S. border. The government of Mexico has indicated its commitment to eradicate poverty and improve the well-being of families in both the short and long run, with particular emphasis on the poorer states.

In addition to distributing direct food assistance, the Progresa program provides children with scholarship and financial support for school supplies and offers free basic health services to families. To the extent that Progresa helps alleviate poverty in Mexico, especially in rural areas where most of the benefits are targeted, Mexico could eventually become a larger market for U.S. agricultural and other products as incomes rise.

#### Technology & Food System Productivity in APEC Economies

Technology will play a key role in raising food-sector productivity to keep pace with population growth and rising affluence in the APEC region in the long term. A report released at APEC's 12th Ministerial Meeting in Brunei on November 12-14 indicates that technology will be essential in raising yields at the farm level and reducing losses, enhancing quality and freshness, and increasing the speed of delivery to consumers. The availability of new biotech methods may help offset diminishing returns from traditional plant breeding programs and help meet rising demand for greater quantities of food and dietary upgrading.

Incorporating information technology into the food supply system will provide greater access to markets for farmers, increased flows of information for market participants, opportunities for enhanced efficiency for businesses, and



better services for consumers. Technologies applied to marketing and processing food products can reduce waste and inefficiencies in the food system. Technology development and adoption is likely to be key in supporting the region's food supply system, particularly with the rapid urbanization in Asia.

#### Americans Relish Cucumbers

Cucumber use in the U.S. climbed steadily since the 1960's, with consumption reaching 3 billion pounds in 1999. Per capita use of cucumbers has risen during each of the past four decades, reaching 10.3 pounds in the 1990's. Sixty percent of cucumbers are consumed in fresh form, mostly at home. The remaining 40 percent is consumed as pickled products, with one-third used in fast foods, largely reflecting sandwich use (e.g., hamburgers) and associated condiment demand (relishes).

U.S. cucumber production totaled 2.4 billion pounds in 1999—about equally split between the fresh and processing markets. Average annual farm value was \$361 million during 1997-99. Florida is the leading cucumber state, producing 19 percent of the nation's output during 1997-99, with Michigan a close second and California ranking third. During the 1990's, about 8 percent of the fresh-market volume was exported.

#### World Cotton Market: A Decade of Change

Global cotton consumption is forecast to reach a record high in 2000/01, after stagnating during much of the 1990's. The upturn in global cotton consumption is led by the developing economies of China, Pakistan, and India. In China, recent liberalization of the cotton sector and sales of government-held stocks have fueled a surge in cotton consumption. In wealthier countries, including the U.S., cotton consumption by textile producers is expected to decline as textile and apparel exports from developing Asian countries continue to displace domestic production.

For 2000/01, U.S. cotton production and demand are forecast to rise from the previous year. U.S. cotton production is currently forecast at 17.5 million 480-pound bales, or 3 percent above 1999. Increased demand for U.S. cotton is led by exports, forecast at 7.6 million bales—13 percent above 1999. U.S. cotton consumption by domestic textile mills is projected at 10 million bales, the lowest since 1991.

#### Conservation Reserve Enhancement Program: A Federal-State Partnership

The Conservation Reserve Enhancement Program (CREP), which allows states to supplement Federal incentives offered to farmers under the Conservation Reserve Program (CRP), has played a role in encouraging land retirement for conservation purposes in some states. In Maryland, for instance, almost half of the CRP enrollment has occurred under the CREP. The 3-year-old CREP helps participating states address more state-specific goals and target conservation practices that may not be enrollable under the CRP. The 13 states that currently participate in CREP offer a mix of Federal and state enrollment incentives, including cost sharing, rental payments, and up-front payments. However, the lack of clear relationships between economic incentives and CREP enrollment progress indicates that non-financial considerations may also play a role in determining program enrollment.

## Briefs

## Specialty Crops

## Citrus Production Unchanged in 2000/01; Good Quality Expected

The 2000/01 citrus crop is expected to be about the same size as last year, with losses in California balanced by gains in Arizona and Texas. California's citrus growers expect a 7-percent drop from 1999/2000, with reductions coming in oranges and tangerines. Florida's growers expect a 1-percent increase overall, with a larger orange crop, but smaller crops of grapefruit, tangerines, temples, and tangelos. Texas and Arizona, the smallest citrus-producing states, are expected to have the largest gains. Texas' citrus crop is projected to be 11 percent above last year, with increases in both its orange and grapefruit crops. Arizona's citrus crop estimate indicates an improved grapefruit crop and a larger lemon crop.

The *orange* crop for 2000/01 is forecast at 13.1 million tons, the same as last year. Florida's orange crop, estimated at 10.8 million tons, will be 3 percent above last year. Texas' orange crop is expected up 15 percent, increasing for the second consecutive year. Offsetting these increases, the California and Arizona orange crops, the major source of fresh oranges to the U.S. market, are expected to be down—12 percent in California and 2 percent in Arizona. Much of the decline is attributed to smaller fruit set this year.

Reduced demand affected California's Valencia growers in 1999/2000. Increased competition from other fruit, including navel oranges from Southern Hemisphere countries, forced California's Valencia growers to switch to processors instead of marketing to the much more lucrative fresh market. While fresh orange imports still account for only a small portion of domestic consumption, the domestic fresh Valencia crop could be pressured by the increased availability of navel orange imports during the summer—when previously they were not available in the U.S. market—as well as by a consumer preference for navels.

On the positive side, California's navel oranges are reported to be large this year,

a boon for marketing since purchasers in both the domestic and international markets prefer larger sized fruit. The large-size fruit should help boost demand in Japan, the major overseas market for U.S. navels. The tighter supply and higher demand for fresh oranges should also boost grower prices for the navel crop.

Although this season's Florida orange crop is not expected to be as large as the record crop of 1997/98, the supply of orange juice may exceed the previous record. Very high beginning stocks coming into the new marketing year, in addition to this year's expected second-largest production, could put orange juice supplies at 1.8 million single-strength equivalent gallons.

Stocks began high in 2000/01 for not-from-concentrate (NFC) orange juice, despite the increased popularity of this product. About 40 percent of the crop last year went into producing NFC, the largest proportion so far. Movement, however, was sluggish, and processors were left with large stocks. Processors may be forced to beef up their promotions this coming season to sell NFC orange juice, especially early in the season, to move it out of storage. As a result, consumers may see lower retail prices.

While NFC has become the orange juice of choice at the retail level, 60 percent of last year's Florida orange crop went into making frozen concentrated orange juice (FCOJ). FCOJ is sold at the retail level as well as to institutions and food services, and processors who reconstitute the juice and sell it chilled. Movement was good in 1999/2000 for FCOJ, and stocks ended only 4 percent above the year before. The situation coming into this year may result in more oranges going into FCOJ, at least at the beginning of the harvest, and less into making NFC orange juice.

Brazil, the world's largest orange juice producer and the major exporter of orange juice, is projected to produce less juice in

2000/01 due to a smaller crop.

Unfavorable weather conditions during flowering and fruit set resulted in smaller sized fruit and slowed maturity, which delayed harvesting. USDA estimates that the smaller crop will result in Brazil's orange juice production declining by 18 percent. Although higher beginning global juice stocks coming into the new season will buffer the decline in Brazil's total orange juice supply, the decline is sufficient to reduce expected world orange juice supplies by 3 percent—despite the projected increase from Florida—and could be felt at the consumer level around the world. Brazil's exports are expected to drop 9 percent from last year, in part from reduced import demand in the U.S. because of this season's larger crop and stable import demand in the European Union.

*Grapefruit* production is expected to be lower in 2000/01 because of a smaller crop from Florida, where growers have been removing grapefruit trees in response to low prices in the recent past. As a result, the number of bearing trees has declined, reducing crop size.

Fruit size is reported to be similar to last year for white grapefruit and slightly smaller for red grapefruit. Florida's grapefruit are said to be of high quality with minimal blemishes. Small fruit size may hurt prices, especially in the international market where larger fruit command higher prices. Their good appearance, however, should help marketing. Grower prices for processing grapefruit should also be lower this year because processors have started the year with large stocks and will not demand as much fruit as last year. Overall grapefruit grower prices may fall this year, after experiencing only 1 good year following several years of very low prices.

*Lemon* production in the U.S. is forecast to be the highest in 3 years. Quality of the lemon crops in both California and Arizona is said to be excellent, which should bring producers good prices despite the larger supply. For the first time, the U.S. allowed Argentine lemons to be imported into certain areas in the summer of 2000. The ruling expands the areas in 2002 and in 2004 will allow them to be shipped to all parts of the country,

provided there have been no pest problems.

Argentine lemons will enter the U.S. mostly during the summer months when demand is the highest. Even so, the competition may eventually bring down prices at a time when domestic growers expect to get their best prices. To maintain their market position, some larger domestic shippers have become involved in marketing Argentine lemons.

*Temple, tangelo, and tangerine* crops are expected to be smaller in 2000/01. Florida's tangerine crop is lower than last year's record crop but still higher than the year before, and there should be an ample supply for this winter. The U.S. market can expect to continue to see Spanish clementines alongside tangerines in supermarkets. Americans have come to like clementines because they are easily peeled and seedless.

Citrus exports to China, which began in 2000, will continue to expand. High-quality navel and Valencia oranges, plus grapefruit and lemons, probably have the greatest potential for export growth. Beginning in the 2000/01 season, China's Citrus Agreement calls for additional counties in Florida and California to qualify for exports to China. Exports to the Philippines, especially of grapefruit, are also expected to rise. **AO**

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## Specialty Crops

### 2000 U.S. Grape Crop to Hit Record High; Demand Up for Fresh Grapes and Wines

U.S. growers are producing more grapes in 2000 and selling them for less, offering consumers a bountiful supply of lower-priced, good-quality, fresh-market grapes and grape products. USDA forecasts a 20-percent rise in this year's grape production over 1999, surpassing the 1997 record. Harvests are up 24 percent in California, which grows more than 90 percent of the country's grapes, and 2 percent in Washington state, the second-largest U.S. producer.

More land in grapes in the two states and California's favorable weather account for this year's bumper crop. Growers in both states have increased their grape-bearing acreage in the 1990's, with California's up 15 percent. In the rest of the country, the total crop has dropped 5 percent, reflecting large declines in New York and Pennsylvania, where wet conditions this year caused mildew and insect problems and where some vineyards showed stress from last year's drought and heavy crop.

Although grapes are the fourth most popular fresh fruit among U.S. consumers, ample supplies of both citrus fruit and summer stone fruit (peaches, plums, and nectarines) have upped the competition in the domestic market, pushing prices down for fresh-market grapes for both growers and consumers. During the 1990's, more

than 80 percent of U.S. fresh-market consumption was domestically produced. Grower prices for fresh-market grapes from May through September were 24 percent lower than in the same period a year ago—an average \$636 per ton. Retail prices for fresh Thompson seedless grapes dropped an average of 8 percent from last season (June to September).

Mostly influenced by higher, good-quality production and lower prices, consumption of U.S. fresh grapes in both the domestic and export markets is expected higher during the 2000/01 season (May to April), mirroring last season's increases. U.S. consumption—estimated at 8.2 pounds per capita in 1999/2000—should rise by about 7 percent in 2000/01.

Nearly 30 percent of fresh-market grape production was exported during the 1990's. Exports of fresh grapes for this year (May to August) have already posted a 34-percent gain over the same period last season. Driving up exports were improved economic conditions in major export markets, including Canada, Hong Kong, Mexico, and the Philippines, as well as other Asian markets like Singapore, China, Thailand, and Indonesia. The industry is optimistic that next season California could begin shipping table grapes to Australia, until now a

closed market, at an estimated 1 million boxes per year—enough to put Australia among the top five markets for California grapes.

About 86 percent of the nation's grapes are processed—more than half for wine, more than a fourth for raisins, and the remainder for juice and canning. In California, where growers will harvest larger crops in every variety of grapes, only 12 percent are table-type grapes, while 47 percent are wine-type grapes and 42 percent are raisin-type. Washington processes virtually all of its grapes—about two-thirds for juice and one-third for wine.

According to the Wine Institute, California now produces more than 90 percent of U.S. wine grapes. In recent years, growers there have greatly increased the acreage they devote to wine grape production, with many vineyards adopting new technologies that produce higher yields and better-tasting wine. Last year, wine grape varieties accounted for well over half of the state's total grape acreage, an increase of 29 percent during the 1990's. Bearing acreage for wine grapes increased 10 percent from the previous year—to 424,000 acres—and non-bearing acreage increased about 7 percent—to 130,000 acres.

## Briefs

California vineyards can expect to harvest a record 6.4 billion pounds of wine grapes in 2000, a result of higher yields and recent new plantings of premium wine varieties that have reached bearing age. Prominent wine grape varieties are Chardonnay and French Colombard for white wine, and Cabernet Sauvignon, Zinfandel, and Merlot for red wine. Increases in bearing acreage last year were greatest for Merlot (up 30 percent), Cabernet Sauvignon (up 16 percent), and Chardonnay (up 15 percent). Although California's growth appears to be strong, the state's grape industry faces a threat from Pierce's disease, a bacterial blight transmitted by insects (glassy-winged sharpshooters) and capable of destroying an entire grape-growing area. Until this disease is eradicated, the industry will remain vulnerable to the losses it can cause.

With about one-third of Washington state's total grape output processed for wine, the state's wine sector is growing at a healthy rate. According to the Washington Agricultural Statistics Service, total wine grape acreage more

than doubled between 1993 and 1999 (from 11,100 acres to 24,000), while bearing acreage increased by more than half (from 10,200 acres to 17,000). The state crushes all of its Concord and Niagara grapes for juice.

U.S. wine exports rose 4 percent in 1999 to a record 70 million gallons, with the United Kingdom, Canada, Japan, and the Netherlands accounting for more than two-thirds of shipments. Imports increased slightly over 1998 (less than 1 percent), coming mostly from the European Union, Chile, and Australia.

Increasing supplies of high-quality wines, stronger national economies, heightened awareness of the health benefits of moderate wine consumption, and market promotion efforts continue to encourage demand for U.S. wines both here and abroad. Exports of U.S. wine and imports into the country rose during the first 8 months of 2000 (up 5 percent and 13 percent), indicating the continuing strength of the market for domestic wine producers and grape growers.

U.S. raisin exports fell 28 percent and domestic consumption of raisins declined by 2 percent during 1999/2000. The supply of raisins in the U.S. fell last season as a result of reduced domestic shipments and a 30-percent downturn in imports. Partly responsible for the decline in imports were smaller raisin crops in Chile, South Africa, Greece, Turkey, and Mexico, which reduced overall world supplies.

Raisin exporters are optimistic for the 2000/01 season, in light of a recent upward trend. According to the Raisin Administrative Committee, California raisin shipments abroad (excluding Canada) in August and September were up 12 percent over the same period in 1999. This change reflects significant increases in demand from the United Kingdom, Germany, Korea, Taiwan, the Netherlands, and Denmark. **AO**

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# Agricultural Outlook Forum 2001



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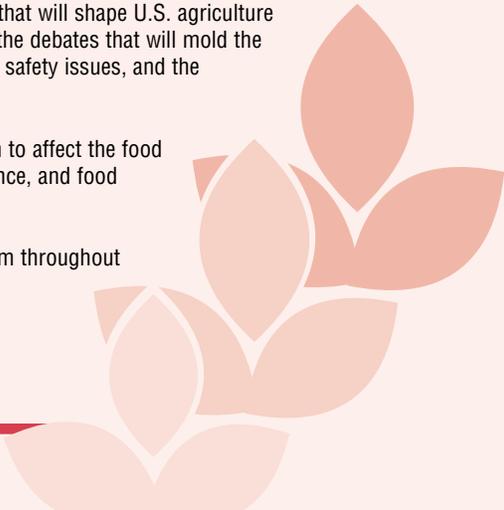
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## Commodity Spotlight



# World Cotton Market: A Decade of Change

With the 2000 U.S. cotton harvest nearly complete, the spotlight has shifted from supply indications to demand expectations. Record global cotton consumption is forecast this season, continuing the rebound from 1998's decline in the wake of the Asian financial crisis. Although consumption by U.S. cotton mills is forecast to weaken slightly this season as a result of rising textile and apparel (clothing) imports, the United States is expected to export an above-average share of raw cotton to the world market. The result is a more robust market outlook as U.S. and world cotton stocks are expected to become tighter in the 2000/01 marketing year (August-July).

As the global cotton economy enters the first decade of the 2000's, global consumption of cotton is once more on the rebound. World cotton consumption had stagnated in the 1990's due to slow global economic growth during the early part of the decade, the collapse of the Soviet Union's textile industry, soaring polyester consumption in the late 1990's, and the Asian financial crisis which sent a shock wave through the Asian-dominated textile industry. Cotton consumption was particularly stagnant in China and Pakistan, the two leading sources of increased consumption during the 1980's. However, during 1999/2000

and 2000/2001, China and Pakistan once again lead the world in consumption growth, polyester consumption gains have slowed, and Russia's textile industry is beginning to recover. For now, world cotton consumption seems to be on an upward path, benefiting U.S. exports.

### *U.S. Cotton Crop Up in 2000*

Despite drought conditions this summer in many U.S. cotton producing areas and the subsequent 13-percent loss in planted area, U.S. all-cotton production in 2000 is currently forecast at 17.5 million 480-pound bales, 3 percent above 1999. Although 1999 production problems were fresh in cotton producers' minds earlier this spring, the outlook for profitable alternatives was limited. The cotton marketing loan program—which supplied a significant portion of producers' incomes in 1999—also provided an incentive for U.S. farmers to plant additional area to cotton in 2000. Favorable springtime weather allowed producers to plant 15.5 million acres of cotton this year, the second-largest U.S. cotton area in nearly four decades and 4 percent more than in 1999.

The U.S. national average yield in 2000 is estimated at 622 pounds per harvested acre, above 1999 but below the 5-year

average. With beginning stocks at 3.9 million bales, the latest production projection places total supplies for the 2000 season at 21.5 million bales, 2 percent above a year earlier. Total demand for U.S. cotton is also projected to climb this season, with higher exports more than offsetting slightly lower domestic mill use (projected at 10.0 million bales). U.S. cotton exports are forecast to increase significantly in 2000 to 7.6 million bales, 13 percent above last season. Smaller crops in Central Asia and West Africa—the principal U.S. competitors—and an improved outlook for world mill use are factors expected to boost foreign demand for U.S. cotton this season.

The U.S. cotton industry is beginning the new decade with a second consecutive year of growing export volume and export share, just as it was 10 years earlier. But during this time, the U.S. and global cotton markets have experienced profound changes. A decade ago, for example, China and Japan were the leading importers of U.S. cotton, but in 2000/01 Mexico and Turkey are expected to be the most important markets for U.S. cotton.

Continued growth of U.S. cotton textile and apparel imports has also placed tremendous pressure on the U.S. cotton textile industry, forcing some participants to limit output, relocate, or close. At the same time, however, more U.S. cotton is contained in these finished imported products than ever before, due largely to the North American Free Trade Agreement (NAFTA) and the Caribbean Basin Initiative. These agreements have provided a "home" for U.S. raw cotton and cotton products used in apparel manufacturing—an outlet that might otherwise not have been available. This trend is likely to continue into the foreseeable future.

### *Income Growth & Liberalization Fuel Changes*

The shift in U.S. trade patterns since 1990 illustrates changes that have occurred in global markets during the last decade. Another example is the trend—which predates the 1990's—toward increased textile production and apparel exports by lower income countries, and the associated decline of cotton fiber use by textile mills in wealthier markets. In 1990, Japan, the

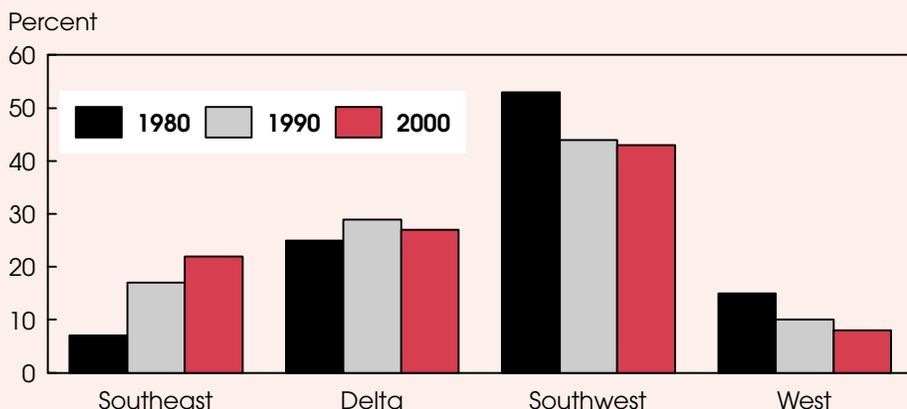
## Commodity Spotlight

### Cotton Production Climbs In Southeastern States

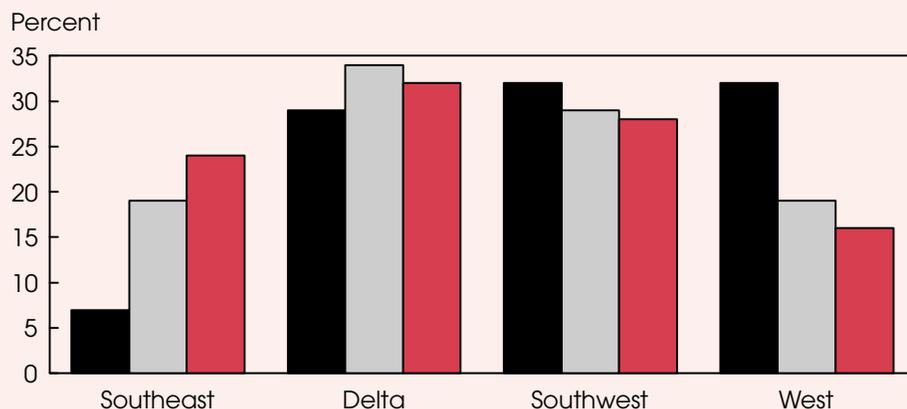
In addition to changes in the global market, significant regional shifts have occurred in U.S. cotton area and production over the last two decades. In the 1980's, nearly 70 percent of U.S. cotton area was located in the Southwest and West where land and water were plentiful. However, recent water concerns in these regions, and success of the boll weevil eradication program in the Southeast have led to dramatic gains in area and production in the Southeast. The share of total upland cotton area in this region has tripled since the 1980's. As a result, the share of U.S. cotton area in the Southwest and West has declined from about 70 percent in 1980 to less than 50 percent in 2000.

The Southeast has shown equally impressive growth in its share of U.S. cotton production, particularly in relation to the West. In the 1980's, the Southeast accounted for 7 percent of upland cotton production, while the West contributed 32 percent. Since then, the two regions have moved in opposite directions. In 2000, the latest estimates indicate that the Southeast share of production is approaching 25 percent of the total while share in the West has declined to just over 15 percent.

#### Southeast Is Steadily Increasing Its Share of U.S. Cotton Area . . .



#### . . . And Its Share of Production



Economic Research Service, USDA

European Union, and the Newly Industrialized Countries (NIC's) of South Korea, Taiwan, and Hong Kong accounted for 17 percent of world cotton fiber consumption. By 1999/2000, their share had dropped to 10 percent.

Among wealthier countries, the United States is an exception to the general shift away from cotton fiber use for domestic textile production, with output climbing by 16 percent between 1990 and 2000. The expanding U.S. economy and con-

sumer promotion—under the world's only significant cotton promotion program—contributed to the gain by driving up consumer demand for cotton products by 60 percent in the 1990's. Nearly 60 percent of the 20-million-bale U.S. demand for clothing and other products is met by imports. But free trade with Canada and Mexico provides new opportunities for U.S. textile exports, sustaining textile production despite rising imports.

NAFTA enabled U.S. textile mills to indirectly capture a growing share of U.S. consumer demand for apparel by creating trade and investment partnerships with Mexico, where apparel production and exports to the U.S. have soared.

Specifically, U.S. mills have used raw cotton to produce capital-intensive intermediate textile products—such as fabrics—for export to Mexico. Mexico, in turn, produces more labor-intensive apparel products and re-exports them to the U.S. under preferential market access not available to Asian apparel product exporters.

The Caribbean and Central America enjoyed similar trade preferences during the 1990's, and Canada, Mexico, and the Caribbean Basin accounted for almost 60 percent of the increase in U.S. cotton product imports during the 1990's. Mexico's use of raw cotton has also grown significantly, and Mexico is now the world's largest cotton importer and the largest customer for U.S. cotton exports.

Market reforms in other parts of the world, such as India, Latin America, and the former Soviet Union (FSU) have also had a large impact on cotton production and consumption in the last decade. Debt problems and economic contraction throughout much of the developing world during the 1980's—and the contrasting stellar growth of export-oriented NIC's—led to economic reforms in India and much of Latin America in the 1990's.

In India, cotton consumption soared as domestic economic growth—and textile exports—responded positively to reforms. During the 1990's, India's cotton consumption rose 4.6 million bales, and raw cotton production rose 3.2 million bales. As a result, India's share of world cotton use rose from 10 percent in 1990 to 15 percent in 1999. In 2000/01, India's consumption

is expected to continue rising, but production is expected to be unchanged from the year before, in part due to insufficient rain in Gujarat—traditionally India’s leading cotton producing state.

Although cotton consumption also rose in Latin America in response to economic liberalization, the removal of policies that formerly protected cotton growers from competition led to declining production during the 1990’s. Latin America’s production fell as much as 3.2 million bales during the 1990’s, while consumption rose 2.5 million bales. A more limited degree of liberalization in Central Asia, following the breakup of the Soviet Union, also resulted in lower cotton production—down 4.6 million bales between 1990 and 2000. Central Asia’s production has stabilized since 1996, but a 500,000-bale decline from the previous year is foreseen in 2000/01 due to an unprecedented drought in the region.

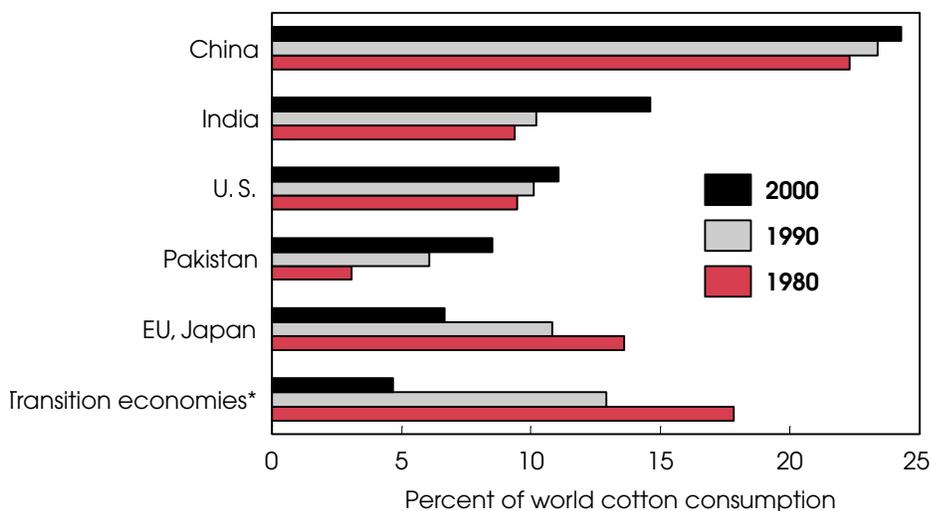
In Russia, economic reforms during the 1990’s drove cotton textile production down 85 percent. Russia’s transition from centralized planning has taken a severe toll on its textile industry, reducing it from the world’s fourth largest cotton consumer in 1990 to 39<sup>th</sup> in 2000/01.

**China Liberalizes Cotton Sector**

China undertook a program of general economic reform during the 1980’s. With the opening of its economy to trade, China more than doubled its share of world clothing exports and became the world’s largest cotton producer. Despite these developments, the liberalization of cotton production in China is actually quite recent. In 1999/2000—more than a decade after liberalizing production of other crops—China sanctioned direct sales by cotton farmers to textile mills, and dropped the price floor that had guaranteed government procurement prices at a level well above world prices during much of the 1990’s. China experimented with similar reforms to the cotton market in the early 1990’s, but a sharp contraction of output in China’s leading producing region forced a reversal in 1993.

Lower procurement prices, a crackdown on smuggling chemical fibers, an improving Chinese economy, and an expanding

**South Asia’s Share of Global Consumption Grows As Transition Economies’ Share Shrinks**



\*Newly Independent States of the former Soviet Union, and Eastern Europe.

Economic Research Service, USDA

world economy with higher textile exports led to a surge in China’s cotton consumption in 1999/2000. China’s rebound during 1999/2000 was extraordinary: a 3-million-bale increase in consumption in 1 year completely offset the 2.7 million bale decline that had stretched out over the previous 7 years. Government figures on China’s yarn output and continued increases in textile exports suggest cotton consumption will continue to grow in 2000/01. During the first 8 months of 2000, China’s clothing exports rose 38 percent from a year earlier, and its cotton fabric exports rose 28 percent on a net basis. At 22.5 million bales, China’s 2000/01 cotton consumption is forecast at a record-high level for the second consecutive year.

To sustain this consumption, China’s government has auctioned about 5 million bales through the newly formed China National Cotton Exchange. Most of this cotton was from government stocks. China’s inventory levels were a closely guarded secret for many years, and much uncertainty remains. Through October, the government has continued to release cotton through auctions to control prices driven upward by growing textile industry demand. China may also be seeking to minimize government stocks ahead of

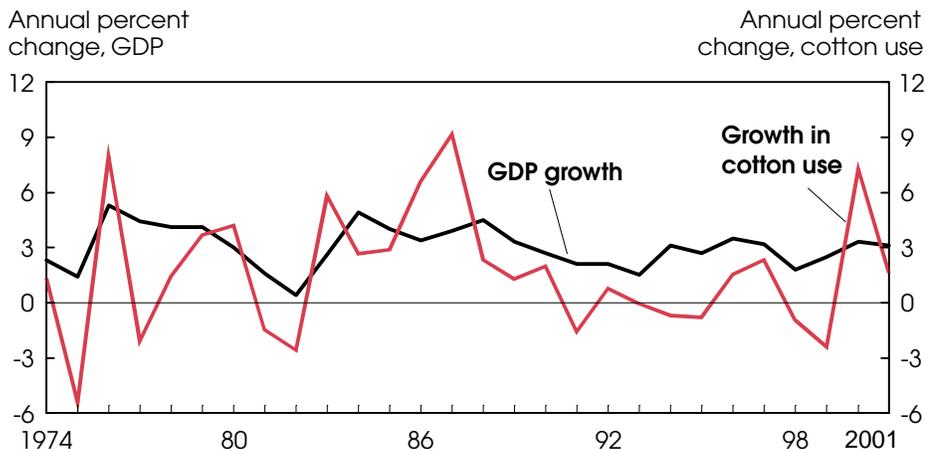
WTO accession—when import competition may make the release of high priced government stocks problematic—so it is unclear what the current willingness to release stocks indicates about future stock and trade policies.

In contrast to the decline in production during China’s earlier cotton market reforms, China’s crop is forecast slightly higher in 2000/01 than in 1999/2000. China’s cotton producers correctly foresaw that early-season 2000/01 price strength would be sustained through to harvest. Also, weather has been relatively favorable, and the use of genetically modified cotton in eastern China helped avoid the substantial losses to bollworms that had plagued provinces like Shandong and Hebei in the early 1990’s. At 18 million bales, China’s 2000/01 crop is forecast 400,000 bales above its 1999/2000 level.

The question for the rest of 2000/01 is whether rising consumption and falling stocks will necessitate large imports. China’s cotton imports are currently forecast to match its exports, and any change in China’s net trade position has important ramifications for the rest of the world.

## Commodity Spotlight

### Growth in World Cotton Use Rebounded as Global GDP Recovered From 1997 Asian Crisis



GDP = gross domestic product. August-July marketing year for cotton (e.g., 1998 = 1997/98 marketing year).

GDP forecast for 2000 and 2001; cotton forecast for 2000/01.

Economic Research Service, USDA

### Textile Export Competition From China & Pakistan

Unlike China, Pakistan's textile industry—the world's fourth largest—experienced growth throughout most of the 1990's. But compared with the 1980's, when cotton consumption grew 178 percent, growth was a relatively sluggish 24 percent between 1990 and 1998. On the other hand, Pakistan's cotton production actually fell during 1990-98, as disease forced abandonment of high-yielding varieties early in the 1990's, and recurring insect problems and poor weather continued to depress cotton production.

The textile industry suffered a further blow as obligations under World Trade Organization membership halted export restraints on raw fiber—ending the domestic industry's preferential access to locally produced cotton. However, rebounding production since 1998 has spurred the reopening of formerly shuttered textile enterprises, and further investment has again increased industry capacity. A 1-million-bale increase in cotton consumption over 2 years is now expected for 2000/01, a 14-percent gain.

About two-thirds of Pakistan's textile output is exported, and during July-September 2000 Pakistan's yarn exports were about 20 percent higher than a year earlier. Similarly, China's 17-percent rise

in cotton consumption over the last 2 years is translating into significant competition for textile industries in other countries. China accounts for about 20 percent of the nearly \$200 billion worth of clothing annually exported around the world, and its exports are undoubtedly increasing faster than world demand. China alone supplied nearly three-quarters of Japan's January-July 2000 textile and apparel import growth (up 18 percent overall from the year before), and about 50 percent of Korea's import growth. Partly due to these increased shipments from China, Korea's 2000/01 beginning yarn stocks are reportedly 50 percent above the 1999/2000 level, and cotton mill consumption there is likely to shrink.

Competition from lower income countries is also expected to reduce mill consumption in Taiwan, as local firms shift spinning to subsidiaries in Vietnam and China. India and Southeast Asian countries are expected to consume more cotton domestically and increase textile exports in 2000/01—due in part to depreciating currencies in these countries. But lower cotton consumption is foreseen for the industries of Japan, Eastern Europe, the United States, and much of the European Union as textile exports from developing Asian countries continue to rise.

### Rebounding Cotton Prices Benefit Southern Hemisphere

Low cotton prices earlier this season have reduced expected cotton production in some regions, including West Africa and Mexico, but price movements since then have provided opportunities for Southern Hemisphere producers. World cotton prices have rebounded sharply since their lows in December 1999—up 40 percent as of September 2000—while prices of production alternatives such as corn or soybeans have been relatively stagnant.

The response to this opportunity is record expected production in Australia, and a crop in Brazil that is forecast 17 percent above the previous year. Since 1996, Brazil has had the largest production gain of any major cotton producing country, and its expected crop of 3.4 million bales is more than two and a half times the 1996 level. Although the size of Brazil's crop is similar to 1990/91 levels, changes to the industry over the past decade have been substantial. Brazil's economic reforms during the 1990's have reduced harvests in the states of Parana and Sao Paulo during the first half of the decade, but there has been a surge in mechanized crop production in Mato Grosso and northern Bahia since 1996.

World gross domestic product (GDP) is likely to expand by 4.1 percent in 2000 and 3.4 percent in 2001—well above the 2.8-percent average of 1995-99. But world cotton consumption in 2000/01 is expected to increase by a more modest 1.6 percent from the previous year. If stable economic growth is maintained, the long-run outlook for cotton consumption should improve.

While world cotton consumption is again growing, and growing in some familiar locations, the world textile market has changed, and the U.S. is exporting to different customers than it did 10 years ago. In the coming decade, reform of world textile and apparel trade under the WTO in 2005 and continued expansion of clothing output by developing country exporters suggest further changes ahead. **AO**

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Courtesy Florida Fruit and Vegetable Association

## Americans Relish Cucumbers

Two common phrases—“cool as a cucumber” and “in a pretty pickle”—might be used to characterize the two segments that make up the market for cucumbers, fresh-market sales and processed products. Demand for fresh-market cucumbers has been on the rise, while consumption of processed (pickled) cucumbers has been slowing. In general, however, cucumber use in the U.S. has been growing, with consumption totaling 3 billion pounds in 1999—up from 2.5 billion 10 years before and continuing the steady climb that began in the 1960’s.

Once considered mere animal fodder, “cukes” are now an important commercial and garden vegetable. The U.S. produces 4 percent of the world’s cucumbers, ranking fourth behind China, Turkey, and Iran. The U.S. cucumber industry is unevenly spread across the 50 states, with 171,000 acres and 6,821 farms that ship into the fresh or processing markets. Cucumbers had an average farm value of \$361 million annually during 1997-99.

### *Cukes for the Fresh Market Or Processing*

Thought to have originated in India, cucumbers have been cultivated for thousands of years. Brought to the New World by Columbus, cucumbers have been culti-

vated in the U.S. for several centuries. Cucumbers are members of the cucurbit family and are related to gourds, gherkins, pumpkins, squash, and watermelon. *Cucumis sativus* is the common slicing (including greenhouse) and pickling species, while *cucumis anguria* is the gherkin type common in India and Africa, and is frequently used to make pickles.

The U.S. produced 2.4 billion pounds of cucumbers for all uses in 1999—about equally split between the fresh and processing markets. While fresh-market cucumber production has been trending upward, reaching a record high in 1999, average pickling output fell 3 percent in the 1990’s compared with the 1980’s. Fresh-market cucumbers are grown year-round, while pickling cucumbers are harvested mainly in the spring and fall.

The three basic classes of cucumbers marketed in the U.S. are field-grown slicers, greenhouse-grown slicers, and processing (pickling) cucumbers. Field-grown slicers (cucumbers for the fresh market) are larger, sweeter, and have thicker skins than the smaller, thinner skinned pickling varieties that are straighter than slicing cukes. “English” or “European” cucumbers are so-called seedless varieties originating in Europe and can be field grown or produced in hothouses. European varieties

tend to be long, cylindrical, and tender-skinned, and have a milder flavor than most field-grown slicers.

Shipping-point (farm-gate) prices for fresh-market cucumbers have averaged about 19 cents per pound over the past 3 years (1997-99)—up 9 percent from the previous 3 years. During the same time, the price of pickling cucumbers at the processing-plant door averaged 12 cents per pound—up 3 percent from the previous 3 years. In real terms, prices for both fresh and processing cucumbers have trended downward over the past 30 years—prices are 20 to 30 percent lower than in 1970, likely reflecting increases in per acre yields.

Monthly prices for pickles or pickling cucumbers are not available, but USDA does collect price data on fresh cucumbers. Prices for fresh cucumbers are generally higher from January to April because of limited domestic supplies, and lowest in June when supplies are available from many areas. The farm price (shipping-point) represents about 25 percent of the retail value for fresh cucumbers.

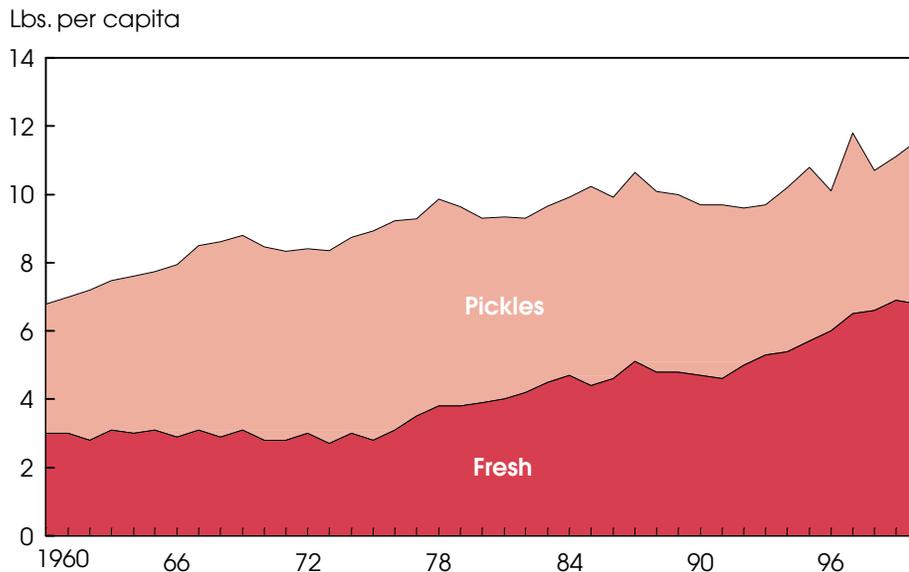
Trade is a key component of the U.S. fresh-market cucumber industry. About 8 percent of fresh-market volume was exported during the 1990’s—virtually the same as the 1980’s. However, export share has been declining since the late 1980’s and stood at 4 percent in 1999. Canada takes 98 percent of U.S. fresh cucumber exports, but Canada’s imports have declined 20 percent since 1997, possibly reflecting increased consumption of domestic greenhouse cucumbers.

U.S. pickle exports have been relatively constant over the past 5 years, accounting for 2 percent of pickling cucumber supply—up from 1 percent or less in the years prior to 1995. The U.S. exported pickles to 38 countries in 1999, with three-fourths of the volume going to Canada, South Korea, and the Netherlands.

Imports of fresh cucumbers are highest in January and February when U.S. production is limited by cool weather, and lowest in summer during the height of the domestic growing season. Imports accounted for 38 percent of U.S. fresh

## Commodity Spotlight

### Fresh Cucumbers Have Propelled Consumption Growth



Economic Research Service, USDA

cucumber consumption in the 1990's—up from 37 percent in the 1980's and 30 percent in the 1970's. The volume of fresh imports in 1999 was 90 percent larger than in 1990, with the majority shipped from Mexico. Under terms of the North American Free Trade Agreement (NAFTA), Mexico faces a small, but declining (15-year phaseout) tariff from March through May and October through November; in contrast, cucumbers from Canada enter duty-free all year. The strong U.S. dollar and the popularity of European-type greenhouse/hydroponic cucumbers has encouraged imports from Canada to rise fourfold since the mid-1990's. Imports from Canada now account for 5 percent of U.S. imported fresh-market cucumbers.

Imports of pickling cucumbers have been on the rise since the mid-1990's. Prior to 1993, imports accounted for 1 percent or less of pickling cucumber consumption, but reached a peak of nearly 8 percent in 1999. Recent gains reflect imports of finished products (pickles ready for immediate consumption) from Canada and India and a rising volume of bulk unfinished pickles (in brine, requiring further processing) from Honduras and India. Bulk unfinished pickle imports totaled 50 million pounds, product weight, in 1999—up from just 7 million pounds in 1990. Bulk

gherkin imports from India have apparently found favor with both U.S. and Canadian processors due largely to their low cost and consistent sizes.

#### *Production Is Concentrated*

Florida is the leading cucumber state, producing 19 percent of the nation's output during 1997-99. Nearly half of Florida's cucumber crop is grown in Manatee and Palm Beach counties. Florida is the leading fresh-market supplier and is fourth in pickling cucumbers. Florida ships fresh cucumbers from October through June, with a lull in January and February due to the threat of freezing weather. Imports from Mexico fill this winter gap.

Michigan is a close second, producing 18 percent of the nation's cucumbers. One-third of this output comes from Van Buren and Allegan counties. Michigan is the leader in pickling-cucumber production, with two-thirds of the state's production going to several pickle packers, including the nation's largest pickle manufacturer. Michigan's 455 cucumber farms are also fourth in fresh-market production, with shipments from late June through early October.

According to the 1997 Census of Agriculture, third-ranked California has

431 farms that harvest cucumbers. The Golden State produces 11 percent of the nation's cucumbers, with three-fourths for the fresh market. About 80 percent of the state's cucumbers are shipped from San Diego and San Joaquin counties. Most of California's fresh-market cucumbers are shipped from May to November.

In the U.S., there is limited overlap between the fresh and processing cucumber industries because of differences in varieties, as well as in production and marketing methods. For example, all fresh-market cucumbers are harvested by hand, while many pickling cucumbers are harvested by machine. According to Pickle Packers International, a national trade association, about two-thirds of the cucumber crop in the northern U.S. (e.g., Michigan), one-third of the crop in the western U.S. (e.g., California), and less than 10 percent of the southern cucumber crop (e.g., North Carolina) are harvested by machine. Another difference is that the majority of pickling cucumbers is produced under contract, while most fresh-market cucumbers are sold in the open (spot) market.

#### *Cucumber Consumption Rising*

Nutritionally, cucumbers are about 96 percent water, low in calories, and free of fat, cholesterol, and sodium. About 100 grams of fresh cucumber (about a cup of slices) contains 10 percent of the daily requirement for vitamin C. (Columbus carried pickled cucumbers on ocean voyages to help stave off scurvy.) One-eighth of a cup of pickles also counts as one serving of fruits and vegetables under the National 5-A-Day program.

Fresh cucumbers are used in a wide variety of salads, but are also typically consumed as sticks for vegetable platters and vegetable dips, baked, sliced as a garnish, diced for use in gazpacho, and blended into other soups. Cucumbers grown for pickles are also favored by some consumers as a fresh vegetable because of their tender, thinner skins. Rising fresh-market consumption likely reflects the popularity of salads, an increasing interest in greenhouse cucumbers, and the general trend toward more healthful lifestyles.

Commodity Spotlight

Pickled cucumbers are most often used as a sandwich side dish, but are also a popular snack item right out of the jar. Dozens of firms across the country produce cucumber pickles and relish. According to the 1997 Census of Manufacturers, manufacturer shipments of cucumber pickles and relishes totaled more than \$1 billion. Dill cucumber pickles represented about half of this value, followed by sweet pickles and refrigerated pickles.

Consumers have been moving away from salty foods over the past 15 years, and the pickle industry has been changing to accommodate them. The average pickle’s salt content today is lower than the 1970’s and 1980’s because fresh-pack pickles are a larger share of the market and contain less sodium than fermented pickles. Although low-sodium pickle products have not gained wide acceptance, the demand for high-grade, mild (low salt and low acid), refrigerated pickles has increased over the past 10 years, and packers have responded with a range of products.

Per capita use of cucumbers has risen during each of the past four decades. Use totaled 10.3 pounds in the 1990’s, up from 9.8 in the 1980’s, 8.9 in the 1970’s and 7.8 pounds in the 1960’s. Pickling use

has been on a slow decline since peaking in 1976 at 6.1 pounds per capita. Therefore, fresh-market use has accounted for all the growth over the past 20 years. Fresh use reached a record high 6.9 pounds in 1999—44 percent higher than 1989. Although per capita use of pickling cucumbers has waned during the past two decades, the 4.2 pounds used per person today is still greater than at any time before the mid-1960’s.

About 60 percent of cucumber consumption is in fresh form with the remainder in pickled products. Because cucumbers consist largely of water, they lack the characteristics (primarily sufficient solids) necessary to be ingredients in commercial frozen and dehydrated foods. According to the USDA 1994-96 Continuing Survey of Food Intakes by Individuals, 85 percent of fresh cucumbers are consumed at home. This may reflect limited uses for fresh cucumbers on standard restaurant menus.

When cucumbers are pickled, the range of uses widens. Reflecting this, 45 percent of pickled cucumbers are consumed away from home. One-third of all pickled cucumbers are used in fast foods, largely in sandwiches (e.g., hamburgers and subs) and associated condiments (relishes). As

for fresh cucumbers in the away-from-home market, U.S. consumers most often eat fresh cucumbers in standard “white tablecloth” restaurants (9 percent). In contrast, these restaurants account for less than 6 percent of pickled cucumber consumption. Fresh cucumber shippers have been able to carve only a small niche in the fast-food market, which is responsible for just 2 percent of fresh cucumber consumption.

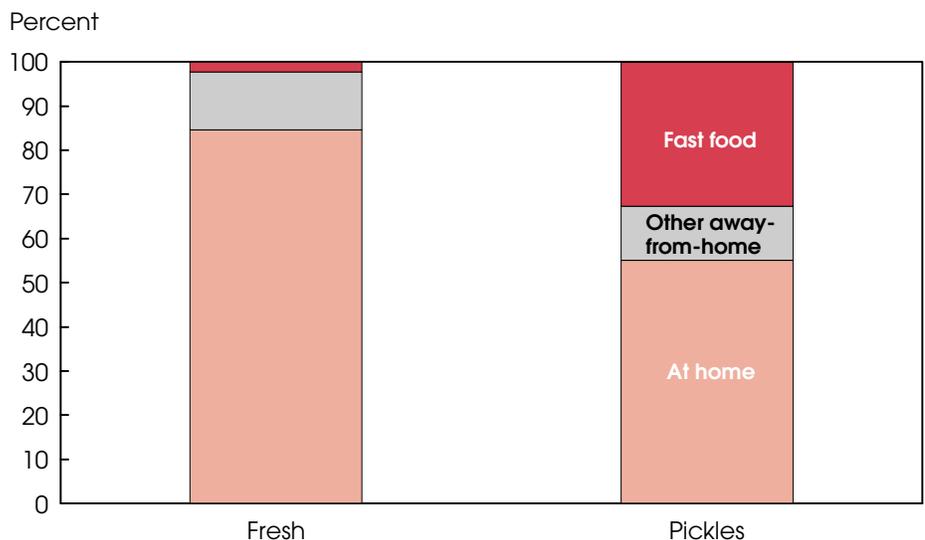
**Who Eats Cucumbers?**

Regional breakdowns indicate that fresh-market cucumbers are most popular among consumers in the Northeast (a 9-state region defined by the Census Bureau) and the West (a 13-state region). Together these two regions account for 42 percent of the nation’s population but 49 percent of fresh cucumber consumption. For consumers of pickled cucumbers, those in the Midwest and, to a lesser degree, the South consume proportionately more than other regions of the country. About 55 percent of fresh cucumbers are consumed in suburban America, where 47 percent of the nation’s population resides. Both rural and metro area consumers eat less than their “share,” as defined by their percentage of the U.S. population.

USDA’s food-intake survey also gauged cucumber consumption nationwide by racial group, which revealed some interesting variations. The survey found that non-Hispanic white and black consumers show a greater preference for pickles than for fresh cucumbers. This was especially true of black consumers, who represent 13 percent of the population but consume less than 6 percent of fresh cucumbers. The opposite was true of Hispanics, who represent 11 percent of the population but consume 13 percent of fresh cucumbers and 8 percent of pickled cucumbers. Other ethnic groups (largely Asian) also favor fresh cucumbers over pickled products. These consumers account for 4 percent of the population, but use 10 percent of all fresh cucumbers and 3 percent of total pickled cucumbers.

The wealthiest consumers appear to favor cucumbers the most. Households with incomes at least three-and-one-half times greater than poverty-level income (the cut-off point for food stamp eligibility is

**Most Fresh Cucumbers Are Consumed at Home, While Pickles Are Popular as Fast Food**



## Commodity Spotlight

### Pickle Primer

Along with drying and dehydrating, pickling is one of the oldest forms of food preservation. Although many vegetables, including beets, cabbage, and peppers, are sold in pickled form, the cucumber is the leading vegetable pickled in the U.S. Pickling cucumbers are smaller, have thinner skins, and are straighter than most slicing cucumbers. The wide variety of pickle flavors is made possible by the addition of various herbs, spices, and seasonings to the pickling liquid. A substantial volume of pickling cucumbers is used to produce relish, a popular condiment. Most relish is made by chopping cucumbers, acidifying them with vinegar, adding seasoning, and then packing and pasteurizing.

There are several types of pickles in the market. Some of these include:

- **Dill**—by far the most popular. The flavor in dill itself comes from seeds of the plant, which contain the substance carvone. Most processors use dillweed oil rather than dill seed to ensure consistent flavor (the same amount of carvone) from batch to batch. Dill pickles are sold as genuine dills, kosher (which for most consumers means garlic has been added to the brine), Polish (which are usually slightly spicy, similar to kosher), German style, and others.
- **Sweet**—the second-most popular. These include bread-and-butter pickles, no-salt pickles, and various sweet-hot varieties.
- **Sour and half-sour** pickles. These are fermented and not pasteurized.

Pickles come in a variety of styles. Some of these include whole (gherkins, midgets), halves, quarters, slices, spears, strips, chips, chunks and sandwich (sliced lengthwise). Relishes are sometimes considered another style of pickle.

Pickles can also be identified by production method:

- **Refrigerated**—accounts for about 20 percent of sales. These are fermented under refrigeration using minimal processing, which keeps them crispy. These have a short shelf life (about 4 months) compared with other packs. This method can be used to produce various dill, half-sour, and sweet pickles, as well as relish.
- **Fresh pack**—pickles produced this way tend to be more crisp and less acidic than processed pickles. This method is used to produce kosher dills, chips, spears, halves, sweet pickles and relish. This pack has an 18-month shelf life.
- **Processed**—the most time-consuming method. Pickles made this way are fermented (cured) in bulk brine tanks for 1 to 3 months and then packed into jars. This method produces dark green pickles with a sharp flavor. Some examples include kosher dills, genuine (which usually means fermented) dills, sours, and sweet pickles. This method also provides for the longest shelf life—2 years. The typical pickle slice on a hamburger is a processed (fermented) pickle.

### Specialty Cukes

There are several specialty cucumber varieties that largely serve ethnic markets. Some of these include:

Armenian cucumbers, which are often found in Mediterranean markets. These cucumbers are green with deep ridges and measure up to 3 feet long. They are sometimes referred to as snake cucumbers or snake melons.

Yamato Extra-Long, commonly seen in Oriental food markets, are dark green, “burpless” (seedless), and can measure up to 2 feet long.

Lemon cucumbers are American heirloom varieties that resemble lemons, but are very mild.

130 percent of the poverty level), who represent 39 percent of the U.S. population, consume 42 percent of both fresh and pickled cucumbers. The 19 percent of the population who earn the lowest incomes consume less than their share of both fresh and processed cucumbers.

Men eat slightly more fresh cucumbers than women—51 percent of the total consumed. This may largely be explained by the higher caloric intake of men. In general, the survey indicated that as consumers age, they tend to eat more fresh vegetables, including cucumbers. People under the age of 20 represent 30 percent of the population but consume just 18 percent of all fresh cucumbers. Both men and women over the age of 20 eat more than their proportionate share of fresh cucumbers.

Interestingly, for processed cucumbers, the story is nearly reversed. Men and women under the age of 20 consume a larger per-

centage of pickles than fresh cucumbers—25 percent—but still less than their proportionate share. And consumers over the age of 60 (16 percent of the population) used just 11 percent of the pickled cucumbers, likely reflecting the desire to reduce sodium in their diets. However, the largest consumers of pickles are men between the ages of 20 and 59. Men in this age group account for 27 percent of the population yet reported consuming 39 percent of the pickled cucumbers.

Given a strong economy and continued consumer interest in health and flavor, both sides of the cucumber industry can enter the new millennium on an optimistic note. Current forecasts indicate per capita use should increase for both fresh cucumbers and pickles in 2000. **AO**

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## Food & Marketing



# Food Assistance Programs & Poverty in Mexico

The potential for increases in aggregate food consumption are much greater in developing countries than in the U.S. and other developed countries. This possible increase in consumption stands to benefit U.S. farmers directly. To capitalize on this potential for increased trade in agricultural goods, U.S. farmers and exporters can benefit from a thorough understanding of the current distribution of income in developing countries and government efforts to improve citizens' well-being in both the short and long run. This is especially true with respect to U.S. agricultural producers anticipating sales to markets in Mexico; following implementation of the North American Free Trade Agreement, U.S. exports to Mexico have increased at a faster rate than exports to almost every other country.

This article presents the geographic distribution of poverty in Mexico and the design of four major food assistance programs. The discussion focuses on the newest program, Progresa, which was initiated in 1997.

### *Distribution of Poverty In Mexico*

In the U.S., poverty is relatively unequally distributed across certain demographic characteristics. For example, in 1998, families with children headed by a single mother were much more likely to be poor than families with children headed by two parents. However, poverty is relatively equally distributed across states.

In Mexico, poverty rates also differ across demographic groups. For example, indigenous people have much higher poverty rates than nonindigenous people. Variation in poverty rates across states in Mexico is greater than in the U.S. Poverty rates range from a low of 21 percent in Baja California to a high of 63 percent in Oaxaca.

The five states with the lowest poverty rates are Baja California, Baja California Sur, the Distrito Federal, Nuevo Leon, and Aguascalientes. Two of these states (Baja California and Nuevo Leon) border the U.S. and a third state (Baja California Sur) is one state removed from the U.S. border. Three other border states have low poverty rates as well—Sonora (31 percent), Chihuahua (33 percent), and Coahuila (34 percent). The other border

state, Tamaulipas, however, has a relatively high poverty rate of 42 percent. In addition to its lower poverty rate, the Distrito Federal has the second largest population of any state in Mexico.

The five states with the highest poverty rates—Hidalgo (57 percent), Zacatecas (58 percent), Guerrero (59 percent), Chiapas (62 percent), and Oaxaca—are the five most rural states (based on the percentage of people living in cities with more than 15,000 inhabitants). Poverty rates are also high in states bordering Guatemala. Besides Chiapas, the poverty rate is 52 percent in Tabasco and in Campeche. This is not unexpected since poverty is more a rural phenomenon in Mexico than it is in the U.S.

Generally, a direct (positive) relationship exists between per capita demand for agricultural products and per capita income within an area. Accordingly, areas with the highest per capita demand for U.S. agricultural products in Mexico are likely to be those closest to the U.S., and those with relatively good access to transportation. Part of the reason for the higher per capita demand in the border states is the growth of the maquiladora system that boosts income in those areas (AO September 2000). Conversely, areas with lower per capita demand are farther from the U.S. and are less accessible to transportation.

### *Food Assistance Programs In Mexico*

The governments of the U.S. and Mexico are committed to eradicating poverty and improving the well-being of families in both the short and long run. This commitment is reflected in their expenditures on food assistance programs. In 1998, Mexico's government spent over 8 billion pesos (about \$1.2 billion) on food assistance programs, while fiscal year 1999 food assistance expenditures in the U.S.

This article is based on "A Comparison of Food Assistance Programs in Mexico and the United States," Food Assistance and Nutrition Research Report Number 6, Economic Research Service, July 2000. Research activities for the report were funded under auspices of the Mexico Emerging Markets Program.

## Food & Marketing

### State Poverty Rates in Mexico Are Generally Lowest Near the U.S. Border



1995 data. A household in Mexico is categorized as poor if its earnings are less than twice the minimum daily salary, an amount that varies across Mexico to reflect differences in the cost of living.

Economic Research Service, USDA

totalled \$32 billion, down from a previous high of \$38 billion in 1996.

Before 1997, the three largest food assistance programs in Mexico were DICONSA (Distribuidora Compañía Nacional De Subsistencias Populares [CONASUPO]), FIDELIST (Fideicomiso para la Liquidación al Subsidio de la Tortilla), and LICONSA (Leche Industrializada CONASUPO). The primary function of all three is to provide specific commodities to low-income families. DICONSA establishes stores with select discounted products for families in low-income areas; FIDELIST provides a kilo of tortillas per day to low-income families; and LICONSA provides milk to children under the age of 12 in low-income families.

In 1997, Mexico implemented a new assistance program, Progresa, with three linked components that have direct parallels with U.S. food assistance programs. First, Progresa provides children with scholarships and financial support for school supplies. This is intended to ensure school attendance and to reduce incentives to seek jobs before completing basic education. Girls receive a higher

allowance than boys, because the drop-out rate among girls is higher and increasing female education has been seen to lead to decreases in family size. The U.S. National School Lunch and Breakfast programs help ensure that students have access to a safe and nutritious diet that will enhance their educational achievement.

A second component of Progresa is a basic free health services package that is provided to all families in the program. Health is further fostered through education and training in the areas of health, nutrition, and hygiene. A comparable U.S. effort is the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), which helps improve the health of pregnant, low-income women through referrals to relevant health and social services. Neither the educational nor the health services component of Progresa has a direct effect on food consumption, but both are intended to increase the long-term income prospects of lower income Mexican families and, if successful, will increase the volume and variety of their food purchases.

The third component of Progresa is direct food assistance. On average, families participating in Progresa receive about 125 pesos per month (about \$16 at an exchange rate of 8 pesos per dollar) to supplement their food purchases. The actual amount varies by family size. While this may not seem a large sum, it is a substantial amount of money for a low-income family in Mexico, where the minimum daily salary in the poorest parts of the country is approximately 15 pesos. Thus, a family of six participating in Progresa receives a benefit equivalent to about 11 days of wages per month at the minimum daily salary.

Research in developing countries has indicated that if women rather than men receive food assistance payments, the money is much more likely to be used to purchase food for children. As a consequence, Mexico distributes Progresa food assistance benefits to the female head of the family.

Unlike other Mexican food assistance programs, Progresa does not limit the types of food families can purchase in stores. Thus, it is more akin to the U.S. Food Stamp Program, which also has few restrictions on food purchases. In addition to these general food assistance monies, small children and pregnant or lactating women receive five daily doses of a nutrition supplement that provides 100 percent of required daily micronutrients and 20 percent of the appropriate caloric intake. This targeting of nutrient supplements is similar to the WIC program, which is for pregnant and postpartum women, infants, and children up to age 5.

Since its implementation, Progresa has grown at a fast pace and eventually will displace the other food assistance programs. In 1997, Progresa served about 400,000 families; by 1999, this figure had risen to 2.3 million families. While the program has expanded rapidly, it has done so through a transparent method that ensures that the communities and individuals most in need receive benefits. This differs from some of the other food assistance programs in Mexico that have been criticized for not reaching those most in need.

## Targeting Progresa Benefits

Countries generally have limited funds available for improving the well-being of poor residents. They therefore try to design programs with effective identification methods to ensure that benefits are distributed in a cost-effective manner that still reaches the intended beneficiaries. Administrative costs of targeting benefits increase as more precise methods are used. Even with the most effective methods, some benefits leak to households not in need of assistance (as defined by the goals of the program) while missing households more in need.

In Progresa, Mexico has chosen a novel way of avoiding these dual problems of leakage and undercoverage without spending too much of its budget on identification procedures. Identification of Progresa beneficiaries is carried out in three stages. The first stage is a geographic targeting process to determine the most impoverished areas. Using a national census, the 1995 Censo de Población y Vivienda, the most impoverished areas are identified based on the percentage of illiterate population age 15 or over; the percentage of households without water services, drainage, electricity, or nondirt floors; the average number of inhabitants per room; and the percentage of the population employed in the primary sector.

Unlike U.S. programs, which do not include geographical location as part of the eligibility criteria for food assistance, Progresa requires that program participants reside in an identified impoverished area. This restriction on Progresa participation may increase undercoverage, but it also reduces administrative costs of the program.

The second stage of targeting benefits is identifying those most in need within an area. A census of socioeconomic information of each household in all the selected localities collects data on household structure, individual characteristics, occupation, income of each member of the household, government support programs received by the members of the household, migration, health of the members of the household, physical characteristics of the house, use of the land, and the number of farm animals. The last stage is presenting the proposed list of beneficiaries to the community at a public meeting to correct any problems with inclusion or exclusion of beneficiaries.

Just as in the U.S., food assistance programs in Mexico increase food consumption. Because a larger share of the average Mexican family's expenditures is for food, a given increase in income is likely to induce a relatively larger increase in food expenditures than in the U.S. Most of the benefits of these increased expenditures will likely accrue to agricultural producers in Mexico. But if Mexico increases food imports to meet the needs of its food assistance programs, U.S. producers will reap some of the benefits. This increase in exports is further aided by programs like Progresa. Unlike other programs that limit food assistance purchases to specific commodities, Progresa, which has no such restrictions, has the potential to increase consumption of a variety of foods reflecting consumers' tastes.

From the perspective of U.S. agricultural producers, the biggest impact of Progresa will probably be through its role in ending the chronic poverty faced by so many Mexicans, especially those in rural areas where the majority of Progresa's benefits are targeted. By increasing the nutrition, health, and education of children in Mexico, their ability to escape poverty as adults is dramatically enhanced. With higher incomes in the future, prospects for increased U.S. exports to Mexico are strengthened. **AO**

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See page 27

## Resources & Environment



# Conservation Reserve Enhancement Program: Early Results from A Federal-State Partnership

The Conservation Reserve Enhancement Program (CREP) is a 3-year-old Federal-state partnership designed to encourage eligible farm operators to adopt specific conservation practices that meet certain water quality or wildlife-related goals. The 13 states that currently participate in CREP's have used various types of incentives to induce potential participants to voluntarily retire their land.

Given the program's short track record and some programmatic difficulties, the impact of these incentives on enrollment is difficult to evaluate, but some incentives do appear to have more impact than others. Lessons gleaned from existing programs may help other states design a CREP or provide insights for the design of similar programs beyond 2002, when authority for the Secretary of Agriculture to sign new CREP agreements expires under current law.

### *What Is the CREP?*

The CREP is a joint Federal-state land retirement conservation program that combines state and Federal resources under current provisions of USDA's Conservation Reserve Program (CRP). The CREP is a distinct program that uses CRP authorities to operate. State authorities sign contracts with local landowners to target specific state and national conservation and environmental objectives, such as improving water quality or preserving wildlife habitat.

Under this arrangement, USDA provides participants who enroll their land with a set level of cost sharing, the same signing (enrollment) incentive payment as for "continuous" signup CRP enrollees, an annual land rental rate (the rental rate plus a percentage that may vary by conservation practice and individual CREP agreement), and an annual land maintenance payment. The CREP allows states to supplement Federal incentives, to address more state-specific goals, and to target certain conservation practices.

State enrollment incentives have included additional cost sharing to minimize or eliminate out-of-pocket costs for participants, up-front enrollment payments, and the option, or requirement, for participants to extend a conservation contract or provide a permanent easement. Permanent easements are limited property rights—in this case designed to keep land in conservation uses—that are granted by the property owner to the state government. Under the CRP, the Federal government does not retain an ownership interest in any easement.

CREP enrollment is usually conducted in the same manner as the "continuous" CRP signup option. That is, eligible CREP participants are allowed to sign up at any time without going through the periodic competitive Environmental Benefits Index (EBI) ranking process normally used to select potential "general" CRP participants. Each state defines specific areas (e.g., watersheds) or land characteristics (e.g., highly erodible land) for CREP eligibility, targeting particular goals that coincide with national objectives—such as improved water quality or preserving endangered species habitats.

In Maryland, for example, the program is targeted to protect Chesapeake Bay water quality, which supports Clean Water Act objectives. In New York, watersheds that supply water to New York City are targeted to protect the city's drinking water supply, which coincides with objectives of the Safe Drinking Water Act. In Washington and Oregon, the focus is on areas that provide habitat for endangered species.

### *Who Participates In the CREP?*

Since 1997, 13 states have implemented CREP's. This analysis includes data on CREP's in Maryland, Illinois, North Carolina, New York, Delaware, Minnesota, Ohio, Oregon, and Washington, but excludes data from Pennsylvania, Virginia, Michigan, and Missouri because of the recent implementation or small number of contracts recorded in these states. Nine additional states (Arkansas, Florida, Iowa, Kentucky, Nebraska, North Dakota, Vermont, West Virginia, and Wisconsin) have CREP pro-

posals under consideration by USDA's Farm Service Agency, which oversees the program. As of October 2000, about 103,000 acres had been enrolled in CREP's, with the largest enrollment in Illinois (about 53,000 acres) and Maryland (approximately 20,000 acres).

Current enrollment under the CREP is dwarfed by enrollment under other land conservation programs—general CRP and the continuous CRP. USDA has committed about \$1.7 billion over the 15-year life of the program to assist the enrollment of almost 1 million acres under the 13 current CREP agreements. In addition to the large difference in total enrolled acreage, the CREP differs from the CRP in several respects, including the size of farms that participate, the type of land enrolled, and the length of contracts. These differences in large part reflect distinctions in the program goals of the general and continuous CRP and the CREP.

Participants in the CREP have farms that are smaller on average than those in the general or continuous CRP, which may reflect farm characteristics in states that

**Provisions of CREP Are Distinct from General and Continuous CRP Signup...**

Program Provisions	General signup CRP	Continuous CRP <sup>1</sup>	CREP
Signup period	Discrete	Continuous	Continuous
Acceptance process	Competitive bid	Noncompetitive	Noncompetitive
Regional scope of enrollment	National	National	State level
Conservation practices	Chiefly new or established grass or tree cover	Chiefly filter strips and riparian buffers	State-specific set of practices, chiefly wetland restoration, buffers, and filter strips

**...And CREP Enrollment Characteristics Are Different Also**

Enrolled acres (thousands) <sup>2</sup>	32,026	1,201	103
Average farm size (acres)	524	439	289
Average parcel size (acres)	83	11	17
Share of acres in whole-farm enrollment (percent) <sup>3</sup>	25	6	12
Average contract length (years)	10	12	14
Average imputed rental rate (\$/acre)	37	44	92
Average Erosion Index (water) <sup>4</sup>	8	4	7

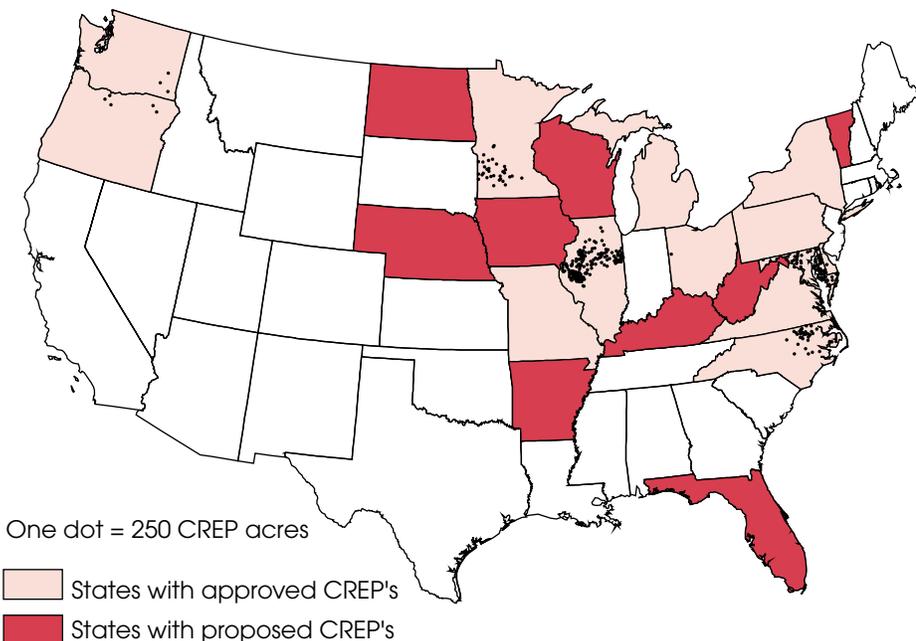
1. Excluding CREP. 2. Enrollment as of October 2000. 3. Ninety-five percent or more of farm enrolled. 4. Water erosion index only.  
Source: Farm Service Agency, USDA.  
Economic Research Service, USDA

operate CREP's. The average CREP contract size (parcel of land per farm enrolled) is slightly greater than that under

the continuous CRP, but considerably smaller than under the general CRP. This could be the result of several factors. The continuous CRP targets relatively small parcels for specific conservation practices (e.g., filter strips) that provide a positive environmental impact for a much larger area. Some CREP states also require that parcels be of a certain minimum size. In addition, only 6 percent of continuous CRP signup acreage is enrolled under whole-farm contracts, with the participant effectively retiring or closing the farm, whereas 12 percent of CREP acreage and one-quarter of general CRP acreage are under whole farm contracts.

The average CREP contract is longer than that of either the general or continuous CRP signup because of a minimum 15-year contract period stipulated by some states. Moreover, CREP acreage is highly valuable, with an average land rental rate more than double the rate on CRP acreage. Given that enrollment under the general signups explicitly considers expected environmental benefits and costs, expensive land is less likely to be accepted under the competitive general CRP signups, other things being equal, than it is under the continuous CRP and the CREP.

**CREP Acreage Is Concentrated in Illinois and Maryland**



Data as of October 2000.  
Economic Research Service, USDA

## Resources & Environment

Given the recent implementation of the CREP, state-level environmental results are not yet available. Consequently, program costs and benefits cannot be adequately evaluated. Instead, the focus here is on achievement of enrollment goals in relation to the level and type of incentives across state programs. But simply examining acreage enrolled in each state could be a misleading indicator of progress.

The indicators of progress under individual state programs will be influenced by several factors, such as how long state programs have been in operation and the size of each state's acreage enrollment goals. Enrollment goals can vary widely by state (e.g., Delaware's goal is 6,000 acres and other states have 100,000-acre targets), and some states have just recently implemented programs. To assess the response of landowners to enrollment incentives, USDA's Economic Research Service constructed an unofficial indicator of monthly progress towards enrollment goals. A state's acreage enrolled is divided by the acreage goal, and this figure is then divided by the number of months that each state's program has been in operation.

This progress indicator shows that the pace of enrollment varies considerably across the nine states for which adequate data exist. Illinois is the clear leader; New York, Oregon, and Washington have the slowest relative performance; and

Delaware, North Carolina, Ohio, Maryland, and Minnesota lie in the middle.

### *Which CREP Incentives Encourage Enrollment?*

The enrollment progress indicator implies that the total per-acre funding committed to the program by Federal and state authorities has little bearing on the rate of enrollment. The Illinois and Oregon CREP's, for example, provide the same level of per-acre funding, but show very different enrollment progress. Disparity in per-acre funding levels among states may reflect different land values, varying costs of implementing conservation practices, and different amounts of cost sharing.

Three types of incentives are generally provided to potential participants under the state CREP's. First, cost sharing by Federal and state governments minimizes or eliminates out-of-pocket costs to farmers of implementing conservation practices. Second, USDA offsets the opportunity cost of idling acreage by providing a base annual rental payment equal to the expected average rent for cropland with specific soils in each county. An additional rental-rate incentive, varying by state and conservation practice, is also provided by USDA. An additional rental-rate incentive of 20 percent, for example, indicates that the participant would receive a

total of 120 percent of the land's expected average rental rate based on agricultural uses.

Third, an up-front payment is provided in some states to induce enrollment. Since April 2000, USDA has provided a Signing Incentive Payment (SIP) of \$10 per acre per year of contract (up to 15 years) for specific practices under the continuous CRP signup. This SIP has been included in CREP agreements that have recently been signed or amended.

Some states also provide their own up-front payments, often a multiple of the annual per-acre rent. As a condition for such payments, some states require the participant to enter into an extended conservation contract or to provide a multiple-year or permanent easement after the CRP contract expires. Oregon took a particularly innovative approach to encouraging enrollment by offering up-front payments to all enrollees with adjoining land if half of the land along a 5-mile stream segment were enrolled prior to 2002. Hence, if a group of participants (or single participant) protects 50 percent of a continuous length of stream, all receive the bonus. However, enrollment progress in Oregon has been very slow due to programmatic difficulties and to concerns over potential land-use restrictions at the end of the contract.

### CREP Enrollment Progress May Be Unrelated to Total Per-Acre Funding Commitment

State	Date agreement signed	Land enrolled	Acreage goal	Enrollment progress index <sup>1</sup>	Estimated funding of CREP		
					Total	Federal	Other <sup>2</sup>
		<i>Acres</i>		<i>Index</i>	<i>\$ per acre<sup>3</sup></i>		
Illinois	03/30/98	52,781	100,000	0.0170	2,500	2,020	480
Delaware	06/02/99	780	6,000	0.0080	1,667	1,333	333
N. Carolina	03/01/99	11,680	100,000	0.0060	2,750	2,210	540
Ohio	04/18/00	2,288	67,000	0.0060	3,000	2,493	507
Maryland	10/20/97	19,548	100,000	0.0050	1,950	1,700	250
Minnesota	02/19/98	10,637	100,000	0.0050	2,230	1,630	600
New York	08/26/98	327	5,000	0.0030	2,200	1,600	600
Oregon	10/17/98	2,319	100,000	0.0010	2,500	2,000	500
Washington	10/19/98	1,475	100,000	0.0006	2,410	1,990	420

1. (Actual enrollment/enrollment goal) divided by number of months state program has been in effect. Higher number indicates more rapid pace of enrollment. For example, a state that fully achieved its enrollment goal in two years would have an indicator of 0.04, and an indicator of 0.08 if goal was achieved in one year. 2. State governments and nongovernment organizations. 3. Committed funding over the life of the program.

Source: Farm Service Agency, USDA (as of October 2000) and USDA-State CREP agreements ([www.fsa.usda.gov/dafp/cepd/crep/crepstates.htm](http://www.fsa.usda.gov/dafp/cepd/crep/crepstates.htm)).

Economic Research Service, USDA

**CREP Enrollment Progress Is Influenced by a Combination of Incentives**

State (ranked by enrollment progress)	Enrollment progress index <sup>1</sup>	Share of establishment costs covered by government <sup>2</sup>	Rental- rate incentive (above general CRP payment)	Signing incentive payment <sup>3</sup>	Requires a supplemental contract or permanent easement
-----Percent-----					
Illinois	0.0170	90-100	20-30	4.5	Yes
Delaware	0.0080	87.5	50-130	None	No
North Carolina	0.0060	75-100	70-100	4.5	Yes
Ohio	0.0060	90	55-75	2.5 or 6.25 <sup>4</sup>	Yes
Maryland	0.0050	87.5	80-100	None	No
Minnesota	0.0050	100	20	6	Yes
New York	0.0030	100	100	None	No
Oregon	0.0010	75-100	25-50	4 <sup>5</sup>	No
Washington	0.0006	87.5	50-60	None	No

1. (Actual enrollment/enrollment goal) divided by number of months state program has been in effect. Higher number indicates more rapid pace of enrollment. 2. Level of cost sharing varies by length of contract and other factors. 3. Generally a multiple of annual rental payment for permanent easement unless otherwise specified. 4. Plus \$10/acre/year. 5. If land enrolled meets specific criteria.

Source: Based on Federal-State CREP agreements. For more information: [www.fsa.usda.gov/dafp/cepd/crep/crepstates.htm](http://www.fsa.usda.gov/dafp/cepd/crep/crepstates.htm).

Economic Research Service, USDA

Several states that rank highly in enrollment progress provide an up-front payment for those participating in permanent easements or other supplemental contracts. This raises the question of whether participants might be cash-strapped farmers who are willing to idle land for an immediate cash infusion. While farmers might generally want to avoid long-term land-idling commitments (to maintain flexibility in case market conditions change), an additional incentive is that permanent easements may qualify for certain Federal income and estate tax benefits. Illinois, North Carolina, Maryland, and Minnesota also provide state tax benefits for conservation practices for which the CREP may qualify. Hence, permanent easements may be a viable conservation option to offer producers.

The levels of rental-rate incentives and cost sharing do not appear to be strongly associated with enrollment progress. The Illinois and Minnesota CREP's, for example, provide the lowest rental-rate incentives, yet fare relatively well in enrollment. New York, on the other hand, with high rental-rate incentives and 100-percent cost sharing, ranks low in progress. Slow progress in New York may be due to implementation problems (e.g., a backlog in completing contracts) rather than a lack of producer response to economic incentives, but it may also indicate that CREP

rental rates, even with incentives, do not accurately reflect opportunity costs.

For example, land used to produce high-value commodities—such as dairy operations in the New York CREP area and many fruit and vegetable operations with-

in the Oregon and Washington CREP areas—may often command higher rents than the rental rates offered by the CREP. CREP rental rates may not reflect the higher opportunity cost of idling this land. On the other hand, even with Illinois' relatively modest rental rate, CREP enrollment progress in that state indicates the opportunity cost of participating is covered, or that rental rate incentives may be of secondary importance to participation. Illinois' success might also be a reflection of previous work with the "T by 2000" initiative, a state soil-erosion reduction program.

CRP rental rates are generally based on dry cropland rental values. CREP's incentives are designed to increase participation to levels needed to achieve desired results. However, they do not necessarily provide for full opportunity costs where nonagricultural factors, such as development potential, are present.

Oregon offers a range of cost sharing from 75 to 100 percent, though most acreage qualifies for only 75 percent, which may explain the state's low enrollment progress. Further information is

**CRP Update**

As of October 1, 2000, about 33.3 million acres were enrolled in the Conservation Reserve Program (CRP) under the general signups, the continuous CRP, and state CREP's. By comparison, another land conservation program that also counts wildlife habitat protection among its goals—the National Wildlife Refuge System—contains about 15 million acres in the continental United States.

USDA announced in May 2000 the results of the most recent (20th) general CRP signup, held in January-February. Of the nearly 3.5 million acres offered by landowners, about 2.5 million acres were accepted for enrollment. Montana, Texas, Washington, North Dakota, and Iowa (in order of magnitude) together accounted for about half of the accepted acres. Less than 10 percent of enrollment was land with contracts due to expire in 2000. This reflects, in part, the relatively small amount of expiring acres (420,000 acres).

About two-thirds of acreage enrolled in the 20th CRP signup was highly erodible land (defined here as land with an erodibility index of 8 or more), and the average erodibility index of accepted land was 13. This is slightly higher than for signup 18 (1998) and equal to signup 16 (1997). The Environmental Benefits Index—the targeting mechanism used to rank and select cropland to be included in the program—indicates that acreage enrolled in the most recent signup is expected to provide slightly greater environmental benefits than acreage in the previous signup. However, the per-acre cost of enrolled acreage climbed, to \$52.76 from \$45.50 in the last general signup and \$45.15 in signup 16. This may indicate rising marginal costs to producers of retiring land for conservation purposes.

## Resources & Environment

needed to clarify how the level of cost sharing and rental-rate incentives influence CREP enrollment.

Concerns about regulation could be an incentive for producers to undertake conservation measures. For example, Maryland's participation may be due in part to the heavy media attention given to Chesapeake Bay water quality problems, including outbreaks of *Pfiesteria*.

### Preliminary Conclusions

Enrollment progress under the existing state CREP's has been slow in some states. States cite a variety of reasons for the slow enrollment: the need for a broader definition of eligible land (e.g., to include hayland in New York, fruit and vegetable acreage in the Northwest); suspension of enrollment due to depletion of state funds or other reasons; and the need for staff or funds to market the program and complete CREP farm plans. Further, farmers may have waited to enroll until related program revisions that increased enrollment incentives were made public (which occurred in April 2000).

However, CREP incentives have played a role in encouraging land retirement for conservation purposes in some states. For example, in Maryland, almost half of total CRP enrollment has occurred under the CREP. In Delaware and North Carolina, CREP incentives have stimulated about 10 percent of total CRP enrollment in the 12 to 18 months that those programs have operated.

Given programmatic difficulties and limited data, it is difficult to draw clear lessons on the economics of the CREP. However, some preliminary conclusions may be drawn based on available contract data. In general, it appears that the way funds are allocated is more important than how much is allocated. For example, offers of up-front payments for permanent easements or contract extensions—but not necessarily high rental-rate incentives—are associated with greater enrollment.

That permanent easements appear to be popular under the program may reflect the desire of some enrollees to exit the sector, or an interest among some participants whose land has been flooded (e.g., in Illinois, North Carolina) for a more stable return on their land. Enrollment to date shows that higher rental rate incentives are not necessarily associated with greater enrollment, perhaps because CREP rental rates do not always reflect opportunity costs. Further information is needed to assess the extent to which greater cost sharing would raise CREP enrollment.

The lack of clear relationships between economic incentives and progress indicates that other, nonfinancial considerations, including the effectiveness of related state conservation efforts, may be affecting CREP enrollment progress. With the resolution of programmatic issues, clearer lessons may be discerned in the future with respect to the economics of CREP's. **AO**

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### Upcoming Reports—USDA's Economic Research Service

The following reports are issued electronically at 3 p.m. (ET) unless otherwise indicated.

#### December

- 4 *Outlook for U.S. Agricultural Trade*
- 7 *Food Security Assessment Tobacco Yearbook*
- 12 *World Agricultural Supply and Demand (8:30 a.m.)*
- 13 *Cotton and Wool Outlook (4 p.m.)*  
*Oil Crops Outlook (4 p.m.)\*\**  
*Rice Outlook (4 p.m.)*
- 14 *Feed Outlook (9 a.m.)\*\**  
*Wheat Outlook (9 a.m.)\*\**
- 20 *Agricultural Outlook\**
- 21 *Agricultural Finance and Income*
- 22 *U.S. Agricultural Trade Update*
- 27 *Livestock, Dairy, and Poultry (4 p.m.)*

\*Release of summary, 3 p.m.

\*\*Available electronically only

## New Technology Raises Food System Productivity in APEC Economies

The fundamental challenge facing the Asia-Pacific Economic Cooperation (APEC) region in the long term will be raising food system productivity to keep pace with population growth and rising affluence. The world will have to produce 40 percent more grain by 2020, of which 25 percent is needed to meet population growth and the balance to meet worldwide demand for a more diverse and resource-intensive diet.

Only about one-fifth of the increase in grain production is likely to come from expanding land under cultivation. Technology, therefore, will play a key role in raising yields at the farm level and reducing losses, enhancing quality and freshness, and increasing the speed of delivery to consumers. These developments also promise to widen consumers' choices and raise nutrition levels.

Technology development and its application in the food system depend on several diverse elements, including strong public commitment, public and private sector linkages, and a variety of supportive programs and policies such as education, infrastructure development, and extension services. Often, commitment to the development and application of new technology is related to overall economic development. But even in the less developed parts of the APEC region, there is a definite commitment to new technology, reflected in the creation of institutions and in government budgetary commitments.

Some APEC members, such as Singapore and Taiwan, are staking their futures on becoming centers of technology development. Singapore, a small city-state of 3 million people, has supported research leading to the development of high-yield, disease-resistant crops, poultry, livestock, and fish, and has created the Institute of Molecular Agrobiology (IMA), the Bioprocessing Technology Centre (BTC), and the Agri-Bio Park to provide infrastructure for tropical agrotechnology. In 1995, the Chinese Taipei government included biotechnology in a list of 10 important industries eligible for special government assistance, and a special task force in the Ministry of Economic Affairs has helped the private sector invest US\$700 million (NT\$23.1 billion) in biotech and pharmaceutical projects.

### **Biotech Beefs Up Traditional Plant Breeding**

The APEC region has a long tradition of contributing to research on plant breeding. Three international experiment stations in the region—IRRI (International Rice Research Institute) in the Philippines, CIMMYT (International Maize and Wheat



William Coyle

Improvement Center) in Mexico, and CIAT (International Center for Tropical Agriculture) in Colombia—developed important hybrid grain varieties in the 1960's and 1970's that have been widely adopted and have contributed to the near doubling of global grain yields between 1970 and 2000. The APEC region, a heavy rice-producing part of the world (about 60 percent of the world total), saw average rice yields increase from about 2 tons per hectare in 1970 to 3.6 in 2000.

More than 5,000 new crop varieties have been developed in *China*, where agricultural R&D focuses on increasing production. An important example is hybrid rice, which has helped double production since 1970.

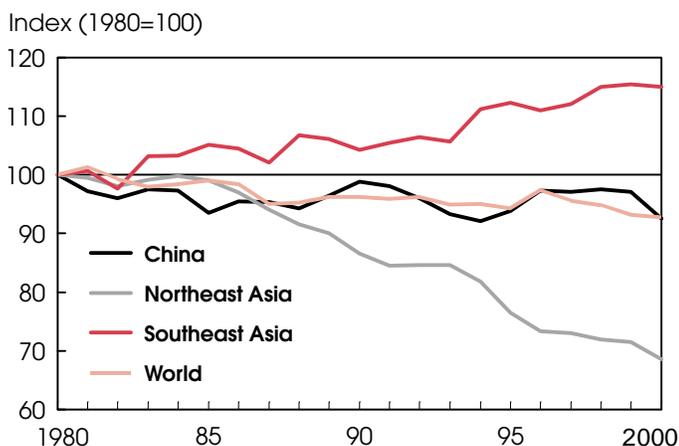
Plant breeding efforts in *Indonesia* have succeeded in developing a number of new rice varieties with higher yields and shorter maturation periods, allowing the harvesting of two to three crops per year. Besides rice, plant breeders in Indonesia have given special attention to soybeans and corn. Tissue culture has been widely used for the propagation of bananas and ornamental plants such as orchids. The Indonesian government has also sponsored the development of gene banks for preserving existing plant varieties.

In *Malaysia*, plant breeding continues to incorporate desirable characteristics into new plant varieties of fruits such as durian, papaya, pineapple, and citrus as well as rice and maize. *Mexico* has concentrated on the diffusion of improved grain varieties and hybrids, not just for increasing yields but also for encouraging better tolerance of pests and/or adverse weather conditions, particularly in drought-prone areas.

This article is based on *Pacific Food Outlook, 2000-01*, a report released at the APEC Ministerial Meeting in Brunei, November 12-14, 2000.

Special Article

**Grain Area Is Decreasing in Some APEC Regions and Globally**



Source: U.S. Department of Agriculture. Northeast Asia includes Japan, Korea, and Taiwan; Southeast Asia includes Indonesia, Malaysia, the Philippines, Thailand, and Vietnam.

Economic Research Service, USDA

More recently, biotechnology is ushering in a new era of plant breeding through genetic modification or engineering. The availability of new biotech methods may help offset diminishing returns from traditional plant breeding programs and help meet rising demand for greater quantities of food from continuing world population growth and dietary upgrading. New pest-resistant and herbicide-tolerant crops offer lower input costs and, sometimes, higher yields.

As of 1999, five principal biotech crops—soybeans, corn, cotton, canola, and potatoes—were being commercially cultivated in eight countries (Argentina, Australia, Canada, China, France, Mexico, Spain, and the U.S.), five of which are APEC members. More than two-thirds of global biotech production is in the U.S., and makes up a significant share of U.S. planted area in soybeans, cotton, and corn.

An international consortium (China, France, Japan, Korea, Taiwan, Thailand, and the U.S.) is laying the groundwork for developing and refining genetically modified rice varieties. The group has invested heavily in efforts to decode the rice genome. Building on this research, the public and private sectors have already developed a number of rice varieties with distinctive characteristics, some of which will benefit production, others consumers. Most publicized is “golden” rice, developed by European researchers and incorporating beta carotene, a source of vitamin A. Vitamin A deficiency is an important health issue in low-income areas of the APEC region.

While the agronomic benefits of genetically modified crops may result in increased production and downward pressures on world prices, pressures in some markets to segregate biotech commodities may result in increased trade uncertainty and higher marketing costs. For example, in some parts of the APEC region, there

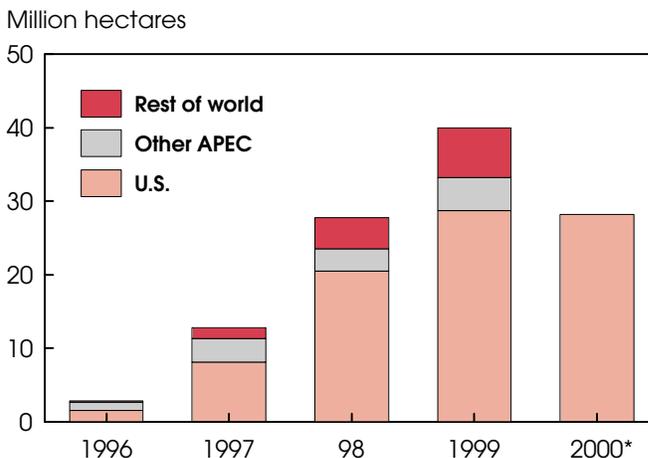
are strong demands from consumer organizations for labeling biotech products. Additionally, adequate procedures for detecting the presence of biotech commodities and assessing possible risks are not available in many of the region’s developing economies.

A regional bloc in the Asia-Pacific region, ASEAN (Association of South East Asian Nations), is promoting the establishment of a National Authority on Genetic Modification (NAGM) to monitor biotech products in the 10 ASEAN member countries. Each member will establish its own NAGM—representatives from national agencies involved in agriculture, trade, economics, environmental protection, health, and other disciplines—which will review and approve proposals related to the release of agricultural biotech products, provide public access to information on planned releases, and ensure guidelines are consistent with regional and international practices.

**The Expanding Role Of Information Technology**

Use of information technology (IT)—including hardware, software, communication devices, and the Internet—is becoming commonplace in both food production and marketing in the developed APEC economies as well as in urban areas of the less developed economies. IT makes markets more efficient by collecting and disseminating information and data—e.g., weather forecasts and real-time market news and prices—that improve farm-level decisionmaking, facilitate online marketing for businesses and consumers, and enhance communications and processes throughout the supply chain. Incorporating IT into the food supply chain provides farmers with greater access to markets, market participants with increased flows of information, businesses with opportunities for enhanced efficiency, and consumers with better services.

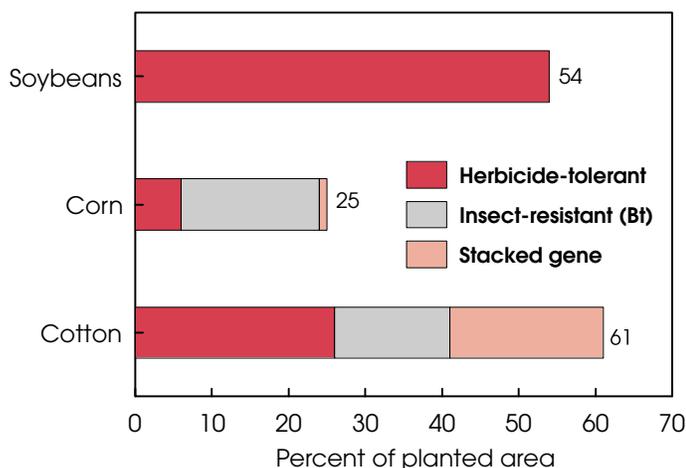
**Global Area Planted to Biotech Crops Is Increasing**



\* Estimate available for U.S. only. Source: C. James, "Global Review of Transgenic Crops," The International Service for the Acquisition of Agri-biotech Applications, ISAAA Briefs, 1997

Economic Research Service, USDA

**Biotech Varieties Amount to More than Half of U.S. Soybean and Cotton Planted Area in 2000**



Source: National Agricultural Statistics Service, USDA.  
Economic Research Service, USDA

Virtual marketplaces for farmers can facilitate purchasing farm inputs, supplies and equipment, and crop insurance products, as well as marketing livestock and crops. Virtual markets can transmit product information, prices, and delivery options from participating suppliers; cash grain bids from competing buyers; or other kinds of information via user-friendly but secure systems. Web sites for conducting farm-related business online are being organized by major U.S. agriculture-related companies, as well as by local farm cooperatives and retailers.

APEC economies are investing in a variety of electronic systems to facilitate transactions on the Internet. For example, Taiwan’s Council of Agriculture (COA) has allotted US\$50 million (NT\$1.5 billion) to a 5-year development plan to build an agricultural marketing system on the Internet. The Philippines Department of Agriculture has established the online National Information Network (NIN) to facilitate communication among researchers, policymakers, and extension agents, who in turn communicate with end users. The network includes supply and demand data and price trends; product standards and consumer safety data; and credit services. FoodConnect Australia enables agri-food businesses to trade and exchange company information and product specifications electronically in both the domestic and global markets. A key feature of the system is provision of export documentation for marketing offshore.

Auctions via the Internet bring purchasers and sellers together in a virtual marketplace. In the U.S., Internet auctions have provided a convenient market for some agricultural producers. However, Australian producers using remote electronic marketing systems for livestock and wool have encountered some difficulties in developing adequate product descriptions for trading, and they indicate that cost savings have been small relative to traditional marketing systems.

Supply chain management to expedite customs clearance and track cargo is essential to cutting delivery time and reducing marketing losses. Canada’s ACROSS Customs Clearance System, which combines electronic data interchange (EDI) with bar-coding technology, promises to speed customs clearance and reduce transportation time and costs for shipments into Canada.

Preclearance of goods entering Canada, and a complementary Canadian Customs initiative that uses Automatic Vehicle Identification (AVI) technology, will speed the movement of truck traffic across its borders. Canada, Mexico, and the U.S. are testing an AVI pilot project that allows trucks equipped with transponders to pass through border crossings without stopping. When that technology is in place, only trucks that do not meet preclearance requirements and those chosen for random checks will have to stop for inspection, a boon particularly for shippers of perishable food products.

Sophisticated bar-coding will make massive quantities of data available to customers and carriers, and enable containers and vehicles, not just packages, to be tracked. The next step in transportation tracking is a reusable, affordable, electronic “smart stamp” that contains information on the shipment, along with a battery and an antenna, in a casing the size of a large postage stamp. The electronic stamp attached to a package transmits data to a nearby scanner to improve tracking and reduce transportation labor costs.

The consumer marketplace is undergoing a revolution in the more developed areas of the APEC region. For example, in Australia, several operational retail food internet sites provide information to consumers largely by suppliers advertising products and by providing access to small business marketers. On a larger scale, two of Australia’s major supermarket chains, Woolworths and Coles Myer, are developing sites where consumers can order products for home delivery at a specified time.

**Information Technology Is More Accessible in the More Developed Economies of the APEC Region**

	Personal computers 1998	Internet service-providers July 1999
	<i>Per 1,000 persons</i>	<i>Per 10,000 persons</i>
<b>Hong Kong/China</b>	254.2	142.8
<b>Korea</b>	156.8	55.5
<b>Singapore</b>	458.4	322.3
China	8.9	0.5
Indonesia	8.2	0.8
Malaysia	58.6	23.5
Philippines	15.1	1.3
Thailand	21.6	4.5
Viet Nam	6.4	0
Papua New Guinea		0.5
<b>Japan</b>	237.2	163.8
<b>U.S.</b>	458.6	1,508.8

Source: Asia Development Bank, 2000 annual report.  
Economic Research Service, USDA

## Special Article

### Biotech Highlights in APEC Economies

**Australia** is closely examining the potential for genetically modified crops, but their studies remain at the trial stage for most products. To date, Australia has conducted some 70 field trials of biotech crops, primarily cotton, canola, clover, and field peas. In 1999, almost 30 percent of Australia's total cotton area—an estimated 120,000 hectares—was sown with insect-resistant (Bt) varieties. In September 2000, the commercial release of herbicide-tolerant (Roundup Ready) cotton was approved.

The Office of the Gene Technology Regulator in Australia manages potential risks to consumers and the environment from genetic manipulation, and establishes appropriate safeguards. The Australia-New Zealand Food Authority requires mandatory labeling of biotech foods “in circumstances where the nature of the food has been significantly changed with respect to its nutritional quality, composition, allergenicity, or end use.”

**Canada's** competitive biotech strength lies in development and commercialization of canola. More than 50 percent of canola acreage now is in biotech varieties. Canada has a number of plant biotech startups (Performance Plants, Prairie Plants, SemBioSys, DNA Landmarks), in addition to the large multinational seed companies.

In **Chile**, initial biotech research efforts were in potatoes, but current efforts are in the fruit sector. No commercial product developed from local research is yet available.

The use of insect-resistant cotton in **China** has expanded to 400,000 hectares in 2000. In addition to cotton, China is commercially producing biotech varieties of tomatoes, sweet peppers, and petunias. Rice, soybeans, potatoes, corn and colored cotton are in the field trial stage.

Following the required review by **Japan's** Agricultural Standards Research Committee and a 1-year moratorium, biotech labeling is scheduled to begin in Japan in April 2001. Carnations are the only biotech crop being commercially produced; rice, tomatoes, melons, broccoli and cucumbers are in the development stage.

Australian winemakers have invested heavily in Internet marketing. For example, Cellarmasters' online sales reached US\$61 million (A\$95 million) in 1999 and the company's goal is a 20-percent online sales share by 2001. Fosters Brewing Group has reportedly invested US\$62 million (A\$100 million) in international Internet operations and a Californian wine club.

If, as some believe, a technology starts having a significant effect on productivity when it reaches a 50-percent penetration rate, many APEC economies have a long way to go but a large potential for future benefits. Rapid growth in Internet use in Asia is projected, but online communication is still very limited,

Since 1991, **Korea** has introduced several biotech crops into field trials, including herbicide-tolerant rice and insect- and virus-resistant cabbage, as well as virus-resistant red peppers, cucumbers, and potatoes. Korea will implement biotech labeling in June 2001.

The current **New Zealand** government opposes the use of genetic modification in all forms, even in field trials. A Royal Commission of Inquiry into genetic engineering has been established to investigate this topic further. Their findings are due in May 2001.

**Peru's** Ministry of Agriculture is developing virus-free potatoes and strawberries. Efforts are also directed at protecting Peru's diverse germplasm.

There has been no commercial production of biotech crops in the **Philippines** to date. Strong environmental activist groups, however, have asked the courts to prohibit the field testing of Bt corn and vitamin A-enriched rice.

Likewise, **Thailand** so far has no commercial production of biotech crops. Varieties of tomatoes, cotton, and corn are in the field trial stage and papaya and chili peppers are in the development stage. Some processed food products in Thailand are facing resistance from foreign buyers—e.g., canned tuna packed in soybean oil derived from imported biotech soybeans and meat from poultry fed imported corn and meal from biotech material. An agricultural declaration ratified in January 2000 limits the use of biotech seeds in Thailand to research purposes and prohibits commercial sale. Field tests of biotech cotton are under way.

The **U.S.** is the world leader in commercial production and in use of biotech crops, but evidence indicates that the rate of biotech adoption in the U.S. slowed in 2000. Uncertainty about the marketability of biotech crops has increased, in part because some large food processors—e.g., J.R. Simplot (potatoes), Frito-Lay, and Gerber—do not purchase biotech products, and some important foreign markets have labeling requirements (e.g., the EU) or will impose them in the near future (e.g., Japan and Korea).

particularly in China and Southeast Asia. Internet usage is much more common in the developed economies and in the city-states of Hong Kong/China and Singapore. In rural areas of developing economies, however, Internet access is less likely, except where large national and multinational agribusinesses are located—e.g., Dole, Del Monte, and San Miguel operations in the Philippines. Rural usage remains heaviest in the U.S., where the number of farms with Internet access doubled between 1997 and 1999 (AO September 2000). As many as 43 percent of U.S. farms with annual sales over \$100,000 and 85 percent of U.S. farmers between the ages of 25 and 45 reported Internet access.

## ***Increasing Efficiency & Cutting Waste***

Increasing the efficiency of the food system is another significant way technology can raise the quantity and quality of the food supply. Developed market consumers require 10,000 gross daily calories to support a 3,000-calorie-a-day diet. Some of the loss can be attributed to grain conversion in meat production, but a majority stems from waste and inefficiencies in the food system, including significant losses at the household level. Post-harvest losses are a problem across the APEC region (*AO* September 1999), with most losses in low-income economies occurring along the food supply chain—e.g., spoilage during transportation because of lack of refrigeration—but occurring at the end of the chain in high-income economies—e.g., waste and spoilage in homes and at food service establishments.

The combination of Asia's largely rural population and prospects for rapid urbanization in the next 20 years suggests a crucial need for developing and adopting marketing innovations to increase efficiency of food delivery. New technologies being applied in the region reduce processing, handling, and transportation costs, as well as cut delivery times and extend the shelf life and storability of food products.

In North America, transportation and logistics innovations have become commercially feasible. New intermodal technologies—such as double-stacking rail containers, reinforced trailers that are pulled directly by locomotives, and more fuel-efficient rail power—are now potentially cost competitive because lower trade barriers have increased cross-border trade and made economies of scale possible.

In packaging, consumer demand for easy-to-open, well-labeled, portable, environmentally friendly packaging has given rise to various types of resealable packages. In particular, the popularity of plastic “zipper” technologies is growing rapidly. Use of flexible polymer packaging has soared because of advantages to both consumers and food processors.

The meat processing industry is undergoing a large-scale shift to case-ready flexible packaging. This promises to reduce costs, contamination, and food losses throughout the supply chain. A combination of breathable films and new sealants now make it easy to achieve a 3-week shelf life for perishable products. Cans, glass jars, and boxes will lose share to flexibles, which offer fewer problems with broken seals, sharp edges, and breakage.

A joint venture between Meat New Zealand and private industry has developed the world's first robotic technology for meat processing. Future meat processing plants are expected to combine manual operations with automated, robot-assisted sections and fully robotic operations. Research is continuing into machine vision systems that locate large pieces of carcass, grasp individual pieces with a robot-mounted gripper, and move the pieces to the boning room for further processing.

In an effort to expand the reach of chilled food exports, New Zealand has developed a process that not only extends the chilled storage life of a product, but also improves the product by enhancing its color, flavor, and tenderness. Equipment and packaging have been developed to allow a wide range of products to be packed, from carcasses and large cuts to case-ready retail packs. In the case of fish, bulk fillets or whole fish can be processed along with retail-ready packs.

In lower income parts of the APEC region, such as Indonesia, a wide range of food processing technology is employed, from simple, traditional methods used by small enterprises and home industry to modern high-tech methods used by big national and multinational corporations. Although the market share of modern supermarkets and superstores offering modern processed foods has grown very fast in major cities in recent years, traditional markets offering traditionally processed foods are still dominant in both urban and rural areas of the country.

## ***Regional Outlook For Food System Technologies***

For many years, policy reform and strong economic growth in the APEC region have succeeded in reducing the percentage of the population identified as hungry. Technology advances alone will not end hunger, but they will bring increased efficiency to complement those efforts.

Adoption of biotech seed for food crops is limited beyond the U.S., and there is considerable uncertainty about future biotech adoption. Even in the U.S., the move by several agribusinesses to limit their purchases of some biotech products suggests uncer-

## **What is APEC?**

APEC began in 1989 as an informal grouping of 12 market-oriented Asia-Pacific economies with the goal of better managing the growing interdependence in the Pacific region and sustaining economic growth. APEC provides a forum for ministerial-level discussion and cooperation on a range of economic issues, including trade promotion and liberalization, investment and technology transfer, human resource development, energy, telecommunications, and transportation. APEC's 21 member economies accounted for 40 percent of global trade in 1998, and about two-thirds of U.S. farm exports.

Members and dates of joining:

- 1989 Australia, Brunei, Canada, Indonesia, Japan, Malaysia, New Zealand, Philippines, Singapore, South Korea, Thailand, United States
- 1991 China, Hong Kong/China, Taiwan
- 1993 Mexico, Papua New Guinea
- 1994 Chile
- 1998 Peru, Vietnam, Russia

## Special Article

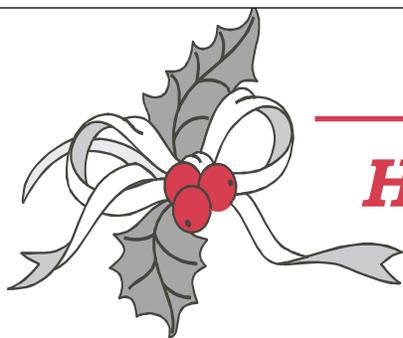
tainty about these commodities that could continue at least in the short term, or until stronger scientific evidence offsets consumers' wariness. Many of the developing economies in the region are likely to continue with the more traditional yield-enhancing technologies in agriculture. A brighter outlook for nonfood biotech commodities is evidenced by the expanded use of insect-resistant (Bt) cotton in Australia, China, and the U.S.

Use of the Internet in the less developed economies of the APEC region's food system is still in the early stages; in the developed economies, 50 percent or more of the population enjoys Internet access. Projected rates of adoption of IT in some of the less developed parts of APEC such as China are rapid but still at a very low level. Modest infrastructure requirements of IT make it accessible to less developed areas, and adoption is likely to have an expanding and positive impact on efficiency in the region's food system, in both developed and less developed areas.

Technologies related to marketing and processing food products, in combination with IT, are likely to be key to the outlook for the region's food supply system, particularly in supporting the rapid process of urbanization in Asia. Urban population in the APEC region now surpasses 1.1 billion—more than 45 percent of the region's total population—and is growing at twice the overall rate of population growth. Meeting the food needs of these vast urban areas, particularly in the less developed parts of the region, will depend on adequate investment in food distribution systems, food processing capacity, storage and marketing facilities, and innovations that make these systems more efficient. **AO**

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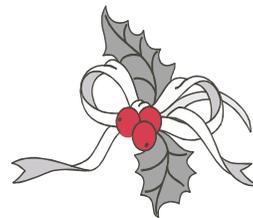
To order a copy of the report, *Pacific Food Outlook, 2000-01*, contact the U.S. National Committee for Pacific Economic Cooperation at [www.pecc.org/food](http://www.pecc.org/food). Cost is US\$20.00.



# Happy Holidays

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**From the Agricultural Outlook staff**



2001 . . .

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# Statistical Indicators

## Summary Data

**Table 1—Key Statistical Indicators of the Food & Fiber Sector**

				1999				2000			2001	
	1998	1999	2000	IV	I	II	III	IV	I	II		
Prices received by farmers (1990-92=100)	101	95	--	92	92	101	--	--	--	--		
Livestock & products	97	95	--	96	95	100	--	--	--	--		
Crops	106	96	--	89	91	102	--	--	--	--		
Prices paid by farmers (1990-92=100)												
Production items	113	111	--	112	115	116	--	--	--	--		
Commodities and services, interest, taxes, and wage rates (PPITW)	115	115	--	116	119	119	--	--	--	--		
Cash receipts (\$ bil.)	197	189	194	59	46	44	47	57	--	--		
Livestock	94	95	100	24	25	25	25	25	--	--		
Crops	102	93	94	34	21	19	22	32	--	--		
Market basket (1982-84=100)												
Retail cost	163	167	--	169	169	169	172	--	--	--		
Farm value	103	98	--	97	95	96	97	--	--	--		
Spread	195	205	--	207	209	209	211	--	--	--		
Farm value/retail cost (%)	22	21	--	20	20	20	20	--	--	--		
Retail prices (1982-84=100)												
All food	161	164	168	165	166	167	169	169	170	170		
At home	161	164	168	165	166	167	169	169	170	170		
Away from home	161	165	169	167	168	168	170	171	172	172		
Agricultural exports (\$ bil.) <sup>1</sup>	53.6	49.1	50.5	51.5	13.6	13.3	12.0	11.9	13.3	13.5		
Agricultural imports (\$ bil.) <sup>1</sup>	37.0	37.5	39.0	39.5	9.6	10.1	10.2	9.3	9.0	9.9		
Commercial production												
Red meat (mil. lb.)	45,134	46,134	46,100	11,756	11,595	11,279	11,618	11,608	11,386	11,179		
Poultry (mil. lb.)	33,667	35,590	36,376	8,894	9,019	9,286	8,966	9,105	9,265	9,570		
Eggs (mil. doz.)	6,658	6,912	7,038	1,786	1,754	1,744	1,750	1,790	1,760	1,750		
Milk (bil. lb.)	157.3	162.7	168.4	40.4	42.6	43.2	41.3	41.3	43.0	43.8		
Consumption, per capita												
Red meat and poultry (lb.)	213.5	220.3	219.8	55.9	53.9	54.9	54.9	56.2	54.4	54.7		
Corn beginning stocks (mil. bu.) <sup>2</sup>	883.2	1,307.8	1,787.0	3,616.2	1,787.0	8,024.7	5,602.0	3,585.9	--	--		
Corn use (mil. bu.) <sup>2</sup>	8,791.0	9,298.3	9,524.1	1,831.1	3,203.2	2,426.1	2,021.5	1,873.0	--	--		
Prices <sup>3</sup>												
Choice steers--Neb. Direct (\$/cwt)	61.48	65.56	68.84	69.65	69.32	71.59	65.43	68-70	69-73	72-78		
Barrows and gilts--IA, So. MN (\$/cwt)	34.72	34.00	44.25	36.29	41.14	50.43	46.43	38-40	42-44	43-47		
Broilers--12-city (cents/lb.)	63.10	58.10	56.00	57.60	54.60	55.70	56.80	56-58	52-56	53-57		
Eggs--NY gr. A large (cents/doz.)	75.80	65.60	65.60	63.20	63.30	62.10	67.10	69-71	63-67	58-62		
Milk--all at plant (\$/cwt)	15.42	14.36	12.25-	13.83	11.90	12.03	12.70	12.40-	11.90-	11.45-		
			12.35					12.70	12.50	12.35		
Wheat--KC HRW ordinary (\$/bu.)	3.27	2.92	--	2.83	2.92	2.95	3.00	--	--	--		
Corn--Chicago (\$/bu.)	2.41	2.01	--	1.91	2.12	2.16	1.64	--	--	--		
Soybeans--Chicago (\$/bu.)	6.01	4.61	--	4.53	4.95	5.20	4.60	--	--	--		
Cotton--avg. spot 41-34 (cents/lb)	67.02	52.31	--	48.08	54.63	55.68	58.36	--	--	--		
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000		
Farm real estate values <sup>4</sup>												
Nominal (\$ per acre)	703	713	740	798	844	887	926	974	1,020	1,050		
Real (1982 \$)	521	507	514	540	558	572	586	606	627	636		
U.S. civilian employment (mil.) <sup>5</sup>	126.3	128.1	129.2	131.1	132.3	133.9	136.3	137.7	139.4	--		
Food and fiber (mil.)	23.7	23.1	23.6	24.2	24.5	24.2	24.1	24.0	24.3	--		
Farm sector (mil.)	2.0	1.9	1.8	1.9	2.0	2.0	1.9	1.8	1.7	--		
U.S. gross domestic product (\$ bil.)	5,986.2	6,318.9	6,642.3	7,054.3	7,400.5	7,813.2	8,318.4	8,790.2	9,299.2	--		
Food and fiber--net value added (\$ bil.)	877.5	924.8	965.7	1,066.2	1,126.5	1,210.4	1,317.1	1,446.4	1,521.4	--		
Farm sector--net value added (\$ bil.) <sup>6</sup>	71.1	75.5	73.1	78.3	75.3	86.7	83.5	74.8	69.8	--		

-- = Not available. Annual and quarterly data for the most recent year contain forecasts. 1. Annual data based on Oct.-Sept. fiscal years ending with year indicated. 2. Sept.-Nov. first quarter; Dec.-Feb. second quarter; Mar.-May third quarter; Jun.-Aug. fourth quarter; Sept.-Aug. annual. Use includes exports and domestic disappearance. 3. Simple averages, Jan.-Dec. 4. As of January 1. 5. Civilian labor force taken from "Monthly Labor Review," Table 18--Annual Data: Employment Status of the Population, Bureau of Labor Statistics, U.S. Department of Labor. 6. The value-added data presented here is consistent with accounting conventions of the National Income and Product Accounts, U.S. Department of Commerce.

## U.S. & Foreign Economic Data

### Table 2—U.S. Gross Domestic Product & Related Data

				1999				2000			
	1997	1998	1999	I	II	III	IV	I	II	III	
<i>Billions of current dollars (quarterly data seasonally adjusted at annual rates)</i>											
Gross Domestic Product	8,318.4	8,790.2	9,299.2	9,104.5	9,191.5	9,340.9	9,559.7	9,752.7	9,945.7	10,063.3	
Gross National Product	8,305.0	8,750.0	9,236.2	9,097.2	9,181.8	9,327.3	9,546.3	9,745.0	9,937.4	--	
Personal consumption expenditures	5,529.3	5,850.9	6,268.7	6,095.3	6,213.2	6,319.9	6,446.2	6,621.7	6,706.3	6,817.4	
Durable goods	642.5	693.9	761.3	733.9	756.3	767.2	787.6	826.3	814.3	824.5	
Nondurable goods	1,641.6	1,707.6	1,845.5	1,786.4	1,825.3	1,860.0	1,910.2	1,963.9	1,997.6	2,032.3	
Food	812.2	845.8	897.8	878.1	886.6	900.4	926.1	938.4	948.3	960.7	
Clothing and shoes	271.7	286.4	307.0	301.1	306.1	308.7	311.9	323.1	325.6	330.6	
Services	3,245.2	3,449.3	3,661.9	3,575.0	3,631.5	3,692.7	3,748.5	3,831.6	3,894.4	3,960.6	
Gross private domestic investment	1,390.5	1,549.9	1,650.1	1,609.8	1,607.9	1,659.1	1,723.7	1,755.7	1,852.6	1,876.6	
Fixed investment	1,327.7	1,472.9	1,606.8	1,560.6	1,593.4	1,622.4	1,651.0	1,725.8	1,780.5	1,802.6	
Change in private inventories	62.9	77.0	43.3	49.2	14.5	36.7	72.7	29.9	72.0	74.0	
Net exports of goods and services	-89.3	-151.5	-254.0	-196.1	-240.4	-280.5	-299.1	-335.2	-355.4	-373.0	
Government consumption expenditures and gross investment	1,487.9	1,540.9	1,634.4	1,595.5	1,610.9	1,642.4	1,688.8	1,710.4	1,742.2	1,742.3	
<i>Billions of 1996 dollars (quarterly data seasonally adjusted at annual rates)<sup>1</sup></i>											
Gross Domestic Product	8,159.5	8,515.7	8,875.8	8,730.0	8,783.2	8,905.8	9,084.1	9,191.8	9,318.9	9,382.2	
Gross National Product	8,168.1	8,515.1	8,868.3	8,726.0	8,776.7	8,895.4	9,075.0	9,187.7	9,313.7	--	
Personal consumption expenditures	5,423.9	5,678.7	5,978.8	5,860.2	5,940.2	6,013.8	6,101.0	6,213.5	6,260.6	6,330.4	
Durable goods	657.3	727.3	817.8	782.7	810.5	826.2	851.8	898.2	886.7	902.9	
Nondurable goods	1,619.9	1,684.8	1,779.4	1,748.5	1,765.0	1,786.1	1,818.1	1,844.8	1,861.1	1,883.3	
Food	794.5	812.8	845.9	832.7	838.0	846.7	866.0	872.2	876.5	879.9	
Clothing and shoes	271.6	292.2	318.5	313.3	316.5	322.1	322.1	337.7	342.3	350.0	
Services	3,147.0	3,269.4	3,390.8	3,335.8	3,373.4	3,411.1	3,443.0	3,487.2	3,526.7	3,559.3	
Gross private domestic investment	1,393.3	1,566.8	1,669.7	1,623.2	1,623.1	1,680.8	1,751.6	1,773.6	1,863.0	1,877.9	
Fixed investment	1,328.6	1,485.3	1,621.4	1,574.0	1,607.1	1,637.8	1,666.6	1,730.9	1,777.6	1,790.5	
Change in private inventories	63.8	80.2	45.3	48.1	13.1	39.1	80.9	36.6	78.6	79.9	
Net exports of goods and services	-113.3	-221.0	-322.4	-279.8	-314.6	-342.6	-352.5	-376.8	-403.4	-410.8	
Government consumption expenditures and gross investment	1,455.4	1,486.4	1,536.1	1,517.1	1,519.9	1,537.8	1,569.5	1,565.1	1,583.7	1,569.4	
GDP implicit price deflator (% change)	1.9	1.3	1.5	2.3	1.4	0.9	1.3	3.3	2.4	2.0	
Disposable personal income (\$ bil.)	5,968.2	6,320.0	6,637.7	6,514.9	6,596.3	6,664.0	6,775.0	6,866.5	6,964.9	7,046.0	
Disposable pers. income (1996 \$ bil.)	5,854.5	6,134.1	6,331.0	6,263.7	6,306.6	6,341.7	6,412.2	6,443.1	6,502.0	6,542.6	
Per capita disposable pers. income (\$)	22,262	23,359	24,314	23,946	24,196	24,384	24,728	25,014	25,322	25,553	
Per capita disp. pers. income (1996 \$)	21,838	22,672	23,191	23,022	23,133	23,203	23,404	23,472	23,639	23,728	
U.S. resident population plus Armed Forces overseas (mil.) <sup>2</sup>	268.0	270.5	272.9	272.0	272.5	273.2	273.9	274.4	275.0	275.6	
Civilian population (mil.) <sup>2</sup>	266.5	269.0	271.5	270.5	271.1	271.7	272.4	273.0	273.5	274.2	
<i>Monthly data seasonally adjusted</i>											
	Annual			1999				2000			
	1997	1998	1999	Sep	Apr	May	Jun	Jul	Aug	Sep	
Total industrial production (1992=100)	130.1	136.4	142.3	142.9	149.3	150.3	151.0	151.0	151.3	151.8	
Leading economic indicators (1992=100)	103.9	105.5	105.2	105.4	106.1	106.0	106.0	105.8	105.7	105.7	
Civilian employment (mil. persons) <sup>3</sup>	129.6	131.5	133.5	133.7	135.7	134.7	135.2	134.7	134.9	135.2	
Civilian unemployment rate (%) <sup>3</sup>	4.9	4.5	4.2	4.2	3.9	4.1	4.0	4.0	4.1	3.9	
Personal income (\$ bil. annual rate)	6,937.0	7,391.0	7,789.6	7,847.0	8,209.3	8,237.6	8,279.5	8,302.4	8,334.8	8,425.1	
Money stock-M2 (daily avg.) (\$ bil.) <sup>4</sup>	4,040.2	4,395.0	4,659.8	4,591.2	4,778.1	4,776.3	4,791.4	4,806.1	4,836.2	4,871.4	
Three-month Treasury bill rate (%)	5.07	4.81	4.66	4.73	5.67	5.92	5.74	5.93	6.11	6.00	
AAA corporate bond yield (Moody's) (%)	7.26	6.53	7.04	7.39	7.64	7.99	7.67	7.65	7.55	7.62	
Total housing starts (1,000) <sup>5</sup>	1,474.0	1,616.9	1,666.5	1,628	1,652	1,591	1,571	1,527	1,525	1,530	
Business inventory/sales ratio <sup>6</sup>	1.38	1.39	1.35	1.34	1.32	1.32	1.32	1.33	1.34	--	
Sales of all retail stores (\$ bil.) <sup>7</sup>	2,610.6	2,745.6	2,994.9	253.9	267.1	267.4	268.4	270.6	207.6	273.0	
Nondurable goods stores (\$ bil.)	1,547.3	1,609.2	1,739.9	147.4	155.9	156.6	157.7	158.9	159.3	160.6	
Food stores (\$bil.)	423.7	435.4	458.3	38.7	40.2	40.1	40.4	40.4	40.4	40.5	
Apparel and accessory stores (\$ bil.)	119.6	127.0	135.1	11.2	11.7	11.8	11.7	11.7	11.9	12.1	
Eating and drinking places (\$ bil.)	254.1	266.4	285.4	23.9	25.4	25.3	25.4	25.7	25.5	25.8	

-- = Not available. 1. In October 1999, 1996 dollars replaced 1992 dollars. 2. Population estimates based on 1990 census. 3. Data beginning January 1994 are not directly comparable with data for earlier periods because of a major redesign of the household survey questionnaire. 4. Annual data as of December of year listed. 5. Private, including farm. 6. Manufacturing and trade. 7. Annual total. *Information contact: David Johnson (202) 694-5324*

**Table 3—World Economic Growth**

	Calendar year									
	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
	<i>Real GDP, annual percent change</i>									
<b>World</b>	1.8	1.4	3.0	2.7	3.5	3.4	1.8	2.7	4.1	3.4
less U.S.	1.4	1.0	2.6	2.7	3.5	3.0	0.9	2.2	3.8	3.4
<b>Developed economies</b>	1.7	0.8	2.7	2.3	3.1	3.0	2.0	2.6	3.7	2.9
less U.S.	1.1	0.0	2.1	2.1	2.9	2.3	0.9	1.8	3.0	2.7
United States	3.1	2.7	4.0	2.7	3.6	4.4	4.4	4.2	5.2	3.4
Canada	0.9	2.3	4.7	2.8	1.5	4.4	3.3	4.5	4.7	2.9
Japan	1.0	0.3	0.7	1.4	5.2	1.6	-2.5	0.3	2.0	1.8
Australia	2.3	3.7	5.2	3.8	4.1	4.0	5.3	4.7	4.5	3.4
European Union	1.1	-0.4	2.7	2.4	1.6	2.5	2.7	2.4	3.3	3.1
<b>Transition economies</b>	-10.2	-6.6	-8.9	-1.5	-1.0	1.1	-1.5	2.3	4.9	3.0
Eastern Europe	-0.6	1.0	2.9	5.7	4.2	2.4	1.8	2.1	4.1	4.2
Poland	2.6	3.8	5.2	7.0	6.1	6.9	4.8	4.0	5.0	5.1
Former Soviet Union	-13.8	-10.0	-14.8	-5.9	-4.5	0.2	-4.0	2.5	5.4	2.1
Russia	-14.5	-8.7	-12.6	-4.1	-3.5	0.8	-4.6	3.2	6.4	1.9
<b>Developing economies</b>	5.3	5.8	6.3	5.2	5.8	5.4	1.2	3.3	5.7	5.4
<b>Asia</b>	7.7	8.0	8.8	8.3	7.5	6.0	0.4	6.2	7.1	6.4
East Asia	9.4	9.2	9.7	8.8	7.8	7.0	2.0	7.5	8.1	6.8
China	14.2	13.5	12.6	10.5	9.6	8.8	7.8	7.1	8.3	8.5
Taiwan	7.5	7.0	7.1	6.4	6.1	6.7	4.6	5.4	6.4	4.7
Korea	5.4	5.5	8.2	8.9	6.7	5.0	-6.7	10.7	8.4	5.3
Southeast Asia	5.6	7.7	7.9	8.1	7.1	4.7	-6.1	3.5	5.6	5.3
Indonesia	7.2	7.3	7.5	8.2	7.8	4.7	-13.2	0.7	4.1	6.1
Malaysia	7.8	8.3	9.2	9.5	8.6	7.8	-7.4	5.6	8.6	6.1
Philippines	0.3	2.1	4.4	4.7	5.8	5.2	-0.5	3.2	3.4	2.0
Thailand	8.1	8.4	8.9	8.8	5.5	-0.4	-10.2	4.2	5.5	5.9
South Asia	5.7	4.5	7.1	6.9	7.0	4.9	5.3	5.6	6.0	6.5
India	5.4	5.0	8.1	7.4	7.7	5.7	5.6	6.2	6.4	7.0
Pakistan	7.8	1.9	3.9	5.1	4.7	-0.4	3.7	3.0	4.0	4.5
<b>Latin America</b>	3.4	4.3	5.3	1.3	3.6	5.1	1.9	0.0	4.0	4.3
Mexico	3.6	1.9	4.5	-6.2	5.1	6.8	4.8	3.7	6.4	5.0
Caribbean/Central	8.0	4.7	4.0	3.2	3.6	5.8	6.1	3.3	4.0	4.7
South America	3.3	4.9	5.6	3.1	3.3	4.8	1.2	-1.0	3.4	4.1
Argentina	11.9	5.9	5.8	-2.8	5.5	8.1	3.9	-3.1	1.0	2.6
Brazil	-0.5	4.9	5.9	4.2	2.8	3.2	0.1	0.8	4.2	4.5
Colombia	3.9	5.4	5.8	5.2	2.0	2.8	0.6	-4.5	3.3	4.8
Venezuela	6.1	0.3	-2.3	3.7	-0.5	6.5	-0.7	-7.3	2.6	3.1
<b>Middle East</b>	4.7	3.9	-0.2	3.7	4.3	4.7	2.2	-1.3	4.8	4.0
Israel	5.6	5.6	6.9	7.0	4.6	2.2	1.9	2.1	5.6	3.8
Saudi Arabia	2.8	-0.6	0.5	0.5	1.4	1.9	2.3	-1.1	3.5	3.0
Turkey	6.4	8.7	-5.2	7.8	7.0	7.5	2.8	-4.9	6.8	5.3
<b>Africa</b>	0.2	1.0	3.2	2.9	5.2	2.8	3.1	2.7	3.7	4.2
North Africa	2.0	0.5	3.9	1.5	6.5	2.6	5.6	3.8	4.3	4.7
Egypt	4.4	2.9	3.9	4.7	5.0	5.5	5.6	6.0	5.0	4.6
Sub-Saharan	-1.1	1.4	2.6	3.9	4.3	2.9	1.3	1.8	3.2	3.8
South Africa	-2.1	1.2	3.2	3.1	4.2	2.5	0.5	1.2	3.0	3.6
	<i>Consumer Prices, annual percent change</i>									
Developed Economies	3.5	3.1	2.6	2.6	2.4	2.1	1.5	1.4	2.3	2.1
Transition Economies	788.9	634.4	274.1	133.5	42.4	27.3	21.8	43.8	18.3	12.5
Developing Economies	42.8	48.7	54.7	23.2	15.3	9.7	10.1	6.6	6.2	5.2
Asia	8.6	10.8	16.0	13.2	8.3	4.7	7.5	2.4	2.4	3.3
Latin America	150.3	194.6	200.3	36.0	21.6	13.4	10.2	9.3	8.9	7.0
Middle East	26.5	26.6	33.2	39.2	26.9	25.4	25.3	20.4	17.4	9.5
Africa	47.1	39.0	54.8	35.2	30.2	13.6	9.1	11.8	12.7	8.6

-- = Not available. The last 3 years are either estimates or forecasts. Sources: Oxford Economic Forecasting; International Financial Statistics, IMF.

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## Farm Prices

**Table 4—Indexes of Prices Received & Paid by Farmers, U.S. Average**

	Annual		1999		2000					
	1997	1998	1999	Oct	May	Jun	Jul	Aug	Sep	Oct
	1990-92=100									
<b>Prices received</b>										
All farm products	107	101	95	91	101	99	98	98	98	92
All crops	115	106	96	88	104	99	96	99	98	89
Food grains	128	103	91	87	86	84	78	81	82	90
Feed grains and hay	117	100	86	76	97	90	82	79	78	80
Cotton	112	107	85	76	78	77	81	85	83	87
Tobacco	104	104	102	105	--	--	--	97	105	104
Oil-bearing crops	131	107	83	80	92	88	81	79	84	80
Fruit and nuts, all	109	111	114	130	91	114	123	129	124	119
Commercial vegetables	118	121	108	97	135	117	118	127	142	109
Potatoes and dry beans	90	99	100	85	110	106	114	95	81	75
Livestock and products	98	97	95	96	99	100	100	97	98	96
Meat animals	92	79	83	87	98	97	96	92	90	92
Dairy products	102	119	110	114	92	93	97	96	98	96
Poultry and eggs	113	117	111	104	108	112	112	110	116	107
<b>Prices paid</b>										
Commodities and services, interest, taxes, and wage rates (PPITW)	118	115	115	116	120	120	120	119	120	121
Production items	119	113	111	112	116	116	116	115	116	117
Feed	125	110	100	97	105	104	100	95	98	102
Livestock and poultry	94	88	95	101	106	108	111	107	105	111
Seeds	119	122	121	121	124	124	124	124	124	124
Fertilizer	121	112	105	105	108	108	112	112	113	114
Agricultural chemicals	121	122	121	122	124	121	121	121	120	121
Fuels	106	84	93	108	124	132	130	132	153	153
Supplies and repairs	118	119	121	122	124	124	124	124	124	124
Autos and trucks	119	119	119	119	120	119	119	118	118	117
Farm machinery	128	132	135	136	139	139	139	139	137	137
Building material	118	118	120	120	122	121	121	121	121	121
Farm services	116	115	116	116	116	117	118	118	119	119
Rent	136	120	113	113	117	117	117	117	113	113
Interest payable per acre on farm real estate debt	105	104	106	106	110	110	110	110	110	110
Taxes payable per acre on farm real estate	115	119	120	120	123	123	123	123	123	123
Wage rates (seasonally adjusted)	123	129	135	135	140	140	136	136	136	136
Prod. items, interest, taxes & wage rates (PITW)	118	114	113	114	118	118	118	117	118	119
Ratio, prices received to prices paid (%)*	90	88	83	78	84	83	82	82	82	76
Prices received (1910-14=100)	678	643	607	579	644	632	623	623	623	584
Prices paid, etc. (parity index) (1910-14=100)	1,574	1,532	1,531	1,543	1,593	1,598	1,594	1,584	1,592	1,604
Parity ratio (1910-14=100) (%)*	43	42	40	38	40	40	39	39	39	36

-- = Not available. Values for the two most recent months are revised or preliminary. \*Ratio of index of prices received for all farm products to index of prices paid for commodities and services, interest, taxes, and wage rates. Ratio uses the most recent prices paid index. Data for this table are taken from the publication *Agricultural Prices*, which is produced monthly by USDA's National Agricultural Statistics Service (NASS) and is available at <http://usda.mannlib.cornell.edu/reports/nassr/price/pap-bb/>. For historical data or for categories not listed here, call the National Agricultural Statistics Service (NASS) Information Hotline at 1-800-727-9540, or access the NASS Home Page at <http://www.usda.gov/nass>.

**Table 5—Prices Received by Farmers, U.S. Average**

	Annual <sup>1</sup>		1999			2000				
	1997	1998	1999	Oct	May	Jun	Jul	Aug	Sep	Oct
<b>Crops</b>										
All wheat (\$/bu.)	3.38	2.65	2.55	2.57	2.59	2.50	2.32	2.41	2.44	2.70
Rice, rough (\$/cwt)	9.70	8.89	6.00	6.23	5.56	5.59	5.47	5.60	5.72	5.86
Corn (\$/bu.)	2.43	1.94	1.90	1.69	2.10	1.91	1.64	1.53	1.61	1.74
Sorghum (\$/cwt)	3.95	2.97	2.95	2.51	3.38	3.32	2.81	2.73	2.77	3.03
All hay, baled (\$/ton)	100.00	84.60	77.00	76.10	89.40	82.50	80.20	80.50	82.70	85.20
Soybeans (\$/bu.)	6.47	4.93	4.75	4.47	5.19	4.92	4.53	4.45	4.57	4.36
Cotton, upland (¢/lb.)	65.20	60.20	44.90	46.30	47.30	46.40	49.10	51.30	50.60	52.50
Potatoes (\$/cwt)	5.62	5.56	5.84	4.86	6.62	6.47	7.12	5.77	4.69	4.31
Lettuce (\$/cwt) <sup>2</sup>	17.50	16.10	13.30	13.10	23.50	13.40	15.00	19.20	29.40	11.40
Tomatoes, fresh (\$/cwt) <sup>2</sup>	31.70	35.20	25.90	21.30	27.40	24.70	23.50	30.70	27.80	40.80
Onions (\$/cwt)	12.60	13.80	9.78	8.17	16.60	14.80	17.40	14.60	11.70	11.00
Beans, dry edible (\$/cwt)	19.30	19.00	17.60	17.20	17.00	15.70	15.10	13.90	15.60	15.30
Apples for fresh use (¢/lb.)	22.10	17.30	21.20	24.30	18.20	16.10	16.20	19.50	23.30	21.80
Pears for fresh use (\$/ton)	276.00	291.00	294.00	474.00	204.00	220.00	270.00	280.00	317.00	377.00
Oranges, all uses (\$/box) <sup>3</sup>	4.22	4.29	5.94	9.88	4.60	4.43	3.07	2.17	9.30	10.90
Grapefruit, all uses (\$/box) <sup>3</sup>	1.93	2.00	3.22	7.59	2.51	5.27	6.14	4.45	6.71	5.17
<b>Livestock</b>										
Cattle, all beef (\$/cwt)	63.10	59.60	63.40	66.20	69.40	68.50	67.50	65.50	65.30	66.00
Calves (\$/cwt)	78.90	78.80	87.70	91.90	107.00	104.00	106.00	106.00	103.00	103.00
Hogs, all (\$/cwt)	52.90	34.40	30.30	34.20	48.50	48.60	48.50	43.80	41.50	42.60
Lambs (\$/cwt)	90.30	72.30	74.50	72.60	96.40	89.70	87.00	83.60	80.80	--
All milk, sold to plants (\$/cwt)	13.36	15.46	14.38	14.90	12.00	12.20	12.70	12.60	12.80	12.60
Milk, manuf. grade (\$/cwt)	12.17	14.24	12.86	12.70	10.10	10.30	10.70	10.70	11.20	10.70
Broilers, live (¢/lb.)	37.70	39.30	37.10	34.30	37.00	37.00	37.50	35.00	39.00	33.00
Eggs, all (¢/doz.) <sup>4</sup>	70.30	66.80	62.70	52.70	52.00	62.90	57.20	68.10	60.30	68.50
Turkeys (¢/lb.)	39.90	38.00	40.80	45.30	40.40	41.60	41.90	42.90	44.50	45.90

-- = Not available. Values for the two most recent months are revised or preliminary. 1. Season-average price by crop year for crops. Calendar year average of monthly prices for livestock. 2. Excludes Hawaii. 3. Equivalent on-tree returns. 4. Average of all eggs sold by producers including hatching eggs and eggs sold at retail. Data for this table are taken from the publication *Agricultural Prices*, which is produced monthly by USDA's National Agricultural Statistics Service (NASS) and is available at <http://usda.mannlib.cornell.edu/reports/nassr/price/pap-bb/>. For historical data or for categories not listed here, call the National Agricultural Statistics Service (NASS) Information Hotline at 1-800-727-9540, or access the NASS Home Page at <http://www.usda.gov/nass>.

## Producer & Consumer Prices

**Table 6—Consumer Price Indexes for All Urban Consumers, U.S. Average (not seasonally adjusted)**

	Annual		1999			2000				
	1997	1998	1999	Oct	May	Jun	Jul	Aug	Sep	Oct
	<i>1982-84=100</i>									
Consumer Price Index, all items	160.5	163.0	166.6	168.2	171.3	172.3	172.6	172.8	173.7	174.0
CPI, all items less food	161.1	163.6	167.0	168.8	172.1	173.2	173.5	173.5	174.6	174.9
All food	157.3	160.7	164.1	165.1	167.3	167.3	168.1	168.7	168.9	169.1
Food away from home	157.0	161.1	165.1	166.2	168.3	168.6	169.1	169.5	170.0	170.3
Food at home	158.1	161.1	164.2	165.1	167.5	167.3	168.3	168.9	169.0	169.1
Meats <sup>1</sup>	144.4	141.6	142.3	144.4	150.1	151.7	152.7	153.9	153.8	152.9
Beef and veal	136.8	136.5	139.2	141.6	148.0	149.4	149.5	150.4	150.2	148.9
Pork	155.9	148.5	145.9	148.1	155.5	157.5	159.9	162.1	161.4	160.7
Poultry	156.6	157.1	157.9	158.1	159.6	159.3	161.8	161.3	160.9	162.1
Fish and seafood	177.1	181.7	185.3	187.3	192.4	191.9	189.7	190.7	191.9	192.8
Eggs	140.0	135.4	128.1	119.8	124.1	125.9	125.5	130.5	132.0	136.1
Dairy and related products <sup>2</sup>	145.5	150.8	159.6	164.1	159.6	159.5	160.5	161.0	161.6	161.9
Fats and oils <sup>3</sup>	141.7	146.9	148.3	149.0	147.0	146.6	148.1	148.9	148.7	149.7
Fresh fruits	236.3	246.5	266.3	262.3	257.3	244.6	248.9	252.2	258.2	262.6
Fresh vegetables	194.6	215.8	209.3	208.9	219.1	217.7	216.7	217.3	218.9	218.6
Potatoes	174.2	185.2	193.1	194.8	200.4	201.7	208.3	210.7	195.4	191.5
Cereals and bakery products	177.6	181.1	185.0	185.2	188.6	187.7	189.6	189.9	188.6	190.1
Sugar and sweets	147.8	150.2	152.3	153.3	153.7	154.0	154.1	154.6	154.6	153.9
Nonalcoholic beverages <sup>4</sup>	133.4	133.0	134.3	134.6	137.3	137.5	138.5	138.2	138.0	137.4
Apparel										
Footwear	127.6	128.0	125.7	126.1	126.1	123.9	120.3	120.7	124.9	125.3
Tobacco and smoking products	243.7	274.8	355.8	373.3	393.5	388.5	400.7	394.1	408.0	396.7
Alcoholic beverages	162.8	165.7	169.7	170.5	173.8	174.4	175.2	175.6	175.5	175.9

1. Beef, veal, lamb, pork, and processed meat. 2. Included butter through December '97. 3. Includes butter as of January '98. 4. Includes fruit juices as of January 1998. This table is compiled with data provided by the Bureau of Labor Statistics (BLS). BLS operates a website at <http://stats.bls.gov/blshome.html> and a Consumer Prices Information Hotline at (202) 606-7828.

Table 7—Producer Price Indexes, U.S. Average (not seasonally adjusted)

	Annual		1999		2000					
	1997	1998	1999	Oct	May	Jun	Jul	Aug	Sep	Oct
	<i>1982=100</i>									
All commodities	127.6	124.4	125.5	127.7	131.6	133.8	133.2	132.9	134.5	135.1
Finished goods <sup>1</sup>	131.8	130.6	133.0	135.1	137.3	138.6	138.3	138.1	139.2	140.0
All foods <sup>2</sup>	132.8	132.4	132.2	133.1	134.3	133.5	133.2	132.5	132.8	133.6
Consumer foods	134.5	134.3	135.1	135.8	138.2	137.6	137.4	136.9	137.1	137.8
Fresh fruits and melons	99.4	90.0	103.6	108.0	96.3	84.9	82.8	71.1	90.6	93.8
Fresh and dry vegetables	123.1	139.5	118.0	109.3	140.6	120.9	119.2	128.1	137.3	143.9
Dried and dehydrated fruits	124.9	124.4	121.2	119.5	122.6	122.6	122.6	122.6	122.6	130.3
Canned fruits and juices	137.6	134.4	137.8	137.8	140.5	140.4	139.9	139.8	140.0	140.4
Frozen fruits, juices and ades	117.2	116.1	123.0	123.6	123.0	122.4	121.8	120.7	118.1	118.1
Fresh veg. except potatoes	121.3	137.9	117.7	101.6	152.0	128.1	124.6	136.8	154.9	165.0
Canned vegetables and juices	120.1	121.5	120.9	120.7	121.2	121.5	121.2	120.5	120.7	121.1
Frozen vegetables	125.8	125.4	126.1	126.4	126.3	124.9	125.6	126.4	126.4	126.6
Potatoes	106.1	122.5	126.9	108.8	91.9	94.4	126.5	125.3	97.7	92.9
Eggs for fresh use (1991=100)	97.1	90.1	77.9	61.5	64.2	81.9	70.3	91.1	77.7	90.7
Bakery products	173.9	175.8	178.0	178.7	181.7	182.3	182.8	182.5	183.3	184.1
Meats	111.6	101.4	104.6	108.7	119.4	119.5	118.1	114.9	111.1	111.6
Beef and veal	102.8	99.5	106.3	112.1	118.9	118.6	114.6	111.9	109.4	111.4
Pork	123.1	96.6	96.0	100.0	121.1	121.3	123.1	116.9	109.1	108.6
Processed poultry	117.4	120.7	114.0	112.6	110.8	111.8	111.5	113.3	117.9	117.2
Unprocessed and packaged fish	178.1	183.0	190.9	196.6	204.1	195.0	196.2	200.9	189.7	194.1
Dairy products	128.1	138.1	139.2	143.5	132.6	134.0	136.3	134.9	135.6	134.6
Processed fruits and vegetables	126.4	125.8	128.1	128.1	129.2	128.9	128.4	127.9	127.6	128.2
Shortening and cooking oil	137.8	143.4	--	--	--	--	--	--	--	--
Soft drinks	133.2	134.8	137.9	139.2	144.9	144.6	144.8	144.8	144.0	144.3
Finished consumer goods less foods	128.2	126.4	130.5	133.7	136.9	139.6	139.0	139.0	140.8	141.5
Alcoholic beverages	135.1	135.2	136.7	136.9	141.4	141.2	138.2	137.6	141.4	142.3
Apparel	125.7	126.6	127.1	126.9	127.2	127.3	127.1	126.7	126.8	127.1
Footwear	143.7	144.7	144.5	144.7	145.0	144.8	144.9	145.1	145.1	145.1
Tobacco products	248.9	283.4	374.0	394.6	392.6	393.2	393.4	402.4	402.5	403.8
Intermediate materials <sup>3</sup>	125.6	123.0	123.2	125.0	128.3	129.8	130.1	129.9	131.0	130.8
Materials for food manufacturing	123.2	123.1	120.8	122.2	120.5	120.6	120.5	119.1	118.9	119.1
Flour	118.7	109.2	104.3	102.2	102.5	104.2	102.4	103.1	103.6	108.6
Refined sugar <sup>4</sup>	123.6	119.8	121.0	120.6	111.5	111.2	112.0	109.7	104.3	105.0
Crude vegetable oils	116.6	131.1	90.2	81.1	82.5	75.6	72.6	67.0	74.3	71.7
Crude materials <sup>5</sup>	111.1	96.7	98.2	104.0	115.9	125.6	120.8	119.2	124.8	128.3
Foodstuffs and feedstuffs	112.2	103.8	98.7	98.8	104.9	101.9	99.4	95.4	97.6	99.5
Fruits and vegetables and nuts <sup>6</sup>	115.5	117.2	117.4	116.2	119.3	104.8	102.9	99.6	114.6	120.5
Grains	111.2	93.4	80.1	72.7	85.8	78.6	71.0	66.8	70.2	76.3
Slaughter livestock	96.3	82.3	86.4	90.9	102.5	100.4	97.9	92.8	91.1	93.1
Slaughter poultry, live	131.0	141.4	129.9	122.7	123.0	124.2	126.5	119.6	133.6	130.8
Plant and animal fibers	117.0	110.4	86.5	80.8	94.5	90.9	86.9	96.7	99.3	101.4
Fluid milk	97.5	112.6	106.3	109.8	90.0	91.5	95.3	93.0	96.1	93.8
Oilseeds	140.8	114.4	90.8	88.1	102.3	97.1	90.9	87.4	92.8	90.1
Leaf tobacco	105.1	104.6	101.6	106.4	--	--	--	97.0	107.0	106.4
Raw cane sugar	116.8	117.2	113.7	107.5	102.0	104.6	97.0	94.7	99.8	111.3

-- = Not available. 1. Commodities ready for sale to ultimate consumer. 2. Includes all raw, intermediate, and processed foods (excludes soft drinks, alcoholic beverages, and manufactured animal feeds). 3. Commodities requiring further processing to become finished goods. 4. All types and sizes of refined sugar. 5. Products entering market for the first time that have not been manufactured at that point. 6. Fresh and dried.

This table is compiled with data provided by the Bureau of Labor Statistics (BLS). BLS operates a website at <http://stats.bls.gov/blshtml> and a Producer Prices Information Hotline at (202) 606-7705.

## Farm-Retail Price Spreads

Table 8—Farm-Retail Price Spreads

	Annual		1999		2000					
	1997	1998	1999	Oct	May	Jun	Jul	Aug	Sep	Oct
<b>Market basket<sup>1</sup></b>										
Retail cost (1982-84=100)	159.7	163.1	167.3	168.3	170.1	169.7	170.8	171.7	171.9	172.3
Farm value (1982-84=100)	106.2	103.3	98.3	97.1	96.0	96.3	96.0	97.2	98.7	97.9
Farm-retail spread (1982-84=100)	188.6	195.4	204.5	206.7	210.0	209.3	211.0	211.8	211.4	212.4
Farm value-retail cost (%)	23.3	22.2	20.6	20.2	19.8	19.9	19.7	19.8	20.1	19.9
<b>Meat products</b>										
Retail cost (1982-84=100)	144.4	141.6	142.3	144.4	150.1	151.7	152.7	153.9	153.8	152.9
Farm value (1982-84=100)	101.2	84.8	81.6	85.1	87.4	87.5	88.9	89.4	89.8	89.9
Farm-retail spread (1982-84=100)	188.6	200.0	204.7	205.3	214.4	217.6	218.1	220.1	219.4	217.5
Farm value-retail cost (%)	35.5	30.3	29.0	29.8	29.5	29.2	29.5	29.4	29.6	29.8
<b>Dairy products</b>										
Retail cost (1982-84=100)	145.5	150.8	159.6	164.1	159.6	159.5	160.5	161.0	161.6	161.9
Farm value (1982-84=100)	98.0	113.0	107.9	115.5	96.0	97.1	101.7	101.1	102.9	104.0
Farm-retail spread (1982-84=100)	189.3	185.6	207.2	208.9	218.3	217.0	214.7	216.3	215.8	215.3
Farm value-retail cost (%)	32.3	36.0	32.4	33.8	28.9	29.2	30.4	30.1	30.5	30.8
<b>Poultry</b>										
Retail cost (1982-84=100)	156.6	157.1	157.9	158.1	159.6	159.3	161.8	161.3	160.9	162.1
Farm value (1982-84=100)	120.6	126.1	119.0	112.8	119.8	120.4	121.9	115.6	127.2	111.6
Farm-retail spread (1982-84=100)	198.1	192.9	202.7	210.3	205.4	204.1	207.7	213.9	199.7	220.2
Farm value-retail cost (%)	41.2	42.9	40.3	38.2	40.2	40.5	40.3	38.4	42.3	36.9
<b>Eggs</b>										
Retail cost (1982-84=100)	140.0	137.1	128.1	119.8	124.1	125.9	125.5	130.5	132.0	136.1
Farm value (1982-84=100)	99.3	89.6	74.9	55.2	54.0	75.8	64.3	87.1	71.8	88.9
Farm-retail spread (1982-84=100)	213.0	222.5	223.7	235.9	250.1	215.9	235.5	208.4	240.1	220.9
Farm value-retail cost (%)	45.6	42.0	37.6	29.6	27.9	38.7	32.9	42.9	35.0	42.0
<b>Cereal and bakery products</b>										
Retail cost (1982-84=100)	177.6	181.1	185.0	185.2	188.6	187.7	189.6	189.9	188.6	190.1
Farm value (1982-84=100)	107.7	94.4	82.5	77.1	76.1	74.7	70.0	71.8	72.4	77.3
Farm-retail spread (1982-84=100)	187.4	193.2	199.2	200.3	204.3	203.5	206.3	206.4	204.8	205.8
Farm value-retail cost (%)	7.4	6.4	5.5	5.1	4.9	4.9	4.5	4.6	4.7	5.0
<b>Fresh fruit</b>										
Retail cost (1982-84=100)	245.1	258.2	294.3	290.7	282.7	267.8	272.2	277.7	285.1	289.7
Farm value (1982-84=100)	137.0	141.3	153.7	148.0	136.0	135.8	115.8	132.8	140.4	136.7
Farm-retail spread (1982-84=100)	295.0	312.2	359.3	356.6	350.4	328.7	344.4	344.6	351.9	360.3
Farm value-retail cost (%)	17.7	17.3	16.5	16.1	15.2	16.0	13.4	15.1	15.6	14.9
<b>Fresh vegetables</b>										
Retail cost (1982-84=100)	194.6	215.8	209.3	208.9	219.1	217.7	216.7	217.3	218.9	218.6
Farm value (1982-84=100)	118.7	124.5	118.1	88.9	136.0	125.7	127.0	127.6	125.2	112.0
Farm-retail spread (1982-84=100)	233.6	262.7	256.2	270.6	261.8	265.0	262.8	263.4	267.1	273.4
Farm value-retail cost (%)	20.7	19.6	19.2	14.5	21.1	19.6	19.9	19.9	19.4	17.4
<b>Processed fruits and vegetables</b>										
Retail cost (1982-84=100)	147.9	150.6	154.8	156.3	153.7	154	154.5	155.3	154.2	155.7
Farm value (1982-84=100)	115.9	115.1	113.5	112.6	111.6	110.4	110.4	109.9	111.2	110.7
Farm-retail spread (1982-84=100)	157.9	161.7	167.7	169.9	166.8	167.6	168.3	169.5	167.6	169.7
Farm value-retail cost (%)	18.6	18.2	17.4	17.1	17.3	17.0	17.0	16.8	17.1	16.9
<b>Fats and oils</b>										
Retail cost (1982-84=100)	141.7	146.9	148.3	149.0	147.0	146.6	148.1	148.9	148.7	149.7
Farm value (1982-84=100)	109.4	118.9	89.0	82.1	85.8	82.0	78.3	76.1	75.2	73.3
Farm-retail spread (1982-84=100)	153.6	157.2	170.0	173.6	169.5	170.4	173.8	175.7	175.7	177.8
Farm value-retail cost (%)	20.8	21.8	16.2	14.8	15.7	15.0	14.2	13.7	13.6	13.2

See footnotes at end of table, next page.

**Table 8—Farm-Retail Price Spreads (continued)**

	Annual			1999			2000			
	1997	1998	1999	Oct	May	Jun	Jul	Aug	Sep	Oct
Beef, all fresh retail value (cents/lb.)	253.8	253.3	260.5	269.7	274.3	278.6	279.5	280.2	280.3	279.3
Beef, Choice										
Retail value (cents/lb.) <sup>2</sup>	279.5	277.1	287.8	295.4	308.8	311.5	310.0	309.9	313.0	311.8
Wholesale value (cents/lb.) <sup>3</sup>	158.2	153.8	171.6	183.1	193.8	190.7	179.6	172.6	168.6	174.4
Net farm value (cents/lb.) <sup>4</sup>	137.2	130.8	141.1	148.5	153.2	149.2	144.7	138.5	136.6	143.6
Farm-retail spread (cents/lb.)	142.3	146.3	146.7	146.9	155.6	162.3	165.3	171.4	176.4	168.2
Wholesale-retail (cents/lb.) <sup>5</sup>	121.3	123.3	116.2	112.3	115.0	120.8	130.4	137.3	144.4	137.4
Farm-wholesale (cents/lb.) <sup>6</sup>	21.0	23.0	30.5	34.6	40.6	41.5	34.9	34.1	32.0	30.8
Farm value-retail value (%)	49.1	47.2	49.0	50.3	49.6	47.9	46.7	44.7	43.6	46.1
Pork										
Retail value (cents/lb.) <sup>2</sup>	245.0	242.7	241.5	244.7	256.2	260.3	262.3	265.6	265.0	262.1
Wholesale value (cents/lb.) <sup>3</sup>	123.1	97.3	99.0	99.5	119.7	122.1	123.1	117.3	111.9	114.3
Net farm value (cents/lb.) <sup>4</sup>	95.3	61.2	60.4	63.2	89.4	91.7	90.0	80.8	77.2	76.3
Farm-retail spread (cents/lb.)	149.7	181.5	181.1	181.5	166.8	168.6	172.3	184.8	187.8	185.8
Wholesale-retail (cents/lb.) <sup>5</sup>	121.9	145.4	142.5	145.2	136.5	138.2	139.2	148.3	153.1	147.8
Farm-wholesale (cents/lb.) <sup>6</sup>	27.8	36.1	38.6	36.3	30.3	30.4	33.1	36.5	34.7	38.0
Farm value-retail value (%)	38.9	25.2	25.0	25.8	34.9	35.2	34.3	30.4	29.1	29.1

1. Retail costs are based on CPI-U of retail prices for domestically produced farm foods, published monthly by the Bureau of Labor Statistics (BLS). Farm value is the payment for the quantity of farm equivalent to the retail unit, less allowance for by-product. Farm values are based on prices at first point of sale, and may include marketing charges such as grading and packing for some commodities. The farm-retail spread, the difference between the retail value and farm value, represents charges for assembling, processing, transporting and distributing. 2. Weighted-average value of retail cuts from pork and Choice yield grade 3 beef. Prices from BLS. 3. Value of wholesale (boxed beef) and wholesale cuts (pork) equivalent to 1 lb. of retail cuts adjusted for transportation costs and by-product values. 4. Market value to producer for live animal equivalent to 1 lb. of retail cuts, minus value of by-products. 5. Charges for retailing and other marketing services such as wholesaling and in-city transportation. 6. Charges for livestock marketing, processing, and transportation. *Information contact: Veronica Jones (202) 694-5387, William F. Hahn (202) 694-5175*

**Table 9—Price Indexes of Food Marketing Costs**

	Annual			1999				2000		
	1997	1998	1999	I	II	III	IV	I	II	III
	1987=100*									
Labor—hourly earnings and benefits	474.3	490.4	503.3	498.6	503.5	504.2	506.7	508.2	512.0	512.9
Processing	486.0	499.3	511.4	504.2	512.1	513.4	515.6	518.1	523.4	527.6
Wholesaling	536.2	552.5	564.6	565.3	572.8	575.2	580.0	578.9	586.4	587.3
Retailing	435.2	454.1	465.8	463.6	464.2	463.8	465.4	467.1	467.8	465.2
Packaging and containers	390.3	395.5	399.4	390.3	396.4	403.0	407.7	410.3	410.6	413.5
Paperboard boxes and containers	341.9	365.2	373.0	355.7	368.3	380.2	387.8	391.9	413.0	412.4
Metal cans	491.0	487.9	486.6	486.6	486.6	486.6	486.6	489.5	440.1	440.1
Paper bags and related products	441.9	432.9	440.9	425.6	435.7	446.3	455.8	457.3	472.4	477.6
Plastic films and bottles	326.6	322.8	324.2	319.7	321.4	325.9	329.6	329.4	330.6	342.4
Glass containers	447.4	446.8	447.1	447.8	447.8	447.0	445.8	450.1	451.1	451.1
Metal foil	233.4	232.0	227.3	228.2	226.1	226.7	228.0	229.8	231.3	233.8
Transportation services	430.0	428.3	394.0	393.5	394.2	394.2	394.2	392.3	393.3	394.6
Advertising	609.4	624.5	623.7	622.2	622.9	623.9	625.6	633.6	635.0	635.7
Fuel and power	668.5	619.7	651.5	586.6	627.3	681.1	711.9	816.5	822.2	866.1
Electric	499.2	492.1	489.4	479.0	484.0	505.9	488.5	477.2	487.0	523.8
Petroleum	616.7	457.0	565.9	388.4	504.0	613.2	758.1	1,114.0	1,102.2	1,160.6
Natural gas	1,214.0	1,239.4	1,235.6	1,206.3	1,222.8	1,272.7	1,240.4	1,235.3	1,259.8	1,300.7
Communications, water and sewage	302.8	307.6	309.3	309.3	308.5	308.9	310.6	310.3	307.8	308.7
Rent	265.6	260.5	256.9	257.5	257.3	256.4	256.4	256.8	258.0	258.0
Maintenance and repair	514.9	529.3	541.6	537.9	540.7	542.5	545.3	552.2	558.3	564.7
Business services	512.3	522.9	531.9	528.1	530.2	533.3	536.1	540.3	543.2	543.7
Supplies	337.8	332.3	327.7	326.1	325.9	327.1	331.7	365.6	338.2	344.5
Property taxes and insurance	580.1	598.3	619.7	609.6	615.2	622.8	631.3	639.8	647.4	658.6
Interest, short-term	108.9	103.7	103.7	93.2	96.7	109.7	115.2	111.3	116.6	117.7
Total marketing cost index	459.9	467.2	472.2	465.1	470.7	475.2	479.1	486.7	488.8	492.4

Last two quarters preliminary. \* Indexes measure changes in employee earnings and benefits and in prices of supplies used in processing, wholesaling, and retailing U.S. farm foods purchased for at-home consumption. *Information contact: Veronica Jones (202) 694-5387*

## Livestock & Products

**Table 10—U.S. Meat Supply & Use**

	Beg. stocks	Production <sup>1</sup>	Imports	Total supply	Exports	Ending stocks	Consumption		Conversion factor <sup>3</sup>	Primary market price <sup>4</sup>
							Total	Per capita <sup>2</sup>		
	Million lbs. <sup>5</sup>						Lbs.			\$/cwt
<b>Beef</b>										
1997	377	25,490	2,344	28,211	2,136	465	25,611	67	0.700	66.32
1998	465	25,760	2,643	28,868	2,171	393	26,305	68	0.700	61.48
1999	393	26,493	2,874	29,760	2,411	411	26,938	69	0.700	65.56
2000	411	26,895	3,118	30,424	2,594	440	27,390	70	0.700	69
2001	440	25,581	3,070	29,091	2,545	365	26,181	66	0.700	72-78
<b>Pork</b>										
1997	366	17,274	634	18,274	1,044	408	16,823	49	0.776	54.30
1998	408	19,011	705	20,124	1,230	584	18,309	53	0.776	34.72
1999	584	19,308	827	20,720	1,285	489	18,945	54	0.776	34.00
2000	489	18,900	999	20,388	1,258	525	18,605	52	0.776	44
2001	525	19,380	1,005	20,910	1,305	550	19,055	53	0.776	40-43
<b>Veal<sup>6</sup></b>										
1997	7	334	0	341	0	8	333	1	0.83	82
1998	8	262	0	270	0	5	265	1	0.83	82
1999	5	235	0	240	0	5	235	1	0.83	90
2000	5	226	0	231	0	4	227	1	0.83	105
2001	4	208	0	212	0	4	208	1	0.83	105
<b>Lamb and mutton</b>										
1997	9	260	83	352	6	14	332	1	0.89	88
1998	14	251	112	377	6	12	360	1	0.89	74
1999	12	248	113	372	5	9	358	1	0.89	76
2000	9	228	117	354	6	11	337	1	0.89	80
2001	11	220	114	345	4	10	331	1	0.89	80
<b>Total red meat</b>										
1997	759	43,358	3,061	47,178	3,185	894	43,099	118	--	--
1998	894	45,284	3,461	49,639	3,407	994	45,239	123	--	--
1999	994	46,284	3,813	51,092	3,701	914	46,476	125	--	--
2000	914	46,249	4,234	51,397	3,858	980	46,559	124	--	--
2001	980	45,389	4,189	50,558	3,854	929	45,775	121	--	--
<i>c/lb</i>										
<b>Broilers</b>										
1997	641	27,041	5	27,687	4,664	607	22,416	72	0.859	59
1998	607	27,612	5	28,225	4,673	711	22,841	73	0.859	63
1999	711	29,468	4	30,183	4,920	796	24,468	77	0.859	58
2000	796	30,122	6	30,923	5,406	850	24,667	77	0.859	56
2001	850	31,176	4	32,030	5,400	880	25,750	80	0.859	55
<b>Mature chickens</b>										
1997	6	510	0	516	384	7	125	1	1.0	--
1998	7	525	0	533	426	6	101	1	1.0	--
1999	6	554	0	562	393	8	162	1	1.0	--
2000	8	538	0	547	259	5	283	1	1.0	--
2001	5	564	0	571	280	10	281	1	1.0	--
<b>Turkeys</b>										
1997	328	5,412	1	5,741	606	415	4,720	18	1.0	65
1998	415	5,215	0	5,630	446	304	4,880	18	1.0	62
1999	304	5,230	1	5,535	379	254	4,902	18	1.0	69
2000	254	5,364	1	5,619	416	225	4,977	18	1.0	71
2001	225	5,528	1	5,754	420	275	5,058	18	1.0	68
<b>Total poultry</b>										
1997	975	32,964	6	33,944	5,654	1,029	27,261	90	--	--
1998	1,029	33,352	6	34,387	5,545	1,022	27,821	91	--	--
1999	1,022	35,252	7	36,281	5,692	1,058	29,531	96	--	--
2000	1,058	36,023	9	37,090	6,082	1,080	29,927	96	--	--
2001	1,080	37,268	7	38,355	6,100	1,165	31,088	99	--	--
<b>Red meat and poultry</b>										
1997	1,734	76,321	3,067	81,123	8,839	1,923	70,360	208	--	--
1998	1,923	78,637	3,467	84,027	8,951	2,016	73,060	214	--	--
1999	2,016	81,537	3,820	87,372	9,393	1,972	76,007	220	--	--
2000	1,972	82,272	4,243	88,487	9,939	2,060	76,487	220	--	--
2001	2,060	82,657	4,196	88,913	9,954	2,094	76,863	220	--	--

-- = Not available. Values for the last 2 years are forecasts. 1. Total including farm production for red meat and federally inspected plus nonfederally inspected for poultry. 2. Retail-weight basis. 3. Red meat, carcass to retail conversion; poultry, ready-to-cook production to retail weight. 4. Beef: Medium #1, Nebraska Direct 1,100-1,300 lb.; pork: barrows and gilts, Iowa, Southern Minnesota; veal: farm price of calves; lamb and mutton: choice slaughter lambs, San Angelo; broilers: wholesale 12-city average; turkeys: wholesale NY 8-16 lb. young hens. 5. Carcass weight for red meats and certified ready-to-cook for poultry. 6. Beginning in 1989, veal trade is no longer reported separately. *Information contact: LaVerne Williams (202) 694-5190*

**Table 11—U.S. Egg Supply & Use**

	Beg. stocks	Production	Imports	Total supply	Exports	Hatching use	Ending stocks	Consumption		Primary market price*
								Total	Per capita	
	Million doz.							No.		¢/doz.
1994	10.7	6,177.6	3.7	6,192.0	187.6	805.4	14.9	5,184.1	238.7	67.3
1995	14.9	6,215.6	4.1	6,234.6	208.9	847.2	11.2	5,167.3	235.6	72.9
1996	11.2	6,350.7	5.4	6,367.3	253.1	863.8	8.5	5,241.8	236.8	88.2
1997	8.5	6,473.1	6.9	6,488.5	227.8	894.7	7.4	5,358.6	240.1	81.2
1998	7.4	6,657.9	5.8	6,671.2	218.8	921.8	8.4	5,522.2	244.9	75.8
1999	8.4	6,912.0	7.4	6,927.8	161.7	941.7	7.6	5,816.7	255.7	65.6
2000	7.6	7,037.5	9.0	7,054.1	164.8	941.5	10.0	5,937.8	258.7	65.6
2001	10.0	7,100.0	5.0	7,115.0	170.0	965.0	5.0	5,975.0	258.1	65.5

Values for the last year are forecasts. Values for previous year are preliminary. \* Cartoned grade A large eggs, New York. Information contact: LaVerne Williams (202) 694-5190

**Table 12—U.S. Milk Supply & Use<sup>1</sup>**

	Commercial				Total commercial supply	Commercial				CCC net removals		
	Production	Farm use	Farm marketings	Beg. stocks		CCC net removals	Ending stocks	Disappearance	All milk price <sup>1</sup>	Skim solids basis	Total solids basis <sup>2</sup>	
	Million lbs. (milkfat basis)					\$/cwt					Billion lbs.	
1993	150.6	1.8	148.8	4.7	2.8	156.3	6.6	4.5	145.1	12.80	3.9	5.0
1994	153.6	1.7	151.9	4.5	2.9	159.3	4.8	4.3	150.3	12.97	3.7	4.2
1995	155.3	1.6	153.7	4.3	2.9	160.9	2.1	4.1	154.9	12.74	4.4	3.5
1996	154.0	1.5	153.5	4.1	2.9	159.5	0.1	4.7	154.7	14.74	0.7	0.5
1997	156.1	1.4	154.7	4.7	2.7	162.1	1.1	4.9	156.1	13.34	3.7	2.7
1998	157.4	1.4	156.1	4.9	4.6	165.5	0.4	5.3	159.9	15.42	4.0	2.6
1999	162.7	1.4	161.3	5.3	4.7	171.4	0.3	6.1	164.9	14.36	6.5	4.0
2000	167.7	1.3	166.4	6.1	4.2	176.7	0.8	5.5	170.4	12.45	8.6	5.4
2001	167.6	1.3	166.3	5.5	4.0	175.8	0.4	5.5	169.9	12.70	1.8	1.2

Values for latest year are forecasts. Values for the preceding year are preliminary. 1. Delivered to plants and dealers; does not reflect deductions.

2. Arbitrarily weighted average of milkfat basis (40 percent) and solids basis (60 percent). Information contact: Jim Miller (202) 694-5184

**Table 13—Poultry & Eggs**

	Annual		1999		2000					
	1997	1998	1999	Sep	Apr	May	Jun	Jul	Aug	Sep
<b>Broilers</b>										
Federally inspected slaughter certified (mil. lb.)	27,270.7	27,862.7	29,741.4	2,497.9	2,340.5	2,741.9	2,672.9	2,417.6	2,743.7	2,338.8
Wholesale price, 12-city (cents/lb.)	58.8	63.1	58.1	57.2	55.4	55.7	56	56.6	55.5	58.4
Price of grower feed (\$/ton) <sup>1</sup>	157.7	128.8	102.8	99.7	112.3	115.6	108.8	97.4	94.6	95.1
Broiler-feed price ratio <sup>2</sup>	4.7	6.3	7.2	7.2	6.5	6.4	6.8	7.7	7.4	8.2
Stocks beginning of period (mil. lb.)	641.3	606.8	711.1	835.3	804.9	842.6	816.5	813.5	817.2	801.7
Broiler-type chicks hatched (mil.)	8,321.6	8,491.9	8,715.7	700.0	743.5	775.2	748	739.9	739.9	704.9
<b>Turkeys</b>										
Federally inspected slaughter certified (mil. lb.)	5,477.9	5,280.6	5,296.5	454.9	416.5	492.3	483.4	425.3	482.8	422.9
Wholesale price, Eastern U.S. 8-16 lb. young hens (cents/lb.)	64.9	62.2	69.0	76.3	67.4	69.2	70.4	71.6	73.6	76.5
Price of turkey grower feed (\$/ton) <sup>1</sup>	142.7	115.9	95	92.3	102.1	104.9	97.9	88.2	86.7	87.3
Turkey-feed price ratio <sup>2</sup>	5.6	6.7	8.7	9.6	7.8	7.7	8.5	9.5	9.9	10.2
Stocks beginning of period (mil. lb.)	328.0	415.1	304.3	706.8	387.5	413.3	477.0	503.6	524.1	524.8
Poults placed in U.S. (mil.)	321.5	297.8	297.3	21.8	25.1	26.3	27	27.1	24.8	23.2
<b>Eggs</b>										
Farm production (mil.)	77,677	79,941	82,939	6,860	7,013	7,105	6,804	7,063	7,099	6,837
Average number of layers (mil.)	304	313	323	322.4	329	326	325.2	326	325	325.5
Rate of lay (eggs per layer on farms)	255.3	255.4	256.8	21.9	21.3	21.8	20.9	21.7	21.8	21.0
Cartoned price, New York, grade A large (cents/doz.) <sup>3</sup>	81.2	75.8	65.6	62.4	68.5	53.4	64.2	61.9	72.5	67.1
Price of laying feed (\$/ton) <sup>1</sup>	160.0	137.7	124.8	125.6	139.4	165.1	131.0	124.3	104.8	114.9
Egg-feed price ratio <sup>2</sup>	8.8	9.8	9.8	9.3	9.4	6.3	9.6	9.2	13.0	10.5
<b>Stocks, first of month</b>										
Frozen (mil. doz.)	7.7	7.4	8.4	6.7	6.1	5.4	6.2	6.6	10.9	11.3
Replacement chicks hatched (mil.)	424.5	438.3	450.9	39.3	36.6	40.9	36.6	33.1	34.3	36.3

1. Calculated from price ratios that were revised February 1995. 2. Pounds of feed equal in value to 1 dozen eggs or 1 lb. of broiler or turkey liveweight (revised February 1995). 3. Price of cartoned eggs to volume buyers for delivery to retailers. Information contact: LaVerne Williams (202) 694-5190

Table 14—Dairy

	Annual			1999		2000				
	1997	1998	1999	Sep	Apr	May	Jun	Jul	Aug	Sep
Class III (BFP before 2000) 3.5% fat (\$/cwt.)	12.05	14.20	12.43	16.26	9.41	9.37	9.46	10.66	10.13	10.76
Wholesale prices										
Butter, Central States (cents/lb.) <sup>1</sup>	116.2	177.6	125.2	135.8	108.7	122.2	128.6	120.3	120.3	119.1
Am. cheese, Wis. assembly pt. (cents/lb.)	132.4	158.1	142.3	167.3	110.7	110.6	120	125.2	125.5	133.4
Nonfat dry milk (cents/lb.) <sup>2</sup>	110.0	106.9	103.5	104.9	100	100.1	101.2	102.2	102.3	102.4
USDA net removals										
Total (mil. lb.) <sup>3</sup>	1,090.3	365.6	343.5	30.3	77.7	106.9	78	54.5	45.9	37.8
Butter (mil. lb.)	38.4	6.3	3.7	0.5	0.9	0.8	0.7	0.2	0	0
Am. cheese (mil. lb.)	11.3	8.2	4.6	0.4	2.2	4.5	1.9	2.1	1.5	0.9
Nonfat dry milk (mil. lb.)	298.0	326.4	540.6	39.4	75	81.8	61.9	42.1	50.5	40.1
Milk										
Milk prod. 20 states (mil. lb.)	133,314	134,900	140,029	11,200	12,399	12,743	12,083	12,232	11,966	11,500
Milk per cow (lb.)	17,180	17,501	18,103	1,445	1,592	1,635	1,547	1,561	1,526	1,465
Number of milk cows (1,000)	7,760	7,708	7,735	7,753	7,787	7,795	7,810	7,834	7,840	7,849
U.S. milk production (mil. lb.) <sup>4</sup>	156,091	157,348	162,711	12,964	14,385	14,778	14,008	14,168	13,855	13,310
Stocks, beginning <sup>3</sup>										
Total (mil. lb.)	4,714	4,907	5,301	8,313	8,702	9,602	9,983	10,376	10,676	9,580
Commercial (mil. lb.)	4,704	4,889	5,274	8,263	8,638	9,520	9,884	10,255	10,541	9,446
Government (mil. lb.)	10	18	28	50	64	82	100	121	135	134
Imports, total (mil. lb.) <sup>3</sup>	2,698	4,588	4,772	432	358	412	439	448	444	--
Commercial disappearance (mil. lb.) <sup>3</sup>	156,118	159,779	164,911	14,073	13,674	14,607	13,889	14,162	15,236	--
Butter										
Production (mil. lb.)	1,151.2	1,168.0	1,275.0	92.1	115.4	111.2	91.8	87.0	85.6	91.5
Stocks, beginning (mil. lb.)	13.4	20.5	25.9	90.5	97.4	126.6	137.6	144.4	136.5	100.8
Commercial disappearance (mil. lb.)	1,108.7	1,222.5	1,308.6	113.3	86.7	102.7	90.9	101.8	125.6	--
American cheese										
Production (mil. lb.)	3,285.6	3,314.7	3,576.5	281.1	312.5	326.5	310.6	321.7	301.6	288.1
Stocks, beginning (mil. lb.)	379.6	410.3	407.6	508.3	525	547.9	554.6	570.2	613.1	592.4
Commercial disappearance (mil. lb.)	3,269.0	3,338.6	3,586.1	322.0	292.9	321.8	297.5	279.9	329.1	--
Other cheese										
Production (mil. lb.)	4,044.9	4,177.5	4,367.5	360.2	381	410.6	387.0	368.3	384.9	368.8
Stocks, beginning (mil. lb.)	107.3	70.0	109.5	186.4	201.7	200.7	208.8	212.0	221.5	207.2
Commercial disappearance (mil. lb.)	4,366.6	4,452.0	4,678.1	403.8	409.1	432.6	412.7	388	429.6	--
Nonfat dry milk										
Production (mil. lb.)	1,271.6	1,135.4	1,378.2	95.5	147	137.9	128.3	121.7	104.5	96.8
Stocks, beginning (mil. lb.)	71.1	103.3	56.9	108.8	167.9	197.4	197	170.7	189.6	152.1
Commercial disappearance (mil. lb.)	894.1	866.9	791.1	69.3	42.8	57.1	93.1	61.5	92.2	--
Frozen dessert										
Production (mil. gal.) <sup>5</sup>	1,290.0	1,324.3	1,311.8	109.5	117.2	127.3	133.8	127.4	123.1	103.4
	Annual			1999		2000				
	1997	1998	1999	I	II	III	IV	I	II	III
Milk production (mil. lb.)	156,091	157,348	162,711	40,505	42,029	39,771	40,406	42,593	43,171	41,333
Milk per cow (lb.)	16,871	17,189	17,771	4,437	4,591	4,337	4,406	4,636	4,684	4,469
No. of milk cows (1,000)	9,252	9,154	9,156	9,128	9,155	9,171	9,170	9,187	9,217	9,252
Milk-feed price ratio	1.54	1.97	2.03	2.20	1.81	2.12	1.99	1.68	1.67	1.85
Returns over concentrate costs (\$/cwt milk)	9.80	12.15	11.45	13.00	9.90	11.90	10.95	8.95	9.05	9.85

-- = Not available. Quarterly values for latest year are preliminary. 1. Grade AA Chicago before June 1998. 2. Prices paid f.o.b. Central States production area. 3. Milk equivalent, fat basis. 4. Monthly data ERS estimates. 5. Hard ice cream, ice milk, and hard sherbet. *Information contact: LaVerne Williams (202) 694-5190*

Table 15—Wool

	Annual			1998		1999				2000		
	1997	1998	1999	IV	I	II	III	IV	I	II	III	
U.S. wool price (¢/lb.) <sup>1</sup>	238	162	110	115	115	116	110	98	97	120	117	
Imported wool price (¢/lb.) <sup>2</sup>	206	164	136	141	146	142	133	125	133	139	139	
U.S. mill consumption, scoured												
Apparel wool (1,000 lb.)	130,386	98,373	65,468	17,530	17,294	16,815	15,793	13,633	17,142	15,775	--	
Carpet wool (1,000 lb.)	13,576	16,331	15,017	4,388	4,220	3,581	3,183	2,966	3,784	3,327	--	

-- = Not available. 1. Wool price delivered at U.S. mills, clean basis, Graded Territory 64's (20.60-22.04 microns) staple 2-3/4" and up. 2. Wool price, Charleston, SC warehouse, clean basis, Australian 60/62's, type 64A (24 micron). Duty since 1982 has been 10 cents. *Information contact: Mae Dean Johnson (202) 694-5299*

Table 16—Meat Animals

	Annual			1999		2000				
	1997	1998	1999	Oct	May	Jun	Jul	Aug	Sep	Oct
Cattle on feed (7 states, 1000+ head capacity)										
Number on feed (1,000 head) <sup>1</sup>	8,943	9,455	9,021	8,793	9,361	9,411	8,959	8,812	8,972	9,502
Placed on feed (1,000 head)	20,765	19,697	21,446	2,692	1,998	1,413	1,674	2,091	2,286	2,387
Marketings (1,000 head)	19,552	19,440	20,124	1,570	1,863	1,828	1,784	1,895	1,708	1,647
Other disappearance (1,000 head)	701	691	676	63	85	37	37	36	48	50
Market prices (\$/cwt)										
Slaughter cattle										
Choice steers, 1,100-1,300 lb.										
Texas	65.99	61.75	65.89	69.63	71.28	69.41	67.22	65.02	65.43	68.51
Neb. direct	66.32	61.48	65.65	69.58	71.66	69.59	66.46	64.69	67.93	65.14
Boning utility cows, Sioux Falls	34.27	36.20	38.40	39.44	43.50	45.38	43.88	43.00	41.88	38.25
Feeder steers										
Medium no. 1, Oklahoma City										
600-650 lb.	81.34	77.70	82.64	82.03	95.03	95.23	98.07	94.07	90.97	92.15
750-800 lb.	76.19	71.80	76.39	80.53	83.42	86.71	89.25	85.85	83.64	--
Slaughter hogs										
Barrows and gilts, 51-52 percent lean										
National Base converted to live equal.	54.30	34.72	34.02	35.84	50.21	51.48	50.45	45.35	43.49	43.09
Sows, Iowa, S.MN 1-2 300-400 lb.	40.24	20.29	19.26	19.73	33.17	33.70	32.31	32.55	30.72	31.45
Slaughter sheep and lambs										
Lambs, Choice, San Angelo										
	87.95	74.20	75.97	74.81	89.65	78.30	84.17	82.20	82.00	77.50
Ewes, Good, San Angelo										
	49.33	40.90	42.32	36.44	--	44.86	48.00	41.40	43.43	43.18
Feeder lambs										
Choice, San Angelo	104.43	79.59	81.05	75.25	100.45	91.14	93.25	91.70	93.89	92.00
Wholesale meat prices, Midwest										
Boxed beef cut-out value										
Choice, 700-800 lb.										
	102.75	98.60	111.55	120.24	126.00	123.85	115.60	110.33	108.56	112.66
Select, 700-800 lb.										
	96.15	92.19	101.99	104.49	111.19	110.16	106.87	106.59	102.08	102.02
Canner and cutter cow beef										
	64.50	61.49	66.66	66.00	73.60	74.20	75.33	73.04	69.57	78.04
Pork cutout										
	70.87	53.08	53.45	55.75	68.49	70.07	70.45	65.69	63.22	--
Pork loins, bone-in, 1/4 " trim, 14-19 lb.										
	128.75	102.04	100.25	98.98	115.38	132.53	131.73	120.45	119.22	119.31
Pork bellies, 12-14 lb.										
	73.91	52.38	57.43	70.83	97.85	91.99	90.38	75.64	63.94	55.79
Hams, bone-in, trimmed, 20-23 lb.										
	--	--	47.90	55.68	53.36	54.43	60.07	60.99	64.41	65.12
All fresh beef retail price	253.77	253.28	260.50	269.70	274.30	278.60	279.50	280.20	280.30	278.50
Commercial slaughter (1,000 head) <sup>2</sup>										
Cattle										
Steers	36,318	35,465	36,150	3,094	3,176	3,237	2,962	3,260	3,035	--
Heifers	17,529	17,428	17,936	1,475	1,647	1,676	1,600	1,681	1,516	--
Cows	11,528	11,448	11,866	1,051	1,006	1,041	917	1,061	1,022	--
Bull and stags	6,564	5,983	5,708	511	467	464	396	459	444	--
Calves	696	606	639	57	56	56	49	59	52	--
Sheep and lambs	1,575	1,458	1,484	105	92	95	99	100	93	--
Hogs	3,911	3,911	3,698	305	259	260	243	283	269	--
Barrows and gilts	91,960	101,029	101,544	8,943	7,945	7,952	7,357	8,622	8,118	--
Commercial production (mil. lb.)	88,409	97,030	97,738	8,639	7,664	7,654	7,084	8,310	7,840	--
Beef	25,384	25,653	25,656	2,265	2,302	2,369	2,202	2,437	2,275	--
Veal	324	252	250	19	19	19	18	18	17	--
Lamb and mutton	257	248	247	20	17	17	16	17	17	--
Pork	17,244	18,981	18,981	1,698	1,540	1,536	1,408	1,641	1,552	--
Hogs and pigs (U.S.) <sup>3</sup>										
Inventory (1,000 head) <sup>1</sup>										
Breeding (1,000 head) <sup>1</sup>	56,124	61,158	62,206	60,191	60,896	60,776	59,337	57,777	59,397	60,185
Market (1,000 head) <sup>1</sup>	6,578	6,957	6,682	6,527	6,515	6,301	6,244	6,200	6,234	6,266
Farrowings (1,000 head)	49,546	54,200	55,523	53,663	54,380	54,474	53,094	51,578	53,164	53,920
Pig crop (1,000 head)	11,479	12,061	11,666	2,986	2,920	2,844	2,798	2,900	2,903	2,883
Cattle on Feed, 7 states (1,000 head) <sup>4</sup>	99,584	105,004	102,569	26,270	25,860	24,972	24,522	25,786	25,681	--
Steers and steer calves	5,410	5,803	5,432	5,341	4,849	5,286	5,768	5,736	5,326	5,584
Heifers and heifer calves	3,455	3,615	3,552	3,527	3,302	3,479	3,942	3,800	3,602	3,877
Cows and bulls	78	59	37	31	44	28	42	37	31	41

-- = Not available. 1. Beginning of period. 2. Classes estimated. 3. Quarters are Dec. of preceding year to Feb. (I), Mar.-May (II), June-Aug. (III), and Sept.-Nov. (IV). 4. Beginning of period. The 7 states include AZ, CA, CO, IA, KS, NE, and TX. Information contact: Leland Southard (202) 694-5187

## Crops &amp; Products

Table 17—Supply & Utilization<sup>1,2</sup>

	Area			Yield	Production	Total supply <sup>4</sup>	Feed & residual	Other domestic use	Exports	Total use	Ending stocks	Farm price <sup>5</sup>
	Set-aside <sup>3</sup>	Planted	Harvested									
		Mil. Acres	Bu./acre									
<b>Wheat</b>												
1996/97	--	75.1	62.8	36.3	2,277	2,746	308	993	1,002	2,302	444	4.30
1997/98	--	70.4	62.8	39.5	2,481	3,020	251	1,007	1,040	2,298	722	3.38
1998/99	--	65.8	59.0	43.2	2,547	3,373	394	990	1,042	2,427	946	2.65
1999/00*	--	62.7	53.8	42.7	2,299	3,339	284	1,016	1,090	2,390	950	2.48
2000/01*	--	62.5	53.0	41.9	2,223	3,268	250	1,026	1,100	2,376	892	2.45-2.75
		Mil. acres		Lb./acre				Mil. cwt (rough equiv)				\$/cwt
<b>Rice<sup>6</sup></b>												
1996/97	--	2.8	2.8	6,120.0	171.6	207.1	--	6/ 101.6	78.3	179.9	27.2	9.96
1997/98	--	3.1	3.1	5,897.0	183.0	219.4	--	6/ 103.3	88.2	191.5	27.9	9.70
1998/99	--	3.3	3.3	5,663.0	184.4	222.9	--	6/ 114.0	86.8	200.8	22.1	8.89
1999/00*	--	3.5	3.5	5,866.0	206.0	238.1	--	6/ 121.4	89.2	210.6	27.5	6.11
2000/01*	--	3.1	3.1	6,236.0	192.4	230.2	--	6/ 122.9	80.0	202.9	27.3	5.75-6.25
		Mil. acres		Bu./acre				Mil. bu.				\$/bu.
<b>Corn</b>												
1996/97	--	79.2	72.6	127.1	9,233	9,672	5,277	1,714	1,797	8,789	883	2.71
1997/98	--	79.5	72.7	126.7	9,207	10,099	5,482	1,805	1,504	8,791	1,308	2.43
1998/99	--	80.2	72.6	134.4	9,759	11,085	5,471	1,846	1,981	9,298	1,787	1.94
1999/00*	--	77.4	70.5	133.8	9,437	11,239	5,673	1,913	1,937	9,524	1,715	1.80
2000/01*	--	79.6	73.0	137.7	10,054	11,779	5,850	1,975	2,275	10,100	1,679	1.70-2.10
		Mil. acres		Bu./acre				Mil. bu.				\$/bu.
<b>Sorghum</b>												
1996/97	--	13.1	11.8	67.3	795	814	516	45	205	766	47	2.34
1997/98	--	10.1	9.2	69.2	634	681	365	55	212	632	49	2.21
1998/99	--	9.6	7.7	67.3	520	569	262	45	197	504	65	1.66
1999/00*	--	9.3	8.5	69.7	595	660	284	55	256	595	65	1.55
2000/01*	--	9.0	7.7	60.4	463	529	230	50	200	480	49	1.55-1.95
		Mil. acres		Bu./acre				Mil. bu.				\$/bu.
<b>Barley</b>												
1996/97	--	7.1	6.7	58.5	392	529	217	172	31	419	109	2.74
1997/98	--	6.7	6.2	58.1	360	510	144	172	74	390	119	2.38
1998/99	--	6.3	5.9	60.0	352	501	161	170	28	360	142	1.98
1999/00*	--	5.2	4.7	59.2	280	450	136	172	30	338	111	2.13
2000/01*	--	5.8	5.2	61.1	318	459	145	172	40	357	102	2.10-2.40
		Mil. acres		Bu./acre				Mil. bu.				\$/bu.
<b>Oats</b>												
1996/97	--	4.6	2.7	57.7	153	317	172	76	3	250	67	1.96
1997/98	--	5.1	2.8	59.5	167	332	185	72	2	258	74	1.60
1998/99	--	4.9	2.8	60.2	166	348	196	69	2	266	81	1.10
1999/00*	--	4.7	2.5	59.6	146	326	180	68	2	250	76	1.12
2000/01*	--	4.5	2.3	64.2	149	325	180	68	2	250	75	1.05-1.15
		Mil. acres		Bu./acre				Mil. bu.				\$/bu.
<b>Soybeans<sup>7</sup></b>												
1996/97	--	62.6	61.6	35.3	2,177	2,516	112	1,370	851	2,333	183	6.72
1997/98	--	70.0	69.1	38.9	2,689	2,826	156	1,597	873	2,626	200	6.47
1998/99	--	72.0	70.4	38.9	2,741	2,944	201	1,590	805	2,595	348	4.93
1999/00*	--	73.7	72.4	36.6	2,654	3,006	166	1,579	973	2,719	288	4.65
2000/01*	--	74.5	73.0	38.0	2,777	3,068	167	1,600	950	2,717	350	4.40-5.00
								Mil. lbs.				¢/lb.
<b>Soybean oil</b>												
1996/97	--	--	--	--	15,752	17,821	--	14,263	2,037	16,300	1,520	22.50
1997/98	--	--	--	--	18,143	19,723	--	15,262	3,079	18,341	1,382	25.84
1998/99	--	--	--	--	18,081	19,546	--	15,655	2,371	18,027	1,520	19.90
1999/00*	--	--	--	--	17,826	19,431	--	16,054	1,375	17,429	2,001	15.60
2000/01*	--	--	--	--	18,160	20,245	--	16,450	1,650	18,100	2,145	14.00-17.00
								1,000 tons				\$/ton <sup>8</sup>
<b>Soybean meal</b>												
1996/97	--	--	--	--	34,210	34,524	--	27,320	6,994	34,314	210	270.9
1997/98	--	--	--	--	38,176	38,443	--	28,895	9,329	38,225	218	185.5
1998/99	--	--	--	--	37,792	38,109	--	30,657	7,122	37,779	330	138.5
1999/00*	--	--	--	--	37,632	38,012	--	30,459	7,260	37,719	293	167.0
2000/01*	--	--	--	--	38,017	38,375	--	31,000	7,100	38,100	275	160-180

See footnotes at end of table, next page

**Table 17—Supply & Utilization (continued)**

	Area		Yield	Production	Total supply <sup>4</sup>	Feed & residual	Other domestic use	Exports	Total use	Ending stocks	Farm price <sup>5</sup>	
	Set-aside <sup>3</sup>	Planted										Harvested
	<i>Mil. Acres</i>	<i>Mil. Acres</i>										<i>Lb./acre</i>
											<i>¢/lb.</i>	
Cotton <sup>9</sup>												
1996/97	1.7	14.7	12.9	705	18.9	22.0	--	11.1	6.9	18.0	4.0	69.3
1997/98	0.3	13.9	13.4	673	18.8	22.8	--	11.3	7.5	18.8	3.9	65.2
1998/99	--	13.4	10.7	625	13.9	18.2	--	10.4	4.3	14.7	3.9	60.2
1999/00*	--	14.9	13.4	607	17.0	21.0	--	10.2	6.8	17.0	3.9	45.0
2000/01*	--	15.5	13.5	622	17.5	21.5	--	10.0	7.6	17.6	3.9	--

-- = Not available or not applicable. \*November 9, 2000 Supply and Demand Estimates. 1. Marketing year beginning June 1 for wheat, barley, and oats; August 1 for cotton and rice; September 1 for soybeans, corn, and sorghum; October 1 for soybean meal and soybean oil. 2. Conversion factors: Hectare (ha.) = 2.471 acres, 1 metric ton = 2,204.622 pounds, 36.7437 bushels of wheat or soybeans, 39.3679 bushels of corn or sorghum, 45.9296 bushels of barley, 68.8944 bushels of oats, 22.046 cwt of rice, and 4.59 480-pound bales of cotton. 3. Includes diversion, acreage reduction, 50-92, & 0-92 programs. 0/92 & 50/92 set-aside includes idled acreage and acreage planted to minor oilseeds, sesame, and crambe. 4. Includes imports. 5. Marketing-year weighted average price received by farmers. Does not include an allowance for loans outstanding and government purchases. 6. Residual included in domestic use. 7. Includes seed. 8. Simple average of 48 percent protein, Decatur. 9. Upland and extra-long staple. Stocks estimates based on Census Bureau data, resulting in an unaccounted difference between supply and use estimates and changes in ending stocks. *Information contacts: Wheat, rice, feed grains, Jenny Gonzales (202) 694-5296; soybeans, soybean products, and cotton, Mae Dean Johnson (202) 694-5299*

**Table 18—Cash Prices, Selected U.S. Commodities**

	Marketing year <sup>1</sup>			1999		2000				
	1997/98	1998/99	1999/00	Sep	Apr	May	Jun	Jul	Aug	Sep
Wheat, no. 1 HRW, Kansas City (\$/bu.) <sup>2</sup>	3.71	3.08	2.87	2.92	2.84	2.95	3.07	2.97	2.89	3.13
Wheat, DNS, Minneapolis (\$/bu.) <sup>3</sup>	4.31	3.83	3.65	3.55	3.69	3.80	3.78	3.50	3.29	3.17
Rice, S.W. La. (\$/cwt) <sup>4</sup>	18.92	16.79	12.99	14.38	12.31	11.88	11.47	11.43	11.69	11.88
Corn, no. 2 yellow, 30-day, Chicago (\$/bu.)	2.56	2.06	1.97	1.88	2.21	2.25	2.01	1.65	1.61	1.67
Sorghum, no. 2 yellow, Kansas City (\$/cwt)	4.11	3.29	3.10	2.97	3.53	3.75	3.18	2.71	2.76	2.67
Barley, feed, Duluth (\$/bu.)	1.90	--	--	--	--	--	--	--	--	--
Barley, malting Minneapolis (\$/bu.)	2.50	--	--	--	--	--	--	--	--	--
U.S. cotton price, SLM, 1-1/16 in. (¢/lb.) <sup>5</sup>	67.79	60.12	60.20	48.39	53.76	58.31	54.97	55.13	59.33	60.62
Northern Europe prices cotton index (¢/lb.) <sup>6</sup>	72.11	58.97	52.85	49.26	58.90	60.53	59.56	58.40	60.93	61.55
U.S. M 1-3/32 in. (¢/lb.) <sup>7</sup>	77.98	74.08	59.64	56.30	64.31	68.88	--	--	67.95	67.38
Soybeans, no. 1 yellow, 30-day Chicago (\$/bu)	6.51	5.13	5.10	4.65	5.22	5.34	5.03	4.58	4.50	4.71
Soybean oil, crude, Decatur (¢/lb.)	25.84	19.90	20.50	16.50	15.63	16.74	14.59	16.74	16.74	14.34
Soybean meal, 48% protein, Decatur (\$/ton)	185.54	138.50	165.45	156.40	176.45	187.90	187.05	168.45	162.64	181.13

-- = Not available. 1. Beginning June 1 for wheat and barley; Aug. 1 for rice and cotton; Sept. 1 for corn, sorghum, and soybeans; Oct. 1 for soybean meal and oil. 2. Ordinary protein. 3. 14 percent protein. 4. Long grain, milled basis. 5. Average spot market. 6. Liverpool Cotlook "A" Index; average of 5 lowest prices of 13 selected growths. 7. Cotton, Memphis territory growths. *Information contacts: Wheat, rice, and feed, Jenny Gonzales (202) 694-5296; soybeans, soybean products, and cotton, Mae Dean Johnson (202) 694-5299*

**Table 19—Farm Programs, Price Supports, Participation, & Payment Rates**See *Agricultural Outlook*, November 2000.**Table 20—Fruit**

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
<b>Citrus<sup>1</sup></b>										
Production (1,000 tons)	10,860	11,285	12,452	15,274	14,561	15,799	15,712	17,271	17,770	13,633
Per capita consumpt. (lb.) <sup>2</sup>	21.4	19.1	24.4	26.0	25.0	24.1	25.0	27.0	27.1	20.7
<b>Noncitrus<sup>3</sup></b>										
Production (1,000 tons)	15,640	15,740	17,124	16,554	17,339	16,348	16,103	18,363	16,528	17,275
Per capita consumpt. (lb.) <sup>2</sup>	70.4	70.5	73.7	73.8	75.6	73.6	73.9	73.1	76.4	81.3
	1999					2000				
	Oct	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
<b>Grower prices</b>										
Apples (¢/pound) <sup>4</sup>	23.5	21.1	20.5	19.7	18.2	16.1	16.2	19.5	23.3	21.8
Pears (¢/pound) <sup>4</sup>	21.95	19.30	15.65	13.45	10.20	11.00	13.50	14.00	15.85	18.85
Oranges (\$/box) <sup>5</sup>	10.25	3.51	3.54	4.14	4.60	4.43	3.07	2.17	0.93	1.09
Grapefruit (\$/box) <sup>5</sup>	6.80	3.64	3.63	2.82	2.51	1.29	6.14	4.45	6.71	5.17
<b>Stocks, ending</b>										
Fresh apples (mil. lb.)	6,165	3,231	2,465	1,891	1,293	832	412	129	3,299	6,249
Fresh pears (mil. lb.)	515	191	133	105	70	28	40	147	532	536
Frozen fruits (mil. lb.)	1,631	1,244	1,107	1,017	1,011	1,120	1,300	1,303	1,234	1,611
Frozen conc. orange juice (mil. single-strength gallons)	482	776	769	742	802	832	752	595	550	486

-- = Not available. 1. Year shown is when harvest concluded. 2. Fresh per capita consumption. 3. Calendar year. 4. Fresh use. 5. U.S. equivalent on-tree returns. *Information contact: Susan Pollack (202) 694-5251*

**Table 21—Vegetables**

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
<b>Production<sup>1</sup></b>										
Total vegetables (1,000 cwt)	562,938	565,754	689,070	688,824	782,505	747,988	762,952	751,739	726,310	829,731
Fresh (1,000 cwt) <sup>2,4</sup>	254,039	242,733	389,597	387,330	412,880	393,398	409,317	427,183	416,785	448,939
Processed (tons) <sup>3,4</sup>	15,444,970	16,151,030	14,973,630	15,074,707	18,481,238	17,729,497	17,681,732	16,227,819	15,476,230	19,039,620
Mushrooms (1,000 lbs) <sup>5</sup>	749,151	746,832	776,357	750,799	782,340	777,870	776,677	808,678	847,760	854,394
Potatoes (1,000 cwt)	402,110	417,622	425,367	430,349	469,425	445,099	499,254	467,091	475,771	478,216
Sweet potatoes (1,000 cwt)	12,594	11,203	12,005	11,027	13,380	12,821	13,216	13,327	12,382	12,234
Dry edible beans (1,000 cwt)	32,379	33,765	22,615	21,862	28,950	30,689	27,912	29,370	30,418	33,230
	1999					2000				
	Oct	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
<b>Shipments (1,000 cwt)</b>										
Fresh	18,751	25,730	28,425	24,169	32,102	37,167	19,317	21,877	15,097	16,561
Iceberg lettuce	3,624	3,776	3,904	2,859	3,388	4,380	3,228	3,930	3,072	3,216
Tomatoes, all	3,469	4,463	4,553	3,845	4,020	4,272	2,497	3,095	2,473	2,684
Dry-bulb onions	4,178	3,910	3,895	3,364	3,707	3,809	3,140	4,314	3,858	3,606
Others <sup>6</sup>	7,480	13,581	16,073	14,101	20,987	24,706	10,452	10,538	5,694	7,055
Potatoes, all	12,951	17,170	19,972	20,460	16,892	15,085	9,854	12,563	11,272	10,919
Sweet potatoes	371	349	311	337	183	228	145	187	272	325

-- = Not available. 1. Calendar year except mushrooms. 2. Includes fresh production of asparagus, broccoli, carrots, cauliflower, celery, sweet corn, lettuce, honeydews, onions, & tomatoes through 1991. 3. Includes processing production of snap beans, sweet corn, green peas, tomatoes, cucumbers (for pickles), asparagus, broccoli, carrots, and cauliflower. 4. Data after 1991 not comparable to previous years because commodity estimates reinstated in 1992 are included. 5. Fresh and processing agaricus mushrooms only. Excludes specialty varieties. Crop year July 1- June 30. 6. Includes snap beans, broccoli, cabbage, cauliflower, celery, sweet corn, cucumbers, eggplant, bell peppers, honeydews, and watermelons.

*Information contact: Gary Lucier (202) 694-5253*

**Table 22—Other Commodities**

	Annual			1999				2000		
	1997	1998	1999	I	II	III	IV	I	II	III
Sugar										
Production <sup>1</sup>	7,418	7,891	9,083	2,636	1,031	749	4,667	2,681	922	--
Deliveries <sup>1</sup>	9,755	9,851	10,167	2,271	2,594	2,693	2,609	2,348	2,513	--
Stocks, ending <sup>1</sup>	3,377	3,423	3,855	4,219	3,184	1,639	3,855	4,551	3,498	--
Coffee										
Composite green price <sup>2</sup> N.Y. (¢/lb.)	146.49	114.43	88.49	94.37	90.41	77.40	91.79	85.66	75.78	66.73
	1997	Annual 1998	1999	1999				2000		
				Mar	Oct	Nov	Dec	Jan	Feb	Mar
Tobacco										
Avg. price to grower <sup>3</sup>										
Flue-cured (\$/lb.)	1.73	1.76	1.7	--	1.82	1.8	--	--	--	--
Burley (\$/lb.)	1.91	1.90	1.9	1.63	--	1.90	1.91	1.90	1.9	1.8
Domestic taxable removals										
Cigarettes (bil.)	471.4	457.9	432.6	34.9	38.8	37.6	34.0	--	--	--
Large cigars (mil.) <sup>4</sup>	3,552	3,721	3,844.0	332.7	315.6	334.7	320.0	--	--	--

-- = Not available. 1. 1,000 short tons, raw value. Quarterly data shown at end of each quarter. 2. Net imports of green and processed coffee. 3. Crop year July-June for flue-cured, October-September for burley. 4. Includes imports of large cigars. *Information contacts: sugar and coffee, Fannye Jolly (202) 694-5249; tobacco, Tom Capehart (202) 694-5245*

## World Agriculture

**Table 23—World Supply & Utilization of Major Crops, Livestock & Products**

	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00 E	2000/01 F
	<i>Million units</i>									
<b>Wheat</b>										
Area (hectares)	222.5	222.9	222.0	214.5	219.2	230.4	227.8	224.7	216.4	215.2
Production (metric tons)	542.9	562.4	558.7	524.1	538.5	582.8	609.4	588.4	586.3	579.9
Exports (metric tons) <sup>1</sup>	111.2	113.0	101.6	101.4	99.5	103.7	103.8	102.3	108.8	105.9
Consumption (metric tons) <sup>2</sup>	555.5	550.3	561.6	547.5	548.8	577.3	584.2	590.8	595.6	596.0
Ending stocks (metric tons) <sup>3</sup>	132.5	144.5	141.6	118.2	107.9	113.5	138.7	136.3	127.1	111.0
<b>Coarse grains</b>										
Area (hectares)	322.8	326.0	318.7	324.1	313.8	322.8	311.2	308.0	302.6	301.0
Production (metric tons)	810.7	871.8	798.9	871.2	802.8	908.5	884.9	889.8	875.8	859.1
Exports (metric tons) <sup>1</sup>	95.9	92.8	85.8	98.0	87.8	94.1	85.7	96.6	103.3	100.9
Consumption (metric tons) <sup>2</sup>	810.1	843.3	838.7	858.5	839.2	873.0	873.1	867.3	880.8	886.6
Ending stocks (metric tons) <sup>3</sup>	135.8	164.1	124.3	137.0	100.6	136.1	147.9	170.4	165.4	137.8
<b>Rice, milled</b>										
Area (hectares)	147.5	146.4	144.9	147.4	148.1	149.8	151.2	152.3	153.9	151.7
Production (metric tons)	354.7	355.7	355.4	364.5	371.4	380.4	386.8	394.0	402.5	397.7
Exports (metric tons) <sup>1</sup>	14.3	15.0	16.3	20.8	19.7	18.8	27.3	25.1	22.7	24.6
Consumption (metric tons) <sup>2</sup>	356.7	357.7	358.2	366.6	371.4	379.6	383.3	388.7	399.9	401.2
Ending stocks (metric tons) <sup>3</sup>	57.2	55.2	52.5	50.4	50.4	51.2	54.7	60.0	62.6	59.1
<b>Total grains</b>										
Area (hectares)	692.8	695.3	685.6	686.0	681.1	703.0	690.2	685.0	672.9	667.9
Production (metric tons)	1,708.3	1,789.9	1,713.0	1,759.8	1,712.7	1,871.7	1,881.1	1,872.2	1,864.6	1,836.7
Exports (metric tons) <sup>1</sup>	221.4	220.8	203.7	220.2	207.0	216.6	216.8	224.0	234.8	231.4
Consumption (metric tons) <sup>2</sup>	1,722.3	1,751.3	1,758.5	1,772.6	1,759.4	1,829.9	1,840.6	1,846.8	1,876.3	1,883.8
Ending stocks (metric tons) <sup>3</sup>	325.5	363.8	318.4	305.6	258.9	300.8	341.3	366.7	355.1	307.9
<b>Oilseeds</b>										
Crush (metric tons)	185.1	184.4	190.1	208.1	217.5	217.7	225.9	240.9	248.4	249.6
Production (metric tons)	224.3	227.5	229.4	261.9	258.9	261.4	286.6	294.1	300.1	302.5
Exports (metric tons)	37.6	38.2	38.7	44.1	44.3	49.6	54.0	54.6	64.5	60.8
Ending stocks (metric tons)	21.9	23.6	20.3	27.2	22.2	18.0	27.9	30.4	29.6	28.4
<b>Meals</b>										
Production (metric tons)	125.2	125.2	131.7	142.1	147.3	148.4	153.5	164.9	169.9	171.9
Exports (metric tons)	42.2	40.8	44.9	46.7	49.8	50.7	51.9	53.9	55.0	55.2
<b>Oils</b>										
Production (metric tons)	60.6	61.1	63.7	69.6	73.1	74.1	75.0	80.7	84.7	85.9
Exports (metric tons)	21.3	21.3	24.3	27.1	26.0	28.2	29.7	31.4	32.4	32.7
<b>Cotton</b>										
Area (hectares)	34.8	32.6	30.7	32.2	35.9	33.8	33.7	33.0	32.3	32.4
Production (bales)	95.8	82.5	77.1	86.0	93.1	89.6	91.6	84.7	87.1	86.7
Exports (bales)	28.5	25.5	26.8	28.4	27.8	26.9	26.7	23.7	27.2	26.7
Consumption (bales)	86.1	85.9	85.4	84.7	86.0	88.0	87.2	85.1	91.3	92.5
Ending stocks (bales)	37.4	34.7	26.8	29.8	36.6	40.1	43.7	45.1	40.6	35.1
	1991	1992	1993	1994	1995	1996	1997	1998	1999 E	2000 F
<b>Red meat<sup>4</sup></b>										
Production (metric tons)	117.7	117.3	119.3	124.6	129.5	123.6	129.5	134.5	136.4	137.8
Consumption (metric tons)	116.1	115.7	118.3	123.6	127.7	120.7	126.7	131.7	134.2	135.6
Exports (metric tons) <sup>1</sup>	7.5	7.4	7.4	8.1	8.2	8.5	9.0	8.9	9.6	9.6
<b>Poultry<sup>4</sup></b>										
Production (metric tons)	39.6	38.0	40.5	43.2	47.5	50.4	52.7	53.5	55.9	57.9
Consumption (metric tons)	38.4	37.0	39.4	42.0	47.0	49.7	51.9	52.5	55.0	57.1
Exports (metric tons) <sup>1</sup>	2.8	2.4	2.8	3.6	4.5	5.1	5.6	5.7	6.0	6.4
<b>Dairy</b>										
Milk production (metric tons) <sup>5</sup>	377.6	378.4	377.6	378.4	380.7	379.8	380.8	383.1	385.8	390.5

-- = Not available. E = Estimated, F = forecast. 1. Excludes intra-EU trade but includes intra-FSU trade. 2. Where stocks data are not available, consumption includes stock changes. 3. Stocks data are based on differing marketing years and do not represent levels at a given date. Data not available for all countries. 4. Calendar year data. 1990 data correspond with 1989/90, etc. 5. Data prior to 1989 no longer comparable.

Information contacts: Crops, Ed Allen (202) 694-5288; red meat and poultry, Leland Southard (202) 694-5187; dairy, LaVerne Williams (202) 694-5190

## U.S. Agricultural Trade

**Table 24—Prices of Principal U.S. Agricultural Trade Products**

	Annual		1999		2000					
	1997	1998	1999	Oct	May	Jun	Jul	Aug	Sep	Oct
<b>Export commodities</b>										
Wheat, f.o.b. vessel, Gulf ports (\$/bu.)	4.35	3.44	3.04	2.92	3.03	3.15	3.12	3.05	3.31	3.56
Corn, f.o.b. vessel, Gulf ports (\$/bu.)	2.98	2.59	2.30	2.18	2.45	2.12	1.91	1.91	2.05	2.16
Grain sorghum, f.o.b. vessel, Gulf ports (\$/bu.)	2.89	2.54	2.15	1.96	2.36	2.01	1.72	1.87	2.01	2.22
Soybeans, f.o.b. vessel, Gulf ports (\$/bu.)	7.94	6.37	5.02	5.01	5.65	5.37	5.02	4.93	5.19	4.94
Soybean oil, Decatur (¢/lb.)	23.33	25.78	17.51	16.08	16.75	15.65	14.70	14.34	14.24	13.51
Soybean meal, Decatur (\$/ton)	266.70	162.74	141.52	153.57	189.34	177.45	163.38	157.48	174.60	171.52
Cotton, 7-market avg. spot (¢/lb.)	69.62	67.04	52.30	49.41	58.31	54.97	55.12	59.33	60.62	60.52
Tobacco, avg. price at auction (¢/lb.)	182.74	179.77	177.82	181.01	--	--	--	169.51	182.97	181.01
Rice, f.o.b., mill, Houston (\$/cwt)	20.88	18.95	16.99	16.00	14.48	14.38	14.53	14.50	14.56	14.95
Inedible tallow, Chicago (¢/lb.)	20.75	17.67	12.99	16.50	10.00	10.00	9.00	9.00	9.35	10.00
<b>Import commodities</b>										
Coffee, N.Y. spot (\$/lb.)	2.05	1.39	1.05	0.95	0.99	0.90	0.93	0.80	0.82	0.81
Rubber, N.Y. spot (¢/lb.)	55.40	40.57	36.66	37.58	37.76	37.07	36.65	37.82	37.35	37.60
Cocoa beans, N.Y. (\$/lb.)	0.69	0.72	0.47	0.42	0.37	0.38	0.38	0.35	0.36	0.36

-- = Not available. Information contacts: Jenny Gonzales (202) 694-5296, Mae Dean Johnson (202) 694-5299.

**Table 25—Trade Balance**

	Fiscal Year			1999		2000				
	1999	2000	2001 P	Sep	Apr	May	Jun	Jul	Aug	Sep
\$ million										
<b>Exports</b>										
Agricultural	49,148	50,936	51,500	3,965	3,916	4,020	4,056	3,832	4,259	4,085
Nonagricultural	586,606	647,359	--	50,384	53,684	54,237	58,185	50,743	57,735	56,330
Total <sup>1</sup>	635,754	698,295	--	54,349	57,600	58,257	62,241	54,575	61,994	60,415
<b>Imports</b>										
Agricultural	37,310	38,923	39,500	2,876	3,365	3,503	3,299	2,991	3,166	2,922
Nonagricultural	938,948	1,132,257	--	86,384	90,412	96,443	99,828	97,043	103,988	102,722
Total <sup>2</sup>	976,258	1,171,180	--	89,260	93,777	99,946	103,127	100,034	107,154	105,644
<b>Trade Balance</b>										
Agricultural	11,838	12,013	12,000	1,089	551	517	757	841	1,093	1,163
Nonagricultural	-352,342	-484,898	--	-36,000	-36,728	-42,206	-41,643	-46,300	-46,253	-46,392
Total	-340,504	-472,885	--	-34,911	-36,177	-41,689	-40,886	-45,459	-45,160	-45,229

P = Projected. -- = Not available. Fiscal year (Oct. 1-Sep. 30). 1. Domestic exports including Department of Defense shipments (f.a.s. value).

2. Imports for consumption (customs value). Information contact: Mary Fant (202) 694-5272

**Table 26—Indexes of Real Trade-Weighted Dollar Exchange Rates<sup>1</sup>**

	Annual		1999		2000					
	1997	1998	1999	Sep	Apr	May	Jun	Jul	Aug	Sep
	1995 = 100									
Total U.S. Trade	105.5	112.4	110.9	114.2	115.2	116.6	118.4	117.5	118.2	118.2
<b>U.S. markets</b>										
All agricultural trade	103.7	111.4	109.2	117.4	116.4	117.5	118.9	118.3	119.4	118.9
Bulk commodities	107.1	115.9	112.7	117.0	117.0	117.9	119.4	119.1	120.2	119.6
Corn	110.8	121.9	115.8	115.5	115.0	115.6	116.5	116.7	118.0	116.8
Cotton	99.3	112.6	110.1	115.5	114.3	115.3	117.0	117.3	118.3	116.7
Rice	106.2	109.4	108.6	112.0	114.4	115.8	116.8	116.2	117.3	117.1
Soybeans	111.9	121.2	118.1	119.6	122.5	123.8	126.5	125.1	126.1	126.6
Tobacco, raw	117.4	125.5	124.2	124.8	129.7	131.2	133.9	131.6	134.2	135.4
Wheat	102.0	107.1	110.7	114.3	115.2	115.9	116.6	116.7	117.9	117.6
High-value products	106.6	113.0	108.0	117.7	115.9	117.1	118.5	117.7	118.8	118.2
Processed intermediates	106.3	113.2	110.5	115.4	115.9	117.1	119.0	118.1	118.9	119.0
Soymeal	99.1	104.3	103.5	108.7	108.6	109.7	110.9	110.6	111.5	111.4
Soyoil	88.1	87.9	96.2	100.7	103.3	103.9	104.2	104.4	104.6	104.9
Produce and horticulture	109.6	116.8	114.5	116.6	118.3	119.9	121.7	120.4	121.8	121.7
Fruits	109.2	118.9	114.3	115.7	116.0	117.2	118.3	118.0	119.5	118.4
Vegetables	107.3	115.1	112.5	112.0	111.8	113.8	114.6	113.5	114.6	113.4
High-value processed	105.8	111.5	103.8	120.0	115.1	116.1	117.0	116.5	117.7	116.4
Fruit juices	112.6	121.0	117.3	118.9	119.9	121.6	123.1	121.5	123.4	122.9
Poultry	79.6	74.0	61.9	156.9	118.1	118.4	118.0	117.4	116.3	115.4
Red meats	120.5	131.6	118.9	120.0	118.7	119.6	120.1	119.8	122.8	120.1
<b>U.S. competitors</b>										
All agricultural trade	108.3	114.2	115.5	124.5	130.2	132.2	135.9	132.7	134.2	136.9
Bulk commodities	101.5	110.1	109.7	133.9	129.6	131.2	133.6	131.9	133.2	133.9
Corn	108.7	111.3	113.9	122.5	129.4	131.2	134.3	130.9	132.2	135.3
Cotton	105.0	116.0	115.8	132.4	129.9	131.4	133.7	130.8	132.0	134.5
Rice	108.9	123.6	119.3	125.8	125.2	126.1	128.9	127.9	131.3	131.7
Soybeans	93.6	91.7	93.2	136.3	131.7	132.6	135.2	134.6	133.7	133.5
Tobacco, raw	100.3	105.1	104.6	126.4	120.0	120.3	120.8	118.6	118.2	123.3
Wheat	109.5	114.2	116.4	118.8	124.9	127.3	130.5	127.0	128.6	130.7
High-value products	109.6	115.3	116.5	127.7	133.6	135.8	139.8	135.9	137.4	140.5
Processed intermediates	107.2	114.5	115.6	129.6	133.1	135.1	138.6	135.6	137.0	139.1
Soymeal	97.1	95.1	96.1	135.6	133.0	134.1	137.5	136.1	135.5	136.3
Soyoil	99.0	98.3	99.4	125.7	126.3	127.2	130.5	129.3	129.5	130.7
Produce and horticulture	108.3	113.3	115.0	122.7	128.5	130.2	133.7	130.6	131.8	134.4
Fruits	110.0	125.1	122.3	128.5	130.5	131.5	134.4	132.8	135.6	136.5
Vegetables	100.6	102.2	105.0	111.8	117.8	119.3	122.3	119.8	120.4	122.7
High-value processed	111.4	116.4	117.5	128.0	135.3	137.8	142.3	137.7	139.4	143.2
Fruit juices	111.4	117.1	118.1	124.7	131.3	133.7	137.3	133.7	135.4	138.3
Poultry	104.0	106.9	107.7	125.2	129.5	131.5	135.1	132.2	133.8	136.3
Red meats	109.7	114.5	116.2	123.8	131.7	134.0	138.6	134.3	136.1	139.6
<b>U.S. suppliers</b>										
All agricultural trade	101.2	109.6	109.3	115.6	116.0	117.6	120.0	119.3	119.6	119.7
High-value products	101.3	107.2	107.9	113.0	114.5	116.1	118.5	117.4	117.5	118.2
Processed intermediates	102.5	110.3	110.3	115.9	117.5	119.4	121.6	120.2	120.8	121.4
Grains and feeds	105.1	112.5	112.9	113.3	114.3	116.5	118.3	116.6	117.5	117.6
Vegetable oils	106.4	122.4	119.3	123.0	125.3	127.1	130.0	128.4	130.1	130.5
Produce and horticulture	93.7	97.6	99.1	103.3	101.6	102.2	103.6	104.7	103.3	102.9
Fruits	91.7	95.7	96.0	97.8	94.8	96.0	97.4	99.6	98.6	98.2
Vegetables	86.3	88.7	84.0	82.4	80.0	81.2	82.1	84.1	80.8	79.7
High-value processed	104.3	110.0	110.9	116.0	119.1	121.2	124.1	122.0	122.7	124.0
Cocoa and products	105.5	117.8	119.7	128.9	133.7	135.6	137.4	135.9	137.2	136.8
Coffee and products	93.1	97.0	100.0	116.7	112.5	113.0	115.2	116.2	115.3	114.9
Dairy products	106.5	111.7	112.0	124.3	131.0	133.9	138.5	134.2	136.2	140.7
Fruit juices	99.1	100.9	101.5	125.4	123.6	125.3	127.9	127.3	127.2	127.7
Meats	95.9	102.1	105.4	108.9	108.5	109.0	110.1	109.8	110.0	109.7

Real indexes adjust nominal exchange rates for relative rates of inflation among countries. A higher value means the dollar has appreciated.

The weights used for "total U.S. trade" index are based on U.S. total merchandise exports to the largest 85 trading partners. Weights are based on relative importance of major U.S. customers, competitors in world markets, and suppliers to the U.S. Indexes are subject to revision for up to 1 year due to delayed reporting by some countries. High-value products are total agricultural products minus bulk commodities.

Source: Nominal exchange rates are obtained from the IMF International Financial Statistics. Exchange rates for the EU-11 are obtained from the Board of Governors of the Federal Reserve System. Full historical series are available back to January 1970 at <http://usda.mannlib.cornell.edu/data-sets/international/88021/>

1. A major revision to the weighting scheme and commodity definitions was completed in May 2000. This significantly altered the series from previous versions.

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Table 27—U.S. Agricultural Exports &amp; Imports

	Fiscal Year			Sep		Fiscal Year			Sep	
	1999	2000	2001 F	1999	2000	1999	2000	2001 F	1999	2000
	1,000 units					\$ million				
<b>Exports</b>										
Animals, live	--	--	--	--	--	476	608	--	21	41
Meats and preps., excl. poultry (mt) <sup>1</sup>	2,089	2,457	1,800	192	196	4,500	5,480	5,100	419	409
Dairy products	--	--	--	--	--	914	996	900	80	77
Poultry meats (mt)	2,402	2,845	2,700	230	227	1,750	1,961	1,900	160	165
Fats, oils, and greases (mt)	1,387	1,206	1,200	87	112	544	421	--	33	33
Hides and skins, incl. furskins	--	--	--	--	--	1,108	1,479	1,200	84	131
Cattle hides, whole (no.)	17,845	21,837	--	1,346	1,691	844	1,166	--	66	96
Mink pelts (no.)	4,172	4,352	--	200	179	98	111	--	5	6
Grains and feeds (mt) <sup>2</sup>	104,576	104,009	--	9,295	10,326	14,272	13,788	13,600	1,178	1,246
Wheat (mt) <sup>3</sup>	28,806	27,779	29,000	2,476	3,074	3,648	3,378	3,700	303	352
Wheat flour (mt)	958	825	1,000	129	63	177	132	--	18	12
Rice (mt)	3,076	3,299	3,200	165	177	1,010	903	800	49	48
Feed grains, incl. products (mt) <sup>4</sup>	58,398	57,195	60,200	5,541	5,941	5,821	5,483	5,200	519	506
Feeds and fodders (mt)	11,800	13,386	11,600	852	942	2,252	2,496	2,200	167	204
Other grain products (mt)	1,538	1,525	--	132	129	1,363	1,397	--	122	124
Fruits, nuts, and preps. (mt)	3,439	3,736	--	262	323	3,805	3,871	4,300	318	373
Fruit juices, incl.										
froz. (1,000 hectoliters)	12,317	11,902	--	1,192	823	735	716	--	65	55
Vegetables and preps.	--	--	--	--	--	4,245	4,443	3,000	322	338
Tobacco, unmanufactured (mt)	205	180	200	7	8	1,376	1,229	1,300	51	60
Cotton, excl. linters (mt) <sup>5</sup>	884	1,474	1,800	32	73	1,309	1,809	2,600	44	99
Seeds (mt)	579	730	--	42	76	800	787	900	53	58
Sugar, cane or beet (mt)	158	115	--	14	6	56	40	--	5	3
Oilseeds and products (mt)	33,597	36,055	37,800	2,733	2,292	8,638	8,386	8,700	723	553
Oilseeds (mt)	--	--	--	--	--	--	--	--	--	--
Soybeans (mt)	22,974	26,038	27,500	1,919	1,455	4,748	5,070	5,000	375	280
Protein meal (mt)	6,726	6,670	--	509	595	1,101	1,259	--	87	111
Vegetable oils (mt)	2,669	2,130	--	207	139	1,846	1,346	--	129	89
Essential oils (mt)	47	53	--	3	4	507	593	--	37	52
Other	--	--	--	--	--	4,112	4,330	--	372	390
Total	--	--	--	--	--	49,148	50,936	51,500	3,965	4,085
<b>Imports</b>										
Animals, live	--	--	--	--	--	1,411	1,737	1,900	117	132
Meats and preps., excl. poultry (mt)	1,403	1,555	1,600	118	119	3,108	3,722	3,800	275	297
Beef and veal (mt)	943	1,027	--	81	76	2,047	2,405	--	188	186
Pork (mt)	337	402	--	29	32	721	958	--	63	78
Dairy products	--	--	--	--	--	1,572	1,635	1,800	133	126
Poultry and products	--	--	--	--	--	201	288	--	18	23
Fats, oils, and greases (mt)	85	107	--	8	8	56	71	--	4	5
Hides and skins, incl. furskins (mt)	--	--	--	--	--	146	160	--	9	9
Wool, unmanufactured (mt)	29	25	--	1	2	75	66	--	3	6
Grains and feeds	--	--	--	--	--	2,943	3,059	3,000	266	292
Fruits, nuts, and preps.,										
excl. juices (mt) <sup>6</sup>	8,171	8,366	8,600	546	516	4,619	4,546	5,500	285	286
Bananas and plantains (mt)	4,418	4,396	4,600	386	328	1,212	1,128	1,200	97	83
Fruit juices (1,000 hectoliters)	31,655	32,199	34,000	2,616	2,609	772	783	--	63	61
Vegetables and preps.	--	--	--	--	--	4,527	4,657	4,700	309	316
Tobacco, unmanufactured (mt)	217	220	200	20	17	742	651	600	67	50
Cotton, unmanufactured (mt)	144	34	--	11	1	150	28	--	5	0
Seeds (mt)	357	448	--	22	15	457	493	--	29	24
Nursery stock and cut flowers	--	--	--	--	--	1,076	1,165	1,200	90	85
Sugar, cane or beet (mt)	1,692	1,379	--	167	168	606	493	--	72	64
Oilseeds and products (mt)	3,767	4,069	3,800	275	310	1,899	1,873	1,800	139	126
Oilseeds (mt)	1,000	1,103	--	42	82	326	310	--	14	16
Protein meal (mt)	1,131	1,194	--	89	95	147	150	--	12	12
Vegetable oils (mt)	1,637	1,772	--	144	134	1,427	1,413	--	113	98
Beverages, excl. fruit										
juices (1,000 hectoliters)	--	--	--	--	--	4,258	4,702	--	360	376
Coffee, tea, cocoa, spices (mt)	2,520	2,841	--	191	213	5,306	5,218	--	362	367
Coffee, incl. products (mt)	1,294	1,411	1,400	95	96	2,967	2,905	3,000	188	163
Cocoa beans and products (mt)	865	1,046	1,100	68	86	1,531	1,466	1,500	113	131
Rubber and allied gums (mt)	1,148	1,249	1,300	91	83	739	841	900	54	61
Other	--	--	--	--	--	2,646	2,735	--	216	216
Total	--	--	--	--	--	37,310	38,923	39,500	2,876	2,922

F = Forecast. -- = Not available. Projections are fiscal years (Oct.1 through Sept. 30) and are from Outlook for U.S. Agricultural Exports. 1999 and 2000 data are from *Foreign Agricultural Trade of the U.S.* 1. Projection includes beef, pork, and variety meat. 2. Projection includes pulses. 3. Value projection includes wheat flour. 4. Projection excludes grain products. 5. Projection includes linters. 6. Value projection includes juice.

Information Contact: Mary Fant (202) 694-5272

**Table 28—U.S. Agricultural Exports by Region**

	Fiscal year			1999			2000			
	1998	1999	2000	Sep	Apr	May	Jun	Jul	Aug	Sep
	<i>\$ millions</i>									
<b>Region &amp; country</b>										
<b>Western Europe</b>	8,858	7,528	6,712	515	481	438	424	391	470	454
European Union <sup>1</sup>	8,521	6,958	6,373	419	430	413	409	372	425	419
Belgium-Luxembourg	666	602	538	39	32	41	37	31	38	43
France	535	377	348	20	23	23	18	30	26	19
Germany	1,295	1,057	947	73	94	56	40	49	74	74
Italy	729	574	560	22	48	37	53	36	29	30
Netherlands	1,793	1,587	1,459	102	83	78	68	81	84	81
United Kingdom	1,299	1,122	1,033	80	72	87	75	82	79	91
Portugal	186	131	145	9	6	11	4	7	11	5
Spain, incl. Canary Islands	1,133	784	664	31	27	28	42	20	28	24
Other Western Europe	336	570	340	96	51	25	15	19	45	35
Switzerland	236	455	250	88	46	16	9	10	36	27
<b>Eastern Europe</b>	320	190	167	9	10	12	17	11	17	11
Poland	139	73	47	5	3	3	5	7	6	3
Former Yugoslavia	97	47	67	2	3	5	8	2	4	4
Romania	31	18	12	0	1	1	1	1	3	1
<b>Newly Independent States</b>	1,455	881	934	130	56	71	56	39	56	72
Russia	1,103	532	671	85	45	59	45	27	47	41
<b>Asia<sup>2</sup></b>	21,988	20,441	22,051	1,666	1,762	1,833	1,856	1,654	1,814	1,701
West Asia (Mideast)	2,285	1,978	2,363	127	175	171	184	175	215	215
Turkey	658	448	701	13	80	48	51	65	42	35
Iraq	131	9	8	--	--	--	--	--	8	--
Israel, incl. Gaza and W. Bank	389	417	458	29	29	45	47	30	43	41
Saudi Arabia	534	468	462	30	32	35	38	36	52	47
South Asia	626	499	416	46	27	36	34	28	29	40
Bangladesh	114	165	82	21	6	6	4	12	5	4
India	162	189	186	17	17	11	19	10	16	24
Pakistan	275	89	93	1	3	9	5	5	3	6
China	1,515	1,011	1,474	150	97	80	141	120	167	88
Japan	9,462	8,933	9,353	703	754	878	816	688	698	679
Southeast Asia	2,293	2,218	2,602	174	209	169	194	198	208	241
Indonesia	530	499	681	37	61	28	44	79	58	64
Philippines	751	735	866	68	78	73	73	56	70	76
Other East Asia	5,808	5,803	5,844	465	500	499	487	445	497	437
Korea, Rep.	2,257	2,482	2,569	195	209	216	203	202	233	200
Hong Kong	1,568	1,264	1,255	114	96	96	117	88	117	103
Taiwan	1,975	2,047	2,011	156	195	188	167	155	146	135
<b>Africa</b>	2,175	2,160	2,272	168	116	126	206	202	246	255
North Africa	1,475	1,468	1,565	109	66	82	136	132	180	189
Morocco	139	162	141	7	6	11	11	8	9	19
Algeria	281	223	255	19	5	22	27	27	36	22
Egypt	939	1,002	1,094	77	48	40	97	90	127	140
Sub-Sahara	699	693	707	59	50	44	70	70	66	66
Nigeria	140	176	160	17	13	12	12	21	19	14
S. Africa	193	165	164	13	6	11	12	15	8	17
<b>Latin America and Caribbean</b>	11,354	10,495	10,639	851	828	835	770	874	958	904
Brazil	563	366	253	20	22	21	18	16	23	14
Caribbean Islands	1,487	1,453	1,457	106	112	108	121	112	110	111
Central America	1,137	1,209	1,129	82	92	86	80	97	109	97
Colombia	607	468	427	28	32	38	42	41	35	22
Mexico	5,953	5,672	6,329	521	481	517	439	531	599	575
Peru	314	347	201	24	19	5	13	19	11	14
Venezuela	515	458	404	29	37	32	27	30	37	37
<b>Canada</b>	7,013	6,951	7,520	591	613	654	671	604	618	623
<b>Oceania</b>	548	502	490	36	37	31	39	39	51	41
<b>Total</b>	53,711	49,148	50,936	3,965	3,916	4,020	4,056	3,832	4,259	4,085

-- = Not available. Based on fiscal year beginning October 1 and ending September 30. 1. Austria, Finland, and Sweden are included in the European Union. 2. Asia forecasts exclude West Asia (Mideast). NOTE: Adjusted for transshipments through Canada for 1998 and 1999 through December 1999, but transshipments are not distributed by country as previously for 2000. *Information contact: Mary Fant (202) 694-5272*

## Farm Income

Table 29—Value Added to the U.S. Economy by the Agricultural Sector

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
	\$ billion									
Final crop output	81.0	88.9	82.4	100.3	95.7	115.6	112.3	102.1	93.1	95.5
Food grains	7.3	8.5	8.2	9.5	10.4	10.8	10.4	8.9	7.3	6.8
Feed crops	19.3	20.1	20.2	20.3	24.5	27.2	27.0	22.7	19.8	20.7
Cotton	5.2	5.2	5.2	6.7	6.9	7.0	6.3	6.1	4.7	4.9
Oil crops	12.7	13.3	13.2	14.7	15.5	16.4	19.8	17.5	13.6	14.3
Tobacco	2.9	3.0	2.9	2.7	2.5	2.8	2.9	2.8	2.3	1.8
Fruits and tree nuts	9.9	10.1	10.3	10.3	11.1	11.9	13.1	12.2	13.0	11.5
Vegetables	11.6	11.8	13.7	14.0	15.0	14.4	14.7	15.1	15.2	15.9
All other crops	13.1	13.7	13.7	14.7	15.0	15.8	16.9	17.1	17.4	17.9
Home consumption	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Value of inventory adjustment <sup>1</sup>	-1.2	3.2	-5.3	7.2	-5.3	9.1	1.1	-0.5	-0.2	1.2
Final animal output	87.3	87.1	92.0	89.7	87.7	92.0	96.5	94.2	95.1	99.8
Meat animals	50.1	47.7	51.0	46.7	44.9	44.2	49.7	43.3	45.6	51.9
Dairy products	18.0	19.7	19.3	20.0	19.9	22.8	20.9	24.1	23.2	21.3
Poultry and eggs	15.2	15.5	17.4	18.5	19.1	22.5	22.3	22.9	22.9	23.5
Miscellaneous livestock	2.5	2.6	2.9	3.1	3.3	3.4	3.6	3.7	3.7	3.6
Home consumption	0.5	0.5	0.4	0.4	0.4	0.3	0.4	0.3	0.4	0.4
Value of inventory adjustment <sup>1</sup>	1.0	1.0	1.1	1.1	0.2	-1.1	-0.4	-0.3	-0.7	-0.9
Services and forestry	15.4	15.2	17.0	18.1	19.9	20.8	22.1	24.7	26.7	26.9
Machine hire and customwork	1.8	1.8	1.9	2.1	1.9	2.2	2.4	2.2	2.0	2.2
Forest products sold	1.8	2.2	2.5	2.6	2.8	2.6	2.8	3.0	2.9	2.9
Other farm income	4.7	4.1	4.6	4.3	5.8	6.2	6.9	8.7	10.8	10.8
Gross imputed rental value of farm dwellings	7.2	7.2	8.1	9.0	9.4	9.9	10.1	10.8	10.9	11.0
<b>Final agricultural sector output<sup>2</sup></b>	<b>183.7</b>	<b>191.3</b>	<b>191.3</b>	<b>208.0</b>	<b>203.4</b>	<b>228.4</b>	<b>230.9</b>	<b>221.0</b>	<b>214.9</b>	<b>222.2</b>
<i>Minus</i> Intermediate consumption outlays:	94.6	93.4	100.7	104.9	109.7	113.2	121.0	118.5	120.8	126.7
Farm origin	38.6	38.6	41.3	41.3	41.8	42.7	46.8	44.8	45.5	47.2
Feed purchased	19.3	20.1	21.4	22.6	23.8	25.2	26.3	25.0	24.5	24.8
Livestock and poultry purchased	14.1	13.6	14.7	13.3	12.5	11.3	13.8	12.5	13.8	15.0
Seed purchased	5.1	4.9	5.2	5.4	5.5	6.2	6.7	7.2	7.2	7.4
Manufactured inputs	23.2	22.7	23.1	24.4	26.1	28.6	29.2	28.2	27.3	30.2
Fertilizers and lime	8.7	8.3	8.4	9.2	10.0	10.9	10.9	10.6	9.9	10.3
Pesticides	6.3	6.5	6.7	7.2	7.7	8.5	9.0	9.0	8.6	8.7
Petroleum fuel and oils	5.6	5.3	5.4	5.3	5.4	6.0	6.2	5.6	5.8	8.2
Electricity	2.6	2.6	2.7	2.7	3.0	3.2	3.0	2.9	3.0	3.1
Other intermediate expenses	32.8	32.1	36.2	39.2	41.7	41.9	44.9	45.6	48.0	49.3
Repair and maintenance of capital items	8.6	8.5	9.2	9.1	9.5	10.3	10.4	10.4	10.5	10.7
Machine hire and customwork	3.5	3.8	4.4	4.8	4.8	4.7	4.9	5.4	5.3	5.5
Marketing, storage, and transportation	4.7	4.5	5.6	6.8	7.2	6.9	7.1	6.9	7.3	7.8
Contract labor	1.6	1.7	1.8	1.8	2.0	2.1	2.6	2.4	2.6	2.7
Miscellaneous expenses	14.3	13.6	15.2	16.7	18.3	17.8	19.9	20.6	22.3	22.6
<i>Plus</i> Net government transactions:	2.1	2.7	6.9	1.1	0.2	0.2	0.2	4.8	13.1	15.7
+ Direct government payments	8.2	9.2	13.4	7.9	7.3	7.3	7.5	12.2	20.6	23.3
- Motor vehicle registration and licensing fees	0.3	0.4	0.4	0.4	0.5	0.4	0.4	0.5	0.4	0.4
- Property taxes	5.8	6.1	6.2	6.4	6.6	6.7	6.8	6.9	7.1	7.2
<b>Gross value added</b>	<b>91.2</b>	<b>100.5</b>	<b>97.5</b>	<b>104.3</b>	<b>93.9</b>	<b>115.4</b>	<b>110.1</b>	<b>107.3</b>	<b>107.2</b>	<b>111.1</b>
<i>Minus</i> Capital consumption	18.2	18.3	18.3	18.7	19.2	19.4	19.6	19.7	19.9	19.8
<b>Net value added<sup>2</sup></b>	<b>73.0</b>	<b>82.2</b>	<b>79.2</b>	<b>85.6</b>	<b>74.7</b>	<b>96.0</b>	<b>90.6</b>	<b>87.5</b>	<b>87.3</b>	<b>91.3</b>
<i>Minus</i> Factor payments:	34.5	34.6	34.8	36.8	37.8	41.1	42.0	42.9	43.9	45.7
Employee compensation (total hired labor)	12.3	12.3	13.2	13.5	14.3	15.2	16.0	16.9	17.5	18.4
Net rent received by nonoperator landlords	10.1	11.2	10.9	11.8	10.9	12.9	12.8	12.7	12.9	13.3
Real estate and non-real estate interest	12.1	11.0	10.7	11.6	12.6	13.0	13.1	13.4	13.6	14.1
<b>Net farm income<sup>2</sup></b>	<b>38.5</b>	<b>47.7</b>	<b>44.3</b>	<b>48.8</b>	<b>36.9</b>	<b>54.9</b>	<b>48.6</b>	<b>44.6</b>	<b>43.4</b>	<b>45.6</b>

Values in last two columns are preliminary or forecast. 1. A positive value of inventory change represents current-year production not sold by December 1. A negative value is an offset to production from prior years included in current-year sales. 2. Final sector output is the gross value of commodities and services produced within a year. Net value added is the sector's contribution to the National economy and is the sum of income from production earned by all factors of production. Net farm income is farm operators' share of income from the sector's production activities. The concept presented is consistent with that employed by the Organization for Economic Cooperation and Development. *Information contact: Roger Strickland: rogers@ers.usda.gov*  
To confirm that this table contains the current forecast, go to <http://www.ers.usda.gov/briefing/farmincome/fore/fore.htm>

**Table 30—Farm Income Statistics**

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
	<i>\$ billion</i>									
<b>Cash income statement:</b>										
1. Cash receipts	167.9	171.3	177.9	181.1	188.0	199.1	207.6	196.6	188.6	194.5
Crops <sup>1</sup>	82.1	85.6	87.5	92.9	100.8	106.3	111.1	102.5	93.1	94.1
Livestock	85.8	85.7	90.4	88.2	87.1	92.8	96.5	94.1	95.5	100.3
2. Direct Government payments	8.2	9.2	13.4	7.9	7.3	7.3	7.5	12.2	20.6	23.3
3. Farm-related income <sup>2</sup>	8.3	8.0	9.0	9.0	10.5	10.9	12.0	13.9	15.8	15.9
4. Gross cash income (1+2+3)	184.4	188.5	200.3	198.1	205.8	217.4	227.1	222.6	225.0	233.6
5. Cash expenses <sup>3</sup>	134.1	133.5	141.2	147.4	153.2	159.8	168.6	167.2	170.4	178.3
6. Net cash income (4-5)	50.2	54.9	59.1	50.7	52.5	57.6	58.5	55.4	54.6	55.4
<b>Farm income statement:</b>										
7. Gross cash income (4)	184.4	188.5	200.3	198.1	205.8	217.4	227.1	222.6	225.0	233.6
8. Noncash income <sup>4</sup>	7.8	7.8	8.7	9.6	9.9	10.3	10.6	11.3	11.4	11.5
9. Value of inventory adjustment	-0.2	4.2	-4.2	8.3	-5.0	8.0	0.7	-0.7	-0.9	0.3
10. Gross farm income (7+8+9)	191.9	200.4	204.7	215.9	210.7	235.7	238.4	233.2	235.5	245.5
11. Total production expenses	153.4	152.8	160.4	167.1	173.8	180.8	189.8	188.6	192.1	199.8
12. Net farm income (10-11)	38.5	47.7	44.3	48.8	36.9	54.9	48.6	44.6	43.4	45.6

Values for last 2 years are preliminary or forecast. Numbers in parentheses indicate the combination of items required to calculate an item. Totals may not add due to rounding. 1. Includes commodities placed under CCC loans and profits made on loans redeemed. 2. Income from custom labor, machine hire, recreational activities, forest product sales, and other farm sources. 3. Excludes depreciation and perquisites to hired labor. Excludes farm operator dwellings. 4. Value of farm products consumed on farms where produced plus the imputed rental value of farm dwellings.

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To confirm that this table contains the current forecast, go to <http://www.ers.usda.gov/briefing/farmincome/fore/fore.htm>

**Table 31—Average Income to Farm Operator Households<sup>1</sup>**

	1992	1993	1994	1995	1996	1997	1998	1999	2000
	<i>\$ per farm</i>								
Net cash farm business income <sup>2</sup>	11,320	11,248	11,389	11,218	13,502	12,676	14,357	13,194	--
Less depreciation <sup>3</sup>	5,187	6,219	6,466	6,795	6,906	6,578	7,409	7,027	--
Less wages paid to operator <sup>4</sup>	216	454	425	522	531	513	637	499	--
Less farmland rental income <sup>5</sup>	360	534	701	769	672	568	543	802	--
Less adjusted farm business income due to other household(s) <sup>6</sup>	961	872	815	649	1,094	*1,505	1,332	1,262	--
	<i>\$ per farm operator household</i>								
Equals adjusted farm business income	4,596	3,168	2,981	2,484	4,300	3,513	4,436	3,603	--
Plus wages paid to operator	216	454	425	522	531	513	637	499	--
Plus net income from farmland rental <sup>7</sup>	360	--	--	1,053	1,178	945	868	1,312	--
Equals farm self-employment income	5,172	3,623	3,407	4,059	6,009	4,971	5,941	5,415	--
Plus other farm-related earnings <sup>8</sup>	2,008	1,192	970	661	1,898	1,234	1,165	944	--
Equals earnings of the operator household from farming activities	7,180	4,815	4,376	4,720	7,906	6,205	7,106	6,359	4,589
Plus earnings of the operator household from off-farm sources <sup>9</sup>	35,731	35,408	38,092	39,671	42,455	46,358	52,628	57,988	60,058
Equals average farm operator household income	42,911	40,223	42,469	44,392	50,361	52,562	59,734	64,347	64,645
	<i>\$ per U.S. household</i>								
U.S. average household income <sup>10</sup>	38,840	41,428	43,133	44,938	47,123	49,692	51,855	--	--
	<i>Percent</i>								
Average farm operator household income as percent of U.S. average household income	110.5	97.1	98.5	98.8	106.9	105.8	115.2	--	--
Average operator household earnings from farming activities as percent of average operator household income	16.7	12.0	10.3	10.6	15.7	11.8	11.9	10	--

-- = Not available. Values in last two columns are preliminary or forecast. 1. This table derives farm operator household income estimates from the Agricultural Resource Management Study (ARMS) that are consistent with Current Population Survey (CPS) methodology. The CPS, conducted by the Bureau of the Census, is the source of official U.S. household income statistics. The CPS defines income to include any income received as cash. The CPS definition departs from a strictly cash concept by including depreciation as an expense that farm operators and other self-employed people subtract from gross receipts when reporting net cash income. 2. A component of farm-sector income. Excludes income of contractors and landlords as well as the income of farms organized as nonfamily corporations or cooperatives, and farms run by a hired manager. Includes income of farms organized as proprietorships, partnerships, and family corporations. 3. Consistent with the CPS definition of self-employed income, reported depreciation expenses are subtracted from net cash farm income. The ARMS collects data on farm business depreciation used for tax purposes. 4. Wages paid to the operator are excluded because they are not shared among other households that have claims on farm business income. These wages are added to the operator household's adjusted farm business income to obtain farm self-employment income. 5. Gross rental income is excluded because net rental income from farm operation is added below to income received by the household. 6. More than one household may have a claim on the income of a farm business. On average, 1.1 households share the income of a farm business. 7. Includes net rental income from the farm business. Also includes net rental income from farmland held by household members that is not part of the farm business. In 1991 and 1992, gross rental income from the farm business was used because net rental income data were not collected. In 1993 and 1994, net rental income data were collected as part of off-farm income. 8. Wages paid to other operator household members by the farm business, and net income from a farm business other than the one surveyed. In 1996, also includes the value of commodities provided to household members for farm work. 9. Wages, salaries, net income from nonfarm businesses, interest, dividends, transfer payments, etc. In 1993 and 1994, also includes net rental income from farmland. 10. From the CPS. Sources: U.S. Department of Agriculture, Economic Research Service, 1992, 1993, 1994, and 1995 Farm Costs and Returns Survey (FCRS), and 1996 and 1997 Agricultural Resource Management Study for farm operator household data. U.S. Department of Commerce, Bureau of the Census Current Population Survey (PCS), for average household income. Information contact: Bob Hoppe (202) 694-5572 or [rhoppe@ers.usda.gov](mailto:rhoppe@ers.usda.gov)

**Table 32—Balance Sheet of the U.S. Farming Sector**

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
	<i>\$ billion</i>									
Farm assets	844.2	868.3	910.2	935.5	966.7	1,003.7	1,051.5	1,064.2	1,083.7	1,111.7
Real estate	624.8	640.8	677.6	704.1	740.5	769.4	808.4	822.8	846.7	872.9
Livestock and poultry <sup>1</sup>	68.1	71.0	72.8	67.9	57.8	60.3	67.1	62.0	61.3	60.4
Machinery and motor vehicles	85.9	85.4	86.5	87.5	88.5	88.9	89.0	88.6	86.9	86.3
Crops stored <sup>2,3</sup>	22.2	24.2	23.3	23.3	27.4	31.7	32.2	30.1	30.3	31.5
Purchased inputs	2.6	3.9	3.8	5.0	3.4	4.4	5.1	5.3	5.5	5.6
Financial assets	40.5	43.1	46.3	47.6	49.1	49.0	49.7	55.4	53.0	55.0
Total farm debt	139.2	139.1	142.0	146.8	150.8	156.1	165.4	172.7	176.4	176.4
Real estate debt <sup>3</sup>	74.9	75.4	76.0	77.7	79.3	81.7	85.4	89.6	94.2	95.5
Non-real estate debt <sup>4</sup>	64.3	63.6	65.9	69.1	71.5	74.4	80.1	83.1	82.2	81.0
Total farm equity	705.0	729.3	768.3	788.7	815.9	847.6	886.1	891.5	907.3	935.3
	<i>Percent</i>									
Selected ratios										
Debt to equity	19.8	19.1	18.5	18.6	18.5	18.4	18.7	19.4	19.4	18.9
Debt to assets	16.5	16.0	15.6	15.7	15.6	15.6	15.7	16.2	16.3	15.9

Values in the last two columns are preliminary or forecast. 1. As of December 31. 2. Non-CCC crops held on farms plus value above loan rates for crops held under CCC. 3. Includes CCC storage and drying facilities loans, but excludes debt on operator dwellings. 4. Excludes debt for nonfarm purposes. *Information contact: Ken Erickson (202) 694-5565 or erickson@ers.usda.gov*

To confirm that this table contains the current forecast, go to <http://www.ers.usda.gov/briefing/farmincome/fore/fore.ht>

**Table 33—Cash Receipts from Farming**

	Annual		1999		2000					
	1997	1998	1999	Aug	Mar	Apr	May	Jun	Jul	Aug
	<i>\$ million</i>									
Commodity sales <sup>1</sup>	207,596	196,575	188,610	15,387	15,155	13,648	14,992	13,942	15,303	16,129
Livestock and products	96,463	94,112	95,463	8,202	8,694	7,678	8,864	7,888	8,357	8,721
Meat animals	49,681	43,336	45,600	4,123	4,883	3,927	5,127	4,061	4,114	4,825
Dairy products	20,940	24,114	23,204	1,881	1,805	1,724	1,781	1,738	1,778	1,743
Poultry and eggs	22,260	22,942	22,942	1,925	1,762	1,803	1,725	1,826	1,815	1,880
Other	3,581	3,719	3,717	272	244	223	231	262	651	272
Crops	111,134	102,463	93,146	7,185	6,462	5,970	6,128	6,054	6,946	7,408
Food grains	10,411	8,892	7,292	748	457	269	276	786	1,194	812
Feed crops	27,048	22,666	19,752	1,528	1,641	904	958	1,302	1,304	1,507
Cotton (lint and seed)	6,345	6,101	4,696	159	155	61	75	98	84	205
Tobacco	2,874	2,803	2,273	362	40	9	0	0	0	314
Oil-bearing crops	19,802	17,483	13,555	779	963	625	582	713	723	812
Vegetables and melons	14,653	15,145	15,164	1,641	1,113	1,248	1,865	1,397	1,581	1,771
Fruits and tree nuts	13,134	12,238	12,975	1,014	561	876	877	830	1,082	1,028
Other	16,866	17,136	17,441	954	1,532	1,979	1,494	928	978	958
Government payments	7,495	12,209	20,594	995	946	1,059	248	700	396	967
Total	215,092	208,784	209,204	16,381	16,101	14,707	15,240	14,643	15,699	17,096

Annual values for the most recent year are preliminary. 1. Sales of farm products include receipts from commodities placed under nonrecourse CCC loans, plus additional gains realized on redemptions during the period. *Information contacts: Larry Traub (202) 694-5593 or ltraub@ers.usda.gov*  
To receive current monthly cash receipts via e-mail contact Larry Traub.

**Table 34—Cash Receipts from Farm Marketings, by State**

Region and State	Livestock and products				Crops <sup>1</sup>				Total <sup>1</sup>			
	1998	1999	Jul 2000	Aug 2000	1998	1999	Jul 2000	Aug 2000	1998	1999	Jul 2000	Aug 2000
	<i>\$ million</i>											
<b>North Atlantic</b>												
Maine	295	286	21	23	215	229	15	30	510	515	36	52
New Hampshire	69	63	5	5	86	90	6	10	155	153	11	15
Vermont	463	473	37	36	71	68	12	3	534	541	49	39
Massachusetts	108	101	8	8	314	295	28	37	422	396	37	45
Rhode Island	9	8	1	1	40	39	3	2	49	48	4	3
Connecticut	184	180	14	15	298	302	15	10	482	482	29	25
New York	2,092	2,043	160	163	1,055	1,054	153	108	3,146	3,097	313	271
New Jersey	219	187	57	12	609	554	65	67	828	740	121	78
Pennsylvania	2,909	2,877	210	221	1,252	1,193	80	90	4,161	4,070	290	312
<b>North Central</b>												
Ohio	1,854	1,786	154	161	3,064	2,643	190	173	4,918	4,429	344	334
Indiana	1,632	1,581	160	142	2,899	2,792	194	180	4,531	4,373	354	322
Illinois	1,574	1,524	144	143	6,448	5,233	384	312	8,022	6,757	528	455
Michigan	1,320	1,331	124	123	2,186	2,139	165	157	3,506	3,470	290	281
Wisconsin	4,491	4,149	321	334	1,610	1,447	112	150	6,101	5,596	433	484
Minnesota	3,773	3,548	317	330	4,102	3,513	239	300	7,875	7,061	556	629
Iowa	4,753	4,712	608	448	6,300	5,004	321	377	11,053	9,716	929	826
Missouri	2,469	2,477	194	223	2,285	1,779	148	115	4,754	4,256	341	338
North Dakota	555	647	42	48	2,359	2,112	112	150	2,913	2,759	154	198
South Dakota	1,549	1,830	159	200	1,855	1,709	163	236	3,404	3,539	322	436
Nebraska	5,124	5,425	444	550	3,906	3,130	197	229	9,030	8,555	642	779
Kansas	4,539	5,009	443	534	3,408	2,607	409	164	7,946	7,616	852	698
<b>Southern</b>												
Delaware	609	566	48	45	167	153	21	26	776	718	69	71
Maryland	942	937	76	75	571	544	60	41	1,513	1,481	137	115
Virginia	1,565	1,580	136	153	766	704	62	72	2,332	2,283	198	225
West Virginia	335	334	28	30	61	53	5	8	396	387	33	38
North Carolina	3,956	3,850	333	331	3,233	2,838	159	300	7,190	6,688	491	632
South Carolina	764	773	60	68	733	633	49	85	1,497	1,406	109	153
Georgia	3,400	3,334	265	272	2,017	1,907	97	109	5,418	5,241	363	381
Florida	1,390	1,363	101	110	5,573	5,702	281	236	6,963	7,066	382	346
Kentucky	2,171	2,158	442	117	1,603	1,298	36	23	3,773	3,456	477	140
Tennessee	1,039	1,011	81	91	1,166	963	51	71	2,205	1,974	132	162
Alabama	2,587	2,777	206	222	709	662	36	25	3,296	3,438	241	247
Mississippi	2,164	2,143	165	166	1,271	1,031	42	29	3,436	3,174	206	196
Arkansas	3,283	3,397	262	275	2,141	1,863	58	57	5,423	5,259	319	332
Louisiana	631	620	53	54	1,236	1,228	25	45	1,868	1,848	78	98
Oklahoma	2,803	3,135	272	324	962	855	138	77	3,765	3,991	410	402
Texas	8,149	8,480	716	914	5,005	4,572	396	525	13,154	13,052	1,112	1,439
<b>Western</b>												
Montana	883	928	63	128	924	789	46	54	1,808	1,716	108	182
Idaho	1,585	1,603	138	154	1,742	1,744	140	165	3,327	3,347	277	319
Wyoming	680	680	35	38	168	172	9	18	848	852	44	56
Colorado	2,842	3,016	229	305	1,529	1,338	110	122	4,371	4,354	339	427
New Mexico	1,420	1,441	124	141	521	513	66	50	1,941	1,953	189	191
Arizona	921	987	94	104	1,410	1,191	65	42	2,331	2,178	159	146
Utah	723	724	61	58	261	243	22	31	984	967	83	88
Nevada	199	216	15	20	149	118	14	12	348	334	29	32
Washington	1,743	1,658	128	139	3,413	3,275	281	333	5,156	4,933	409	473
Oregon	762	790	67	86	2,199	2,262	197	253	2,961	3,052	264	339
California	6,526	6,714	525	571	18,145	18,087	1,432	1,657	24,671	24,801	1,957	2,228
Alaska	27	29	2	2	18	19	2	2	44	48	5	5
Hawaii	90	86	7	7	423	447	38	39	514	533	45	47
<b>U.S.</b>	94,112	95,463	8,357	8,721	102,463	93,146	6,946	7,408	196,575	188,610	15,303	16,129

Annual values for the most recent year are preliminary. Estimates as of end of current month. Totals may not add because of rounding. 1. Sales of farm products include receipts from commodities placed under nonrecourse CCC loans, plus additional gains realized on redemptions during the period.

Information contact: Larry Traub (202) 694-5593 or ltraub@ers.usda.gov. To receive current monthly cash receipts via e-mail, contact Larry Traub.

Table 35—CCC Net Outlays by Commodity &amp; Function

	Fiscal year									
	1992	1993	1994	1995	1996	1997	1998	1999	2000 E	2001 E
	\$ million									
<b>Commodity/Program</b>										
Feed grains:										
Corn	2,105	5,143	625	2,090	2,021	2,587	2,873	5,402	9,696	3,712
Grain sorghum	190	410	130	153	261	284	296	502	942	252
Barley	174	186	202	129	114	109	168	224	393	128
Oats	32	16	5	19	8	8	17	41	63	55
Corn and oat products	9	10	10	1	0	0	0	0	1	0
Total feed grains	2,510	5,765	972	2,392	2,404	2,988	3,354	6,169	11,095	4,147
Wheat and products	1,719	2,185	1,729	803	1,491	1,332	2,187	3,435	5,417	1,688
Rice	715	887	836	814	499	459	491	911	1,729	769
Upland cotton	1,443	2,239	1,539	99	685	561	1,132	1,882	4,206	1,700
Tobacco	29	235	693	-298	-496	-156	376	113	301	25
Dairy	232	253	158	4	-98	67	291	480	685	149
Soybeans	-29	109	-183	77	-65	5	139	1,289	2,725	3,325
Peanuts	41	-13	37	120	100	6	-11	21	42	60
Sugar	-19	-35	-24	-3	-63	-34	-30	-51	141	90
Honey	17	22	0	-9	-14	-2	0	2	1	3
Wool and mohair	191	179	211	108	55	0	0	10	7	-6
Operating expense <sup>1</sup>	6	6	6	6	6	6	5	4	60	5
Interest expenditure	532	129	-17	-1	140	-111	76	210	626	707
Export programs <sup>2</sup>	1,459	2,193	1,950	1,361	-422	125	212	165	329	691
1988-2000 Disaster/tree/ livestock assistance	1,054	944	2,566	660	95	130	3	2,241	1,549	26
Conservation Reserve Program	0	0	0	0	2	1,671	1,693	1,462	1,587	1,657
Other conservation programs	0	0	0	0	7	105	197	292	382	355
Other	-162	949	-137	-103	320	104	28	588	1,459	1,004
Total	9,738	16,047	10,336	6,030	4,646	7,256	10,143	19,223	32,341	16,395
<b>Function</b>										
Price support loans (net)	584	2,065	527	-119	-951	110	1,128	1,455	1,947	1,248
Cash direct payments: <sup>3</sup>										
Production flexibility contract	0	0	0	0	5,141	6,320	5,672	5,476	5,049	4,057
Market loss assistance	0	0	0	0	0	0	0	3,011	11,054	0
Deficiency	5,491	8,607	4,391	4,008	567	-1,118	-7	-3	0	0
Dairy termination	2	0	0	0	0	0	0	0	0	0
Loan deficiency	214	387	495	29	0	0	478	3,360	6,387	5,259
Oilseed	0	0	0	0	0	0	0	0	463	500
Cotton user marketing	140	114	149	88	34	6	416	280	491	355
Other	0	35	22	9	61	1	0	1	476	520
Conservation Reserve Program	0	0	0	0	2	1,671	1,693	1,435	1,551	1,657
Other conservation programs	0	0	0	0	0	85	156	247	331	302
Noninsured Assistance (NAP)	0	0	0	0	2	52	23	54	75	177
Total direct payments	5,847	9,143	5,057	4,134	5,807	7,017	8,431	13,861	25,877	12,827
1988-99 crop disaster	960	872	2,461	577	14	2	-2	1,913	1,299	0
Emergency livestock/tree/DRAP livestock indemn/forage assist.	94	72	105	83	81	128	5	328	250	26
Purchases (net)	321	525	293	-51	-249	-60	207	668	784	57
Producer storage payments	14	9	12	23	0	0	0	0	0	0
Processing, storage, and transportation	185	136	112	72	51	33	38	62	75	75
Export donations ocean transportation	139	352	156	50	69	34	40	323	617	161
Operating expense <sup>1</sup>	6	6	6	6	6	6	5	4	60	5
Interest expenditure	532	129	-17	-1	140	-111	76	210	626	707
Export programs <sup>2</sup>	1,459	2,193	1,950	1,361	-422	125	212	165	329	691
Other	-403	545	-326	-105	100	-28	3	234	477	598
Total	9,738	16,047	10,336	6,030	4,646	7,256	10,143	19,223	32,341	16,395

1/ Does not include CCC Transfers to General Sales Manager. 2/ Includes Export Guarantee Program, Direct Export Credit Program, CCC Transfers to the General Sales Manager, Market Access (Promotion) Program, starting in FY 1991 and starting in FY 1992 the Export Guarantee Program - Credit Reform, Export Enhancement Program, Dairy Export Incentive Program, & Technical Assistance to Emerging Markets, and starting in FY 2000 Foreign Market Development Cooperative Program and Quality Samples Program. 3/ Approximately \$1.5 billion in benefits to farmers under the Disaster Assistance Act of 1989 were paid in generic certificates and were not recorded directly as disaster assistance outlays. 4/ Includes cash payments only. Excludes generic certificates in FY 86-96. E= Estimated in FY 2001 Mid-Session Review Budget which was released on June 26, 2000 based on April 2000 supply & demand estimates. The CCC outlays shown for 1996-2002 include the impact of the Federal Agriculture Improvement and Reform Act of 1996, which was enacted on April 4, 1996, and FY 2000 and FY 2001 outlays include the impact of the Agricultural Risk Protection Act of 2000, which was enacted on June 20, 2000. Minus (-) indicates a net receipt (excess of repayments or other receipts over gross outlays of funds). Information contact: Richard Pazdalski Farm Service Agency-Budget at (202) 720-3675 or Richard\_Pazdalski@wdc.fsa.usda.gov.

## Food Expenditures

**Table 36—Food Expenditures**

	Annual			2000			Year-to-date cumulative		
	1997	1998	1999	Aug	Sep	Oct	Aug	Sep	Oct
	<i>\$ billion</i>								
Sales <sup>1</sup>									
At home <sup>2</sup>	383.8	392.3	407.3	36.9	34.4	34.2	283.6	318.0	352.2
Away from home <sup>3</sup>	309.5	322.1	343.7	32.6	31.4	32.5	249.3	280.7	313.1
	<i>1998 \$ billion</i>								
Sales <sup>1</sup>									
At home <sup>2</sup>	392.4	392.3	397.8	35.3	32.8	32.6	273.2	306.0	338.6
Away from home <sup>3</sup>	317.4	322.1	335.3	31.0	29.7	30.7	238.6	268.3	299.0
	<i>Percent change from year earlier (\$ billion)</i>								
Sales <sup>1</sup>									
At home <sup>2</sup>	3.8	2.2	3.8	8.1	1.7	-3.9	6.5	6.0	5.0
Away from home <sup>3</sup>	5.9	4.1	6.7	7.3	9.5	8.0	10.6	10.5	10.2
	<i>Percent change from year earlier (1998 \$ billion)</i>								
Sales <sup>1</sup>									
At home <sup>2</sup>	-0.2	0.0	1.4	5.0	-1.0	-6.2	7.2	6.2	4.9
Away from home <sup>3</sup>	3.0	1.5	4.1	4.9	6.8	5.4	11.6	11.1	10.5

-- = Not available. 1. Food only (excludes alcoholic beverages). Not seasonally adjusted. 2. Excludes donations and home production. 3. Excludes donations, child nutrition subsidies, and meals furnished to employees, patients, and inmates. *Information contact: Annette Clauson (202) 694-5389*  
 Note: This table differs from Personal Consumption Expenditures (PCE), table 2, for several reasons: (1) this series includes only food, excluding alcoholic beverages and pet food which are included in PCE; (2) this series is not seasonally adjusted, whereas PCE is seasonally adjusted at annual rates; (3) this series reports sales only, but PCE includes food produced and consumed on farms and food furnished to employees; (4) this series includes all sales of meals and snacks, while PCE includes only purchases using personal funds, excluding business travel and entertainment. For a more complete discussion of the differences, see "Developing an Integrated Information System for the Food Sector," ERS Agr. Econ. Rpt. No. 575, Aug. 1987.

## Transportation

**Table 37—Rail Rates; Grain & Fruit-Vegetable Shipments**

	Annual			1999			2000			
	1997	1998	1999	Sep	Apr	May	Jun	Jul	Aug	Sep P
Rail freight rate index <sup>1</sup> (Dec. 1984=100)										
All products	112.1	113.4	113.0	113.3	113.9	114.6	115.0	115.3	115.0	114.7
Farm products	120.3	123.9	121.8	122.9	121.7	121.7	121.7	122.3	124.2	124.6
Grain food products	107.6	107.4	99.6	100.4	99.7	100.5	100.5	100.5	--	100.4
Grain shipments										
Rail carloadings (1,000 cars) <sup>2</sup>	23.2	22.8	24.4	25.9	22.4	21.9	20.7	22.1	23.4	24.0
Barge shipments (mil. ton) <sup>3</sup>	2.6	3.0	3.5	2.7	3.6	3.5	3.3	4.3	3.3	2.7
Fresh fruit and vegetable shipments <sup>4</sup>										
Piggy back (mil. cwt)	1.1	0.9	0.7	0.8	0.9	1.1	1.0	0.8	0.7	0.8
Rail (mil. cwt)	1.7	1.2	1.1	0.9	1.0	1.4	2.0	1.3	1.0	1.2
Truck (mil. cwt)	42.6	42.2	44.3	37.5	51.5	59.3	56.5	44.4	42.5	38.9

P= Preliminary. R = Revised. -- = Not available. 1. Department of Labor, Bureau of Labor Statistics. 2. Weekly average; from Association of American Railroads. 3. Shipments on Illinois and Mississippi waterways, U.S. Corps of Engineers. 4. Agricultural Marketing Service, USDA.

*Information contact: Jenny Gonzales (202) 694-5296*

## Indicators of Farm Productivity

**Table 38—Indexes of Farm Production, Input Use, & Productivity<sup>1</sup>**

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
	<i>1992 = 100</i>									
Farm output	88	83	89	94	94	100	94	107	101	106
All livestock products	92	93	94	95	98	100	100	108	110	109
Meat animals	95	97	97	96	99	100	100	102	103	100
Dairy products	94	96	95	98	98	100	99	114	115	115
Poultry and eggs	81	83	86	92	96	100	104	110	114	119
All crops	86	75	86	92	92	100	90	106	96	103
Feed crops	84	62	85	88	86	100	76	102	83	98
Food crops	84	76	83	107	82	100	96	97	90	93
Oil crops	88	72	88	87	94	100	85	115	99	107
Sugar	95	91	91	92	96	100	95	106	98	94
Cotton and cottonseed	92	96	75	96	109	100	100	122	110	117
Vegetables and melons	90	81	85	93	97	100	97	113	108	112
Fruit and nuts	95	102	98	97	96	100	107	111	102	102
Farm input <sup>1</sup>	101	100	100	101	102	100	101	102	101	100
Farm labor	101	103	104	102	106	100	96	96	92	100
Farm real estate	100	100	102	101	100	100	98	99	98	99
Durable equipment	120	113	108	105	103	100	97	94	92	89
Energy	102	102	101	100	101	100	100	103	109	104
Fertilizer	106	97	94	97	98	100	111	109	85	89
Pesticides	92	79	93	90	100	100	97	103	94	106
Feed, seed, and purchased livestock inventories	97	96	91	99	99	100	101	102	109	95
Farm output per unit of input	87	83	90	93	92	100	94	105	100	106
Output per unit of labor										
Farm <sup>2</sup>	87	81	86	92	89	100	98	111	110	106
Nonfarm <sup>3</sup>	95	95	96	96	97	100	100	101	--	--

-- = Not available. Values for latest year preliminary. 1. Includes miscellaneous items not shown separately. 2. Source: Economic Research Service.

3. Source: Bureau of Labor Statistics. *Information contact: John Jones (202) 694-5614*

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## Food Supply & Use

### Table 39—Per Capita Consumption of Major Food Commodities<sup>1</sup>

Commodity	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
	<i>Lbs.</i>									
Red meats <sup>2,3,4</sup>	115.6	112.3	111.9	114.0	112.1	114.7	115.1	112.8	111.0	115.6
Beef	65.4	63.9	63.1	62.8	61.5	63.6	64.4	65.0	63.8	64.9
Veal	1.0	0.9	0.8	0.8	0.8	0.8	0.8	1.0	0.9	0.7
Lamb & mutton	1.0	1.0	1.0	1.0	1.0	0.9	0.9	0.8	0.8	0.9
Pork	48.4	46.4	46.9	49.5	48.9	49.5	49.0	45.9	45.5	49.2
Poultry <sup>2,3,4</sup>	53.9	56.3	58.3	60.8	62.5	63.3	62.9	64.1	64.2	65.0
Chicken	40.9	42.4	44.2	46.7	48.5	49.3	48.8	49.5	50.3	50.8
Turkey	13.1	13.8	14.1	14.1	14.0	14.1	14.1	14.6	13.9	14.2
Fish and shellfish <sup>3</sup>	15.6	15.0	14.8	14.7	14.9	15.1	14.9	14.7	14.5	14.8
Eggs <sup>4</sup>	30.5	30.2	30.1	30.3	30.4	30.6	30.2	30.4	30.7	31.8
Dairy products										
Cheese (excluding cottage) <sup>2,5</sup>	23.8	24.6	25.0	26.0	26.2	26.8	27.3	27.7	28.0	28.4
American	11.0	11.1	11.1	11.3	11.4	11.5	11.8	12.0	12.0	12.2
Italian	8.5	9.0	9.4	10.0	9.8	10.3	10.4	10.8	11.0	11.3
Other cheeses <sup>6</sup>	4.3	4.5	4.6	4.7	5.0	5.0	5.0	5.0	5.0	4.8
Cottage cheese	3.6	3.4	3.3	3.1	2.9	2.8	2.7	2.6	2.7	2.7
Beverage milks <sup>2</sup>	224.2	221.8	221.1	218.3	213.4	213.6	209.8	210.0	206.9	204.5
Fluid whole milk <sup>7</sup>	97.5	90.4	87.3	84.0	80.1	78.8	75.3	74.6	72.7	71.6
Fluid lower fat milk <sup>8</sup>	106.5	108.5	109.9	109.3	106.6	106.0	102.6	101.7	99.9	98.5
Fluid skim milk	20.2	22.9	23.9	25.0	26.7	28.8	31.9	33.7	34.3	34.4
Fluid cream products <sup>9</sup>	7.8	7.6	7.7	8.0	8.0	8.1	8.4	8.7	9.0	9.2
Yogurt (excluding frozen)	4.2	4.0	4.2	4.2	4.3	4.7	5.1	4.8	5.2	5.1
Ice cream	16.1	15.8	16.3	16.3	16.1	16.1	15.7	15.9	16.4	16.6
Lowfat ice cream <sup>10</sup>	8.4	7.7	7.4	7.1	6.9	7.6	7.5	7.6	7.9	8.3
Frozen yogurt	2.0	2.8	3.5	3.1	3.5	3.5	3.5	2.6	2.1	1.9
All dairy products, milk equivalent, milkfat basis <sup>11</sup>	563.8	568.4	565.6	565.9	574.1	586.0	583.9	574.7	577.7	582.3
Fats and oils--total fat content	60.5	63.0	64.8	66.8	69.7	68.0	66.4	65.3	64.9	65.3
Butter and margarine (product weight)	14.6	15.3	15.0	15.4	15.8	14.8	13.7	13.5	12.8	12.5
Shortening	21.5	22.2	22.4	22.4	25.1	24.1	22.5	22.3	20.9	20.9
Lard and edible tallow (direct use)	1.8	2.2	1.8	3.5	3.4	4.2	4.4	4.8	4.1	5.2
Salad and cooking oils	24.4	25.3	26.4	27.2	26.9	26.2	26.9	26.2	28.6	27.9
Fruits and vegetables <sup>12</sup>	656.0	656.1	650.3	677.7	691.3	705.8	694.3	710.9	717.9	699.6
Fruit	278.0	272.6	255.3	283.8	283.1	291.0	284.8	290.2	296.8	281.4
Fresh fruits	122.9	116.3	113.0	123.5	124.5	126.3	124.1	128.1	131.9	131.8
Canned fruit	21.2	21.0	19.8	22.9	20.7	21.0	17.5	18.8	20.4	17.3
Dried fruit	13.2	12.1	12.3	10.8	12.6	12.8	12.8	11.3	10.8	12.8
Frozen fruit	4.1	3.8	3.8	3.9	3.7	3.8	4.2	4.0	3.7	4.2
Selected fruit juices	116.4	119.0	106.0	122.1	121.2	126.7	125.8	127.7	129.3	115.0
Vegetables	378.0	383.5	395.0	393.9	408.3	414.7	409.5	420.7	421.1	418.1
Fresh	172.2	167.1	167.4	171.1	178.2	184.6	179.1	184.1	190.4	186.5
Canning	102.4	111.6	114.4	112.2	112.9	112.4	110.8	109.5	107.8	108.0
Freezing	67.4	66.8	72.6	70.9	76.0	78.4	79.9	84.7	81.9	82.3
Dehydrated and chips	29.8	31.0	32.8	31.5	33.6	31.0	31.3	34.5	32.7	32.9
Pulses	6.3	7.1	7.8	8.1	7.7	8.4	8.4	8.0	8.3	8.4
Peanuts (shelled)	7.0	6.0	6.5	6.2	6.1	5.8	5.7	5.7	5.9	5.9
Tree nuts (shelled)	2.2	2.4	2.2	2.2	2.4	2.3	1.9	2.0	2.1	2.3
Flour and cereal products <sup>13</sup>	174.2	181.6	183.0	185.6	189.7	192.4	190.3	196.3	197.6	195.0
Wheat flour	129.7	136.0	137.0	138.9	143.3	144.5	141.8	148.7	149.5	145.9
Rice (milled basis)	14.8	15.8	16.2	16.7	16.7	18.1	18.9	17.8	18.4	18.9
Caloric sweeteners <sup>14</sup>	133.1	136.9	137.9	141.2	144.4	147.3	149.8	150.7	154.0	155.1
Coffee (green bean equiv.)	10.1	10.3	10.3	10.0	9.1	8.2	8.0	8.9	9.3	9.5
Cocoa (chocolate liquor equiv.)	4.0	4.3	4.6	4.6	4.3	3.9	3.6	4.2	4.1	4.4

-- = Not available. 1. In pounds, retail weight unless otherwise stated. Consumption normally represents total supply minus exports, nonfood use, and ending stocks. Calendar-year data, except fresh citrus fruits, peanuts, tree nuts, and rice, which are on crop-year basis. 2. Totals may not add due to rounding. 3. Boneless, trimmed weight. Chicken series revised to exclude amount of ready-to-cook chicken going to pet food as well as some water leakage that occurs when chicken is cut up before packaging. 4. Excludes shipments to the U.S. territories. 5. Whole and part-skim milk cheese. Natural equivalent of cheese and cheese products. 6. Includes Swiss, Brick, Muenster, cream, Neufchatel, Blue, Gorgonzola, Edam, and Gouda. 7. Plain and flavored. 8. Plain and flavored, and buttermilk. 9. Heavy cream, light cream, half and half, eggnog, sour cream, and dip. 10. Formerly known as ice milk. 11. Includes condensed and evaporated milk and dry milk products. 12. Farm weight. 13. Includes rye, corn, oats, and barley products. Excludes quantities used in alcoholic beverages, corn sweeteners, and fuel. 14. Dry weight equivalent.

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