

AGRICULTURAL OUTLOOK



Economics Editor
Dennis A. Shields
(202) 694-5331
dshields@ers.usda.gov

Associate Economics Editors
Judith E. Sommer
Richard Magleby
(202) 694-5615
Lewrene Glaser

Managing Editor
Mary Reardon
(202) 694-5136

Art Director
Cynthia Ray

Statistics Coordinator
David Johnson
(202) 694-5324

Photo Researchers
Lindsay Mann
Shashunga Clayton

Briefs

- 2** *Field Crops:* Abundant Field Crop Supplies Expected in 2001/02
- 3** *Livestock, Dairy, & Poultry:* Meat and Poultry Production To Rise Slightly in 2002
- 5** *Specialty Crops:* Plenty of California Peaches & Nectarines Expected in 2001

Commodity Spotlight

- 6** *Mexican Cattle Exports to U.S.: Current Perspectives*
Rhonda Skaggs, Leland Southard, & others

World Agriculture & Trade

- 10** *China's Fruit & Vegetable Sector: A Changing Marketing Environment*
Dennis A. Shields & Francis C. Tuan

Policy

- 14** *Using Farm-Sector Income as a Policy Benchmark*
Mitch Morehart & others
- 20** *Impact of Government Payments to Farmers Varies by Level of Profitability & Household Income*
Jeffrey Hopkins
- 22** *Government Payments to Farmers Contribute to Rising Land Values*
James Ryan, Charles Barnard, & Robert Collender
- 27** *Falling Prices & National Farm Policy: The Northern Great Plains*
Stephen J. Vogel & Kenneth Hanson

Statistical Indicators

- | | |
|--|---|
| 32 Summary | 49 World Agriculture |
| 33 U.S. & Foreign Economic Data | 50 U.S. Agricultural Trade |
| 35 Farm Prices | 54 Farm Income |
| 37 Producer & Consumer Prices | 59 Food Expenditures |
| 39 Farm-Retail Price Spreads | 59 Transportation |
| 41 Livestock & Products | 59 Indicators of Farm Productivity |
| 45 Crops & Products | 60 Food Supply & Use |

Published 10 times per year by the Economic Research Service, U.S. Department of Agriculture. Materials may be reprinted without permission. Current and back issues available at www.ers.usda.gov/epubs/pdf/agout/ao.htm.

Contents have been approved by the World Agricultural Outlook Board and the summary released May 18, 2001. Price and quantity forecasts are based on the May10, 2001 *World Agricultural Supply and Demand Estimates*.

Subscriptions: \$65 per year (\$130 to foreign addresses, including Canada). Order from ERS-NASS, 5285 Port Royal Rd., Springfield, VA 22161. Or call 1-800-999-6779 or 1-703-605-6220. Checks payable to ERS-NASS.

The next issue (AGO-283) is scheduled for mailing on August 3, 2001. If not delivered by August 17, call (202) 694-5127 (please have mailing label handy). The full text will also be distributed electronically; call (202) 694-5050.

Cover photo: Valley of garlic in Fujian Province, China. Dennis A. Shields.

China's fruit & vegetable sector. . . Mexico's cattle exports. . . U.S. payments to farmers. . . Farm income & policy

Abundant Farm Commodity Supplies Shape Markets

Large supplies of major U.S. field crops are expected again in 2001/02, keeping downward pressure on farm prices for the fifth consecutive year, according to USDA's first forecast for the season. U.S. soybean supplies for 2001/02 are expected to be record large, and average farm price is forecast to drop about 5 percent from 2000/01. Corn prices are expected to remain relatively unchanged, as higher carry-in stocks of corn largely offset lower production. Wheat deviates from the general projection, with production expected to decline 12 percent and season-average farm price to rise 16 percent (midpoint of forecast range).

Production of red meat and poultry in 2002 is forecast at nearly 83 billion pounds, up 1 percent from that expected this year, and marginally higher than record production in 2000. Continuing increases in pork and poultry production, bolstered by profitability and continued low corn and soybean meal prices, will more than offset a modest decline in beef production. Although red meat and poultry supplies are at record levels, relatively strong domestic and foreign demand is maintaining prices.

China's Fruit & Vegetable Sector in a Changing Market Environment

China's longstanding potential as a strong competitor in international fruit and vegetable trade will likely be realized over the next several years. Although China exports less than 1 percent of its fruit and vegetable production, private-sector investment—both domestic and foreign—is currently creating world-class operations that deliver high-quality fruits and vegetables within China and to international markets. Growth in domestic demand for fruits and vegetables, improvements in marketing practices, and China's future agricultural production policies will largely determine how soon and how strongly China's produce sector affects U.S. and world markets.



Mexican Cattle Exports to U.S.: Current Perspectives

For generations, cattle have played a key role in bilateral trade between the U.S. and Mexico, and the composition of cattle trade has remained relatively constant over the years. The U.S. exports breeding stock and cattle for slaughter to Mexico, while Mexico exports primarily feeder cattle (young stock to finish gaining weight in feedlots) to the U.S. The U.S. is expected to remain a major market for Mexican cattle producers, who raise cattle suited for feeding with seasonal forage supplies.

Using Farm-Sector Income as a Policy Benchmark

Measures of farm-sector income are valuable indicators of how well U.S. agriculture is performing, but they may not fully capture the financial situations of farmers and farm families. Intended policy outcomes and actual results often diverge because aggregate measures do not reveal the wide variations in income and circumstances among various farm groups, do not reflect off-farm income and wealth, do not reveal farmers' problems with servicing debt, and give no indication of how many farms fail financially.

High levels of government payments to the U.S. farm sector have forestalled a significant drop in national farm income in recent years. While payments boost both profitability and household income, they enhance rates of return disproportionately for farms that have low and high rates of return relative to other farms. Likewise, the effect of direct payments on farm household income is greatest for households with the lowest and highest measured levels of economic well-being.

Government Payments to Farmers Contribute to Rising Land Values

Value of agricultural land depends largely on its expected future earnings from farming. Income from government payments indirectly supports farmland values and contributes to higher rents, generally benefiting farmland owners. But for farmers who rent a large share of the acreage they operate, higher rental rates raise fixed costs and increase the risk of operating losses if commodity prices and government payments decline. ERS analysis indicates that the contribution of government payments to U.S. farmland value rose from about 13 percent during 1990-97 to 25 percent during 1998-2001.

Falling Prices & National Farm Policy: The Northern Great Plains

Fluctuating crop prices and farm incomes can affect the economic well-being of rural communities and even entire regions. This is especially so in the Northern Great Plains—where farm production and food processing account for one-fifth of total regional output and almost one-tenth of employment. Low crop prices during 1998-2000 triggered marketing loan benefits (MLBs) and emergency market loss assistance payments (MLAs), propping up farm income and generating spillover effects throughout the regional economy. A regional economywide model shows that MLBs reduce job losses in crop production and cut by half the negative effect of low prices on gross regional product. MLA-type lump-sum transfers do little to offset reductions in crop production and employment induced by low crop prices.

Briefs

Field Crops

Abundant Field Crop Supplies Expected in 2001/02

Large supplies of major U.S. field crops are expected again in 2001/02, keeping downward pressure on season-average farm prices for the fifth consecutive year, according to USDA's first forecast of production and prices. Wheat deviates from the general projection, with production expected to decline 12 percent and season-average farm price to rise 16 percent (midpoint of forecast range).

U.S. *soybean* supplies for 2001/02 are expected to be record large, exceeding 3 billion bushels for the third consecutive year. Plantings are forecast up 3 percent from 74.5 million acres in 2000/01, in part because the soybean loan rate has supported expected returns and because per-acre costs of fertilizer and energy inputs are lower than those of corn. If realized, this will be the ninth consecutive increase for soybeans. Assuming trend yields, domestic soybean production is anticipated to jump 8 percent to a record 2,985 million bushels. With abundant U.S. and foreign supplies, the season-average farm price is anticipated to weaken for the fifth year in a row—to \$3.90-\$4.50 per bushel, with the midpoint down from an expected \$4.40 in 2000/01.

Record competitor soybean supplies (e.g., Brazilian) will limit U.S. exports in 2001/02, particularly in the first half of the marketing year. Nevertheless, at 980 million bushels, USDA expects strong U.S. soybean exports next season, supported by a large U.S. crop, low domestic prices, and a slowdown in foreign oilseed supply growth. A modest gain is projected for domestic crush, based on increased domestic meal use. With expected large gains in domestic production, U.S. ending soybean stocks are projected to be nearly double those in 2000/01.

U.S. *corn* production in 2001 is projected to decline 4 percent to 9,575 million bushels, the sixth consecutive crop of more than 9 billion bushels. Producers are planning to reduce corn acreage by 4 per-

cent as well, and yields are forecast slightly above trend due to above-average planting progress. Total domestic supplies are anticipated to decrease only 1 percent because higher carry-in stocks largely offset lower production.

Domestic use of corn in 2001/02 is expected to fall less than 1 percent because of fewer cattle on feed and increased competition from larger sorghum supplies. U.S. corn exports are anticipated to be slightly higher next season, as competition from foreign exporters subsides. With ending stocks large and relatively unchanged year-over-

year, corn prices are expected to remain weak. The U.S. average farm price in 2001/02 is expected to be \$1.65-\$2.05 per bushel, with a midpoint similar to the forecast for 2000/01.

U.S. *wheat* plantings for the 2001 crop are expected to decline for the fifth consecutive year. Also, fewer of the planted acres are expected to be harvested for grain, especially in Oklahoma, Kansas, and South Dakota, where weather has been adverse. Production is projected to fall nearly 12 percent to 1,961 million bushels. With smaller carry-in stocks and fairly steady imports, wheat supplies are expected to decline substantially from 2000/01. Food and seed uses of wheat are expected to rise slightly next season, partially offsetting a decline in feed and residual uses that reflect smaller wheat supplies and attractive corn prices.

U.S. Field Crops—Market Outlook

	Area		Yield	Production	Total supply	Domestic use	Exports	Ending stocks	Farm price
	Planted	Harvested							
	—Mil. acres—		Bu/acre		—Mil. bu—				\$/bu
Wheat									
2000/01	62.5	53.0	41.9	2,223	3,263	1,334	1,100	829	2.63
2001/02	60.3	50.3	39.0	1,961	2,886	1,295	1,000	591	2.75-3.35
Corn									
2000/01	79.5	72.7	137.1	9,968	11,693	7,795	1,900	1,998	1.80-1.90
2001/02	76.7	69.9	137.0	9,575	11,583	7,740	1,925	1,918	1.65-2.05
Sorghum									
2000/01	9.2	7.7	60.9	470	535	265	215	55	1.75-1.85
2001/02	9.4	8.3	69.3	575	630	230	230	55	1.50-1.90
Barley									
2000/01	5.8	5.2	61.1	318	457	297	58	102	2.15
2001/02	5.3	4.8	61.8	295	432	297	30	105	1.95-2.35
Oats									
2000/01	4.5	2.3	64.2	149	335	253	2	80	1.10
2001/02	4.4	2.2	60.6	134	319	233	2	84	0.90-1.30
Soybeans									
2000/01	74.5	72.7	38.1	2,770	3,063	1,778	990	295	4.40
2001/02	76.7	75.6	39.5	2,985	3,283	1,803	980	500	3.90-4.50
			Lbs./acre		—Mil. cwt (rough equiv.)—				\$/cwt
Rice									
2000/01	3.06	3.04	6,281	190.9	228.6	121.3	83	24.3	5.55-5.65
2001/02	3.09	3.07	6,061	186.0	220.8	122.9	76	21.9	5.25-5.75
			Lbs./acre		—Mil. bales—				¢/lb.
Cotton									
2000/01	15.52	13.05	632	17.19	21.13	9.2	6.4	5.5	53.3
2001/02	15.61	14.20	635	18.80	24.31	9.0	9.0	6.3	*

Based on May 10, 2001 *World Agricultural Supply and Demand Estimates*.

*USDA is prohibited from publishing cotton price projections.

Economic Research Service, USDA

Foreign use is expected to increase slightly (more so in Asia), but exportable supplies in major foreign countries will continue to be large. Thus, relatively higher priced U.S. wheat will face intense competition in the world market. As a result, wheat exports are projected to decline 100 million bushels to 1 billion next season. Nevertheless, total use is projected to exceed production next season, and ending stocks are expected to be down. The expected price range for 2001/02 is \$2.75-\$3.35 per bushel, compared with an estimated \$2.63 per bushel for 2000/01.

U.S. *rice* plantings are expected to be 3.1 million acres in 2000/01, 1 percent higher than last season when prices were relatively low. However, with a forecast trend yield below last year's record, production is projected to fall almost 3 percent from last year's harvest of 191 million cwt. Long-grain rice production is anticipated to rise 5 percent, while short- and medium-grain rice production is projected to drop 19 percent. The projected total supply in 2001/02 is expected to be more than 3 percent below 2000/01, and ending stocks are projected to fall 10 percent. But relatively large world supplies and low global prices will place downward pressure on U.S. prices. The season-average farm price for rice is expected to fall to

\$5.25-\$5.75 per cwt, from \$5.55-\$5.65 in 2000/01.

Total domestic use of rice (including food, seed, industrial, and residual) is projected to expand 1 percent to 123 million cwt. Total exports are anticipated to fall, with shipments of rough rice remaining the same while milled rice exports are expected to decline 13 percent. U.S. rice exports will face tough competition from major foreign exporters. U.S. imports—mainly aromatic varieties from India and Pakistan—are projected to increase 2 percent in 2001/02.

U.S. *cotton* production is projected to increase 9 percent to 18.8 billion bushels due to higher planted acreage and yields. A third consecutive annual rise in area is attributable to higher expected net returns for cotton versus competing crops. Ending stocks are projected to increase 800,000 bales or 15 percent, with a stocks-to-use ratio of 35 percent.

Domestic mill use of cotton is anticipated to be marginally lower in 2001/02 as competition from textile imports offsets growth in retail demand. In contrast, U.S. exports of raw cotton in 2001/02 are projected to soar to 9 million bales—a 41-

Planted area for field crops, excluding winter wheat, is based on USDA's *Prospective Plantings* report for 2001, released on March 30. Harvested area is based on historical averages for harvested-to-planted ratios. Yields are derived from historical trends or averages, except for winter wheat where survey results are used, and for corn where a statistical model is used based on trend, weather, and planting progress. With planting still underway and harvest several months away for most crops, growing conditions could alter final production levels. U.S. crop prices are influenced not only by weather domestically and in other countries, but also by changing U.S. and global demand conditions.

percent increase over the previous season and the highest level since 1994/95.

Exports are expected to benefit from a modest recovery in world consumption, large exportable supplies in the U.S., and strong preseason sales. As a result, U.S. share of world cotton trade is expected to increase from 25 percent to 32 percent.



Gregory K. Price (202) 694-5315
gprice@ers.usda.gov

Livestock, Dairy, & Poultry

Meat & Poultry Production To Rise Slightly in 2002

Red meat and poultry production in 2002 is forecast at nearly 83 billion pounds, up 1 percent from this year and marginally higher than record production in 2000. Continuing increases in pork and poultry production, bolstered by profitability and continued low corn and soybean meal prices, will more than offset a modest decline in beef production.

Although red meat and poultry supplies are at record levels, relatively strong domestic and foreign demand is maintaining prices. Prices for both fed and feeder cattle are expected to post modest gains in

2002 as supplies continue to decline.

Wholesale broiler prices are also expected to post a modest gain due to continuing gains in exports. Increased pork production will push hog prices lower.

Due to drought in the summer of 2000 and increased hay feeding during the harsh winter of 2000/01, forage supplies were tight. As a result, *beef* producers continued to reduce their breeding herds in 2000 and early 2001. As of April 1, heifers on feed were up 3 percent from last year and 11 percent over 1999. Many of the heifers that might have been bred this spring and

retained in the herd are already on feed. These heifers on feed will moderate this year's decline in beef production. However, for the rest of this year, producers are expected to retain heifers for the breeding herd rather than place them on feed. As a result of heifer retention and lower cattle inventories, beef production will likely decline 4-5 percent this year and about 2-3 percent in 2002.

Cattle inventories have been decreasing since 1996. Continuing declines in the breeding herd have resulted in what will likely be the smallest calf crop in 2001 since at least the 1950s, and the calf crop in 2002 will likely drop even further.

With expectations of higher prices, especially for cattle that will grade Choice, producers are likely to hold back more heifers for breeding following this year's

Briefs

U.S. Livestock and Poultry Products—Market Outlook

		Beginning stocks	Production	Imports	Total supply	Exports	Ending stocks	Consumption Total	Per capita	Primary market price
		<i>Million lbs.</i>							<i>Lbs.</i>	<i>\$/cwt</i>
Beef	2001	525	25,680	3,060	29,265	2,500	390	26,375	66.5	74-78
	2002	390	25,081	3,075	28,456	2,540	385	25,621	64.1	77-83
Pork	2001	477	19,160	965	20,602	1,405	475	18,722	52.3	44-46
	2002	475	19,755	1,000	21,230	1,400	500	19,330	53.6	41-45
										<i>¢/lb.</i>
Broilers	2001	798	30,286	4	31,088	5,925	700	24,463	75.7	57-60
	2002	700	31,163	4	31,867	6,200	740	24,927	76.5	59-64
Turkeys	2001	241	5,528	1	5,770	480	275	5,014	18.1	66-69
	2002	275	5,625	1	5,901	495	275	5,130	18.3	66-71
		<i>Million doz.</i>							<i>No.</i>	<i>¢/doz.</i>
Eggs*	2001	11.4	7,140.5	5.7	7,157.6	153	10	6,050.2	261.4	74-77
	2002	10.0	7,270.0	8.0	7,288.0	165	10	6,143.0	263.3	68-73

Based on May 10, 2001 *World Agricultural Supply and Demand Estimates*.

*Total consumption does not include eggs used for hatching.

See appendix tables 10 and 11 for complete definition of terms.

Economic Research Service, USDA

calf crop, provided adequate forage is available. This will further reduce an already much lower feeder cattle supply, which was down 2 percent below a year ago on April 1. Feeder cattle supplies are expected to continue to decline over the next couple of years until the cattle herd begins to expand.

Fed-cattle prices are expected to average around \$80 per cwt in 2002, up from the mid-\$70s this year. Lower feeder cattle supplies will boost feeder cattle prices into the low-\$90s in 2002, from the high-\$80s this year. Following record high levels early this year, retail beef prices are expected to rise only slightly in 2002 in the face of large competing meat supplies.

Pork production in 2002 is forecast at 19.7 billion pounds, up 3 percent from this year. Hog slaughter will likely be up about 2 percent and the average dressed weight is expected to be a pound heavier. The March *Hogs and Pigs* report indicates the inventory of all hogs and pigs was up 2 percent from 2000. The number of hogs kept for breeding was up 1 percent, consistent with the March-August farrowing intentions (up 1 percent from actual farrowings a year ago). Pigs farrowed during this period will reach slaughter weight in late 2001 and early 2002.

Pork producers are gradually expanding production this year and are expected to continue the slow rate of expansion through 2002. Changing industry structure and producers' financial problems in late 1998 and 1999 have muted the response to favorable returns in 2000 and first-half 2001. Many smaller producers exited the industry in the late 1990s, and others may still be recovering from the financial problems of that time.

To expand production, larger and mid-sized producers face a more complicated process than in the recent past. Expansion now entails securing financing, obtaining building and waste management permits from state and local authorities, and hiring and training staff. In addition, vertical coordination—through either marketing or production contracts—is replacing the spot market sales prevalent in past years. The factors that complicate expansion are likely muting the peaks and valleys of the hog production cycle.

Hog prices are expected to average in the low- to mid-\$40s per cwt in 2002, compared with the mid-\$40s this year. Competing poultry meat supplies will continue to be large. The effect of foot-and-mouth disease in the European Union—especially in Denmark, a major player in the world pork market—adds uncertainty to price forecasts.

Retail pork prices are expected to rise 1-3 percent in 2002, about the same increase expected this year. Strong retail beef prices increase the competitive position of pork.

Poultry output in 2002 is expected to rise about 3 percent, compared with a less than 1-percent increase likely this year. With continued low feed costs, improving net returns will probably encourage a 3-percent boost in *broiler* production in 2002, compared with an expected marginal increase this year. Wholesale broiler prices will likely reach 59-64 cents per pound, compared with 57-60 cents this year. Key to higher broiler prices is the continuing strong export market, especially Russia and China.

Turkey production is expected to increase about 2 percent in 2002, compared with a 4-percent rise this year. Turkey prices are expected to average about the same in 2002 as this year, around 68 cents per pound. **AO**

For further information, contact:

Leland Southard, coordinator; Ron Gustafson, cattle; Leland Southard, hogs; Mildred Haley, world pork; Dale Leuck, world beef; David Harvey, poultry. All are at (202) 694-5180.

Specialty Crops

Plenty of California Peaches & Nectarines Expected in 2001

Despite some adverse winter and spring weather, California should produce a plentiful supply of peaches and nectarines this year. The state is expected to harvest a plum crop even lighter than last year's below-average crop, however. California's stone fruit (peach, nectarine, and plum) orchards—which account for most of U.S. stone fruit production—have received less rainfall than usual, even with heavy rains in early March and early April. With most of these orchards equipped with pumps and wells, crop moisture requirements have been met thus far. Still, California's stone fruit growers continue to worry about water supply shortages, especially this summer.

Part of the blame for the predicted smaller plum crop lies with the heavy early-March rains and part with an April hail storm. The rains hampered bee pollination of plum varieties that were already in full bloom. (They had no effect on early-variety self-pollinating peaches and nectarines.) Also contributing to the decline in plum production is the switch by some producers to pluots, a hybrid of plums and apricots, by grafting onto plum limbs.

The hail storm swept California's stone fruit orchards on April 7, after all varieties of peaches, nectarines, and plums had set fruit. While the ultimate damage from the storm remains uncertain, industry sources indicated that nectarines and plums seem most affected, perhaps because their smooth skin offers less protection than the fuzzy skin of peaches.

On the plus side, California stone fruit orchards received 1,243 chill hours (when temperatures remain below 45 degrees Fahrenheit), compared with the average of 1,146 chill hours required to achieve full dormancy, an essential stage for the development of strong fruit. As a result, con-

sumers will still find an abundance of good quality California peaches and nectarines this summer, according to the California Tree Fruit Agreement (CTFA)—a grower-funded organization that promotes fresh-market stone fruit.

USDA forecasts total production of peaches in California (both freestone and cling varieties) to decrease 5 percent to 1.77 billion pounds in 2001. Total peach production was 1.87 billion pounds in 2000 and 1.82 billion in 1999. Harvesting of early peach varieties started the week of April 15, early nectarine varieties a week later, and early plum varieties around mid-May.

Figures from CTFA indicate that packout (number of 25-pound boxes harvested) of California stone fruit in 2001 will be down 11 percent from last year. While the fresh-market peach and nectarine harvests are expected down from last year, they will be near the 5-year averages for both crops. Packout of peaches—both yellow and white flesh varieties—is projected to decline 7 percent from last year. (The April hailstorm affected mostly the summer yellow peach varieties.) The nectarine packout is also projected down 7 percent from 2000, while the plum packout is projected down by 18 percent.

Peaches account for more than 70 percent of all stone fruit produced in the U.S. South Carolina and Georgia follow California's 72 percent share of peach production at a far distance, averaging about 6 and 4 percent of the U.S. total over the past 3 years. In 2000, production in the two states was 150 and 115 million pounds, respectively. This year, freezing temperatures throughout the Southeast in early March damaged some peaches in northern Georgia. As of the last week of April, 70 percent of Georgia's peach crop

appeared to be in good condition; 81 percent of South Carolina's peach crop appeared to be in fair to good condition.

Domestic and export prices for stone fruit in 2001 depend on several factors and cannot be predicted with certainty. In 2000, grower prices for plums and nectarines averaged lower than the previous year, while grower prices for peaches averaged 3 percent higher, even with the larger crop. Much of the increase sprang from higher prices for processing peaches, and prices for fresh-market peaches averaged slightly lower. Last summer's retail prices for fresh-market peaches averaged 1 percent below 1999, but 8 percent above the average of the last 5 years (1995-99). Although supplies in California this summer are expected to be ample to meet summer stone fruit demand, reduced production and good quality may push up stone fruit prices from last year.

What could also help boost prices are export markets as strong as last year's, when U.S. exports of fresh peaches (including nectarines) and fresh plums were up 15 percent and 12 percent from the year before. Shipments to all three major U.S. markets for fresh peaches were up (Canada, 1 percent; Taiwan, 29 percent; and Mexico, 42 percent), as were shipments to the two major export markets for U.S. fresh plums (Canada, up 2 percent; and Taiwan, 16 percent). Plum exports to Hong Kong were steady.

Although Japan opened its market last year for the first time to U.S. fresh nectarines, it did so late in the season; domestic supplies were already scarce and only a small volume was shipped. This summer, the Japanese market will open for U.S. nectarines around June 15, according to CTFA, when U.S. supplies are ample. On the downside, poor economic conditions in Japan and slower growth in Taiwan this year may weaken demand for U.S. stone fruit. **AO**

Agnes Perez (202) 694-5255
acperez@ers.usda.gov

Commodity Spotlight



Leland Southard

Mexican Cattle Exports to U.S.: Current Perspectives

For generations, cattle have played a key role in bilateral trade between the U.S. and Mexico. Cattle account for nearly all U.S. livestock imports from Mexico and 5-10 percent of U.S. agricultural imports from Mexico. The composition of cattle trade has remained relatively constant over the years: the U.S. exports breeding stock and cattle for slaughter to Mexico, while Mexico exports primarily feeder cattle (young stock to finish gaining weight in feedlots) to the U.S. Cattle are exported to the U.S. as forage supplies in Mexico decline seasonally.

The relationship among all industry players is unusually strong. Cattle producers in Mexico, cattle brokers in the border region, and cattle buyers in the U.S. have maintained close links through decades of political and economic upheaval, drought, and impediments to trade imposed by both the U.S. and Mexican governments. Some ranchers (or their extended families) even produce cattle in both countries.

Since implementation of the North American Free Trade Agreement (NAFTA) in 1994, total agricultural trade between Mexico and the U.S. has grown steadily. However, given a long history of firmly established business relationships and relatively free movement of people and ani-

mals across the border, U.S.-Mexico cattle trade has not been affected substantially. Since 1994, cattle trade between the two countries has been affected more by Mexican economic events, drought, and Mexican export regulations requiring an export license. Imports of feeder cattle from Mexico, for instance, are not notably different now than in the early 1990s. The outlook for U.S.-Mexico cattle trade remains favorable, as Mexican ranchers become increasingly sophisticated in producing and marketing cattle to send across the border.

The history of U.S. imports of Mexican feeder cattle can be divided into three periods: 1961-84, 1985-95, and 1996-2000. In the first period, policy shifts by the Mexican government on cattle exports and U.S. concerns about disease and parasites made for a relatively unstable trade environment. From 1985 to 1995, U.S. imports more than tripled due to stabilization of the Mexican cattle industry, continued disease control efforts, and genetic improvements in Mexican herds.

In the mid-1990s, producers in northern Mexico faced extreme drought, economy-wide instability, and a dramatic devaluation of the peso—all of which led them to sell record numbers of Mexican feeder

cattle (1.6 million) to the U.S. in 1995. Following liquidation of that year's herd, the domestic supply contracted and the number of animals entering the U.S. the next year decreased 72 percent to 456,000. Imports have gradually recovered since then and in 2000 reached 1.2 million animals.

In 1999, feeder cattle from Mexico made up about 5 percent of the U.S. inventory of calves weighing less than 500 pounds and 7 percent of the entire stock of U.S. cattle and calves on feed (13.2 million animals). Annual Mexican feeder cattle exports to the U.S. typically amount to 3-5 percent of Mexico's total inventory of cattle.

According to the Mexican government, the number of feeder cattle exported depends on rainfall, related forage supplies, the Mexican cattle cycle (rise and fall of cattle inventory over time in response to changing prices), U.S. cattle market prices, exchange rates, and overall condition of the Mexican economy. Most feeder cattle destined for the U.S. market are steers; the extra veterinary costs involved in exporting spayed heifers keep their numbers relatively low. Although exact figures are not available, cattle used in rodeos account for an estimated 5 percent of Mexico's cattle exports to the U.S.

Feeder Cattle Ports of Entry

Mexican feeder cattle currently cross into the U.S. through 10 major ports of entry along the U.S.-Mexico border: San Luis, Nogales, and Douglas (Arizona); Columbus and Santa Teresa (New Mexico); and Presidio, Del Rio, Eagle Pass, Laredo, and Hidalgo (Texas). An additional port in Sasabe (Arizona) processes very few, if any, cattle. The size and complexity of these ports of entry vary greatly. While Santa Teresa boasts a modern, state-of-the-art facility that can accommodate up to 10,000 cattle, significant improvements have been made at most other ports. Some continue to operate with limited and/or older cattle-handling facilities.

Cattle crossing facilities on the Mexican side of the border are supported and maintained by Mexican cattle producers, under the auspices of a regional cattlegrowers' association (*Union Ganadera*).

Commodity Spotlight

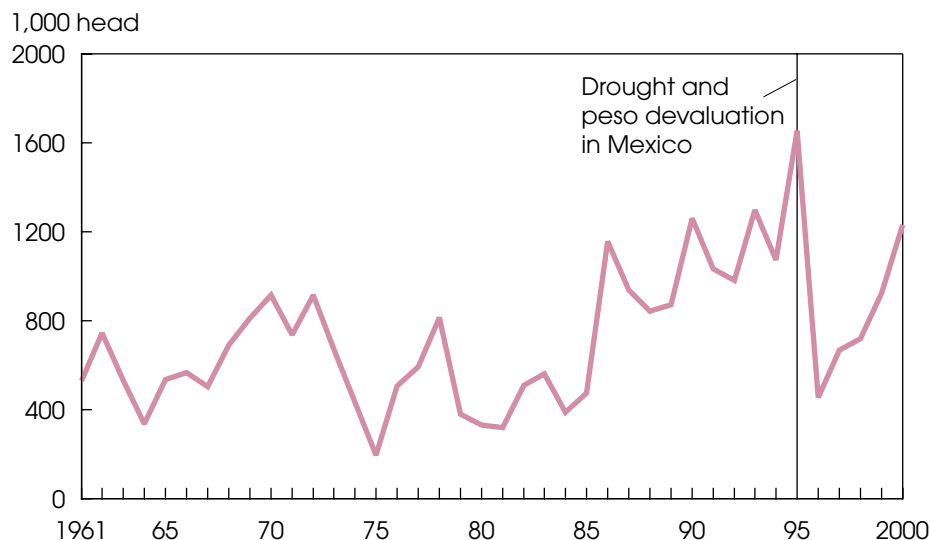
The Mexican cattlegrowers' associations are made up of rancher groups that operate within a particular Mexican state, and in many respects fulfill the same functions as state-level cattle rancher associations: U.S. state-level industry advocacy, political activity, and cattle marketing. However, they also function as traditional agricultural cooperatives by operating border crossing facilities, providing outlets for group marketing and education, manufacturing feed, and purchasing vaccines and other supplies in bulk for sale to members.

Cattle crossing facilities on the U.S. side of the border are operated primarily by private firms (in Arizona and Columbus, NM) and the Texas Department of Agriculture. However, at Santa Teresa, NM, Chihuahuan cattle producers operate both sides of the cattle port-of-entry.

Current U.S. health regulations regarding imports of cattle from Mexico are unchanged from the pre-NAFTA period: cattle must be free of pests and diseases, and test negative for tuberculosis (and for brucellosis in breeding cattle). To help ensure these requirements are met, the Mexican cattle rancher associations own and operate inspection facilities at each port of entry. Each facility is staffed by inspectors employed by USDA's Animal and Plant Health Inspection Service (APHIS), which collects user fees for its inspections from cattle brokers—who in turn charge the fee to the Mexican cattle producers.

When cattle are sold in the U.S., five or more fees may be associated with the transaction, including payments to Mexican customs brokers or inspectors, Mexican cattle brokers, the Mexican cattlegrower association (for expenses incurred at the crossing facility), U.S. customs brokers or inspectors, and a U.S. cattle broker. Mexican ranchers also pay \$1 per head for the U.S. beef checkoff program, which promotes beef consumption. Despite the amount of fees, the U.S. feeder cattle market is more financially attractive to producers than selling the animals domestically for beef, which must be transported to population centers in central Mexico.

U.S. Cattle Imports from Mexico Are Moving Up Again



Economic Research Service, USDA

The Santa Teresa cattle crossing facility handles the largest volume of Mexican animals entering the U.S. (about 327,000 head in 2000). Mexican cattle spend approximately 24 to 48 hours at this port of entry, where the Mexican cattlegrower association feeds and waters them, and where they are inspected by APHIS. Mexican officials also review the animals' documentation. Some animals are quarantined in Mexico for further examination.

Approximately 3,000 to 4,000 animals are refused entry annually at the Santa Teresa facility. The typical basis for refused entry is failure to comply with U.S. or Mexican paperwork or regulations, such as ear tags and records that are not consistent, dipping certificates that are not in order, improper branding, evidence of open wounds or live ticks, or suspicions that the cattle in question may have been stolen in Mexico.

If animals pass the basic inspection, which is visual, tactile, and includes manual verification of castration, they are sent swimming through dipping vats of insecticide approximately 60 feet in length. The dipped, inspected animals are taken to holding pens and eventually released into an area that spans both the Mexican and U.S. borders. They then enter pens on the U.S. side of the border. Although they may spend some time in this facility while

awaiting transport, they have probably already been purchased on the U.S. side and will be loaded immediately onto cattle trailers destined for U.S. pastures or feedlots. At Santa Teresa, the cattle cross the border on foot. At most of the other ports, the cattle are loaded onto trucks after inspection in Mexico and taken across the border to the U.S. facility. There, they are unloaded and reloaded again before leaving the U.S. facility.

At ports of entry, cattle are priced according to current U.S. market rates and a pricing formula. Prices are set for a 300-pound animal (the approximate average weight of most feeder cattle imported from Mexico), and Mexican sellers are penalized one cent for every 10 pounds over the 300-pound baseline. If the offer price for steers entering from Mexico is \$1.13 per pound, for instance, a 400-pound animal is sold for \$1.03 per pound. (This system may create an incentive for Mexican producers to export their animals earlier than might be optimal, given local forage conditions.)

There is a distinct seasonal pattern in the timing of cattle imports from Mexico. Imports are lowest in summer because Mexican ranchers typically let their animals graze from spring until the first fall frost in the higher elevations. Within a month after the first frost, feeder animals

Commodity Spotlight

begin moving to market, entering the U.S. during the winter and spring months. As frost progresses south and to the lower elevations in northern Mexico, animals there join the current flow of feeder calves into the U.S. market. This marketing pattern allows ranchers to take advantage of the warm-season grasses that grow on rangelands in northern Mexico and the U.S. Southwest.

Most cattle entering the U.S. originate from the Mexican states of Chihuahua, Coahuila, Durango, Nuevo Leon, and Tamaulipas. Cattle coming from Chihuahua, Coahuila, and Durango predominate at New Mexico and west Texas ports. Coahuila, Nuevo Leon, and Tamaulipas are the primary sources of cattle entering at the central and southern Texas ports. Sonora is likely the primary state of origin for cattle entering through Arizona ports. These cattle breeds are primarily English (Hereford and Angus) or mixed English, with some Brahma and English crosses (such as Brangus).

Cattle buyers at Santa Teresa have found that European crossbreeds are able to acclimate themselves to U.S. pastures and feedlots. These animals are also able to withstand the hot and dry conditions as well as extreme daily temperature variations of the northern Mexico desert regions. They are well-suited for finishing (the last stage of production before cattle emerge from the feedlot and are sent to beef packing plants) with grain in the U.S., and end up as quality beef bearing the grade of "select" or better. Many Mexican feeder cattle are the result of herd improvement programs using bulls and heifers (both registered and commercial) imported from the U.S.

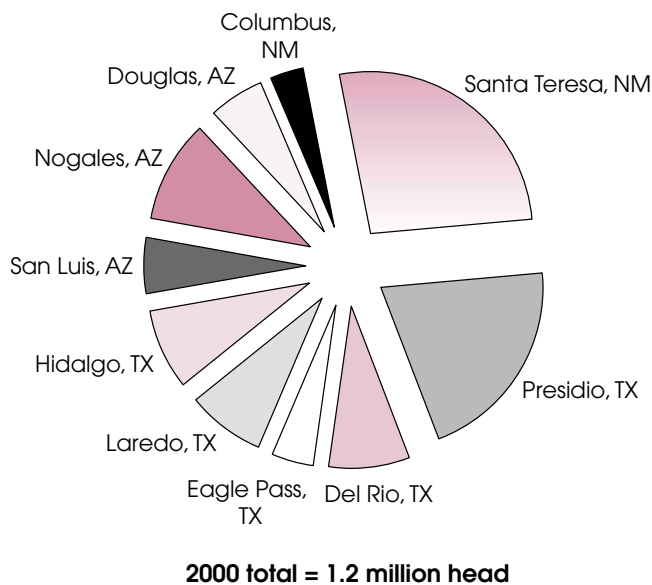
Importation records that are completed at U.S. ports of entry do not indicate the final destination of Mexican cattle. However, areas most commonly mentioned by individuals familiar with cattle marketing at New Mexico ports are the Texas Panhandle, northern Colorado, Oklahoma, northeastern New Mexico, Kansas, and California's Imperial Valley. Individuals working in or near the Texas ports of entry report that Texas, Nebraska, southeastern Colorado, the Imperial Valley, Oklahoma, New Mexico, Kansas, and Arizona are all destinations for imported

U.S.-Mexico Border Regions



Economic Research Service, USDA

U.S. Cattle Imports from Mexico by Port



Economic Research Service, USDA

cattle. Informants familiar with Arizona ports indicate that many of the cattle crossing at Nogales and San Luis remain in Arizona for feeding, but that cattle also go to California, west and central Texas, and Oklahoma for feeding. They also report that cattle crossing into Arizona are

sometimes sent to Idaho, South Dakota, and possibly Canada for feeding.

Given the pricing formula used at the border, most Mexican feeder cattle are relatively lightweight and so are destined primarily for small grain pastures and back-grounding in the U.S. (backgrounding

Commodity Spotlight

involves primarily a forage ration, which allows skeletal and muscle development without adding fat).

Winter small grain pastures throughout the Great Plains region draw imported cattle, and when plentiful supplies of this forage are available, there is increased demand at the border for the lightest Mexican animals (200-300 pounds). Heavier animals (weighing at least 500 pounds) go directly to feedlots.

Dissatisfaction with the efficiency of traditional U.S. border cattle marketing practices has recently led Mexican ranchers to explore alternatives to the current system that will increase pricing transparency and reduce the influence of middlemen in the marketing process. Some are electing to bring their smaller cattle into the U.S., retain ownership, and pay grazing fees. Others are delivering heavier cattle directly to U.S. feedlots and either retaining ownership or selling the animals there. Some of the regional cattlegrowers' associations are encouraging members to send their cattle to auctions in the U.S. instead of selling through port-of-entry cattle buyers. The *Union Ganadera de Chihuahua* is constructing an auction facility on the U.S. side of the border at Santa Teresa, with plans to develop video or satellite marketing arrangements.

What Influences Movements of Cattle from Mexico?

Because APHIS needs projections of monthly Mexican cattle imports to plan and allocate its inspection resources properly, it recently commissioned an evaluation of factors (e.g., prices, grazing conditions) influencing the movement of feeder cattle from Mexico to the U.S. The study, which used nine models, focused on 1994-98, with a 12-month lag in the impact of rainfall that effectively reduced the scope of the study to 1995-98. The

models use the ratio of nominal U.S. cattle prices to nominal Mexican cattle prices, both in dollars per cwt (the dollar/peso exchange rate was also incorporated into the models).

As data on Mexican pasture conditions are not available, measurements of accumulated rainfall served as proxies for grazing conditions. The rainfall variables used in each model were cumulative for 12 months, and lagged: for example, the rainfall observation for January 1995 was the sum of rainfall from January 1994 to December 1994, while the rainfall reported for February 1995 was the sum of rainfall from February 1994 to January 1995.

Research results helped confirm commonly held notions about the relationship between cattle prices and exports: As U.S. prices increase relative to Mexican prices (or as Mexican prices decrease relative to U.S. prices), Mexican cattle exports generally increase.

Results for the rainfall variables were not, however, consistently negative or positive. For instance, as rainfall in Chihuahua decreases, cattle volume at both ports in New Mexico (Columbus and Santa Teresa) increases. This result reflects the usual practice among Mexican cattle producers of liquidating their herds when confronted with drought and selling fewer cattle when grazing conditions are better.

Conversely, at the Presidio port of entry, cattle exports appear to be positively related to rainfall in Coahuila: the more rainfall, the more cattle are exported to the U.S. The same result applied for Nogales (port) and Sinaloa (state). In each of these cases, increasing amounts of available forage likely led farmers to raise more calves and to increase production—perhaps in part by importing cattle from other parts of Mexico. These imports may

also be among the factors explaining the positive relationship between precipitation and increased cattle exports from the region.

In the cases of Arizona's San Luis and Douglas ports, the traditional relationship between price and cattle exports did not appear to hold. This result may reflect longstanding market relationships between buyers in the U.S. and Mexican cattle producers or brokers or could be related to the geographic isolation (relative to large Mexican markets) of some Sinaloa and Sonoran producers.

Looking Ahead

Although relatively stable, cattle trade between the U.S. and Mexico will face periodic disruptions and perhaps bursts of unanticipated exports in the future. Cyclical economic and weather changes, for instance, may substantially affect the movement of feeder cattle from Mexico, even though this movement is in general quite consistent. Periodic economic turmoil in Mexico could result in dramatic spikes in cattle exports to the U.S., such as occurred in 1995.

The U.S. is expected to remain a major market for Mexican cattle producers as northern Mexico continues to raise cattle suited for feeding with seasonal forage supplies. Also, the Mexican cattle feeding industry is expected to remain small because there is limited domestic demand for premium beef. **AO**

Diana Mitchell, Rhonda Skaggs, and William Gorman (New Mexico State University); Terry Crawford and Leland Southard (202) 694-5187 southard@ers.usda.gov

Research for this article was sponsored in part by the New Mexico Agricultural Experiment Station.

IN UPCOMING ISSUES OF AGRICULTURAL OUTLOOK

- * ANIMAL HEALTH ISSUES AFFECTING INDUSTRY AND CONSUMERS
- * ISSUES IN ANIMAL WASTE DISPOSAL
- * FORCES SHAPING SOUTH AMERICAN AGRICULTURE

World Agriculture & Trade



Dennis Shields

China's Fruit & Vegetable Sector: A Changing Market Environment

China's longstanding potential as a strong competitor in international fruit and vegetable trade will likely be realized over the next several years. Although China exports less than 1 percent of its fruit and vegetable production, private-sector investment—both domestic and foreign—is currently creating world-class operations that deliver high-quality fruits and vegetables to domestic and international markets.

Over the last two decades, domestic demand has absorbed most of China's gains in production—from 215 million metric tons in 1980 to over 460 million in 1999—as the country's population expands and overall income levels rise. Growth in domestic demand for fruits and vegetables, improvements in marketing practices, and China's future agricultural production policies will likely determine how soon and how strongly China's produce sector affects U.S. and world markets.

Resource Mix & Climate Favor Fruit/Vegetable Production

China's land base is relatively large, and harvested area of fruits and vegetables is about 22 million hectares, about 3 times the U.S. level. In the 1990s, harvested area increased by nearly one-third for

vegetables and nearly 50 percent for fruit. Some area was switched from grain (which makes up the bulk of total area), due in part to greater market incentives for vegetable and fruit production.

While other countries (e.g., the U.S., Australia, and Brazil) also have large land resources, few have an enormous labor supply available to produce and process labor-intensive crops like fruits and vegetables. Farmers and processors in China generally have little difficulty in filling their labor needs, even at a typical daily wage of 15 yuan (about \$2).

The topography and soil in many parts of the country, in addition to the abundance of labor, make further changes in cropping patterns advantageous. Sloped land currently under corn and other crop production, for example, may be more suited for labor-intensive fruit crops, a change that would likely result in greater control of soil erosion and more efficient use of limited water resources—two growing concerns in China.

China's diverse climate allows for a wide variety of fruit and vegetable production. In the south, a tropical climate supports production of bananas, citrus, and other tropical and semi-tropical fruits (papaya,

litchi, mango, and longan), as well as outdoor production of vegetables year-round. In the north, with its cold winters, deciduous fruits (e.g., apples, pears, and peaches) and greenhouse vegetables dominate. Seasonal vegetable production is significant in the middle and northern regions, where summer temperatures are moderate.

Rainfall across much of China depends on the monsoon, which moves northward in spring and summer. Annual rainfall in the southern half of the country is more than 600 millimeters (23.6 inches). The northern half receives less rainfall, particularly in the northwest with its high plateaus and deserts. Where rainfall is not sufficient, fruit and vegetable farmers irrigate by hand or with sprinkler systems.

Vegetable production (including melons) totaled 405 million tons in 1999. Leading vegetables include sweet potatoes, potatoes, cabbage, cucumbers, eggplant, peppers, onions, and lettuce each totaling at least 5 million tons. (About 40 percent of all potatoes is fed to livestock.) China is the world's largest producer of vegetables, with output about seven times the U.S. level. Per capita production is about one and one-half times the U.S. level.

Fruit production totaled 62 million tons in 1999. Major fruit types include apples (21 million tons), citrus (11 million), pears (8 million), bananas (4 million), and grapes (3 million). Key producing provinces include Shangdong in the east for apples, pears, and grapes, and Guangdong in the south for citrus and tropical fruits. China is also the world's leading fruit producer, with output about twice the U.S. level. Per capita production is about one-half the U.S. level.

Government's Role Is Limited In Fruit & Vegetable Market

China's fruit and vegetable sector has seen less government intervention over the last half century than other agricultural commodities, such as grains. As a result, fruit and vegetable marketing is more responsive to consumer demand. With the introduction of new varieties, production has grown substantially and product quality has improved.

World Agriculture & Trade

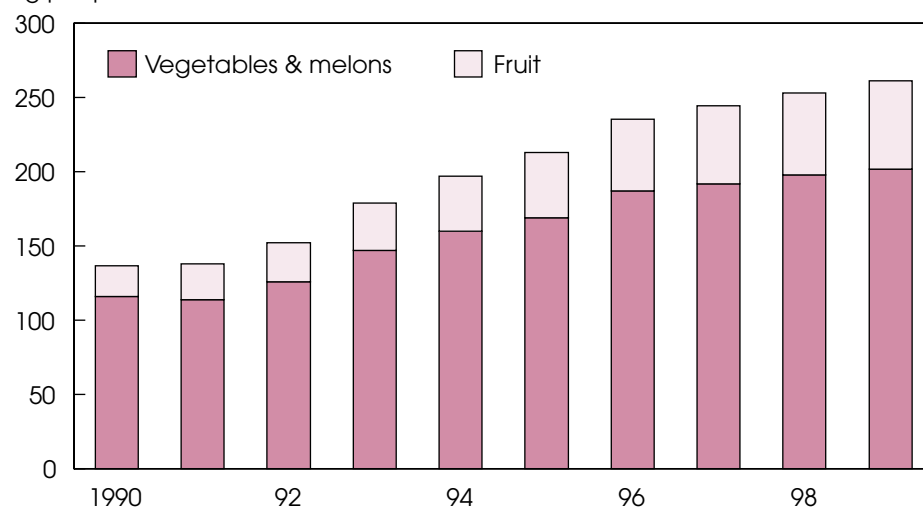
Prior to establishment of the People's Republic of China in 1949, vegetable producers were farm households who owned their own land or rented their land from local landlords. They produced for local market demand and for their own consumption. By 1958, most farms were organized into economic collectives (communes). State-organized production teams on the outskirts of cities supplied urban areas and prevailed until 1984.

In 1978, China decentralized the country's economic decisionmaking and allowed farmers to grow products for sale in the open market. Agricultural output increased dramatically and foreign investment rose. Nevertheless, production teams continued to produce vegetables for state-owned vegetable companies that managed the wholesale and retail activities to bring supplies to urban residents.

In 1984, communes were disbanded. Farm families and rural economic cooperatives raised vegetables for their own consumption and for direct marketing to urban consumers. Although urban vegetable firms continued to sign delivery contracts with village and township economic cooperatives, produce trade across provincial boundaries began. The number of rural open markets increased dramatically, and accounted for a growing share of the country's produce sales. Implementation of the land contract system (contracts between individuals and villages, which collectively own land) in the early 1980s gave households more freedom to decide which crops to plant. Increased planting flexibility and re-opening of local markets resulted in sharply higher fruit and vegetable plantings.

China's Per Capita Fruit and Vegetable Production Rose During the 1990s

Kg per person



Vegetables exclude potatoes.

Source: Food and Agriculture Organization.

Economic Research Service, USDA

In the late 1980s, small urban centers, county seats, towns, and township centers relied on local open markets for vegetable supplies. Large and medium cities got vegetables through state-owned vegetable companies that contracted with counties, townships, and villages in suburban areas and through proliferating state-owned wholesale markets.

In 1988, China's Ministry of Agriculture and provincial/local agricultural bureaus began the Vegetable Basket Program, designed to address problems of food shortages and high food prices in the 1980s. The program established "production bases" around city suburbs and elsewhere around the country to capitalize on

regional advantages in soil and climate. These areas continue to receive special investment funds from the central government, with the program transferring new technology (e.g., seeds, greenhouses, and pest protection) to local farmers.

Also, over the last decade, the government has been instrumental in financing the construction of thousands of greenhouses around the country, with total area now estimated at 350,000 hectares. Many greenhouses are 3-sided concrete structures with plastic sheeting. Another 850,000 hectares are under "hoop" production—plastic sheeting supported by small hoops.

Today, supplies from across the country supplement locally produced vegetables in urban areas, providing year-round availability. During cool periods of the year in Beijing, for example, vegetable supplies are procured from three production bases: 1) west-central China (autumn vegetables), 2) North China Plain (greenhouse production in winter with low transport cost to Beijing), and 3) south (winter vegetables).

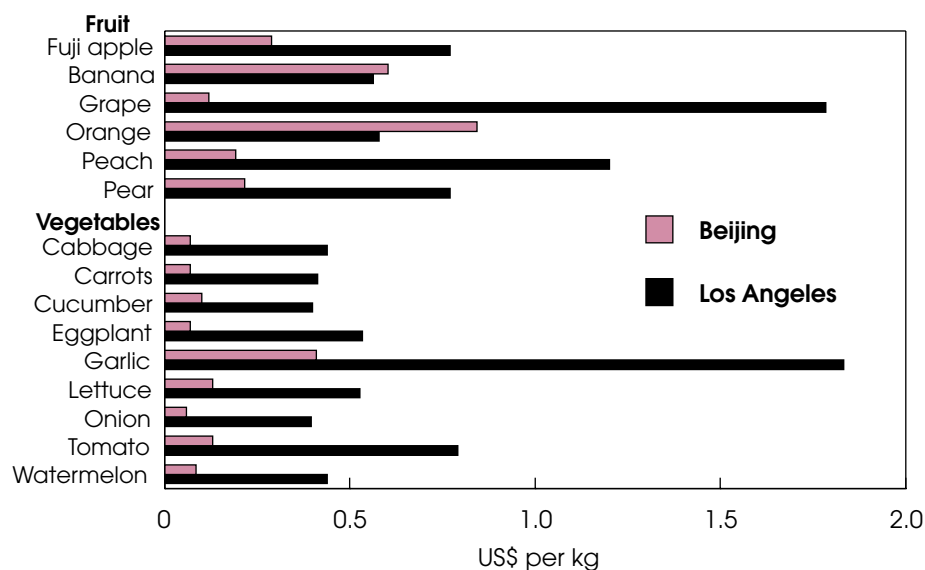
The Vegetable Basket Program also helped develop a network of wholesale markets, which increase farmers' opportu-

WTO Membership for China Could Boost Imports from U.S.

China's expected accession to the World Trade Organization will reduce its import tariffs on a number of fruits, vegetables, and their products, including table grapes (from 40 percent ad valorem to 13 percent), oranges (40 percent to 12 percent), apples (30 percent to 10 percent), frozen potato fries (25 percent to 13 percent), and wine (65 percent to 20 percent). Lower tariffs will likely boost U.S. fruit and vegetable exports to China, especially for products experiencing recent demand growth (e.g., oranges and grapefruit). U.S. products, known for high quality, are already popular in China's hotel/restaurant trade as well as large-scale city supermarkets. WTO accession will also likely stimulate increased investment in the marketing system, reducing the risk of product loss before reaching retail markets for imports and domestic sales.

World Agriculture & Trade

Most Fruit and Vegetable Wholesale Prices in China Are Sharply Below U.S. Levels



Price levels indicate wholesale market conditions at the end of September 2000. Based on price data from USDA Agricultural Marketing Service and Beijing Urban and Rural Economic Information Center.

Economic Research Service, USDA

nities to generate cash. China's wholesale markets now number more than 4,000. Development of these markets has encouraged farmers to plant high-valued fruit and vegetables, which has raised income in rural areas and improved farmers' livelihoods. Since the late 1980s, farmers in some areas have been allowed to pay taxes in cash rather than in grain, reducing the incentive to plant grains.

Other government programs that have encouraged development of the fruit and vegetable sector include demonstration farms in major growing regions (and production bases) to introduce new varieties and offer extension services to area farmers. The government has developed transport systems (e.g., major roadways, expressways, and rail lines) to move products, including fruits and vegetables, from southern production bases to northern areas. A national fruit and vegetable market is gaining momentum now that growers around the nation can monitor daily market situations in many major wholesale markets with a fruit and vegetable price information system sponsored by the Ministry of Agriculture in cooperation with local agricultural bureaus.

Sector Prospects Hinge on Marketing Practices

Long-term growth in China's production of fruits and vegetables and greater use of markets have coincided with expanding consumption, as measured by per capita production. Per capita production of fruit and vegetables (excluding potatoes) grew from 134 kg (298 pounds) in 1980 to nearly 250 kg (556 pounds) in 1999. (Per capita production, or availability, is used here as an indicator of the level of consumption, because trade is minimal and because methods for collecting and reporting household survey data have varied, making trend analysis problematic. Actual consumption is lower due to loss and waste.)

The wide selection of products enjoyed by consumers, especially city residents, throughout the year contrasts with the 1980s when a limited supply was available in the winter (often only cabbage and Irish potatoes). Other factors in the consumption increase include rising incomes and changes in diet. Inflation-adjusted income per urban resident increased nearly 30 percent from 1990 to 1999.

With abundant supplies of agricultural products in recent years, prices have been declining for many vegetables (e.g., carrots and garlic). This indicates that growth in demand is not keeping pace with output. Meanwhile, growing demand for high-quality produce (e.g., broccoli, navel oranges, and grapefruit) for the tourist/hotel trade is stimulating imports. Imports are creating a competitive market within China.

Over the next 5 years, supplies of some fruits and vegetables may continue to grow faster than demand if planting incentives remain favorable relative to other crops. Although fruit and vegetable prices have been declining, field crop prices have been under even greater pressure in recent years as domestic policies encouraged grain production. The field crop sector may be under additional price pressure from imports following China's expected accession to the World Trade Organization, which would prohibit subsidized grain exports and curb government policies that favor grain output.

China's fruit and vegetable export prospects are already bolstered by relatively low costs of production, which are reflected in wholesale prices. In Beijing, for example, wholesale prices for fruits and vegetables are only one-tenth to one-third the level of prices in other countries. Many private firms, including foreign investors who are taking advantage of China's low input costs (particularly labor), are expanding fruit and vegetable output and boosting overseas shipments. Total fresh vegetable exports were 1.3 million tons in 1999, up 11 percent from 1998. Fresh and dried fruit exports were 0.7 million, up 13 percent from 1998. Major destinations are Japan, Hong Kong, Russia, South Korea, and Singapore.

While additional gains in fruit and vegetable exports in China seem plausible, several factors will dampen prospective gains in the near term. First, China currently offers only a few varieties of fruits and vegetables in large volume for the export market. Second, the fruit and vegetable industry does not use grade standards (e.g., for uniform product size), although the Government is currently working with USDA's Agricultural Marketing Service to address this issue. Third,

World Agriculture & Trade

there is not widespread use of basic marketing practices such as modern packing and packaging techniques.

Finally, product promotion is very limited and not practical at the moment, given the current overall level of product quality (uniform size and appearance) for commercial sale. In many successful exporting countries, industry-sponsored organizations help coordinate promotional and informational efforts, but such activities are currently undertaken on a limited scale in China and only by individual exporters.

In short, most produce in China today is not export quality, and bringing it up to international standards would most likely significantly reduce the cost advantage at the farm level. However, for product grown in professionally managed operations, quality is already high and unit costs could decline as new technology (e.g., higher yielding varieties) is adopted.

To improve production and marketing practices, the Government now permits foreign trading and/or investing companies to work with farmers to grow and deliver vegetables that meet buyers' requirements, signing contracts for 2-3 years and supplying inputs such as appropriate seeds. For example, in 1999, an investor from Singapore built a large greenhouse/packing facility west of Qingdao (Shandong Province in eastern China) to ship products (spinach, lettuce, melons, and celery) to Japan and Singapore. The owner invested in China due in part to financial incentives from the local government (e.g., 2 years of tax-free operation), and is planning to expand and exploit favorable export prospects to other countries in Asia.

Another set of investors (also from Singapore) has planted 2,500 mu (167 ha) of Red Globe grapes in a new vineyard in Shangdong under a 15-year lease with a village north of Qingdao. The firm ships fresh-market grapes to Singapore, Malaysia, other parts of Asia, and Europe.

While China's production potential is impressive, an apparent dearth of high-quality supply of product for the domestic market may indicate that near-term prospects for large export volumes are limited. Consequently, domestic demand in high-income areas may be sufficient to absorb the supply of high-quality (i.e., export-quality) produce. For example, a pear producer in Shangdong sees large domestic demand potential for high-quality produce and plans to ship pears to Shanghai and Guangdong once harvest begins next year.

Nevertheless, China is making inroads in several markets traditionally dominated by the U.S. China produces a large volume of Fuji apples, which have become very competitive in the Hong Kong import market and pushed aside the previous market leader, Washington State Red Delicious. In Japan, U.S. broccoli now faces stiff competition from China.

Another issue affecting future sales is world price levels and the marketing window. It is likely that a large share of China's products would enter world markets at a time when competition from local and global producers is already intense, because harvesting seasons overlap for many producers in the Northern Hemisphere. Consequently, additional supplies in the world market, particularly during peak harvest periods, could result in very sharp price declines for all suppliers.

The evolving nature of post-harvest handling/packaging in China and future levels of foreign investment will likely play a large part in determining the country's future competitiveness in world fruit and vegetable markets. China could become very competitive and post large gains in overall export volumes once the country makes significant and widespread advances in marketing practices. **AO**

Dennis A. Shields (202) 694-5331 and
Francis C. Tuan (202) 694-5238
dshields@ers.usda.gov
ftuan@ers.usda.gov

This article is based on information gathered by a USDA team that visited China in November 2000.

Upcoming Reports—USDA's Economic Research Service

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

June

- 1 Outlook for U.S. Agricultural Trade
- 12 World Agricultural Supply and Demand Estimates (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.)**
- 26 Vegetables and Specialties Yearbook*
- 27 Foreign Agricultural Trade of the United States (FATUS)/ U.S. Agricultural Trade Update
Livestock, Dairy, and Poultry Situation and Outlook (4 p.m.)**

*Release of summary, 3 p.m.

**Available electronically only

中国 CONTINUING COVERAGE OF CHINA IN AGRICULTURAL OUTLOOK

NEXT: CHINA'S GRAIN INDUSTRY— STRUCTURE AND PROSPECTS

VISIT THE CHINA BRIEFING ROOM ON THE ERS WEBSITE
WWW.ERS.USDA.GOV/BRIEFING/CHINA

Policy



Using Farm-Sector Income As a Policy Benchmark

Farm income support is often the prescription for treating fluctuations in production and prices as well as losses in world markets due to market access constraints. U.S. agricultural policy over the past 60 years contains many examples of initiatives intended to raise farm prices and income. More recently, the array of farm-related policies has broadened to address food safety, food assistance, rural economic health, economic well-being of farm families, and conservation and environmental concerns.

Clearly, measures of farm-sector income are inadequate tools for determining the need for government intervention in most of these new areas. Some analysts are also, however, beginning to question whether income measures are even appropriate for determining the need for income support payments to farmers. Over the years, policymakers have attempted to address farm economic well-being using farm-sector income measures as a policy benchmark, and the results have been, at best, modest and uneven.

As the debate over the next farm bill gets underway—against a backdrop of low commodity prices and 3 years of emergency income support payments—many interested groups have called for estab-

lishing new countercyclical income support programs that use measures of farm-sector income or receipts to determine payments (AO April, May 2001).

The objective of this article is to examine how well current data on farm-sector income reflect the actual financial needs of farmers and their families, and to assess the success of these measures as benchmarks for policy intervention.

Benefits of Measuring Farm-Sector Income

When using an aggregate indicator of performance such as net income in design or evaluation of policy, analysts must determine the kind of relevant information that can be provided—or, more crucially, cannot be provided—by a sectorwide measure. Net cash income, for example, is a measure that indicates how much cash is available within the production agriculture sector to reduce debt, purchase capital assets, pay taxes, and contribute to family living expenses. Net farm income, which is net cash income adjusted for changes in inventory values and capital replacement, represents the income earned by farmers, their partners, and others who supply labor, management, and capital for use in production.

Both net cash income and net farm income are single-dimension measures that can be used to monitor annual changes in sector earnings or to track changes across a broader time span. In this sense, they are similar to the barometers of change that track other sectors of the national economy, such as after-tax profits of manufacturers or retailers.

Even when taking a longrun historical view of agricultural sector performance, it is necessary to reformulate net income measures. For example, examining current net cash income relative to the average of the previous 5 years (i.e., 5-year moving average) makes it easier to identify “recessions” in the agricultural economy. Used this way, aggregate income measures not only specify when recessions occurred, but indicate their depth and duration.

With emergency assistance between 1998 and 2000 to offset low commodity prices, agricultural net cash income has kept pace with 5-year moving averages. Without additional assistance in 2001, net cash income is forecast by USDA to be 7 percent below the previous 5-year average.

When aggregate income measures are used in this way and expected sector income is below its recent average, an overly simplified policy prescription would be to provide additional money to farmers to make up the difference. Given current commodity price forecasts and expectations for input costs, analysts can even estimate the amount needed to equate 2001 net cash income with the previous 5-year average (\$4 billion). If this approach were followed, the impact of low commodity prices on the sector and all of its participants would be remedied in much the same way it was for the previous 3 years.

If the farm sector were not a diverse set of farms and if policy objectives were really this simple, such a broad approach might work. However, using a single aggregate measure of performance to suggest government intervention is an approach that suffers from a number of deficiencies.

Aggregate Farm Income Masks Wide Variations

Production agriculture involves a wide range of farms and ranches that enjoy varying degrees of financial success. A single aggregate measure such as net farm income cannot reflect this heterogeneity. For instance, if net farm income has risen from one year to the next, it is not possible to tell whether every farm's income rose by the same percent over that period, or whether a small group of farms earned a higher share of the sector's profits. In other words, the sector cannot be viewed as one large representative farm.

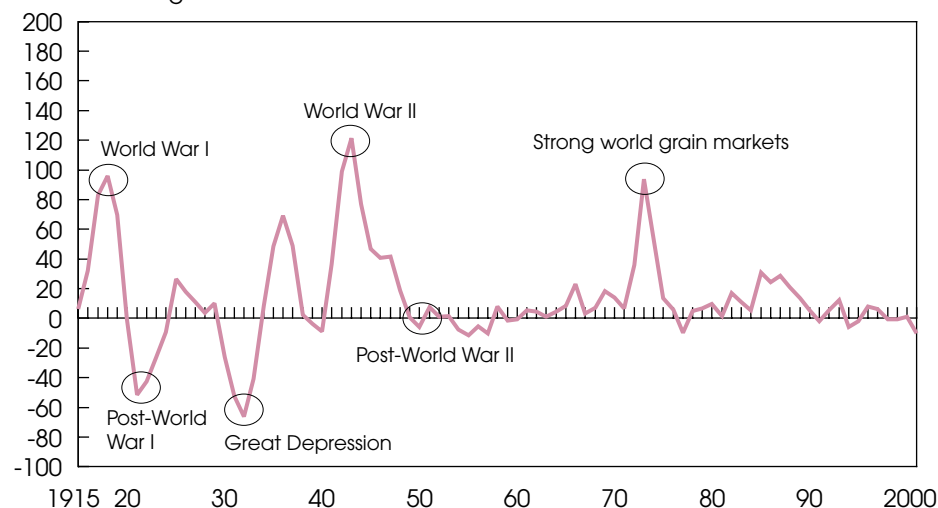
USDA survey data from the annual Agricultural Resource Management Study (ARMS) can be used to examine the distribution of various performance measures, including net farm income. The wide variation in financial outcomes for farm businesses, for instance, can be demonstrated by summarizing net farm income at various points of the distribution (percentiles). This approach provides detailed information about characteristics of the distribution that are not obvious when evaluating a single summary statistic such as the mean. USDA's Farm Typology measures, focused here on two distinct points in time, illustrate the importance of examining the distribution of net farm income among farm operators.

In 1997, aggregate net farm income reached a record \$48.6 billion. Given this measure of success, it would seem that most farm businesses enjoyed a prosperous year. However, the distribution of income among farms suggests otherwise. At least half of all farms in the following small-farm typology groups had net incomes below \$6,000: limited-resource, retirement, residential/lifestyle, and farming occupation-low sales. These four groups represent 85 percent of all farms. Farms in these groups are typically small, do not require a full-time commitment from the operator, and do not provide the majority of the farm household's income.

The groups for larger farms (gross sales of \$100,000 or more), that derive a larger share of their household's total household earnings from farming, show a different net farm income distribution. There is considerably more variation in the distri-

Farm-Sector Income Reflects Global Events

Percent change



Percent change = ((net cash income in current year divided by average net cash income of previous 5 years) - 1) x 100. Inflation-adjusted. 2000 and 2001 preliminary.

Economic Research Service, USDA

bution of net farm income among farms within each group, and the amount of variation increases with farm size. For very large farms, the difference between the highest and lowest percentiles was almost \$400,000 in 1997, compared with just over \$8,000 for limited-resource farms. The distribution of net farm income was also more positively skewed towards higher income levels for larger farms. (The difference between the value of net farm income at the 80th percentile and median net farm income in 1999—\$220,000—was more than two times the difference between median net farm income and the 20th percentile net farm income value—\$97,000. If the distribution of net farm income were uniform, these differences would be similar.)

By 1999, aggregate net farm income had fallen to \$43.4 billion from \$48.6 billion in 1997. All farms were not equally affected by this \$5.2-billion decline from 1997's record levels. Changes in the net farm income distribution suggest that farms' financial circumstances deteriorated over a wide range of income levels for limited-resource and retirement farms. There were modest income gains at the high end of the income distribution for residential/lifestyle farms, matched by similar declines at the low end of the dis-

tribution. The opposite situation occurred for farming occupation-low sales farms, where there were income gains at the low end of the distribution and modest declines in net farm income at the high end of the distribution. For farm businesses in the farming occupation-high sales group, and for very large farms, net farm income improved at the low end of the distribution between 1997 and 1999. This result might not have been anticipated, given the 11-percent decline in net farm income during the period.

Aggregate Farm Income Excludes Off-Farm Income . . .

When crop prices are low and aggregate farm income falls, farm household income and consumption decline, leading to a lower standard of living for farm families. In the majority of farm households (62 percent), the farm operator's primary occupation is something other than farming. Many of these part-time farms typically lose money or produce low earnings that contribute only a relatively small amount to total household income. For farm households with married couples, both the operator and spouse in 40 percent of farm households work off the farm; neither operator nor spouse work off the farm on 21 percent of all farms.

Policy

Net Farm Income Varies Substantially Within and Across Farm Typology Groups

	Farm typology group						
	Small family farms					Other family farms	
	Limited-resource	Retirement	Residential/lifestyle	Farming occupation, low sales	Farming occupation, high sales	Large	Very large
1999	<i>No.</i>						
All farms	126,920	297,566	931,561	480,441	175,370	77,314	58,403
Average net farm income by percentile	<i>\$1,000</i>						
80th	5	9	9	19	71	133	332
60th	2	5	4	9	45	83	170
Median	1	4	2	5	36	61	110
40th	-1	2	0	2	26	43	70
20th	-5	-2	-5	-6	1	-1	13
1997	<i>No.</i>						
All farms	195,571	304,293	811,752	396,698	178,210	79,240	45,804
Average net farm income by percentile	<i>\$1,000</i>						
80th	6	14	8	25	72	147	403
60th	2	7	4	10	44	88	192
Median	1	6	2	6	33	68	135
40th	1	3	0	3	22	48	87
20th	-3	0	-5	-7	-5	9	5

A net farm income percentile is 1-percent share of total farms ranked by net farm income. Among very large farms in 1999, for example, net income was equal to or below \$170,000 at the 60th percentile and below (i.e., the lowest 60 percent of farms in this group).

Source: Agricultural Resource Management Study, USDA.

Economic Research Service, USDA

This vocational diversification insulates the farm household from the financial variability that farming may entail. Household expenditures for food, clothing, medical needs, and other living expenses tend to remain relatively constant from one year to the next, and change is based on the family's perception of long-term income prospects. Most households can accommodate income shortfalls by relying on savings or liquidating assets.

No direct relationship is apparent between the state of the general farm economy and the proportion of farm households in which family living expenditures exceed household income. In 1996, generally regarded as a good year for agriculture based on the sector's net income, 29 percent of farm households did not have sufficient income to meet their consumption expenditures. In 1999, when net income fell, this figure dropped to 19 percent as increases in off-farm income (\$16,000 on average) more than offset the average decline in household income from farming (\$2,000).

The condition of the farm economy clearly has a relatively larger impact on households headed by operators whose primary occupation is farming. For these households, greater dependence on farm income does, on average, result in lower expenditures compared with households where the operator's main occupation is something other than farming.

This phenomenon is illustrated by the substantial difference in average household income. In 1999, farm households headed by operators whose primary occupation was farming had average household income of \$55,000, compared with \$70,000 for households headed by operators whose primary occupation was something other than farming. A higher proportion of households that depended heavily on farming revenues had consumption expenditures exceeding household income (27 percent versus 14 percent in 1999). In addition, these households experienced less improvement between 1996 and 1999 in the share of farm households with consumption expenditures exceeding household income. In 1996, 32 percent of these

"farm-dependent" households had to accommodate income shortfalls, compared with 27 percent in 1999.

Income earned off the farm remains important to the farm-dependent household's ability to accommodate income shortfalls. In 1999, farm-dependent households with negative farm earnings had average off-farm incomes of \$42,500 and consumption expenditures of \$21,000, compared with \$28,000 and \$23,000 respectively for farm-dependent households that had positive earnings from the farm business.

. . . & Does Not Reflect Wealth

A common perception is that low returns from farming make it difficult for farm households to acquire and hold wealth—particularly for households that depend primarily on agricultural sources of income and equity investments and fail to diversify outside the farm. Aggregate measures of income overlook the well-being of farm families in terms of their ability to accumulate wealth.

Farm households had an average net worth of nearly \$563,600 in 1999. Information from the Federal Reserve Board's Survey of Consumer Finance (SCF) for 1998 (the latest data available) puts the average family net worth of nonfarm households at \$283,000, roughly half that of farm households.

Since most farmers are self-employed business owners, a more appropriate comparison is between farm and nonfarm proprietorship households. In these cases, portions of the household's income and net worth are associated with a business venture. Analysis of household net worth data suggests that in general, farm proprietorship households are wealthier than their nonfarm counterparts. The median net worth of farm proprietorships was \$351,000, compared with \$167,000 for nonfarm proprietorship households. However, the share of farm proprietorship households at low (negative net worth) and high (net worth greater than \$1,500,000) levels are similar to shares at the extremes for nonfarm proprietorship households.

The difference between farm and nonfarm proprietorship household wealth is explained by the composition of household assets. Even though about 45 percent of all cropland is rented, a substantial portion of a farm business net worth is tied up in land. Farm business net worth accounts for about 70 percent of farm household net worth. In contrast, most nonfarm businesses tend to lease their facilities and have much lower capital requirements. Because nonfarm proprietorship households typically do not have large capital investments in the business, household financial assets not related to the business contribute more to net worth.

Differences in the composition of household assets have also allowed farm households to accumulate more wealth over the 1990s than nonfarm households. Although data limitations do not allow for exact correspondence in the time periods for evaluating changes in net worth, the overall trend is clear: While average household net worth measured in the SCF increased by 32 percent (between 1992 and 1998), farm household net worth increased by 54 percent (between 1993 and 1999). The average annual increase in

farm household net worth was about 9 percent, compared with just over 5 percent for nonfarm households.

Aggregate Farm Income Does Not Reveal Debt Problems . . .

Debt is not a source of capital for all farms. Only 42 percent of farms reported debt outstanding at the end of 1999. For

those who do borrow, a portion of income must be set aside for interest and principal repayment. Unanticipated income shortfalls can impede a farm's ability to service debt, resulting in delinquent loans. Loan defaults occur when income deficits are sizable, widespread, or prolonged.

Historical trends in agricultural loan delinquency rates (payment past due 30

Most Farm Household Income Is from Off-Farm Sources

	Primary occupation				All farm households	
	Farming		Other			
	1996	1999	1996	1999	1996	1999
			\$1,000			
Average household income	48	55	52	70	50	64
Farming	19	21	-2	-3	8	6
Other sources	30	34	55	73	42	58
Average household expenditures	23	23	24	25	24	24
			Percent of farm households			
Operator's primary occupation	49	38	51	62	100	100
Share of households with expenditures greater than total income	32	27	25	14	29	19

Some totals do not add due to rounding.

Source: Agricultural Resource Management Study, USDA.

Economic Research Service, USDA

ERS Farm Typology Groups

Small Family Farms (sales less than \$250,000)

Limited-resource. Any small farm with gross sales less than \$100,000, total farm assets less than \$150,000, and total operator household income less than \$20,000. Limited-resource farmers may report farming, a nonfarm occupation, or retirement as their major occupation.

Retirement. Small farms whose operators report they are retired (excludes limited-resource farms operated by retired farmers).

Residential/lifestyle. Small farms whose operators report a major occupation other than farming (excludes limited-resource farms with operators reporting a nonfarm major occupation).

Farming occupation, low sales. Small farms with sales less than \$100,000 whose operators report farming as their major occupation (excludes limited-resource farms whose operators report farming as their major occupation).

Farming occupation, high sales. Small farms with sales between \$100,000 and \$249,999 whose operators report farming as their major occupation.

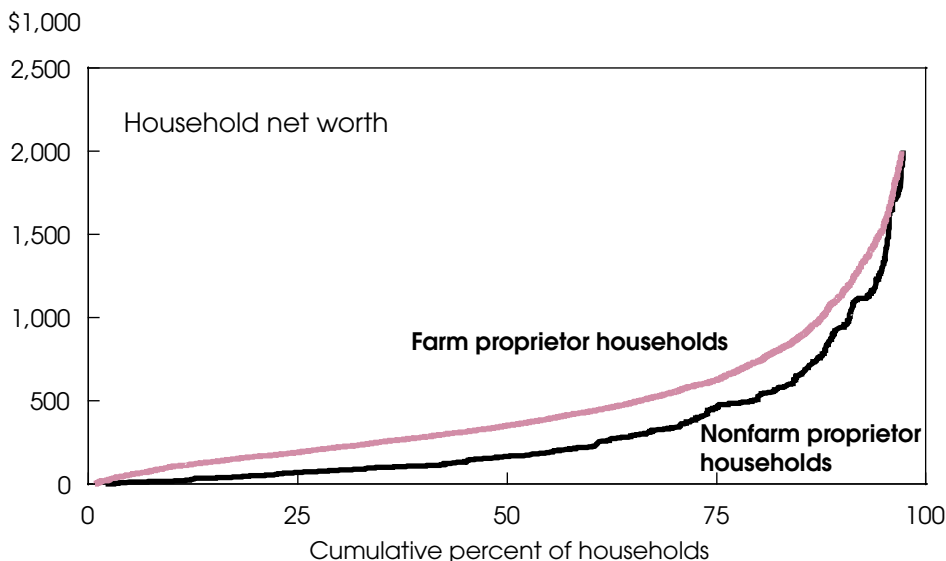
Other Farms

Large family farms. Farms with sales between \$250,000 and \$499,999.

Very large family farms. Farms with sales of \$500,000 or more.

Nonfamily farms. Farms organized as nonfamily corporations or cooperatives, as well as farms operated by hired managers.

Policy

Farm Proprietorship Households Are Wealthier Than Nonfarm Counterparts

Seventy-five percent of farm proprietor households for example, have net worth of \$625,000 or less. Seventy-five percent of nonfarm proprietor households have net worth of \$460,000 or less. Based on data from 1999 USDA Agricultural Resource Management Study and Federal Reserve Board's Survey of Consumer Finance for 1998.

Economic Research Service, USDA

days or more) as reported by the Federal Reserve for commercial banks suggest that loan repayment problems peaked in 1987 at 11 percent of total loan volume. Delinquency rates declined throughout most of the 1990s and have remained around 3 percent of total loan volume for the past several years. Only in 1996 and 1999 did commercial bank agricultural loan delinquency rates increase.

Annual changes in net farm income would not have signaled these modest increases in loan delinquencies. Net farm income increased by 49 percent between 1995 and 1996 and fell by less than 3 percent between 1998 and 1999. The largest annual decline in net farm income since 1987 was between 1994 and 1995 (-24 percent), when farm loan delinquencies went from 2.8 to 2.7 percent of commercial bank agricultural loans. Data on commercial banks' loans to nonfarm businesses for commercial and industrial purposes suggest that with the exception of the early 1990s, delinquency rates for farm loans have been higher than for other business loans.

... Is Not Indicative of Farm Business Failures ...

Like other competitive businesses, farms go out of business each year for a variety of reasons. They often shut their doors voluntarily. The American Bankers Association (ABA), which conducts a survey of agricultural banks to track the number of farms going out of business each year, reports that for the period between 1985 and 1999, closure rates peaked in 1986 at 6.2 percent. These rates were between 2 and 3 percent for most of the 1990s. The majority of closures are normal attrition and voluntary liquidations (80 percent) but the others are business failures.

Another indication of business failures is the percentage of farms filing for bankruptcy. While the rate of bankruptcy filings is lower than farm closures, the statistics tend to track over time, with bankruptcy filings peaking at 4.2 percent in 1986 and remaining between 1 and 2 percent for most of the 1990s.

While farm business dissolution rates were relatively steady during the 1990s, there were large year-to-year swings in aggregate net farm income. The largest

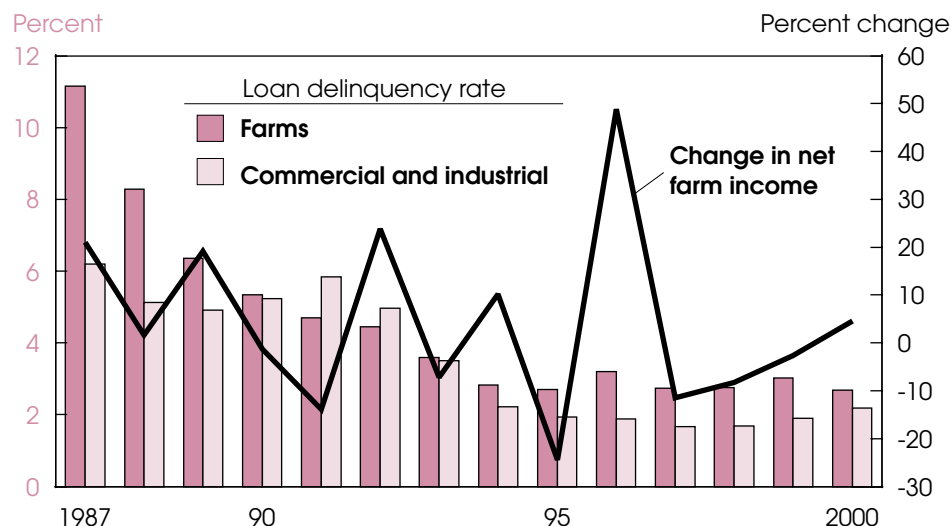
annual increases in net farm income occurred between 1995 and 1996 (49 percent) and between 1991 and 1992 (24 percent). With such significant increases in aggregate income, the number of farm failures would be expected to decline. Surprisingly, failures actually increased between 1995 and 1996 and remained unchanged between 1991 and 1992. The largest annual declines in net farm income occurred between 1994 and 1995 (-24 percent) and between 1990 and 1991 (-13 percent). The proportion of farms going out of business did increase in each of these periods, but by a relatively small amount (0.2 percentage points). Business failures represent a cumulative effect of consecutive years of poor performance and when they occur may be several years removed from the initial occurrence of low income.

Do farms fail more often or at a higher rate than other businesses? The Small Business Administration summarizes data compiled by the Administrative Office of the U.S. Courts on the number of business bankruptcies and voluntary and involuntary business closures from the U.S. Department of Labor. The rate of nonfarm business closures ranged between 13 and 16 percent, 4 times higher than for farm businesses. Part of the difference in the closure rates is explained by higher start-up costs for farming and the greater amount of equity at risk. The costs of termination are substantially lower for many small nonfarm businesses. The decision to voluntarily terminate a business (which makes up the majority of both farm and nonfarm closures) is much easier if the amount of equity invested is small or easily transferred to another enterprise. If the business assets are not easily transferred, such as in agriculture, the costs of termination can be substantial.

... & Does Not Capture Intrinsic Benefits of Farming

Rural areas abound with various sources of amenities such as nature, wildlife, scenic landscapes, tradition, and culture. As entrepreneurs, farmers also enjoy the independence and responsibilities that come with running their own businesses. The satisfaction derived from these aspects of living and working on a farm is not easily measured in monetary terms.

Farm Loan Delinquency Rates Remain Low Despite Swings in Net Farm Income



Delinquency rates (percent of total loan volume) from *Federal Reserve Statistical Release*.

Economic Research Service, USDA

When asked to identify criteria for judging the success of their farms, a relatively high proportion of farm operators indicated that the farming lifestyle was as important or in some cases more important than any financial consideration. Lifestyle was the predominant measure of success for farmers operating small farms identified as limited-resource, retirement, residential/lifestyle, and farming occupation-low sales. In each of these groups, farmers chose lifestyle as a very important element of success more often than any other element.

Lifestyle remained an important criterion of success even among larger-size farm businesses. For large and very large farms—as well as small family farms classified as occupation farms—higher sales—a high proportion in each category (80 percent or more) identified adequate income as a very important measure of success. In addition, as many as 70 percent of farms in each of these typology groups associated success with the lifestyle benefits from farming.

Policy Requires More Comprehensive Approach

Measures of sector income are valuable indicators of how the farming sector is performing on a national scale. Nonetheless, these measures may not be the best tools with which to track the financial situations and needs of farmers and farm families—especially if they are to be used as a basis for creating new farm policies. Although much of the current farm policy debate has focused on net farm income and the adequacy of the safety net, this article has attempted to show that the benefits of using aggregate farm income measures in this fashion are overshadowed by the limitations.

Intended policy outcomes and actual results often diverge because aggregate measures do not reveal the wide variations in income and circumstances among various farm groups, do not reflect off-farm income and wealth, do not reveal farmers' problems with servicing their debt, and do not give any indication of how often farms fail. The reality of a technologically and financially diverse farm sector suggests the need to examine

alternative policy benchmarks and intervention mechanisms. **AO**

Mitch Morehart (202) 694-5581, with James Johnson, C. Edwin Young, and Greg Pompelli
morehart@ers.usda.gov

June Releases—USDA's Agricultural Statistics Board

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

June

- 1 Dairy Products Prices (8:30 a.m.)
Dairy Products
Poultry Slaughter
- 4 Egg Products
Crop Progress (4 p.m.)
- 5 Weather - Crop Summary (12 noon)
- 6 Broiler Hatchery
- 8 Dairy Products Prices (8:30 a.m.)
Milkfat Prices (8:30 a.m.)
- 11 Crop Progress (4 p.m.)
- 12 Crop Production (8:30 a.m.)
Weather - Crop Summary (12 noon)
- 13 Broiler Hatchery
Fruit and Vegetable Ag. Practices
Turkey Hatchery
- 14 Potato Stocks
- 15 Dairy Products Prices (8:30 a.m.)
Milk Production
- 18 Crop Progress (4 p.m.)
- 19 Weather - Crop Summary (12 noon)
- 20 Broiler Hatchery
Cold Storage
- 21 Cherry Production (Tent., 8:30 a.m.)
Catfish Processing
- 22 Dairy Products Prices (8:30 a.m.)
Milkfat Prices (8:30 a.m.)
Cattle on Feed
Chickens and Eggs
Livestock Slaughter
Monthly Agnews
- 25 Crop Progress (4 p.m.)
- 26 Weather - Crop Summary (12 noon)
- 27 Broiler Hatchery
Peanut Stocks and Processing
- 28 Agricultural Prices
- 29 Acreage (8:30 a.m.)
Dairy Products Prices (8:30 a.m.)
Grain Stocks (8:30 a.m.)
Quarterly Hogs and Pigs

Policy

Impact of Government Payments to Farmers Varies by Level of Profitability & Household Income

High levels of government payments to the U.S. farm sector have forestalled a significant drop in national farm income in recent years. The high levels of assistance have generated debate about the appropriate way to address the downturns in the agricultural economy and the effect of direct payments on the distribution of farms and farm households by economic well-being. At the farm level, payments generally boost both profitability and household income. But are the gains even across different levels of farm profitability and household income?

Working with farm-level data from the 1999 Agricultural Resource Management Study (the most recent available), USDA's Economic Research Service (ERS) sought to determine 1) what the level of farm profitability and household income would have been without the program payments and 2) how the payment gains are distributed across different levels of farm profitability and household income.

ERS addressed these questions by comparing the distributions of farms by farm profitability and household income calculated with and without government payments for farms participating in direct payment programs. The issue of distribution involves the structure of agriculture (farm numbers by various characteristics). The differential effects of government payments on economic well-being can affect the structure of the sector.

Distribution refers to the clustering of farms along the range of a measure, such as profits or incomes, and can be used to focus attention on a particular portion of the farm population, such as those with low household income. In 1999, individual farm profitability (measured here by return on assets—ROA) varied from over 20 percent to below -20 percent. About half of farms were clustered at an ROA between 1 percent and -6.4 percent. Farm household income varied from over \$250,000 to below -\$50,000. About half of the farms fell in the range of \$21,000 to \$73,000.

The range in profit levels across farms results from differences in management, weather, enterprise mix, and prices. Factors affecting profits, along with differences in off-farm income, also determine a farm household's level of income.

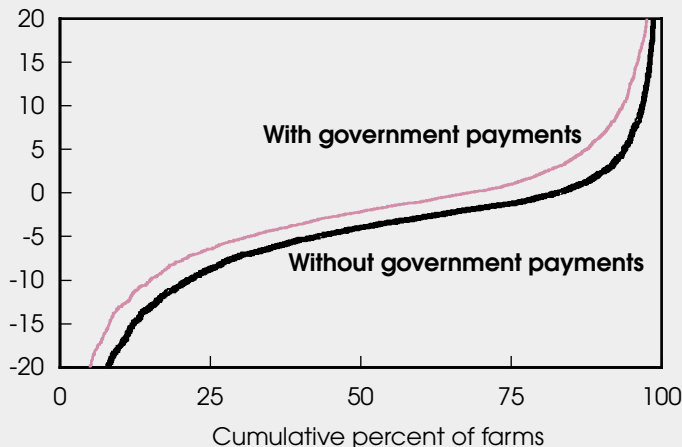
The 1999 rate of return on assets and level of household income include government payments. To determine what the return on assets would have been without government payments, the payments are subtracted from farm pretax net income and the remainder is divided by farm business assets. To determine the impact of government payments on household income, the payments are subtracted from farm pretax net income and the result is added to off-farm income. (If farm business income is shared with more than one household, the revised farm business income is divided among households.) This is, of course, a simplification of the effects of government payments. It does not, for example, take into account any adjustments that a farmer might have made in his/her operation in the absence of government payments.

ERS found that at the median (above which 50 percent of the observations lie), direct payments increased the rate of return on

Government Payments Boost Farm Profitability. . .

Rate of return on assets

Percent

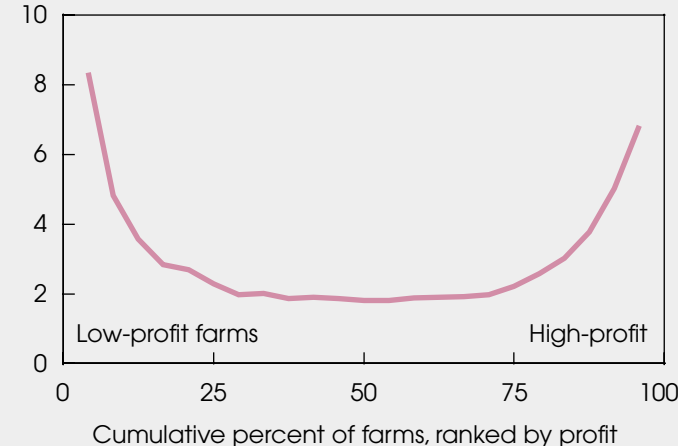


Example: seventy-five percent of farms have a rate of return on assets (including government payments) below 1 percent. Return on assets equals net economic returns divided by assets.

. . . with Low- and High-Profit Farms Enjoying the Largest Gains from Payments

Percentage-point gain in rate of return on assets

Percent



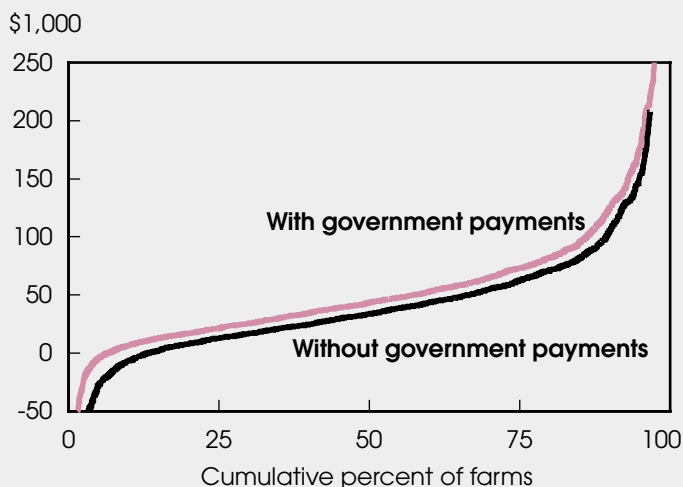
Example: the rate of return for the 10 percent of farms with the lowest profit and the 10 percent with the highest profit increases more than 4 percent when government payments are included.

Based on data from 1999 USDA Agricultural Resource Management Study.

Economic Research Service, USDA

Government Payments Boost Household Income. . .

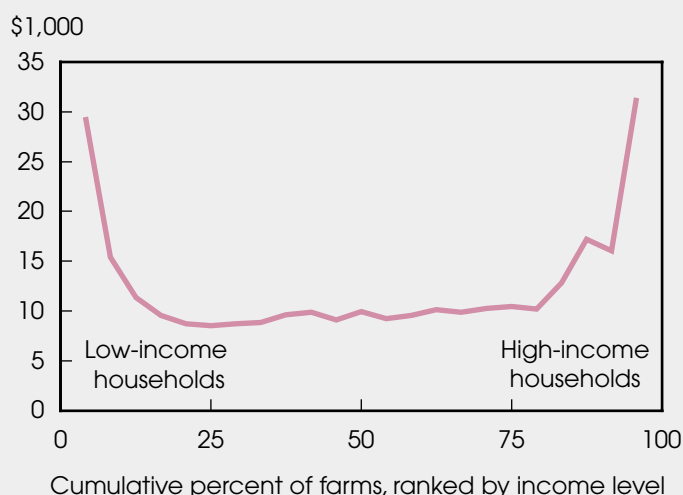
Farm household income



Example: seventy-five percent of farms, have household income (including government payments) below \$73,000.

. . .with Low- and High-Income Farms Enjoying the Largest Gains from Payments

Gain in farm household income



Example: government payments increase farm household income by at least \$15,000 for the 10 percent of farms with the lowest household income and the 10 percent with the highest household income. Based on data from 1999 USDA Agricultural Resource Management Study.

Economic Research Service, USDA

assets by nearly 2 percentage points to -2.1 percent. Median household income increased by almost \$10,000 to \$43,500.

As indicated above, farms vary in their profitability, and the effects of direct government payments were evaluated across the distribution of farms by profitability levels. The least profitable farms enjoyed a 10-percentage-point increase in the rate of profits. Moving toward more profitable farms, the effect quickly declines to 2 percentage points and holds at that level throughout the middle of the distribution; here, profits remained negative despite the effect of payments. In the upper third of the distribution by profit, which includes those farms that would have shown a profit even in the absence of payments, the gain in profit rates begins to climb toward 7 percentage points for the most profitable farms.

In other words, direct payments influenced the highest and lowest ends of the distribution in a similar way, boosting returns disproportionately for farms that had low and high rates of return relative to other farms. Toward the middle of the distribution, direct payments had less influence on farm profits, reflecting lower payments relative to the level of farm assets.

Similarly, the effect of direct payments on distribution of farms by household income is concentrated in those with the lowest and highest measured levels of well-being. The level of income corresponding to the poorest households (negative to approximately \$17,000 total earnings) increased by up to \$30,000. This high improvement dropped off quickly, settling near \$10,000 for a large portion of farms in the middle of the distribution. As household incomes approached the highest levels (\$80,000 and above), the effect of direct payments began to increase and was similar to levels achieved for poor households.

This analysis raises questions about the capacity of counter-cyclical direct payment programs to effectively address the needs of those encountering financial stress. These programs accounted for a large portion of the direct payments from 1998 to 2000 and were triggered by either low prices (loan deficiency payments) or congressional action (primarily market loss assistance) during this period. The effects of these programs were not directly proportional to need, going disproportionately to profitable farms and to households with high income levels. Although the payments sharply improved the financial standing of the worst-off program participants, the absolute level of improvement quickly leveled off for farms in the mid-range levels of profitability and household income.

The effects described here are most likely unintended because farm programs were not designed to be proportional to hardship at the farm business or household level. The results shown here have implications for the structure of agriculture. In that respect, the effects of direct payments may differ from what some policymakers prefer. **AO**

Jeffrey Hopkins (202) 694-5584
jhopkins@ers.usda.gov

Policy



Tim McCabe, USDA

Government Payments To Farmers Contribute To Rising Land Values

Direct government payments are usually intended to benefit farm operator families. Critics of payment programs nonetheless contend that, since government payments are usually attached to land, this addition to farm income contributes to rising rental rates and, in turn, to higher land values. The “bidding” of government payments into higher rents and land values generally benefits farmland owners. While a share of the payments accrues to tenants and sharecroppers, farmers who rent a large share of acreage they operate face increased rental rates. This raises their fixed costs and increases the risk of operating losses if commodity prices and government payments decline.

Some government payments to farmers also translate into income for merchants who provide seed, fertilizer, machinery, and other production inputs. Lenders benefit from the improved repayment capacity of farm borrowers and reduced risk on farm loan portfolios. Other indirect benefits accrue as local economic multipliers create ripple effects from the additional income throughout the rural community.

This article describes the interaction between government payments and land values and identifies groups in the community—landowners and others—who are likely to benefit directly or indirectly from program payments. A simple model illustrates the impact of government payments on farmland values, followed by a discussion of government payment impacts on local economies and farm lenders.

Payments Raise Income & Land Values

The value of agricultural land depends largely on its expected future earnings from farming. Because government payments contribute to farm income, they indirectly support farmland values. In competitive local land markets, land buyers pay a higher price to acquire land that conveys an expected stream of government payments.

Payments are generally attached to the land, so the rights to receive payments transfer with land ownership. Current landowners capture most of the expected future program benefits through land value appreciation. Although landowners must sell the land to fully realize the ben-

efits of higher land values, they realize a partial benefit from the increase in equity against which they can borrow and from higher rental rates.

Farmland values change to reflect the present value of expected future net returns to land through a process called capitalization. As government payments become a component of expected future returns, they are incorporated into land values through capitalization. The benefits of higher expected future returns accrue to current owners of land on which payments are made, including both farm owner-operators and nonoperator landlords.

Government payments generally improve the balance sheets of recipients by decreasing income risk associated with land ownership, increasing the value of farm assets, and reducing the need to acquire debt. Government payments may affect the debt side of farmers’ balance sheets by reducing the need for financing of capital asset purchases, and, depending on the timing of receipt of payments, lessening the amount of credit needed for seasonal production financing. Countercyclical direct program payments tend to stabilize income, minimize the impact of catastrophic market losses, and reduce financial risk for both farm operators and the lenders providing them credit.

The impact of income from any source—including government payments—on land values depends on whether that income is viewed as permanent or transitory. This distinction hinges on landowners’ degree of certainty that the income source will be there in the future. Even though production flexibility contract payments (PFCPs) may have been viewed as transitory payments when authorized by the 1996 Act, subsequent emergency assistance and a 70-year history of government involvement in agriculture have generated the expectation that future support will be available when needed.

During 1981–86, high interest rates, a strong dollar, and declining exports contributed to rising uncertainty about the future profitability of farming, leading to a 31-percent nationwide decline in the total value of farm real estate assets. But land values in recent years have been

relatively robust—especially in areas reliant on production of program commodities—despite concerns about low commodity prices and the future direction of farm programs.

Bankers in the Chicago Federal Reserve District (Iowa and parts of Illinois, Indiana, Michigan, and Wisconsin) report that land values in the district rose 6 percent overall in the year ending January 1, 2001, despite a slowdown in the rate of increase in the last three quarters. The gain may confirm that after several years of emergency assistance to offset the effects of low commodity prices, landowners and land purchasers view government payments as a near-permanent solution to future commodity price declines, and that Midwest farmland owners remain confident that government intervention to maintain farm incomes will continue for the foreseeable future. This apparent confidence suggests that landowners view government payments as transitory only in the sense that they might be reduced if market prices and returns on commodity sales improve dramatically.

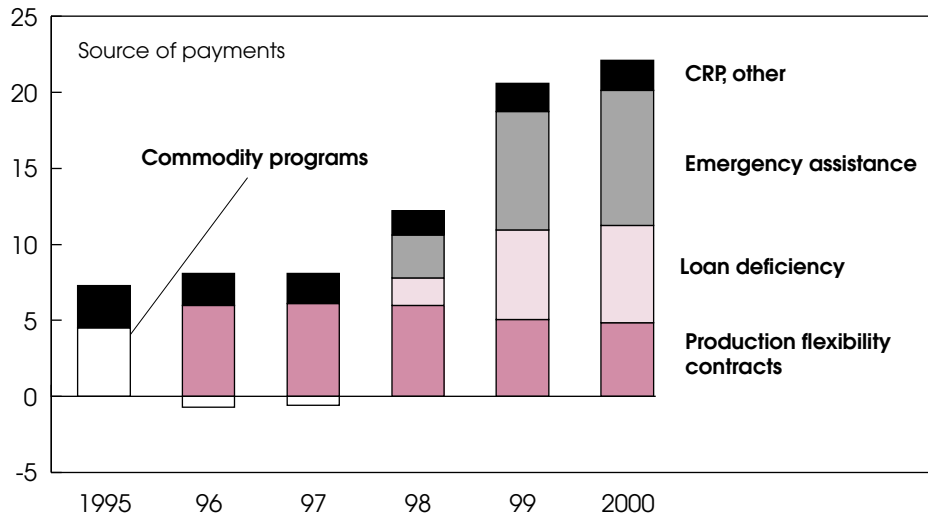
Comparing Benefits to Landowners & Tenants

For many operators, renting land to farm is a key strategy to expand the size of the farm business without incurring additional debt. About 42 percent of farmers rented land in 1999. On average, rented farmland accounted for about 45 percent of total land operated per farm, but about 18 percent of operators rented more than three-fourths of the land they farmed while 7 percent were full tenants—i.e., they owned none of the land they operated. Depending on the extent that government payments lead to higher rental rates and higher land values, operators farming mostly rented acreage may receive little benefit.

PFCP checks are sent to landlords and tenants according to the terms of the lease agreement. In a series of panel discussions held in early 1997 under the auspices of USDA's Economic Research Service, professional farm managers indicated that PFCPs were almost immediately captured by landowners and reflected in rental rates and land values. According to

Emergency Assistance and Loan Deficiency Payments Pushed Direct Government Payments to Historical High in 2000

\$ billion



Previous high for total payments was \$16.7 billion in 1987.

In 1996-97, return of commodity program overpayments exceeded gross outlays.

Economic Research Service, USDA

panelists, the process was clear in cash lease situations, where the lease terms negotiated between tenant and landlord reflect the expected contribution of PFCPs to the renter's income. Given the intense competition for leased land in many areas, tenants operating on cash leases found their lease rates being bid up until the landowner had captured most of the tenant's share of the PFCP.

Landowners' capture of PFCPs through farmland rents is less straightforward when tenants operate land under share rental arrangements. Under the 1996 Farm Act, crop-share leases are routinely reviewed by county committees and USDA personnel to check for compliance with local practices regarding division of PFCPs between landlords and share-rent tenants. Farm manager panelists perceived that the payments were intended to be shared proportionally according to crop shares. But landlords did have some leeway to adjust terms of share leases to circumvent this requirement and to capture more of the PFCP benefits.

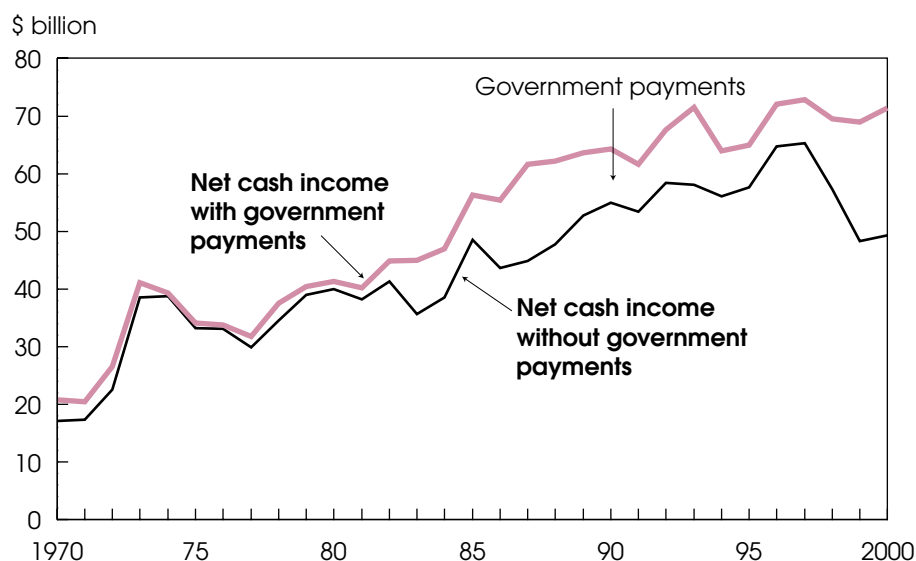
For example, panelists reported that some landlords reduced their share of expenses or retained a larger crop share to gain additional compensation that was equiva-

lent to the amount of the tenant's share of the PFCP. Such lease changes generally take place over time and are subject to review, but panelists indicated that an increasingly larger share of payment benefits would likely accrue to landlords. However, in areas where competition for rental land was less intense, tenants retained a greater proportion of their PFCP.

Farm manager panelists reported that longer term changes in lease arrangements were occurring as landlords attempt to capture a greater share of PFCPs. In some instances, share leases were being converted to cash leases. In other cases, to eliminate questions as to who should receive the PFCPs, landlords simply quit renting out their farmland and used paid labor—sometimes the previous tenant—to provide custom work (labor and equipment) for the same tasks that had previously been carried out under the share lease. The landowner would also pay input suppliers for custom application of needed inputs. As a result of these adjustments, PFCP benefits to share-rent tenants are expected to be minimal in areas where competition for rental land is more intense.

Policy

Government Payments Amounted to Almost One-Third of Net Cash Income to Farm Operators and Landowners in 2000



Economic Research Service, USDA

No follow-up panel discussions have been held to assess the degree to which these adjustments have played out, but USDA data generally support the observations of the 1997 panelists. Cash lease income to nonoperator landlords increased by 17 percent from 1996 through 2000, while share-rent income declined 38 percent. Moreover, the portion of nationwide nonoperator landlord income from cash leases increased from 47 percent to 57 percent between 1996 and 2000, suggesting a shift from share leases to cash leases.

The degree to which government payments affect rental agreements and land values depends on how much additional expense is incurred to become eligible for the payment. Under legislation prior to the 1996 Act, deficiency payments—paid when season-average market prices fell below predetermined target prices—were based on an operation's historic acreage and yields of program commodities. These were effectively lump-sum payments that provided little incentive to increase production (and costs), because a recipient could do little to increase recorded program base acres and yields. Because qualifying for a payment depended on market conditions and prices and entailed additional costs to maintain mandated set-aside acreage, deficiency pay-

ments flowed to the landowner through higher rents and land values.

Production flexibility contract payments—authorized under the 1996 Act—are based on previous participation in annual commodity programs, and are tied to ownership of farmland instead of production of commodities. Where deficiency payment levels depended in large part on commodity market prices, PFCPs—although declining over 7 years—are predetermined for a known time horizon. The payments were intended to benefit those deriving income from farming, and are attached to the land rather than the farm operator. Although the Secretary of Agriculture was directed to protect the interests of tenants and sharecroppers, modifications in both rental rates and lease types resulted in landowners capturing most of the PFCP benefits.

Loan deficiency payments (LDPs) provide a per-unit revenue floor for most program commodities. While these payments are available only for program commodities during periods of relatively low prices, they provide a per-unit revenue floor, reducing any further down-side price risk for these commodities. Since they are paid on each unit produced, they give

farmers an incentive to increase production, incurring greater expenses for fertilizer, herbicides, and other production inputs. By shifting a small share of payment benefits to input suppliers, LDPs have a lesser effect on land values than PFCPs and other lump-sum payments.

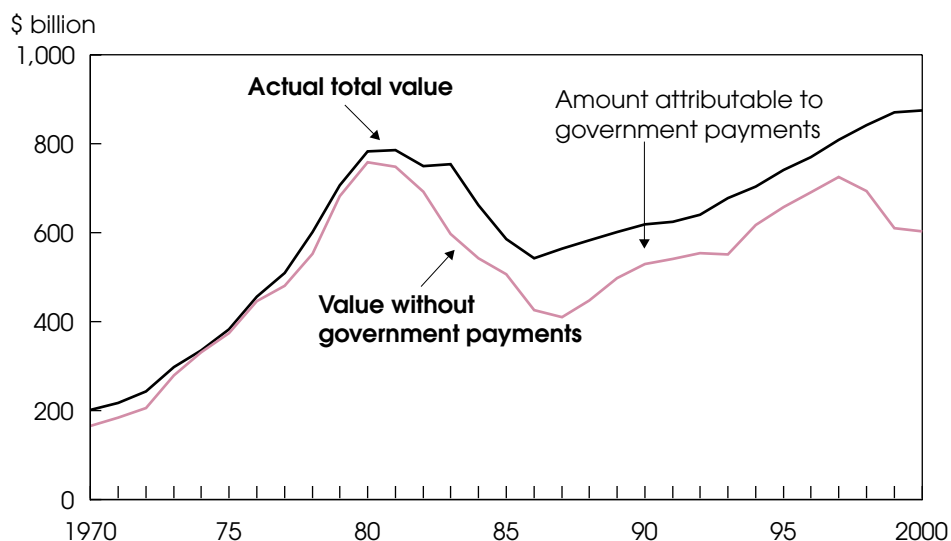
Environmental programs such as the Conservation Reserve Program and Wetlands Reserve Program require payment recipients to incur some expense in maintaining enrolled land in a conserving use. Since payments are made on land that is environmentally sensitive but not necessarily agriculturally productive, they may represent a return—certain for a number of years—that is higher than earnings the land could generate in production. But in removing land from production, they reduce the supply of available land and exert upward pressure on rental rates.

Land Values Without Program Payments

The impact of government payments on farmland values can be illustrated using a simple income capitalization modeling approach. Assuming that net income from all sources—e.g., market sales or government payments—is reflected in land values, the ratio of net income to real estate value is the discount rate at which income is capitalized into land values. This calculated discount or capitalization rate can then be used to estimate land values in the absence of government payments. This simple model is based on assumptions that should generate the largest “reasonable” contribution of government payments to land values and therefore indicate a projected lower limit on land values without government payments.

The ratio of farm-sector net cash income (measured in USDA farm-sector accounts as net cash income accruing to farm operators, contractors, and nonoperator landlords) to farm real estate value measures an implied discount rate, uniquely determined for each year. Applying the discount rate to annual net income excluding government payments generates a new land value that would exist if farmland values depended solely on earnings from market sales. Results suggest that in the absence of government payments, total value of U.S. farmland would have been

U.S. Farm Real Estate Value Would Have Been Lower Without Government Payments



Economic Research Service, USDA

about 4 percent lower at most during 1972-81 and no more than 19 percent lower during 1982-89. This gap between total U.S. land value with and without government payments decreased to about 13 percent during 1990-97, and rose to 25 percent during 1998-2001.

While these findings are consistent with those from more extensive prior studies, several caveats apply. This approach assumes that future income expectations are based entirely on current income, and that expectations change annually and are immediately reflected in current land values. The approach also assumes that government payments contribute dollar-for-dollar to net income (no program participation costs are estimated), and that all net income has the same impact on land values regardless of whether the source is market sales or government payments. Perhaps most importantly, farmland value is based solely on future expected farm income and has no value in nonagricultural uses such as recreation or residential or commercial development.

Most previous studies that have examined the effect of past government payments on cropland values have analyzed limited geographic areas or addressed the issue from the perspective of a single commodity. Those studies bracket the effect of

government payments at between 7 percent and 38 percent of cropland value, with differences attributable to variation in program commodity studied, reference date of the study, region, and estimation method.

A 1990 study by USDA's Economic Research Service (ERS) took a more longrun perspective by estimating changes in cropland values after producers have had time to adjust inputs, outputs, and technology to a drop in income from government payments. The study used a computable general equilibrium model—where all sectors adjust simultaneously—to specifically address the issue of U.S. cropland values in the absence of farm programs. The model results indicate that longrun equilibrium cropland values would be 15-20 percent lower in the absence of government payments.

A more recent ERS study evaluated the impact of government commodity programs on cropland values at the time of implementation of the 1996 Act. The percentage of cropland value accounted for by farm program payments was estimated. Results indicate that the responsiveness of cropland values to changes in government payments varies widely across the U.S. For example, elimination of government payments would have lowered land values

by 69 percent in parts of the Northern Plains, and by about 30 percent throughout much of the Corn Belt. Other areas with a relatively high share of land values attributable to government payments were in north central Texas, southern Georgia, coastal North Carolina, and the Great Plains.

Other Businesses Benefit From Farm Payments

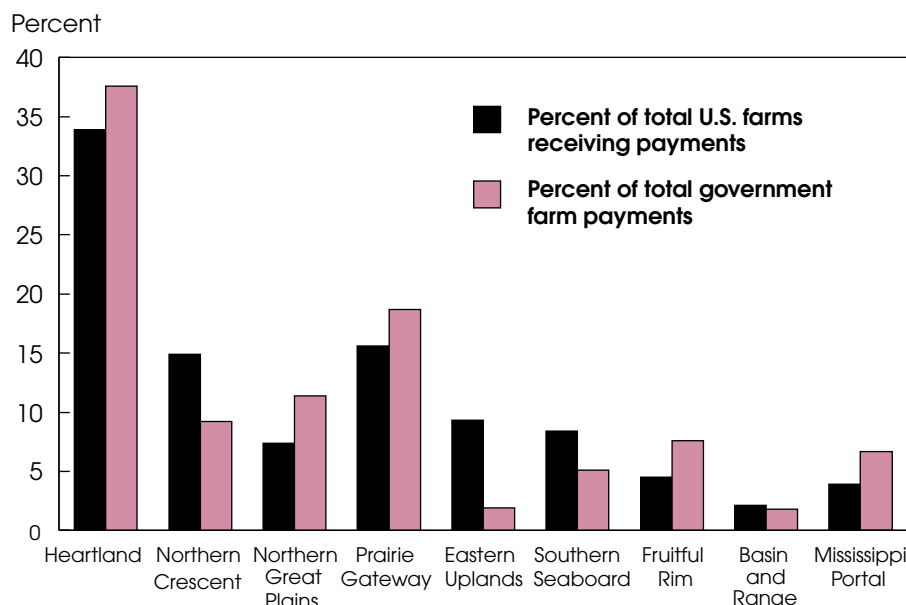
Farm program payments indirectly affect the incomes of rural businesses other than farms, primarily through farm business and household spending in the local area. When farmers use government payments, or credit obtained on the basis of those payments, to purchase farm inputs and equipment locally, they infuse the economy with additional funds, contributing to the revenues of other local businesses and to the maintenance or creation of local jobs. Such local economy spillovers are sometimes called economic multiplier effects.

The magnitude of local economy spillovers from government payments depends upon a number of factors, including design of farm programs and whether or not program payments are spent within the community. If farm program payments are spent in the community where the enrolled land is located, then economic spillovers will benefit the local economy. LDPs, for example, have greater local economywide effects than lump-sum payments because they tend to be spent locally on additional inputs, especially in agriculturally dependent areas (see article on page 27).

One avenue of seepage from the local economy is farm payments that go to landlords who live outside the area. The more that landowners, in general, are able to capture increases in government payments through increased rents and farmland values, the more likely that payments to absentee landlords will escape the local economy. According to data from the Agricultural Economics and Land Ownership Survey, more than one-third of landlords live on the farm they rent to others but one-fourth live at least 150 miles away from their land.

Policy

The Heartland Received More Direct Farm Payments Than Any Other Region in 1999



Economic Research Service, USDA

Farm programs benefit financial institutions that service the farm sector by augmenting farmers' cash-flows. Cash-flows determine the ability of farm owners and operators to repay borrowed money. Government payments to farmers increase the size and reduce the risk of cash-flows associated with farming, and also support the value of farmland serving as collateral for many farm loans.

Larger and more reliable cash-flows benefit farm lenders and give financial institutions a vested interest in the continuation of farm programs. Cash-flow characteristics are key to a lender's determination of how much can prudently be loaned to a farm business. PFCPs and other fixed payments that increase the size of total cash-flows from farmland are received by eligible farmers regardless of production or price risks they face. LDPs and other countercyclical payments not only increase the overall size of cash-flows, but also reduce their riskiness because the cash-flows then increase in years of low market prices.

By increasing and stabilizing farm cash-flows, government payments enable lenders to offer farmers credit on more attractive terms than they otherwise could. This feedback mechanism may well encourage farmers to increase their use of debt and to hold more financial assets. Financial institutions also profit from those farmers and farmland owners who receive government payments but don't borrow, because their demand for savings, trust, and transactions accounts rises as farm-sector wealth and cash-flows increase.

Policy Considerations

Government payments benefit farm operators, but they are largely attached to the land. Consequently, government payments accrue mainly to landowners, in the short run through rising rental rates and in the longer term through capitalization of future program benefits into land values.

Many other businesses in local economies may benefit as increased spending by farm payment recipients adds to income and employment through economic multiplier effects. Lenders share in the benefits due to improved repayment capacity of farm borrowers and reduced risk in farm loan portfolios.

Program payments and their impacts will be part of the upcoming debate on the farm bill that will replace current legislation expiring in 2002. Direct government payments exceeded \$22 billion in 2000 (including nearly \$9 billion in emergency assistance), and represented almost 31 percent of net cash income to farm operators, contractors, and landlords. Many farm groups are calling for continuation of payments near this record level. **AO**

*James Ryan (202) 694-5586, Charles Barnard, and Robert Collender
jimryan@ers.usda.gov*

Ken Erickson also contributed to this article.

Upcoming Reports—USDA's Economic Research Service

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

July

- 11 *World Agricultural Supply and Demand Estimates (8:30 a.m.)*
- 12 *Cotton and Wool Outlook (4 p.m.)***
*Oil Crops Outlook (4 p.m.)***
*Rice Outlook (4 p.m.)***
- 13 *Feed Outlook (9 a.m.)***
*Wheat Outlook (9 a.m.)***
- 19 *Agricultural Outlook**
- 24 *Foreign Agricultural Trade of the United States (FATUS)/U.S. Agricultural Trade Update*
- 25 *Livestock, Dairy, and Poultry Situation and Outlook (4 p.m.)*

*Release of summary, 3 p.m.

**Available electronically only

Identifying the goals of U.S. farm policy

In an upcoming issue of *Agricultural Outlook*

Policy



Dennis Shields

Falling Prices & National Farm Policy: The Northern Great Plains

Fluctuating crop prices and farm incomes can affect the economic well-being of rural communities and even entire regions, particularly those highly dependent on agriculture and where livestock and crop producers have strong linkages to other sectors. Here the scope and design of national farm policy have significant ramifications beyond the farm gate, and Federal farm program payments can affect various sectors of the economy differently.

One such highly dependent region is the Northern Great Plains—Kansas, Nebraska, and North and South Dakota—where farm production and food processing sectors account for \$49 billion (one-fifth of total regional output) and 308,000 jobs (almost one-tenth of regional employment). Almost 90 percent of total crop acreage in the region (according to the 1997 Census of Agriculture) is devoted to wheat, feed crops, and oilseeds, whose prices dropped from very high levels in 1995 to very low levels in 1999 and 2000. This triggered marketing loan benefits (MLBs—loan deficiency program payments and marketing loan gains) and emergency market loss assistance payments (MLAs) during 1998-2000, that

both propped up farm income and generated spillover effects throughout the Northern Great Plains economy.

This article explores the effects on the Northern Great Plains of the downturn in commodity prices and of the farm program response. Specifically, how did MLBs and MLAs contribute to regional welfare when commodity prices dropped? The article assesses the impact of trends in income, land values, and government payments on the Northern Great Plains economy, and highlights agriculture's strong linkages to other sectors in the region.

This examination illustrates a farm program conundrum facing economists and regional policymakers. Lump-sum income

transfers such as MLAs promote economic efficiency because they are mostly decoupled from production decisions. However, they fail to mitigate the large sectoral dislocations induced by a downturn in commodity prices. On the other hand, MLBs affect farm-level decisionmaking by subsidizing farmers' net returns. These programs enjoy widespread political support because they afford income protection by insulating production decisions from commodity price signals.

Federal Payments Counter Effects of Falling Prices

Agriculture and agriculture-related industries in the Northern Great Plains have a strong regional and national presence. The region's four states produce a quarter of total U.S. wheat, one-eighth of feed crops, and one-sixth of livestock. Its meat processing activities account for almost one-fifth of total U.S. production of meat products. Meat, food grains, and other food processing sectors represent the major forward linkages from this region's agricultural production.

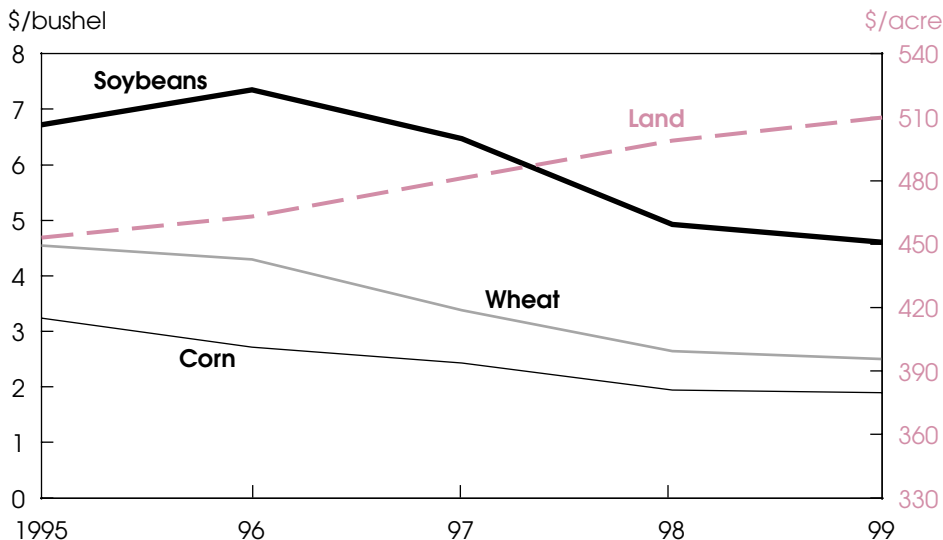
The Asian financial crisis in the late 1990s precipitated a drop in world demand for U.S. agricultural exports. Also, global commodity supplies expanded in response to record-high commodity prices in the 1995/96 marketing year. Abundant worldwide harvests in subsequent years continued to exert downward pressure on commodity prices and added to world and U.S. stocks. Wheat, corn, and soybean prices fell, on average, by 20-30 percent during 1997-99, and crop cash receipts for Northern Great Plains producers fell from \$13 billion in 1997 to less than \$10 billion in 1999.

Throughout this period, net cash income for the region fluctuated between \$6 billion and \$7 billion. All the while, land

The regional computable general equilibrium model used here is based on a 37-sector aggregation of economic activity for the Northern Great Plains States and is constructed from the 1996 IMPLAN state-level database. These results provide information on ballpark magnitudes of sectoral and economywide adjustments in the medium run (3-5 years) independent of outside influences. In this discussion, the term "production" is a revenue flow variable—not a measure of physical quantities produced. This is a common convention in regional and macroeconomics and allows comparison of changes in production among food and nonfood sectors of the economy.

Policy

In Northern Great Plains, Land Prices Rose Even As Crop Prices Fell



For crops, U.S. average farm price for crop year. Average land price on January 1.
Source: National Agricultural Statistics Service, USDA.

Economic Research Service, USDA

values for cropland in the Northern Great Plains rose 10 percent, or about 3 percent annually—about the rate of inflation.

The fact that regional farmland prices rose during this period while commodity prices fell so drastically—pushing down crop cash receipts—is explained in large part by the sudden and substantial rise in government payments to Northern Great Plains producers during calendar years 1998-99. Prior to these years, the ratio of government payments to crop cash receipts was unchanged, and government payments as a share of net cash income remained constant. In 1998, marketing loan benefits rose sharply when prices fell below government commodity loan rates, and eligible producers also received emergency market loss assistance payments authorized by Congress.

Receipt of MLBs and MLAs almost doubled the region's ratio of government program payments to crop cash receipts as well as the program payment share of net cash income. In 1999, government payments accounted for three-fifths of farmers' net cash income in the Northern Great Plains, and the ratio of government payments to this region's crop cash receipts reached almost 50 percent. This cash infusion prevented net cash income from sink-

ing to levels experienced during the farm financial crisis of the 1980s. Federal relief propped up farm income and even exerted upward pressure on regional farmland prices as the 1990s drew to a close, unlike the 1980s plunge in farmland prices.

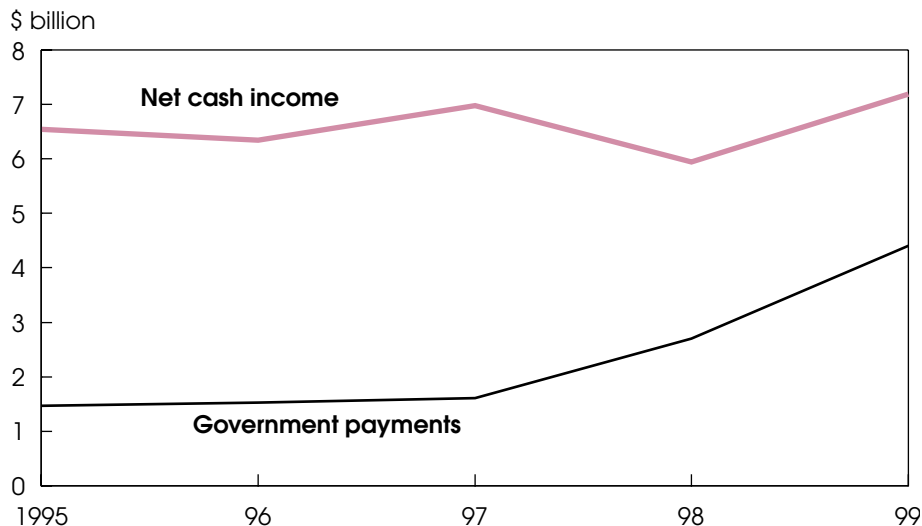
Model Estimates Sector & Regional Impacts

While some farm-level impacts of MLBs and MLAs can be observed, assessing their effects on the regional economy requires using a regional economywide model. Four hypothetical "what if" scenarios are simulated and compared to a base scenario of the Northern Great Plains economy at an initial equilibrium. The analysis of these scenarios represents a way of systematically exploring their different impacts on the regional economy.

The scenarios are:

- **Base:** Northern Great Plains economy in equilibrium using 1996 data.
- **No MLAs or MLBs:** commodity prices drop by 20-30 percent but there are no MLAs or MLBs.
- **Both MLAs and MLBs:** commodity prices drop by 20-30 percent and producers receive both MLAs and MLBs at 1999 levels.
- **MLAs only:** commodity prices drop by 20-30 percent and producers only receive MLA payments at 1999 levels.
- **MLBs only:** commodity prices drop by 20-30 percent and producers only receive MLBs at 1999 levels.

Government Payments Increased As Share of Farmers' Net Cash Income In Northern Great Plains



Economic Research Service, USDA

In these scenarios, the largest share of the \$1.6 billion in MLBs in 1999 goes to feed crop producers, followed by oilseed and wheat producers. While actual market prices reflect supply and demand, farmers view MLBs as a component of expected prices (see *AO*, October 2000).

MLAs represent after-the-fact lump-sum transfers to producers based on acreage enrolled under Production Flexibility Contracts. MLA payments of \$1.3 billion made in 1999 were adjusted to account for the shift in acreage from wheat and feed grains to oilseeds during 1996-99 and for additional relief supplied to oilseed producers in 1999. Since the payments were authorized toward the end of the 1999 fiscal year, it was assumed they did not affect prior planting decisions made by producers. Not examined were the effects of Conservation Reserve Program and Production Flexibility Contract payments, since they did not represent direct responses to low prices.

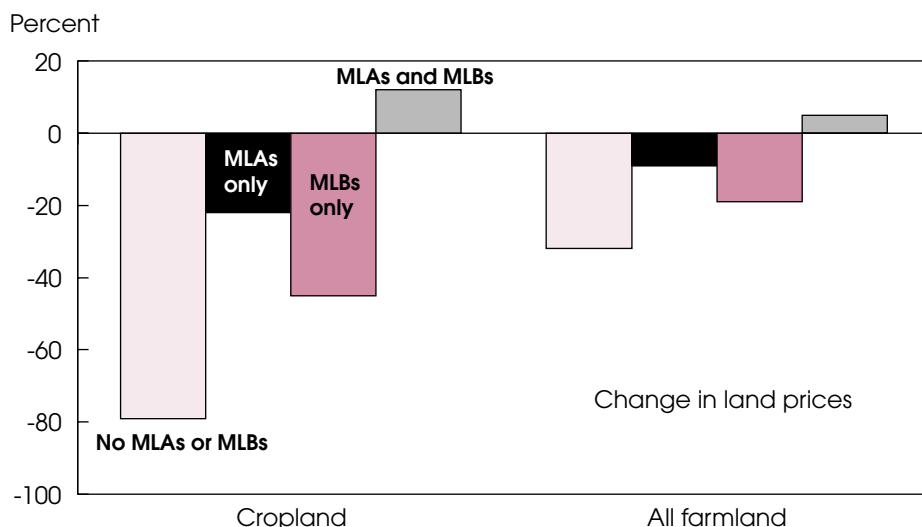
Finally, results from these simulations represent how the regional economy would adjust over a 3-5-year period independent of other outside influences or events.

Without Government Payments, Falling Prices Would Have Jolted Regional Economy

Model results of the “**No MLAs or MLBs**” scenario indicate that in the absence of government assistance payments, price declines of 20-30 percent for wheat, feed grains, and oilseeds would have caused major sector and cross-sector impacts. Compared with the base scenario, output of these crops drops by \$6.5 billion (about 50 percent), many workers leave crop production, and demand for agricultural chemicals and services drops. The price declines lead to a 50-percent reduction in regional wheat output, 40-percent drop in feed crops, and 60-percent drop in oilseeds. Income from wheat, feed grains, and oilseeds falls by 70 percent (or \$4.3 billion).

Livestock producers and food processors are generally the major beneficiaries of a fall in commodity prices. A drop in grain and oilseed prices lowers input costs for these sectors, allowing them to expand

Land Prices Are Higher When Both MLAs and MLBs Are Provided*



MLA = Market loss assistance; MLB = loan deficiency payments and marketing loan gains.

*Scenarios are simulated using a regional economywide model and represent total adjustment over a 3-5-year period from a base scenario.

Economic Research Service, USDA

production while lowering prices to consumers. According to model results, as crop prices fall, livestock, dairy, and poultry producers in the region increase output by about \$4.3 billion or 14 percent, compared with the base scenario. Food processors increase output by a similar percentage. Employment in these sectors increases by almost 20,000 jobs.

In competitive land markets, falling crop cash receipts drive down cropland values. Without program intervention, the model estimates that cropland prices in the region decrease by 79 percent and farmland prices by 32 percent (cropland in this region is about 41 percent of total farmland) compared with the base scenario. The 32-percent drop is consistent with estimated changes in land asset values nationwide in the absence of program payments (see article on page 22).

Without government intervention, according to model results, the fall in crop prices causes nominal gross regional product (GRP) to drop by 2.5 percent, or \$3.7 billion, in the Northern Great Plains economy. (GRP is a regional measure, comparable to the national measure, gross domestic product.) About 85 percent of this regional contraction is due to low prices,

and the remainder is due to a decline in real economic activity. Offsetting gains in livestock, food processing, and manufacturing diminish the reduction in total real economic activity in the region.

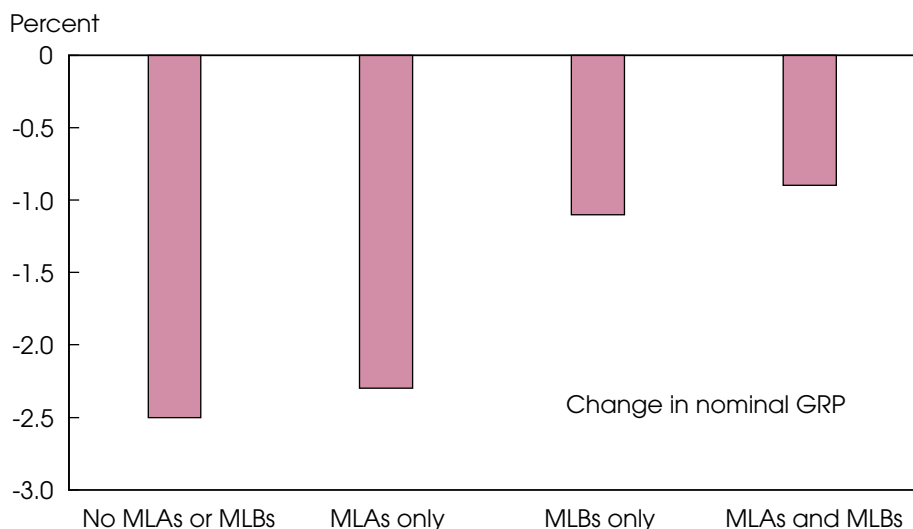
Without the assistance payments, total employment in the Northern Great Plains falls by 40,500 jobs, or 1.1 percent of the labor force. However, this contraction in aggregate employment masks larger shifts in jobs among sectors. Loss of more than 60 percent of total employment in the three major program crop sectors—or 92,000 jobs among farm operators and farm labor—leads to a fall in wage rates that allows other firms to add 54,000 new jobs. Nonfood-related sectors account for 64 percent of these new jobs (mostly in manufacturing), while food-related sectors absorb the other 36 percent.

With Program Payments, Region Adjusts to Lower Prices

Results of the “**Both MLAs and MLBs**” scenario indicate that with these payments, smaller declines occur in wheat production (down 30 percent from the base instead of the 50 percent under the no MLAs or MLBs scenario) and in feed crop production (down 20 percent instead

Policy

Direct Payments Limit Decline in Economic Activity in the Northern Great Plains Region*



MLA = Market loss assistance; MLB = loan deficiency payments and marketing loan gains; GRP = gross regional product.

*Scenarios are simulated using a regional economywide model and represent total adjustment over a 3-5 year period from a base scenario.

Economic Research Service, USDA

of 40 percent). These drops are partially offset by a 4-percent increase in oilseed production because the MLB subsidy rate and MLA transfers for oilseeds are relatively favorable compared with those for wheat and feed grains. Crop sector income falls by 17 percent from the base scenario, or about a quarter of the potential loss without assistance payments.

Livestock producers and food processors expand production by \$3.2 billion, or 11 percent over the base scenario. Added employment in livestock production and food processing accounts for 46 percent of the net increase of 27,000 jobs in the region, while all nonfood sectors—spread equally across the manufacturing, trade and transport, and service sectors—absorb the rest.

In contrast to the precipitous drop in cropland prices under the no MLAs or MLBs scenario, the two programs together induce a 12-percent increase in cropland prices and almost a 5-percent rise in overall farmland prices. These payments create an implicit wealth effect, ensuring positive increases in land prices for producers in the Northern Great Plains despite the decline in commodity prices.

Clearly, without these payments, the market outcome of declining cropland prices could reduce producer access to credit.

The farm program response substantially mitigates regional economic and employment spillovers from the drop in commodity prices by partially stemming the large outflow of capital and labor from the crop producing sectors. The farm program response reduces the drop in the Northern Great Plains nominal GRP by almost two-thirds to 0.9 percent, or \$1.6 billion. Total employment falls by only 17,000 jobs (or 0.5 percent). Moreover, shifts in jobs from crop production to other food and non-food sectors are much smaller than without program intervention.

MLA and MLB Impacts On Region Differ

MLAs only. MLA and MLB programs differ in their impacts on land prices and GRP. MLA payments alone mitigate the size of the fall in cropland prices by 57 percentage points—i.e., the decline is 22 percent from the base instead of the 79-percent fall in cropland prices under the no MLA or MLB scenario.

While providing relief to landowners, MLAs do not directly influence farmers' decisions or induce adjustments in markets for capital and labor or markets for food and nonfood goods and services. These transfers are spent by operators to reduce farm debt, and by farm households mainly to purchase consumer goods. With MLA payments only, nominal GRP falls by 2.3 percent, slightly less than the 2.5-percent drop that occurs in the no MLA or MLB scenario.

MLBs only. In contrast, the MLB payments alone partially stem the outflow of labor and capital from the crop sectors and reduce the drop in nominal GRP by half to 1.1 percent, or \$1.7 billion. With over 95 percent of this decline represented by the effects of low prices, these payments almost neutralize the real contractionary effects of the price shock on the Northern Great Plains economy. The MLB program allows farmers to minimize lost revenue from some crops by switching to production of oilseeds. Regional cropland prices decrease by 45 percent from the base compared with 79 percent with no intervention, translating to a decrease of aggregate farmland prices of almost 19 percent.

Implications for Regional Policy

MLBs and MLAs represent two types of policies producing different effects on the Northern Great Plains economy. MLBs directly offset producers' costs, reducing market adjustments producers make. With this program in place, the fall in commodity prices becomes less disruptive to the mix of goods and services produced in the Northern Great Plains. Consequently, it is the MLB program itself that is responsible for reducing job losses in crop production by half and almost offsetting the real effect of this price shock on GRP.

As a lump-sum transfer, the MLA payments directly subsidize cropland prices, thereby augmenting crop-sector incomes. However, since MLA-type payments do little to offset reductions in crop production induced by lower prices, crop-sector employment would still fall by the same 60 percent as in the "No MLAs or MLBs" scenario. The larger disruptions in the

other sectors and the regional labor market would still occur.

For the economist, lump-sum transfers such as MLAs are the preferred method of distributing a subsidy because they do not distort farmers' responses to price signals. For the regional policymaker, MLBs are preferred because, by dampening the price signals and slowing the outflow of capital and labor from the crop sectors, they diminish the adjustments that the regional economy must make. Hence the conundrum.

However, an even more fundamental implication exists. Since 1950, farm size has doubled, the number of farms has declined by 60 percent, and technological change has generated a thriving agricultural sector that uses increasingly less labor. Successful U.S. agriculture has been a story of continuous innovation and change in the structure of production, even as real commodity prices follow a downward trend.

The extent to which the current downturn in commodity prices reflects part of the longrun downward trend in real prices indicates there could be a constructive role for marketing loans. If loan rates

were allowed to follow average prices downward, MLB payments could facilitate a smoother structural transition to a new market environment. With an estimated loss of 92,000 crop production jobs in the agriculturally dependent Northern Great Plains without MLBs, even a portion of this job loss is hard to swallow in one gulp. **AO**

Stephen J. Vogel (202) 694-5368 and Kenneth Hanson (202) 694-5427

*svogel@ers.usda.gov
khanson@ers.usda.gov*

C. Edwin Young also contributed to this article.

Farm and Commodity Policy briefing room On the ERS website

Visited it lately?

Debate on the 2002 farm bill is gathering momentum. The **newly updated** Farm and Commodity Policy briefing room offers analyses of current farm policy and alternative proposals for addressing the needs of farmers and others who will be affected by new farm legislation. As the farm bill debate proceeds, the briefing room will be updated with new information and analysis.

www.ers.usda.gov/briefing/farmpolicy

Click on "The 2002 farm bill debate"

Just released

Analysis of the U.S. Commodity Loan Program with Marketing Loan Provisions

The availability of marketing loan benefits to supplement producer revenues when crop prices are relatively low can influence farmers' planting decisions and their acreage allocation, and in turn affect crop prices. This new analysis from ERS will help inform the farm bill debate.

www.ers.usda.gov/publications/aer801

Hard copies available by calling 1-800-999-6779
(stock number AER-801)





New products, available on the Economic Research Service website, examine:

- Farm income forecast in 2001
- Structure and diversity of the U.S. farm sector

Farm Income Forecast. Indicates that rapidly improving conditions in the livestock have lifted the early-January forecast for 20001 by \$1.1 billion.

www.ers.usda.gov/Briefing/FarmIncome/Fore.htm

Structural and Financial Characteristics of U.S. Farms: 2001 Family Farm Report. Uses the ERS farm typology to examine farm structure and capture the diversity of U.S. farms, and includes data on the economic viability of family farms, the characteristics of farms and operators, and the role of government programs.

www.ers.usda.gov/publications/aib768/

America's Diverse Family farms: Assorted Sizes, Types, and Situations. Draws from the 20001 Family Farm Report to describe U.S. farm structure, and explains the farm typology developed by ERS.

www.ers.usda.gov/publications/aib769/

For additional resources, reports, financial data, and updates, visit the these farm-focused briefing rooms on the ERS website:

Farm Income and Costs

Farm Structure

Farm and Commodity Policy

Farm Financial Management

All are at www.ers.usda.gov/briefing/

Economic Research Service,
USDA

Statistical Indicators

Summary Data

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

	2000						2001			
	2000	2001	2002	II	III	IV	I	II	III	IV
Prices received by farmers (1990-92=100)	96	102	--	99	97	97	100	--	--	--
Livestock & products	97	105	--	98	98	99	103	--	--	--
Crops	96	99	--	101	96	95	97	--	--	--
Prices paid by farmers (1990-92=100)										
Production items	116	120	--	116	116	118	120	--	--	--
Commodities and services, interest, taxes, and wage rates (PPITW)	120	124	--	119	120	121	124	--	--	--
Cash receipts (\$ bil.)	194	202	--	42	50	58	47	45	51	59
Livestock	100	107	--	24	25	26	26	26	28	27
Crops	95	95	--	18	24	32	22	19	23	32
Market basket (1982-84=100)										
Retail cost	171	--	--	169	172	173	--	--	--	--
Farm value	97	--	--	96	97	100	--	--	--	--
Spread	210	--	--	209	211	212	--	--	--	--
Farm value/retail cost (%)	20	--	--	20	20	20	--	--	--	--
Retail prices (1982-84=100)										
All food	168	173	177	167	169	170	172	172	173	174
At home	168	173	177	167	169	170	172	172	173	173
Away from home	169	174	178	168	170	171	172	173	174	175
Agricultural exports (\$ bil.) ¹	50.9	53.0	--	12.0	12.2	14.4	13.8	12.6	12.3	14.0
Agricultural imports (\$ bil.) ¹	38.9	40.0	--	10.2	9.1	9.7	9.9	9.9	10.5	10.0
Commercial production										
Red meat (mil. lb.)	46,150	45,106	45,083	11,288	11,623	11,634	11,118	11,324	11,415	11,249
Poultry (mil. lb.)	36,427	36,730	37,705	9,287	9,070	9,050	8,960	9,360	9,180	9,230
Eggs (mil. doz.)	7,035	7,141	7,270	1,744	1,751	1,786	1,756	1,770	1,780	1,835
Milk (bil. lb.)	167.7	165.9	169.9	43.2	41.2	40.7	41.3	42.8	40.7	41.1
Consumption, per capita										
Red meat and poultry (lb.)	219.5	215.8	215.6	54.9	55.2	55.5	53.0	54.1	53.9	54.7
Corn beginning stocks (mil. bu.) ²	1,787.0	1,717.5	--	8,039.4	5,601.9	3,585.9	1,717.5	8,522.2	6,037.4	--
Corn use (mil. bu.) ²	9,514.8	9,745.0	--	2,441.0	2,021.5	1,870.7	3,165.0	2,487.3	--	--
Prices ³										
Choice steers--Neb. Direct (\$/cwt)	69.65	74-78	77-83	71.59	65.43	72.26	79.17	73-75	72-76	74-80
Barrows and gilts--IA, So. MN (\$/cwt)	44.70	44-46	41-45	50.43	46.43	40.78	42.83	49-51	47-49	36-40
Broilers--12-city (cents/lb.)	56.20	57-60	59-64	55.70	56.80	57.60	57.80	58-60	58-62	56-60
Eggs--NY gr. A large (cents/doz.)	68.90	74-77	68-73	62.10	67.10	83.10	75.80	69-71	75-79	77-83
Milk--all at plant (\$/cwt)	12.33	14.80-15.30	13.20	12.07	12.67	12.70	13.37	14.95	15.30	15.75
								15.25	15.90	16.65
Wheat--KC HRW ordinary (\$/bu.)	3.08	--	--	2.95	3.00	3.44	3.45	--	--	--
Corn--Chicago (\$/bu.)	1.97	--	--	2.16	1.64	2.01	2.03	--	--	--
Soybeans--Chicago (\$/bu.)	4.86	--	--	5.20	4.60	4.70	4.48	--	--	--
Cotton--avg. spot 41-34 (cents/lb)	57.47	--	--	55.68	58.36	61.24	52.66	--	--	--
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Farm real estate values ⁴										
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.) ⁵	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.) ⁶	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 are 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				2001
	1998	1999	2000	III	IV	I	II	III	IV	I
<i>Billions of current dollars (quarterly data seasonally adjusted at annual rates)</i>										
Gross Domestic Product	8,790.2	9,299.2	9,963.1	9,340.9	9,559.7	9,752.7	9,945.7	10,039.4	10,114.4	10,243.6
Gross National Product	8,750.0	9,236.2	9,958.7	9,327.3	9,546.3	9,745.0	9,937.4	10,030.5	10,121.8	--
Personal consumption expenditures	5,850.9	6,268.7	6,757.3	6,319.9	6,446.2	6,621.7	6,706.3	6,810.8	6,890.2	6,999.4
Durable goods	693.9	761.3	820.3	767.2	787.6	826.3	814.3	824.7	815.8	837.7
Nondurable goods	1,707.6	1,845.5	2,010.0	1,860.0	1,910.2	1,963.9	1,997.6	2,031.5	2,046.9	2,069.8
Food	845.8	897.8	953.2	900.4	926.1	938.4	948.3	959.9	966.2	977.3
Clothing and shoes	286.4	307.0	328.3	308.7	311.9	323.1	325.6	330.9	333.6	337.4
Services	3,449.3	3,661.9	3,927.0	3,692.7	3,748.5	3,831.6	3,894.4	3,954.6	4,027.5	4,091.9
Gross private domestic investment	1,549.9	1,650.1	1,832.7	1,659.1	1,723.7	1,755.7	1,852.6	1,869.3	1,853.3	1,797.7
Fixed investment	1,472.9	1,606.8	1,778.2	1,622.4	1,651.0	1,725.8	1,780.5	1,803.0	1,803.5	1,811.7
Change in private inventories	77.0	43.3	54.5	36.7	72.7	29.9	72.0	66.4	49.8	-14.1
Net exports of goods and services	-151.5	-254.0	-370.7	-280.5	-299.1	-335.2	-355.4	-389.5	-402.7	-361.0
Government consumption expenditures and gross investment	1,540.9	1,634.4	1,743.7	1,642.4	1,688.8	1,710.4	1,742.2	1,748.8	1,773.6	1,807.6
<i>Billions of 1996 dollars (quarterly data seasonally adjusted at annual rates)¹</i>										
Gross Domestic Product	8,515.7	8,875.8	9,318.5	8,905.8	9,084.1	9,191.8	9,318.9	9,369.5	9,393.7	9,439.9
Gross National Product	8,515.1	8,868.3	9,316.6	8,895.4	9,075.0	9,187.7	9,313.7	9,362.8	9,402.2	--
Personal consumption expenditures	5,678.7	5,978.8	6,294.3	6,013.8	6,101.0	6,213.5	6,260.6	6,329.8	6,373.3	6,422.6
Durable goods	727.3	817.8	896.0	826.2	851.8	898.2	886.7	903.2	896.0	921.5
Nondurable goods	1,684.8	1,779.4	1,869.0	1,786.1	1,818.1	1,844.8	1,861.1	1,882.6	1,887.4	1,899.6
Food	812.8	845.9	877.3	846.7	866.0	872.2	876.5	879.1	881.4	882.8
Clothing and shoes	292.2	318.5	345.1	322.1	322.1	337.7	342.3	350.2	350.0	354.6
Services	3,269.4	3,390.8	3,543.9	3,411.1	3,443.0	3,487.2	3,526.7	3,559.3	3,602.5	3,617.6
Gross private domestic investment	1,566.8	1,669.7	1,839.8	1,680.8	1,751.6	1,773.6	1,863.0	1,871.1	1,851.5	1,795.8
Fixed investment	1,485.3	1,621.4	1,771.7	1,637.8	1,666.6	1,730.9	1,777.6	1,791.3	1,787.1	1,794.2
Change in private inventories	80.2	45.3	60.9	39.1	80.9	36.6	78.6	72.5	55.7	-7.1
Net exports of goods and services	-221.0	-322.4	-412.4	-342.6	-352.5	-376.8	-403.4	-427.7	-441.7	-404.9
Government consumption expenditures and gross investment	1,486.4	1,536.1	1,579.2	1,537.8	1,569.5	1,565.1	1,583.7	1,578.2	1,589.6	1,605.1
GDP implicit price deflator (% change)	1.3	1.5	2.0	0.9	1.3	3.3	2.4	1.6	2.0	3.2
Disposable personal income (\$ bil.)	6,320.0	6,637.7	6,989.8	6,664.5	6,775.0	6,866.5	6,964.9	7,040.9	7,087.0	7,179.2
Disposable pers. income (1996 \$ bil.)	6,134.1	6,331.0	6,511.0	6,341.7	6,412.2	6,443.1	6,502.0	6,543.7	6,555.3	6,587.7
Per capita disposable pers. income (\$)	23,359	24,314	25,379	24,384	24,728	25,014	25,322	25,535	25,641	25,917
Per capita disp. pers. income (1996 \$)	22,672	23,191	23,640	23,203	23,404	23,472	23,639	23,732	23,718	23,781
U.S. resident population plus Armed Forces overseas (mil.) ²	270.5	272.9	275.4	273.2	273.9	274.4	275.0	275.6	276.3	--
Civilian population (mil.) ²	269.0	271.5	273.9	271.7	272.4	273.0	273.5	274.2	274.9	--
	Annual			2000				2001		
	1998	1999	2000	Mar	Oct	Nov	Dec	Jan	Feb	Mar
<i>Monthly data seasonally adjusted</i>										
Total industrial production (1992=100)	138.2	144.8	153.6	151.3	154.9	154.1	152.6	151.8	151.3	151.8
Leading economic indicators (1996=100)	105.4	108.8	109.9	110.5	109.4	109.1	108.5	109.0	108.8	108.7
Civilian employment (mil. persons) ³	131.5	133.5	135.2	135.0	135.5	135.5	135.8	136.0	135.8	135.8
Civilian unemployment rate (%) ³	4.5	4.2	4.0	4.0	3.9	4.0	4.0	4.2	4.2	4.3
Personal income (\$ bil. annual rate)	7,391.0	7,789.6	8,281.7	8,161.6	8,406.0	8,422.1	8,461.0	8,509.6	8,551.1	8,591.9
Money stock-M2 (daily av.) (\$ bil.) ⁴	4,383.4	4,650.0	4,943.4	4,717.2	4,887.0	4,904.1	4,943.4	4,993.9	5,038.3	5,098.9
Three-month Treasury bill rate (%)	4.81	4.66	5.85	5.72	6.10	6.19	5.83	5.27	4.93	4.50
AAA corporate bond yield (Moody's) (%)	6.53	7.04	7.62	7.68	7.55	7.45	7.21	7.15	7.10	6.98
Total housing starts (1,000) ⁵	1,616.9	1,666.5	1,593.1	1,630	1,529	1,564	1,577	1,671	1,634	1,613
Business inventory/sales ratio ⁶	1.39	1.35	1.33	1.31	1.35	1.36	1.36	1.37	1.37	--
Sales of all retail stores (\$ bil.) ⁷	2,745.6	2,994.9	--	269.7	272.5	270.9	271.3	274.9	274.3	273.3
Nondurable goods stores (\$ bil.)	1,609.2	1,739.9	--	157.0	160.8	160.6	161.1	163.0	161.8	161.2
Food stores (\$ bil.)	435.4	458.3	--	39.7	40.8	40.8	41.2	41.3	41.4	41.4
Apparel and accessory stores (\$ bil.)	127.0	135.1	--	12.0	12.1	12.0	12.1	12.3	12.3	12.1
Eating and drinking places (\$ bil.)	266.4	285.4	--	25.3	25.7	25.8	25.8	26.6	26.3	26.3

-- = 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									
	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
<i>Real GDP, annual percent change</i>										
World	1.5	3.1	2.7	3.1	3.5	2.1	2.9	4.1	2.3	3.1
less U.S.	1.1	2.7	2.8	3.0	3.1	1.3	2.4	3.7	2.4	3.2
Developed economies	0.9	2.8	2.3	2.7	3.1	2.5	2.8	3.6	1.7	2.6
less U.S.	0.1	2.3	2.2	2.2	2.4	1.5	2.1	2.9	1.6	2.3
United States	2.7	4.0	2.7	3.6	4.4	4.4	4.2	5.0	1.8	3.0
Canada	2.3	4.7	2.8	1.5	4.4	3.3	4.5	4.7	2.5	3.0
Japan	0.5	1.0	1.6	3.3	1.9	-1.1	0.8	1.7	0.1	1.1
Australia	3.8	5.4	3.8	3.9	3.7	4.9	6.9	3.7	1.8	3.5
European Union	-0.4	2.7	2.4	1.6	2.5	2.8	2.5	3.4	2.4	2.9
Transition economies	-6.6	-8.9	-1.5	-1.0	1.1	-1.5	2.3	5.7	3.9	3.6
Eastern Europe	1.0	2.9	5.7	4.2	2.4	1.8	2.0	3.8	3.7	4.4
Poland	3.8	5.2	7.0	6.1	6.9	4.8	4.0	4.2	3.5	4.5
Former Soviet Union	-10.0	-14.8	-5.9	-4.5	0.2	-4.0	2.5	7.1	4.0	3.0
Russia	-8.7	-12.6	-4.1	-3.5	0.8	-4.6	3.2	7.4	4.1	2.9
Developing economies	5.8	6.3	5.2	5.8	5.4	1.3	3.4	5.7	4.4	5.4
Asia	7.9	8.8	8.3	7.4	5.9	0.5	6.3	7.2	5.4	6.5
East Asia	9.1	9.8	8.8	7.8	7.0	2.0	7.5	8.1	5.9	6.8
China	13.5	12.6	10.5	9.6	8.8	7.8	7.1	8.0	7.9	8.5
Taiwan	7.0	7.1	6.4	6.1	6.7	4.6	5.4	6.0	4.3	5.0
Korea	5.5	8.2	8.9	6.7	5.0	-6.7	10.9	8.8	3.8	5.1
Southeast Asia	7.7	7.9	8.1	7.1	4.7	-6.3	3.6	5.8	3.8	5.6
Indonesia	7.3	7.5	8.2	7.8	4.7	-13.2	0.7	4.8	3.8	5.7
Malaysia	8.3	9.2	9.5	8.6	7.8	-7.2	5.6	8.6	3.8	6.8
Philippines	2.1	4.4	4.7	5.8	5.2	-0.5	3.2	4.0	2.2	3.8
Thailand	8.4	8.9	8.8	5.5	-0.4	-10.8	4.2	4.3	3.5	5.7
South Asia	4.5	7.0	7.4	6.7	4.4	5.7	5.7	5.9	5.8	6.5
India	5.0	7.9	8.0	7.3	5.0	6.1	6.3	6.3	6.3	7.0
Pakistan	1.9	3.9	5.1	4.7	-0.4	3.7	3.0	3.9	2.7	3.7
Latin America	4.3	5.3	1.3	3.6	5.1	1.9	0.0	3.7	3.7	4.2
Mexico	1.9	4.5	-6.2	5.1	6.8	4.9	3.8	6.9	3.8	4.5
Caribbean/Central	4.7	4.0	3.2	3.6	5.8	6.1	3.4	4.4	4.4	4.6
South America	4.9	5.6	3.1	3.3	4.8	1.2	-1.0	2.9	3.7	4.2
Argentina	5.9	5.8	-2.8	5.5	8.1	3.9	-3.1	-0.4	0.7	2.3
Brazil	4.9	5.9	4.2	2.8	3.2	0.1	0.8	4.0	4.8	4.5
Colombia	5.4	5.8	5.2	2.0	2.8	0.6	-4.5	3.4	4.0	6.4
Venezuela	0.3	-2.3	3.7	-0.5	6.5	-0.7	-7.3	2.6	3.1	3.0
Middle East	3.9	-0.2	3.7	4.3	4.7	2.2	-1.2	4.8	0.4	3.9
Israel	5.6	6.9	7.0	4.6	2.2	1.9	2.1	5.4	2.8	4.0
Saudi Arabia	-0.6	0.5	0.5	1.4	1.9	2.3	-1.1	3.5	3.0	2.5
Turkey	8.7	-5.2	7.8	7.0	7.5	2.8	-4.7	7.0	-4.6	5.9
Africa	1.0	3.2	2.9	5.2	2.8	3.1	2.9	3.7	4.1	3.7
North Africa	0.5	3.9	1.5	6.5	2.6	5.6	3.8	4.3	4.6	4.0
Egypt	2.9	3.9	4.7	5.0	5.5	5.6	6.0	5.0	4.5	4.2
Sub-Saharan	1.4	2.6	3.9	4.3	2.9	1.3	2.3	3.3	3.7	3.4
South Africa	1.2	3.2	3.1	4.2	2.5	0.5	1.9	3.1	3.4	3.2
<i>Consumer prices, annual percent change</i>										
Developed economies	3.1	2.6	2.6	2.4	2.1	1.5	1.4	2.3	2.1	1.8
Transition economies	634.3	274.2	133.5	42.4	27.4	21.8	43.9	20.1	15.3	10.0
Developing economies	43.2	55.3	23.2	15.4	9.9	10.4	6.7	6.1	5.7	4.8
Asia	10.8	16.0	13.2	8.3	4.8	7.7	2.5	1.9	2.8	3.3
	152.1	200.3	36.0	21.2	12.9	9.8	8.8	8.1	6.3	4.8
Middle East	29.4	37.3	39.1	29.6	27.7	27.6	23.2	20.7	18.4	13.5
Africa	39.0	54.8	35.1	30.1	14.4	9.1	11.5	13.5	9.6	5.7

-- = Not available. The last 3 years are either estimates or forecasts. Sources: Oxford Economic Forecasting; International Financial Statistics, IMF.
 Information contact: Andy Jerardo (202) 694-5323, ajerardo@ers.usda.gov

Farm Prices

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

	Annual			2000			2001			
	1999	2000	2001	Apr	Nov	Dec	Jan	Feb	Mar	Apr
<i>1990-92=100</i>										
Prices received										
All farm products	96	96	102	100	98	98	97	100	103	107
All crops	97	96	99	102	97	96	94	98	98	106
Food grains	90	86	92	85	92	94	93	91	92	91
Feed grains and hay	86	86	90	91	85	90	89	90	90	90
Cotton	85	82	78	75	96	96	86	81	71	72
Tobacco	102	106	103	90	113	113	118	118	97	79
Oil-bearing crops	83	85	79	89	84	88	84	80	78	75
Fruit and nuts, all	116	101	105	98	107	85	91	92	96	140
Commercial vegetables	110	122	135	136	143	112	120	144	138	133
Potatoes and dry beans	100	93	87	106	77	78	78	85	93	92
Livestock and products	95	97	105	98	100	101	100	102	108	109
Meat animals	83	94	101	99	92	95	97	98	103	104
Dairy products	110	94	104	91	96	100	101	100	106	110
Poultry and eggs	110	107	113	106	119	114	105	112	119	116
Prices paid										
Commodities and services, interest, taxes, and wage rates (PPITW)	115	120	124	119	121	122	124	124	123	124
Production items	111	116	120	116	117	118	120	120	119	120
Feed	100	101	107	102	102	106	109	106	105	106
Livestock and poultry	95	110	110	112	112	115	111	108	109	112
Seeds	121	124	127	125	124	124	124	124	125	134
Fertilizer	105	109	134	106	116	119	134	139	135	135
Agricultural chemicals	121	120	123	119	119	120	127	126	121	121
Fuels	93	135	134	125	155	146	143	143	128	127
Supplies and repairs	121	124	126	124	125	125	126	125	126	126
Autos and trucks	119	119	119	120	119	119	120	119	119	118
Farm machinery	135	140	142	138	137	137	137	137	142	143
Building material	120	121	121	122	121	121	120	121	121	121
Farm services	116	118	119	117	118	118	119	119	119	119
Rent	113	113	114	113	113	113	114	114	114	114
Interest payable per acre on farm real estate debt	106	112	116	112	110	110	116	116	116	116
Taxes payable per acre on farm real estate	120	123	123	123	123	123	123	123	123	123
Wage rates (seasonally adjusted)	135	140	149	140	143	143	149	149	149	149
Prod. items, interest, taxes & wage rates (PITW)	113	118	122	118	119	120	123	122	122	122
Ratio, prices received to prices paid (%)*	83	80	72	84	81	80	78	81	84	86
Prices received (1910-14=100)	607	612	647	636	624	624	614	634	656	682
Prices paid, etc. (parity index) (1910-14=100)	1,531	1,594	1,646	1,589	1,612	1,621	1,651	1,647	1,640	1,647
Parity ratio (1910-14=100) (%)*	40	38	39	40	39	38	37	38	40	41

-- = 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 ¹			2000			2001			
	1997	1998	1999	Apr	Nov	Dec	Jan	Feb	Mar	Apr
Crops										
All wheat (\$/bu.)	3.38	2.65	2.55	2.57	2.83	2.87	2.85	2.83	2.87	2.84
Rice, rough (\$/cwt)	9.70	8.89	6.00	5.75	5.63	5.60	5.84	5.72	5.55	5.52
Corn (\$/bu.)	2.43	1.94	1.90	2.03	1.86	1.97	1.98	1.96	1.95	1.91
Sorghum (\$/cwt)	3.95	2.97	2.95	3.24	3.27	3.54	3.37	3.48	3.29	3.34
All hay, baled (\$/ton)	100.00	84.60	77.00	78.20	85.00	85.10	84.90	86.80	87.20	94.80
Soybeans (\$/bu.)	6.47	4.93	4.75	5.00	4.55	4.78	4.68	4.46	4.39	4.18
Cotton, upland (¢/lb.)	65.20	60.20	44.90	45.40	58.00	58.00	52.30	49.10	43.20	43.60
Potatoes (\$/cwt)	5.62	5.56	5.84	6.46	4.40	4.61	4.56	5.02	5.56	5.47
Lettuce (\$/cwt) ²	17.50	16.10	13.30	22.80	20.20	12.00	13.70	23.20	15.00	16.50
Tomatoes, fresh (\$/cwt) ²	31.70	35.20	25.90	34.80	46.10	33.00	43.80	28.70	56.50	24.30
Onions (\$/cwt)	12.60	13.80	9.78	9.99	10.60	11.60	13.90	14.10	15.60	16.00
Beans, dry edible (\$/cwt)	19.30	19.00	17.60	15.70	15.40	14.40	15.00	15.20	15.00	15.50
Apples for fresh use (¢/lb.)	22.10	17.30	21.20	19.30	18.50	18.10	16.10	15.20	14.20	15.80
Pears for fresh use (\$/ton)	276.00	291.00	294.00	305.00	378.00	301.00	340.00	251.00	274.00	304.00
Oranges, all uses (\$/box) ³	4.22	4.29	5.94	4.36	3.16	2.94	2.82	3.29	4.13	5.02
Grapefruit, all uses (\$/box) ³	1.93	2.00	3.22	3.31	3.09	2.20	1.87	2.07	1.53	1.36
Livestock										
Cattle, all beef (\$/cwt)	63.10	59.60	63.40	71.30	69.10	71.90	74.80	74.80	76.30	76.50
Calves (\$/cwt)	78.90	78.80	87.70	111.00	106.00	106.00	108.00	109.00	112.00	113.00
Hogs, all (\$/cwt)	52.90	34.40	30.30	47.40	36.40	39.80	37.20	39.10	46.00	46.70
Lambs (\$/cwt)	90.30	72.30	74.50	82.60	71.50	71.80	74.10	80.10	84.40	--
All milk, sold to plants (\$/cwt)	13.36	15.46	14.38	11.90	12.60	13.10	13.20	13.00	13.90	14.40
Milk, manuf. grade (\$/cwt)	12.17	14.24	12.86	10.20	10.40	10.80	10.90	11.10	12.20	12.70
Broilers, live (¢/lb.)	37.70	39.30	37.10	34.00	38.00	35.00	34.00	37.00	40.00	39.00
Eggs, all (¢/doz.) ⁴	70.30	66.80	62.70	64.70	74.00	83.30	67.20	68.20	69.10	66.50
Turkeys (¢/lb.)	39.90	38.00	40.80	40.00	47.00	40.50	36.60	36.30	37.10	37.80

-- = 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			2000			2001			
	1998	1999	2000	Apr	Nov	Dec	Jan	Feb	Mar	Apr
<i>1982-84=100</i>										
Consumer Price Index, all items	163.0	166.6	172.1	171.2	174.1	174.0	175.1	175.8	176.2	176.9
CPI, all items less food	163.6	167.0	172.9	172.0	175.0	174.7	175.9	176.6	177.1	177.8
All food	160.7	164.1	167.8	166.6	168.9	170.0	170.9	171.3	171.7	171.9
Food away from home	161.1	165.1	169.0	168.1	170.4	170.8	171.4	171.8	172.3	172.7
Food at home	161.1	164.2	167.9	166.5	168.8	170.2	171.3	171.8	172.0	172.2
Meats ¹	141.6	142.3	150.7	148.8	152.5	152.9	154.1	156.5	157.9	158.0
Beef and veal	136.5	139.2	148.1	147.0	149.3	150.9	154.8	158.6	160.1	161.5
Pork	148.5	145.9	156.5	153.5	158.0	157.2	156.7	157.9	159.4	157.9
Poultry	157.1	157.9	159.8	158.5	157.2	160.7	160.8	161.8	162.6	163.1
Fish and seafood	181.7	185.3	190.4	189.8	189.6	189.5	192.8	193.0	190.7	192.4
Eggs	135.4	128.1	131.9	129.5	140.4	145.5	150.4	142.9	139.2	144.7
Dairy and related products ²	150.8	159.6	160.7	160.6	161.4	161.5	163.6	163.6	163.2	163.4
Fats and oils ³	146.9	148.3	147.4	144.8	146.5	150.2	153.0	152.6	153.1	151.5
Fresh fruits	246.5	266.3	258.3	257.0	262.8	269.0	261.8	253.5	257.3	269.4
Fresh vegetables	215.8	209.3	219.4	213.6	224.6	240.2	235.9	240.6	238.2	232.6
Potatoes	185.2	193.1	196.3	194.9	181.2	179.4	186.6	186.8	189.3	187.0
Cereals and bakery products	181.1	185.0	188.3	187.2	189.0	190.7	191.1	191.9	191.9	192.5
Sugar and sweets	150.2	152.3	154.0	152.4	153.0	153.5	155.7	155.8	155.7	154.0
Nonalcoholic beverages ⁴	133.0	134.3	137.8	137.6	137.9	136.7	139.4	139.9	139.5	138.9
Apparel										
Footwear	128.0	125.7	123.8	126.7	125.4	123.8	121.4	122.6	125.2	124.9
Tobacco and smoking products	274.8	355.8	394.9	404.4	411.0	396.6	404.3	408.5	407.7	424.2
Alcoholic beverages	165.7	169.7	174.7	173.6	176.4	176.5	177.2	177.7	177.8	178.1

1. Beef, veal, lamb, pork, and processed meat. 2. Included butter through December 1997. 3. Includes butter as of January 1998. 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/bls/home.html> and a Consumer Prices Information Hotline at (202) 606-7828.

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

	Annual			2000			2001			
	1998	1999	2000	Apr	Nov	Dec	Jan	Feb	Mar	Apr
1982=100										
All commodities	124.4	125.5	132.7	130.7	135.0	136.2	138.8	136.5	135.9	136.3
Finished goods ¹	130.6	133.0	138.0	136.7	140.0	139.7	141.2	141.5	141.0	141.7
All foods ²	132.4	132.2	133.0	133.4	133.8	133.7	134.1	135.3	136.8	137.5
Consumer foods	134.3	135.1	137.2	137.3	138.2	137.9	138.4	139.5	140.9	141.6
Fresh fruits and melons	90.0	103.6	91.4	93.1	93.3	94.3	96.5	88.5	90.9	94.3
Fresh and dry vegetables	139.5	118.0	126.7	125.4	149.2	109.8	128.8	145.8	156.0	129.0
Dried and dehydrated fruits	124.4	121.2	122.9	122.6	124.3	122.4	121.8	121.9	121.5	121.0
Canned fruits and juices	134.4	137.8	140.0	139.9	139.7	140.1	142.2	142.4	142.4	143.8
Frozen fruits, juices and ades	116.1	123.0	120.9	123.2	116.4	116.3	116.4	115.8	115.2	115.2
Fresh veg. except potatoes	137.9	117.7	135.0	126.8	173.9	120.3	147.0	171.3	183.2	145.6
Canned vegetables and juices	121.5	120.9	121.2	120.9	121.7	121.3	121.1	121.4	121.4	121.3
Frozen vegetables	125.4	126.1	126.0	126.3	126.1	126.2	125.9	128.5	127.0	127.9
Potatoes	122.5	126.9	100.5	97.1	91.9	90.9	88.4	86.6	98.5	100.5
Eggs for fresh use (1991=100)	90.1	77.9	84.9	87.1	99.7	109.3	95.7	89.6	88.2	104.2
Bakery products	175.8	178.0	182.3	181.1	184.5	184.5	185.0	185.8	187.3	187.2
Meats	101.4	104.6	114.3	115.3	112.2	115.0	115.6	117.4	121.3	123.0
Beef and veal	99.5	106.3	113.7	114.4	114.5	118.5	121.9	123.1	125.9	125.7
Pork	96.6	96.0	113.4	116.0	105.5	109.3	104.9	108.5	116.6	120.6
Processed poultry	120.7	114.0	112.9	111.8	116.6	115.1	109.3	112.2	113.5	115.7
Unprocessed and packaged fish	183.0	190.9	198.1	211.2	190.0	192.2	193.1	211.4	200.1	207.8
Dairy products	138.1	139.2	133.7	132.3	135.2	136.2	136.8	136.1	138.6	141.3
Processed fruits and vegetables	125.8	128.1	128.6	129.0	127.9	127.6	127.6	128.1	127.8	128.3
Shortening and cooking oil	143.4	140.4	132.4	132.7	132.9	131.4	129.6	129.2	131.6	130.7
Soft drinks	134.8	137.9	144.1	144.4	144.6	144.3	146.6	146.8	147.7	147.8
Finished consumer goods less foods	126.4	130.5	138.4	136.0	141.3	140.9	143.3	143.6	142.1	142.9
Alcoholic beverages	135.2	136.7	140.6	137.3	142.0	143.0	143.4	143.2	144.7	145.2
Apparel	126.6	127.1	127.4	127.3	127.5	127.5	127.0	127.0	126.7	126.4
Footwear	144.7	144.5	144.9	144.9	144.9	144.9	144.9	146.2	146.1	147.3
Tobacco products	283.4	374.0	397.2	392.7	403.9	404.3	426.7	426.9	426.8	426.6
Intermediate materials ³	123.0	123.2	129.2	128.0	130.5	130.6	131.5	131.3	130.8	130.6
Materials for food manufacturing	123.1	120.8	119.2	119.6	118.9	119.9	120.4	120.3	122.3	123.3
Flour	109.2	104.3	103.8	101.9	106.1	107.0	107.5	107.0	108.9	107.9
Refined sugar ⁴	119.8	121.0	110.6	111.6	106.0	106.4	107.7	110.4	108.1	108.2
Crude vegetable oils	131.1	90.2	73.6	84.0	66.0	63.7	61.1	59.3	65.6	66.8
Crude materials ⁵	96.7	98.2	120.6	111.3	128.4	140.2	155.0	133.2	131.5	132.9
Foodstuffs and feedstuffs	103.8	98.7	100.2	103.4	100.4	104.1	105.3	104.5	108.9	109.1
Fruits and vegetables and nuts ⁶	117.2	117.4	111.1	111.4	121.6	106.7	115.5	117.6	123.0	114.3
Grains	93.4	80.1	78.3	82.6	81.2	81.2	86.6	80.5	84.5	80.4
Slaughter livestock	82.3	86.4	96.5	102.3	94.3	100.9	100.9	102.3	107.9	108.4
Slaughter poultry, live	141.4	129.9	124.7	121.0	134.7	129.1	124.3	123.6	129.3	128.0
Plant and animal fibers	110.4	86.5	93.9	86.2	101.2	100.2	92.8	92.1	80.5	71.9
Fluid milk	112.6	106.3	92.0	89.3	90.1	97.4	100.2	97.5	102.0	107.4
Oilseeds	114.4	90.8	93.8	98.0	90.0	94.8	93.6	86.5	86.9	84.1
Leaf tobacco	104.6	101.6	--	92.3	104.3	115.8	119.9	121.4	107.0	81.1
Raw cane sugar	117.2	113.7	101.8	102.5	111.4	107.6	112.2	122.1	111.7	113.3

-- = 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/blshome.html> and a Producer Prices Information Hotline at (202) 606-7705.

Farm-Retail Price Spreads

Table 8—Farm-Retail Price Spreads

	Annual			2000			2001			
	1998	1999	2000	Apr	Nov	Dec	Jan	Feb	Mar	Apr
Market basket ¹										
Retail cost (1982-84=100)	163.1	167.3	170.6	168.5	171.9	174.0	174.7	175.1	175.4	176.0
Farm value (1982-84=100)	103.3	98.3	97.0	96.7	100.6	101.4	100.6	100.3	104.3	102.8
Farm-retail spread (1982-84=100)	195.4	204.5	210.2	207.2	210.4	213.1	214.6	215.4	213.7	215.4
Farm value-retail cost (%)	22.2	20.6	19.9	20.1	20.5	20.4	20.2	20.1	20.8	20.5
Meat products										
Retail cost (1982-84=100)	141.6	142.3	150.4	147.0	152.5	152.9	154.1	156.5	157.9	158.0
Farm value (1982-84=100)	84.8	81.6	88.4	86.1	90.7	90.7	91.8	92.0	93.2	93.4
Farm-retail spread (1982-84=100)	200.0	204.7	214.0	209.5	215.9	216.7	218.0	222.6	224.3	224.3
Farm value-retail cost (%)	30.3	29	29.8	29.7	30.1	30.1	30.2	29.8	29.9	29.9
Dairy products										
Retail cost (1982-84=100)	150.8	159.6	160.7	160.6	161.4	161.5	163.6	163.6	163.2	163.4
Farm value (1982-84=100)	113.0	107.9	98.8	95.3	102.1	106.1	106.9	105.4	110.8	114.5
Farm-retail spread (1982-84=100)	185.6	207.2	217.7	220.8	216.1	212.6	215.9	217.2	211.5	208.5
Farm value-retail cost (%)	36.0	32.4	29.5	28.5	30.3	31.5	31.3	30.9	32.6	33.6
Poultry										
Retail cost (1982-84=100)	157.1	157.9	159.8	158.5	157.2	160.7	160.8	161.8	162.6	163.1
Farm value (1982-84=100)	126.1	119	117.4	118.2	125.7	114.5	109.9	117.9	126.4	124.0
Farm-retail spread (1982-84=100)	192.9	202.7	208.7	204.9	193.4	213.9	219.4	212.4	204.3	208.1
Farm value-retail cost (%)	42.9	40.3	39.3	39.9	42.8	38.1	36.6	39.0	41.6	40.7
Eggs										
Retail cost (1982-84=100)	137.1	128.1	131.9	129.5	140.4	145.5	150.4	142.9	139.2	144.7
Farm value (1982-84=100)	89.6	74.9	80.6	82.0	100.4	119.3	86.5	87.5	89.0	84.6
Farm-retail spread (1982-84=100)	222.5	223.7	223.9	214.9	212.3	192.6	265.3	242.4	229.3	252.7
Farm value-retail cost (%)	42.0	37.6	39.3	40.7	45.9	52.7	36.9	39.3	41.1	37.5
Cereal and bakery products										
Retail cost (1982-84=100)	181.1	185.0	188.3	187.2	189.0	190.7	191.1	191.9	191.9	192.5
Farm value (1982-84=100)	94.4	82.5	75.2	77.3	79.6	77.4	77.9	79.2	81.4	80.2
Farm-retail spread (1982-84=100)	193.2	199.2	204.0	202.5	204.3	206.5	206.9	207.6	207.3	208.2
Farm value-retail cost (%)	6.4	5.5	4.9	5.1	5.2	5.0	5.0	5.1	5.2	5.1
Fresh fruit										
Retail cost (1982-84=100)	258.2	294.3	284.3	282.2	290.4	297.4	287.7	278.4	282.1	297.7
Farm value (1982-84=100)	141.3	153.7	141.3	151.3	140.5	143.7	147.2	139.0	139.0	141.6
Farm-retail spread (1982-84=100)	312.2	359.3	350.3	342.6	359.6	368.4	352.6	342.8	348.2	369.7
Farm value-retail cost (%)	17.3	16.5	15.7	16.9	15.3	15.3	16.2	15.8	15.6	15.0
Fresh vegetables										
Retail cost (1982-84=100)	215.8	209.3	219.4	213.6	224.6	240.2	235.9	240.6	238.2	232.6
Farm value (1982-84=100)	124.5	118.1	121.4	124.1	126.9	129.2	131.3	120.6	148.3	114.9
Farm-retail spread (1982-84=100)	262.7	256.2	269.8	259.6	274.8	297.3	289.7	302.3	284.4	293.1
Farm value-retail cost (%)	19.6	19.2	18.8	19.7	19.2	18.3	18.9	17.0	21.1	16.8
Processed fruits and vegetables										
Retail cost (1982-84=100)	150.6	154.8	153.6	151.7	152.6	153.8	158	157.5	156.6	156.3
Farm value (1982-84=100)	115.1	113.5	111.0	111.9	110.6	110.3	110.4	110.6	110.8	110.8
Farm-retail spread (1982-84=100)	161.7	167.7	166.9	164.1	165.7	167.4	172.9	172.1	170.9	170.5
Farm value-retail cost (%)	18.2	17.4	17.2	17.5	17.2	17.0	16.6	16.7	16.8	16.9
Fats and oils										
Retail cost (1982-84=100)	146.9	148.3	147.4	144.8	146.5	150.2	153.0	152.6	153.1	151.5
Farm value (1982-84=100)	118.9	89	80.9	88.4	76.2	73.8	72.2	70.9	76.3	72.9
Farm-retail spread (1982-84=100)	157.2	170	171.9	165.5	172.4	178.3	182.7	182.7	181.3	180.4
Farm value-retail cost (%)	21.8	16.2	14.8	16.4	14.0	13.2	12.7	12.5	13.4	12.9

See footnotes at end of table, next page.

Table 8—Farm-Retail Price Spreads (continued)

	Annual			2000			2001			
	1998	1999	2000	Apr	Nov	Dec	Jan	Feb	Mar	Apr
Beef, all fresh retail value (cents/lb.)	253.3	260.5	275.3	272.5	279.6	280.4	292.4	296.5	298.6	299.3
Beef, Choice										
Retail value (cents/lb.) ²	277.1	287.8	306.4	305.4	310.3	310.1	321.4	334.2	334.3	343.8
Wholesale value (cents/lb.) ³	153.8	171.6	182.3	191.0	182.8	197.6	202.5	201.5	202.7	199.3
Net farm value (cents/lb.) ⁴	130.8	141.1	149.0	158.9	152.4	163.5	167.7	171.0	170.0	164.1
Farm-retail spread (cents/lb.)	146.3	146.7	157.4	146.5	157.9	146.6	153.7	163.2	164.3	179.7
Wholesale-retail (cents/lb.) ⁵	123.3	116.2	124.1	114.4	127.5	112.5	118.9	132.7	131.6	144.5
Farm-wholesale (cents/lb.) ⁶	23.0	30.5	33.3	32.1	30.4	34.1	34.8	30.5	32.7	35.2
Farm value-retail value (%)	47.2	49.0	48.6	52.0	49.1	52.7	52.2	51.2	50.9	47.7
Pork										
Retail value (cents/lb.) ²	242.7	241.5	258.2	255.5	259.3	262.5	260.6	261.5	265.4	263.3
Wholesale value (cents/lb.) ³	97.3	99.0	114.5	118.6	108.1	111.1	107.9	107.7	117.3	120.5
Net farm value (cents/lb.) ⁴	61.2	60.4	79.4	88.4	67.0	73.5	68.6	73.7	86.0	87.2
Farm-retail spread (cents/lb.)	181.5	181.1	178.8	167.1	192.3	189.0	192.0	187.8	179.4	176.1
Wholesale-retail (cents/lb.) ⁵	145.4	142.5	143.7	136.9	151.2	151.4	152.7	153.8	148.1	142.8
Farm-wholesale (cents/lb.) ⁶	36.1	38.6	35.1	30.2	41.1	37.6	39.3	34.0	31.3	33.3
Farm value-retail value (%)	25.2	25.0	30.8	34.6	25.8	28.0	26.3	28.2	32.4	33.1

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			2001
	1998	1999	2000	III	IV	I	II	III	IV	I
	1987=100*									
Labor—hourly earnings and benefits	490.4	503.3	514.0	504.2	506.7	508.2	512.0	514.1	521.7	526.5
Processing	499.3	511.4	525.0	513.4	515.6	518.1	523.4	526.9	531.3	533.4
Wholesaling	552.5	564.6	589.4	575.2	580.0	578.9	586.4	587.3	601.0	608.7
Retailing	454.1	465.8	469.9	463.8	465.4	467.1	467.8	465.2	477.2	488.3
Packaging and containers	395.5	399.4	412.0	403.0	407.7	410.3	410.6	413.5	413.7	414.2
Paperboard boxes and containers	365.2	373.0	407.7	380.2	387.8	391.9	413.0	412.4	413.5	412.0
Metal cans	487.9	486.6	452.5	486.6	486.6	489.5	440.1	440.1	440.1	441.5
Paper bags and related products	432.9	440.9	470.4	446.3	455.8	457.3	472.4	477.6	474.5	474.2
Plastic films and bottles	322.8	324.2	336.7	325.9	329.6	329.4	330.6	342.4	344.3	344.0
Glass containers	446.8	447.1	450.8	447.0	445.8	450.1	451.1	451.1	450.8	460.2
Metal foil	232.0	227.3	232.4	226.7	228.0	229.8	231.3	233.8	234.8	235.5
Transportation services	428.3	394.0	394.3	394.2	394.2	392.3	393.3	394.6	396.9	401.0
Advertising	624.5	623.7	635.7	623.9	625.6	633.6	635.0	635.7	638.6	644.3
Fuel and power	619.7	651.5	841.1	681.1	711.9	816.5	822.2	866.1	859.6	830.3
Electric	492.1	489.4	498.2	505.9	488.5	477.2	487.0	523.8	504.9	514.3
Petroleum	457.0	565.9	1,135.8	613.2	758.1	1,114.0	1,102.2	1,160.6	1,166.4	998.5
Natural gas	1,239.4	1,235.6	1,275.4	1,272.7	1,240.4	1,235.3	1,259.8	1,300.7	1,305.7	1,403.3
Communications, water and sewage	307.6	309.3	309.1	308.9	310.6	310.3	307.8	308.7	309.5	312.6
Rent	260.5	256.9	258.2	256.4	256.4	256.8	258.0	259.1	259.0	259.2
Maintenance and repair	529.3	541.6	561.2	542.5	545.3	552.2	558.3	564.7	569.7	574.8
Business services	522.9	531.9	544.6	533.3	536.1	540.3	543.2	545.9	548.8	555.3
Supplies	332.3	327.7	348.5	327.1	331.7	365.6	338.2	344.5	345.8	349.2
Property taxes and insurance	598.3	619.7	654.6	622.8	631.3	639.8	647.4	658.6	672.6	680.9
Interest, short-term	103.7	103.7	115.4	109.7	115.2	111.3	116.6	117.7	116.0	91.0
Total marketing cost index	467.2	472.2	491.5	475.2	479.1	486.7	488.8	493.1	497.1	499.2

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	Produc- tion ¹	Imports	Total supply	Exports	Ending stocks	Consumption		Conversion factor ³	Primary market price ⁴
							Total	Per capita ²		
	Million lbs. ⁵						Lbs.			\$/cwt
Beef										
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	2,417	411	26,932	69	0.700	65.56
2000	411	26,888	3,032	30,331	2,516	525	27,290	69	0.700	69.65
2001	525	25,680	3,060	29,265	2,500	390	26,375	66	0.700	76.04
2002	390	25,081	3,075	28,546	2,540	385	25,621	64	0.700	80.00
Pork										
1998	408	19,011	705	20,124	1,230	584	18,309	53	0.776	34.72
1999	584	19,308	827	20,720	1,278	489	18,952	54	0.776	34.00
2000	489	18,952	967	20,408	1,305	477	18,626	52	0.776	44.70
2001	477	19,160	965	20,602	1,405	475	18,722	52	0.776	44.71
2002	475	19,755	1,000	21,230	1,400	500	19,330	54	0.776	43.00
Veal ⁶										
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	225	0	230	0	5	225	1	0.83	106
2001	5	207	0	212	0	5	207	1	0.83	107
2002	5	200	0	205	0	5	200	1	0.83	112
Lamb and mutton										
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	234	129	372	6	13	353	1	0.89	79
2001	13	208	140	361	4	10	347	1	0.89	82
2002	10	196	146	352	4	10	338	1	0.89	83
Total red meat										
1998	894	45,284	3,461	49,639	3,407	994	45,239	123	--	--
1999	994	46,284	3,813	51,092	3,700	914	46,477	125	--	--
2000	914	46,299	4,128	51,341	3,827	1,020	46,494	124	--	--
2001	1,020	45,255	4,165	50,440	3,909	880	45,651	120	--	--
2002	880	45,232	4,221	50,333	3,944	900	45,489	119	--	--
										¢/lb
Broilers										
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	30,209	6	31,011	5,548	798	24,665	77	0.859	56
2001	798	30,286	4	31,088	5,925	700	24,463	76	0.859	59
2002	700	31,163	4	31,867	6,200	740	24,927	77	0.859	61
Mature chickens										
1998	7	525	0	533	426	6	101	1	1.0	--
1999	6	554	0	562	393	8	162	1	1.0	--
2000	8	531	0	541	223	9	308	1	1.0	--
2001	9	521	0	532	80	10	441	1	1.0	--
2002	10	505	0	517	80	10	426	1	1.0	--
Turkeys										
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	5,333	1	5,589	458	241	4,889	18	1.0	71
2001	241	5,528	1	5,770	480	275	5,014	18	1.0	68
2002	275	5,625	1	5,901	495	275	5,130	18	1.0	68
Total poultry										
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	36,073	9	37,140	6,229	1,048	29,863	96	--	--
2001	1,048	36,335	7	37,390	6,485	985	29,918	95	--	--
2002	985	37,293	7	38,285	6,775	1,025	30,483	96	--	--
Red meat and poultry										
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	9,392	1,972	76,008	220	--	--
2000	1,972	82,372	4,137	88,481	10,056	2,068	76,357	219	--	--
2001	2,068	81,590	4,172	87,830	10,394	1,865	75,569	216	--	--
2002	1,865	82,525	4,228	88,618	10,719	1,925	75,972	216	--	--

-- = 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.	
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	7,034.9	8.4	7,051.0	171.8	940.2	11.4	5,927.5	258.3	68.9
2001	11.4	7,140.5	5.7	7,157.6	153.0	944.4	10.0	6,050.2	261.4	75.7
2002	10.0	7,270.0	8.0	7,288.0	165.0	970.0	10.0	6,143.0	263.3	70.5

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 & Use¹

	Production	Farm use	Commercial		Imports	Total commercial supply	Commercial			CCC net removals		
			Farm market-ings	Beg. stocks			CCC net re-movals	Ending stocks	Disap-pear-ance	All milk price ¹	Skim solids basis	Total solids basis ²
Million lbs. (milkfat basis)										Billion lbs.		
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	166.3	6.1	4.4	176.9	0.8	6.9	169.2	12.40	8.6	5.5
2001	165.9	1.3	164.6	6.9	4.8	176.2	0.2	6.4	169.6	15.05	4.9	3.0
2002	169.9	1.2	168.7	6.4	4.7	179.8	0.2	6.4	173.2	13.70	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			2000				2001		
	1998	1999	2000	Mar	Oct	Nov	Dec	Jan	Feb	Mar
Broilers										
Federally inspected slaughter certified (mil. lb.)	27,862.7	29,741.4	30,495.2	2,687.9	2,632.5	2,553.3	2,357.7	2,621.1	2,322.0	2,564.0
Wholesale price, 12-city (cents/lb.)	63.0	58.1	56.2	54.5	57.2	58.2	57.2	56.9	57.5	59.0
Price of grower feed (\$/ton) ¹	129.0	102.5	100.4	101.6	104.5	102.7	107.7	106.3	102.8	101.3
Broiler-feed price ratio ²	6.3	7.2	6.9	7.9	6.7	7.4	6.5	6.4	7.2	7.9
Stocks beginning of period (mil. lb.)	606.8	711.1	795.6	805.0	810.3	753.9	750.1	797.6	773.2	676.6
Broiler-type chicks hatched (mil.)	8,491.9	8,715.7	8,779.1	759.2	711.3	675.0	738.7	733.9	670.5	763.5
Turkeys										
Federally inspected slaughter certified (mil. lb.)	5,280.6	5,296.5	5,402.2	469.7	499.6	482.3	403.4	458.2	407.8	460.0
Wholesale price, Eastern U.S. 8-16 lb. young hens (cents/lb.)	62.2	69.0	70.5	65.4	78.7	79.6	70.3	61.5	61.2	62.4
Price of turkey grower feed (\$/ton) ¹	115.8	95.0	96.3	100.1	92.2	96.1	100.0	100.3	96.8	96.4
Turkey-feed price ratio ²	6.7	8.6	8.7	7.6	10.0	9.8	8.1	7.3	7.5	7.7
Stocks beginning of period (mil. lb.)	415.1	304.3	254.3	353.9	528.1	473.9	261.1	241.3	289.1	333.5
Poults placed in U.S. (mil.)	297.8	296.1	297.3	25.7	23.7	23.4	23.3	25.6	23.7	25.9
Eggs										
Farm production (mil.)	79,927.0	82,943.0	84,412.0	7,234.0	7,130.0	7,027.0	7,279.0	7,217.0	6,519.0	7,331.0
Average number of layers (mil.)	313.0	322.9	328.2	330.9	328.2	330.7	332.0	333.3	335.5	336.6
Rate of lay (eggs per layer on farms)	255.3	256.8	257.2	21.9	21.7	21.3	21.9	21.6	19.4	21.8
Cartoned price, New York, grade A large (cents/doz.) ³	75.8	65.6	68.9	60.7	73.0	81.4	94.9	76.2	71.5	79.6
Price of laying feed (\$/ton) ¹	137.7	124.7	123.6	142.0	117.7	108.8	111.1	123.3	119.6	118.1
Egg-feed price ratio ²	9.8	9.8	10.6	8.0	12.4	13.3	15.0	10.9	11.4	11.7
Stocks, first of month Frozen (mil. doz.)	7.4	8.4	7.6	11.2	11.0	12.6	11.7	11.4	12.9	11.7
Replacement chicks hatched (mil.)	438.3	451.7	429.7	38.9	36.1	32.3	34.7	38.0	38.2	40.1

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			2000				2001		
	1998	1999	2000	Mar	Oct	Nov	Dec	Jan	Feb	Mar
Class III (BFP before 2000) 3.5% fat (\$/cwt.)	14.20	12.43	9.74	9.54	10.02	8.57	9.37	9.99	10.27	11.42
Wholesale prices										
Butter, Central States (cents/lb.) ¹	177.6	125.2	118.5	99.7	116.9	151.7	150.0	122.2	138.1	154.9
Am. cheese, Wis. assembly pt. (cents/lb.)	158.1	142.3	116.2	112.2	109.4	107.5	113.0	110.2	120.0	131.9
Nonfat dry milk (cents/lb.) ²	106.9	103.5	101.6	100.1	102.3	103.1	104.3	103.6	103.2	103.1
USDA net removals										
Total (mil. lb.) ³	365.6	343.5	841.4	86.3	33.8	83.7	49.0	30.6	22.6	14.3
Butter (mil. lb.)	6.3	3.7	8.9	1.6	0.0	0.0	0.0	0.0	0.0	0.0
Am. cheese (mil. lb.)	8.2	4.6	28.0	1.8	1.2	6.7	4.2	1.6	1.2	0.0
Nonfat dry milk (mil. lb.)	326.4	540.6	692.6	76.5	50.4	45.5	44.8	70.6	50.9	66.9
Milk										
Milk prod. 20 states (mil. lb.)	134,900	140,062	144,528	12,687	11,813	11,385	11,855	12,062	11,112	12,401
Milk per cow (lb.)	17,502	18,109	18,532	1,632	1,511	1,459	1,519	1,550	1,431	1,599
Number of milk cows (1,000)	7,708	7,734	7,799	7,776	7,817	7,805	7,803	7,783	7,767	7,756
U.S. milk production (mil. lb.) ⁴	157,348	162,716	167,658	14,756	13,714	13,212	13,752	14,016	12,908	14,400
Stocks, beginning ³										
Total (mil. lb.)	4,907	5,301	6,186	9,193	9,058	7,983	6,996	7,010	7,887	8,375
Commercial (mil. lb.)	4,889	5,274	6,142	9,136	8,925	7,853	6,862	6,871	7,706	8,167
Government (mil. lb.)	18	27	44	57	133	130	134	139	181	208
Imports, total (mil. lb.) ³	4,588	4,772	4,445	371	359	383	352	433	381	--
Commercial disappearance (mil. lb.) ³	159,779	164,947	169,222	14,729	15,000	14,394	13,935	13,444	12,706	--
Butter										
Production (mil. lb.)	1,168.0	1,277.1	1,273.6	121.0	103.9	100.4	111.6	129.4	110.2	101.8
Stocks, beginning (mil. lb.)	20.5	25.9	24.9	107.5	84.6	58.0	27.1	24.0	63.3	81.0
Commercial disappearance (mil. lb.)	1,222.5	1,310.7	1,297.6	114.9	132.6	132.6	115.4	92.1	95.7	--
American cheese										
Production (mil. lb.)	3,314.7	3,532.6	3,633.9	314.2	285.6	279.2	303.4	301.1	274.8	299.7
Stocks, beginning (mil. lb.)	410.3	407.6	458.0	536.1	576.5	546.0	521.8	521.1	508.1	503.1
Commercial disappearance (mil. lb.)	3,338.6	3,542.2	3,588.1	312.8	315.6	299.0	303.1	321.1	282.4	--
Other cheese										
Production (mil. lb.)	4,177.5	4,361.5	4,620.6	400.6	402.9	395.8	385.0	385.5	357.4	414.3
Stocks, beginning (mil. lb.)	70.0	109.5	163.3	221.1	203.9	185.3	173.4	185.2	202.9	218.1
Commercial disappearance (mil. lb.)	4,452.0	4,672.1	4,963.3	426.6	459.1	447.9	408.8	385.4	385.4	--
Nonfat dry milk										
Production (mil. lb.)	1,135.4	1,359.7	1,451.6	139.4	101.0	99.5	121.4	116.7	132.4	136.2
Stocks, beginning (mil. lb.)	103.3	56.9	150.9	198.1	154.4	145.7	133.3	146.3	145.5	137.7
Commercial disappearance (mil. lb.)	866.9	737.2	770.4	71.5	59.5	67.1	64.5	46.9	89.3	--
Frozen dessert										
Production (mil. gal.) ⁵	1,324.3	1,301.0	1,312.2	121.8	103.4	83.9	78.9	90.7	97.3	115.2

-- = 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			1999		2000				2001
	1998	1999	2000	III	IV	I	II	III	IV	I
U.S. wool price (¢/lb.) ¹	162	110	107	110	98	97	120	117	96	101
Imported wool price (¢/lb.) ²	164	136	137	133	125	133	139	139	136	151
U.S. mill consumption, scoured										
Apparel wool (1,000 lb.)	98,373	65,468	60,294	15,793	13,633	17,142	15,655	14,132	13,365	--
Carpet wool (1,000 lb.)	16,331	15,017	14,514	3,183	2,966	3,784	3,327	3,650	3,753	--

-- = 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			2000			2001			
	1998	1999	2000	Apr	Nov	Dec	Jan	Feb	Mar	Apr
Cattle on feed (7 states, 1000+ head capacity)										
Number on feed (1,000 head) ¹	9,455	9,021	9,752	9,593	10,192	10,213	10,176	10,222	10,012	9,859
Placed on feed (1,000 head)	19,697	21,446	21,875	1,470	1,678	1,440	1,965	1,331	1,530	1,324
Marketings (1,000 head)	19,440	20,124	20,644	1,601	1,568	1,500	1,751	1,477	1,603	1,546
Other disappearance (1,000 head)	691	676	907	71	89	77	68	64	80	74
Market prices (\$/cwt)										
Slaughter cattle										
Choice steers, 1,100-1,300 lb.										
Texas	61.75	65.89	69.86	73.13	72.19	76.41	78.79	79.40	79.44	76.50
Neb. direct	61.47	65.56	69.65	73.33	72.16	77.01	78.46	79.71	79.80	75.92
Boning utility cows, Sioux Falls	36.20	38.40	41.71	43.81	39.38	42.19	41.75	43.34	46.10	45.56
Feeder steers										
Medium no. 1, Oklahoma City										
600-650 lb.	78.13	82.64	94.36	96.18	93.73	95.29	92.96	97.67	99.14	103.93
750-800 lb.	71.79	76.39	88.58	84.15	89.80	90.53	87.23	86.05	87.19	89.29
Slaughter hogs										
Barrows and gilts, 51-52 percent lean										
National Base converted to live equal.	34.72	34.00	34.02	49.59	37.84	41.40	38.61	41.47	48.41	49.28
Sows, Iowa, S.MN 1-2 300-400 lb.	20.29	19.26	29.79	30.33	26.90	29.59	27.89	29.48	34.37	39.38
Slaughter sheep and lambs										
Lambs, Choice, San Angelo	74.20	75.96	79.40	78.25	76.70	75.33	81.25	87.00	82.63	83.30
Ewes, Good, San Angelo	40.86	42.45	46.23	47.08	45.85	47.17	51.88	56.75	56.94	47.15
Feeder lambs										
Choice, San Angelo	79.86	80.74	95.86	99.33	103.65	102.17	109.63	117.00	115.44	112.90
Wholesale meat prices, Midwest										
Boxed beef cut-out value										
Choice, 700-800 lb.	98.60	110.90	117.45	123.97	119.09	129.60	128.00	129.53	130.92	127.08
Select, 700-800 lb.	92.19	101.99	101.99	115.40	110.29	120.50	121.70	125.01	127.44	120.62
Canner and cutter cow beef	61.49	66.51	72.57	74.38	72.11	73.55	--	--	--	--
Pork cutout	53.08	53.45	64.07	68.92	56.75	60.15	58.62	61.47	70.98	70.39
Pork loins, bone-in, 1/4 " trim,14-19 lb.	101.63	100.38	117.13	127.48	104.19	114.68	110.80	114.32	128.53	117.98
Pork bellies, 12-14 lb.	52.38	57.12	77.46	93.70	54.97	58.36	66.61	66.68	78.04	85.80
Hams, bone-in, trimmed, 20-23 lb.	45.85	45.18	52.02	47.18	51.02	47.98	43.86	54.38	59.94	54.59
All fresh beef retail price	253.28	260.50	275.30	274.30	279.60	280.40	292.40	296.50	298.60	299.30
Commercial slaughter (1,000 head) ²										
Cattle	35,465	36,150	36,247	2,783	2,931	2,719	3,002	2,580	2,918	--
Steers	17,428	17,932	18,060	1,410	1,393	1,305	1,423	1,210	1,417	--
Heifers	11,448	11,868	12,041	923	972	896	979	870	953	--
Cows	5,983	5,710	5,522	402	516	475	549	454	494	--
Bull and stags	606	639	624	48	50	43	51	46	54	--
Calves	1,458	1,282	1,132	81	92	92	91	79	84	--
Sheep and lambs	3,804	3,701	3,455	345	296	301	269	245	326	--
Hogs	101,029	101,544	97,955	7,227	8,757	8,094	8,643	7,604	8,327	--
Barrows and gilts	97,025	97,732	94,585	6,979	8,458	7,829	8,339	7,352	8,026	--
Commercial production (mil. lb.)										
Beef	25,653	26,386	26,776	2,027	2,169	1,998	2,205	1,883	2,116	--
Veal	252	226	216	17	18	18	18	16	16	--
Lamb and mutton	248	244	230	23	20	21	19	17	23	--
Pork	18,981	19,278	18,905	1,398	1,712	1,583	1,693	1,486	1,626	--
	Annual			1999	2000			2001		
	1998	1999	2000	IV	I	II	III	IV	I	II
Hogs and pigs (U.S.) ³										
Inventory (1,000 head) ¹	61,158	62,206	59,342	60,776	59,342	57,782	59,137	59,545	59,338	58,754
Breeding (1,000 head) ¹	6,957	6,682	6,234	6,301	6,234	6,190	6,234	6,246	6,270	6,244
Market (1,000 head) ¹	54,200	55,523	53,109	54,474	53,109	51,593	52,904	53,300	53,068	52,510
Farrowings (1,000 head)	12,061	11,641	11,462	2,844	2,798	2,885	2,899	2,848	2,836	2,907
Pig crop (1,000 head)	105,004	102,354	101,354	24,973	24,522	25,565	25,548	25,208	24,896	--
Cattle on Feed, 7 states (1,000 head) ⁴										
Steers and steer calves	5,803	5,432	5,432	5,286	5,768	5,746	5,326	5,584	5,936	5,885
Heifers and heifer calves	3,615	3,552	3,552	3,479	3,942	3,810	3,602	3,877	4,081	3,913
Cows and bulls	59	37	37	28	42	37	31	41	59	61

-- = 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 & Products

Table 17—Supply & Utilization^{1,2}

	Area			Yield	Production	Total supply ⁴	Feed & residual	Other domestic use	Exports	Total use	Ending stocks	Farm price ⁵
	Set-aside ³	Planted	Harvested									
	Mil. acres		Bu./acre	Mil. bu.							\$/bu.	
Wheat	--	70.4	62.8	39.5	2,481	3,020	251	1,007	1,040	2,298	722	3.38
1997/98	--	65.8	59.0	43.2	2,547	3,373	394	990	1,042	2,427	946	2.65
1998/99	--	62.7	53.8	42.7	2,299	3,339	284	1,016	1,090	2,390	950	2.48
1999/00	--	62.5	53.0	41.9	2,223	3,263	300	1,034	1,100	2,434	829	2.63
2000/01*	--	60.3	50.3	39.0	1,961	2,886	250	1,045	1,000	2,295	591	2.75-3.35
2001/02*												
	Mil. acres		Lb./acre	Mil. cwt (rough equiv)							\$/cwt	
Rice ⁶	--	3.1	3.1	5,897.0	183.0	219.5	--	6/ 103.9	87.7	191.6	27.9	9.70
1997/98	--	3.3	3.3	5,663.0	184.4	223.0	--	6/ 114.0	86.8	200.9	22.1	8.89
1998/99	--	3.5	3.5	5,866.0	206.0	238.2	--	6/ 121.9	88.9	210.7	27.5	5.93
1999/00	--	3.1	3.0	6,281.0	190.9	228.6	--	6/ 121.3	83.0	204.3	24.3	5.55-5.65
2000/01*	--	3.1	3.1	6,061.0	186.0	220.8	--	6/ 122.9	76.0	198.9	21.9	5.25-5.75
2001/02*												
	Mil. acres		Bu./acre	Mil. bu.							\$/bu.	
Corn	--	79.5	72.7	126.7	9,207	10,099	5,482	1,805	1,504	8,791	1,308	2.43
1997/98	--	80.2	72.6	134.4	9,759	11,085	5,471	1,846	1,981	9,298	1,787	1.94
1998/99	--	77.4	70.5	133.8	9,431	11,232	5,664	1,913	1,937	9,515	1,718	1.82
1999/00	--	79.5	72.7	137.1	9,968	11,693	5,825	1,970	1,900	9,695	1,998	1.80-1.90
2000/01*	--	76.7	69.9	137.0	9,575	11,583	5,700	2,040	1,925	9,665	1,918	1.65-2.05
2001/02*												
	Mil. acres		Bu./acre	Mil. bu.							\$/bu.	
Sorghum	--	10.1	9.2	69.2	634	681	365	55	212	632	49	2.21
1997/98	--	9.6	7.7	67.3	520	569	262	45	197	504	65	1.66
1998/99	--	9.3	8.5	69.7	595	660	284	55	256	595	65	1.57
1999/00	--	9.2	7.7	60.9	470	535	230	35	215	480	55	1.75-1.85
2000/01*	--	9.4	8.3	69.3	575	630	285	60	230	575	55	1.50-1.90
2001/02*												
	Mil. acres		Bu./acre	Mil. bu.							\$/bu.	
Barley	--	6.7	6.2	58.1	360	510	144	172	74	390	119	2.38
1997/98	--	6.3	5.9	60.0	352	501	161	170	28	360	142	1.98
1998/99	--	5.2	4.7	59.2	280	450	136	172	30	338	111	2.13
1999/00	--	5.8	5.2	61.1	318	457	125	172	58	355	102	2.15
2000/01*	--	5.3	4.8	61.8	295	432	125	172	30	327	105	1.95-2.35
2001/02*												
	Mil. acres		Bu./acre	Mil. bu.							\$/bu.	
Oats	--	5.1	2.8	59.5	167	332	185	72	2	258	74	1.60
1997/98	--	4.9	2.8	60.2	166	348	196	69	2	266	81	1.10
1998/99	--	4.7	2.5	59.6	146	326	180	68	2	250	76	1.12
1999/00	--	4.5	2.3	64.2	149	335	185	68	2	255	80	1.10
2000/01*	--	4.4	2.2	60.6	134	319	165	68	2	235	84	0.90-1.30
2001/02*												
	Mil. acres		Bu./acre	Mil. bu.							\$/bu.	
Soybeans ⁷	--	70.0	69.1	38.9	2,689	2,826	156	1,597	873	2,626	200	6.47
1997/98	--	72.0	70.4	38.9	2,741	2,944	201	1,590	805	2,595	348	4.93
1998/99	--	73.7	72.4	36.6	2,654	3,006	164	1,579	973	2,716	290	4.63
1999/00	--	74.5	72.7	38.1	2,770	3,063	183	1,595	990	2,768	295	4.40
2000/01*	--	76.7	75.6	39.5	2,985	3,283	178	1,625	980	2,783	500	3.90-4.50
2001/02*												
	Mil. acres		Bu./acre	Mil. lbs.							¢/lb.	
Soybean oil	--	--	--	--	18,143	19,723	--	15,262	3,079	18,341	1,382	25.84
1997/98	--	--	--	--	18,081	19,546	--	15,655	2,372	18,027	1,520	19.90
1998/99	--	--	--	--	17,824	19,427	--	16,055	1,376	17,432	1,995	15.60
1999/00	--	--	--	--	17,855	19,925	--	16,350	1,400	17,750	2,175	14.00
2000/01*	--	--	--	--	18,280	20,530	--	16,750	1,700	18,450	2,080	13.00-16.00
2001/02*												
	Mil. acres		Bu./acre	1,000 tons							\$/ton ⁸	
Soybean meal	--	--	--	--	38,176	38,443	--	28,895	9,329	38,225	218	185.5
1997/98	--	--	--	--	37,792	38,109	--	30,657	7,122	37,779	330	138.5
1998/99	--	--	--	--	37,623	38,003	--	30,378	7,331	37,710	293	167.7
1999/00	--	--	--	--	38,182	38,525	--	31,350	6,900	38,250	275	168.0
2000/01*	--	--	--	--	38,785	39,125	--	32,100	6,750	38,850	275	145-170
2001/02*												

See footnotes at end of table, next page

Table 17—Supply & Utilization (continued)

	Area			Yield	Production	Total supply ⁴	Feed & residual	Other domestic use	Exports	Total use	Ending stocks	Farm price ⁵
	Set-aside ³	Planted	Harvested									
	<i>Mil. acres</i>					<i>Lb./acre</i>		<i>Mil. bales</i>				
Cotton ⁹												
1997/98	1.7	13.9	13.4	673	18.8	22.8	--	11.3	7.5	18.8	3.9	65.2
1998/99	0.3	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	13.1	632	17.2	21.1	--	9.2	6.7	17.0	5.5	53.3
2001/02*	--	15.6	14.2	635	18.8	24.3	--	9.3	9.0	18.3	5.0	--

-- = Not available or not applicable. *May 10, 2001 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 and soyoil. 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. Average for August 2000-February 2001. USDA is prohibited by law from publishing cotton price projections. *Information contact: Mae Dean Johnson (202) 694-5299*

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

	Marketing year ¹			2000				2001		
	1997/98	1998/99	1999/2000	Mar	Oct	Nov	Dec	Jan	Feb	Mar
Wheat, no. 1 HRW, Kansas City (\$/bu.) ²	3.71	3.08	2.87	2.91	3.41	3.45	3.47	3.54	3.35	3.45
Wheat, DNS, Minneapolis (\$/bu.) ³	4.31	3.83	3.65	3.65	3.69	3.77	3.52	3.79	3.68	3.63
Rice, S.W. La. (\$/cwt) ⁴	18.92	16.79	12.99	12.63	12.45	12.69	12.75	12.75	12.75	12.72
Corn, no. 2 yellow, 30-day, Chicago (\$/bu.)	2.56	2.06	1.96	2.11	1.91	2.06	2.06	2.03	1.99	2.07
Sorghum, no. 2 yellow, Kansas City (\$/cwt)	4.11	3.29	3.10	3.51	3.14	3.41	3.66	3.64	3.63	3.56
Barley, feed, Duluth (\$/bu.)	1.90	--	--	--	1.30	1.42	1.50	1.54	1.51	1.50
Barley, malting Minneapolis (\$/bu.)	2.50	--	--	--	2.24	2.39	2.45	--	2.40	2.37
U.S. cotton price, SLM, 1-1/16 in. (¢/lb.) ⁵	67.79	60.12	60.20	57.67	60.54	62.16	61.04	56.66	54.10	47.22
Northern Europe prices cotton index (¢/lb.) ⁶	72.11	58.97	52.85	57.45	60.90	64.07	65.90	64.19	60.88	54.75
U.S. M 1-3/32 in. (¢/lb.) ⁷	77.98	74.08	59.64	64.70	66.69	68.95	69.44	69.75	68.63	61.25
Soybeans, no. 1 yellow, 15-day ⁸ Central Illinois (\$/bu)	6.51	4.85	4.76	5.04	4.51	4.66	4.92	4.63	4.49	4.42
Soybean oil, crude, Decatur (¢/lb.)	25.84	19.90	20.50	16.21	13.50	13.50	13.50	13.50	12.38	13.90
Soybean meal, 48% protein, Decatur (\$/ton)	185.54	138.50	165.45	175.14	176.73	183.83	196.47	187.99	165.35	162.53

-- = 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 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. 8. Soybean 30-day price discontinued. *Information contact: Mae Dean Johnson (202) 694-5299*

Table 19—Farm Programs, Price Supports, Participation, & Payment Rates

	Marketing assistance loan rate	Marketing loan benefit ¹	Flexibility contract payment rate	Acres under contract	Contract payment yields	Participation rate ²
		<u>\$/bu.</u>		<u>Mil. acres</u>	<u>Bu./acre</u>	<u>Percent</u>
Wheat						
1996/97	2.58	--	0.874	76.7	34.70	99
1997/98	2.58	0.01	0.631	76.7	34.70	--
1998/99	2.58	0.19	0.663	78.9	34.50	--
1999/2000	2.58	0.41	0.637	79.0	34.50	--
2000/2001 ³	2.58	--	0.588	78.9	34.50	--
		<u>\$/cwt</u>			<u>Cwt/acre</u>	
Rice						
1996/97	6.50	--	2.766	4.2	48.27	99
1997/98	6.50	0.00	2.710	4.2	48.17	--
1998/99	6.50	0.08	2.921	4.2	48.17	--
1999/2000	6.50	1.94	2.820	4.2	48.15	--
2000/2001 ³	6.50	--	2.600	4.1	48.15	--
		<u>\$/bu.</u>			<u>Bu./acre</u>	
Corn						
1996/97	1.89	--	0.251	80.7	102.90	98
1997/98	1.89	0.01	0.486	80.9	102.80	--
1998/99	1.89	0.14	0.377	82.0	102.60	--
1999/2000	1.89	0.26	0.363	81.9	102.60	--
2000/2001 ³	1.89	--	0.334	81.9	102.60	--
		<u>\$/bu.</u>			<u>Bu./acre</u>	
Sorghum						
1996/97	1.81	--	0.323	13.1	57.30	99
1997/98	1.76	0.00	0.544	13.1	57.30	--
1998/99	1.74	0.12	0.452	13.6	56.90	--
1999/2000	1.74	0.26	0.435	13.7	56.90	--
2000/2001 ³	1.71	--	0.400	13.6	57.00	--
		<u>\$/bu.</u>			<u>Bu./acre</u>	
Barley						
1996/97	1.55	--	0.332	10.5	47.30	99
1997/98	1.57	0.01	0.277	10.5	47.20	--
1998/99	1.56	0.23	0.284	11.2	46.70	--
1999/2000	1.59	0.14	0.271	11.2	46.60	--
2000/2001 ³	1.62	--	0.251	11.2	46.60	--
		<u>\$/bu.</u>			<u>Bu./acre</u>	
Oats						
1996/97	1.03	--	0.033	6.2	50.80	97
1997/98	1.11	0.00	0.031	6.2	50.80	--
1998/99	1.11	0.18	0.031	6.5	50.70	--
1999/2000	1.13	0.19	0.030	6.5	50.60	--
2000/2001 ³	1.16	--	0.028	6.5	50.60	--
		<u>\$/bu.</u>			<u>Bu./acre</u>	
Soybeans ⁴						
1996/97	4.97	--	--	--	--	--
1997/98	5.26	0.01	--	--	--	--
1998/99	5.26	0.45	--	--	--	--
1999/2000	5.26	0.88	--	--	--	--
2000/2001 ³	5.26	--	--	--	--	--
		<u>¢/lb.</u>			<u>Lb./acre</u>	
Upland cotton						
1996/97	51.92	--	8.882	16.2	610.00	99
1997/98	51.92	0.00	7.625	16.2	608.00	--
1998/99	51.92	0.09	8.173	16.4	604.00	--
1999/2000	51.92	0.20	7.880	16.4	604.00	--
2000/2001 ³	51.92	--	7.330	16.3	604.00	--

-- = Not available. 1. Weighted average, based on portions of crop receiving marketing loan gains, loan deficiency payments, and no benefits (calculated by Economic Research Service). 2. Participation rate is the percent of eligible acres that entered production flexibility contracts. 3. Estimated payment rates and acres under contract. 4. There are no flexibility contract payments for soybeans.

Information contact: Brenda Chewning, Farm Service Agency (202) 720-8838

Table 20—Fruit

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Citrus ¹										
Production (1,000 tons)	11,285	12,452	15,274	14,561	15,799	15,712	17,270	17,770	13,633	17,403
Per capita consumpt. (lb.) ²	19.1	24.4	26.0	25.0	24.1	25.0	27.0	27.1	20.7	--
Noncitrus ³										
Production (1,000 tons)	15,740	17,124	16,554	17,339	16,348	16,103	18,382	16,560	17,331	18,217
Per capita consumpt. (lb.) ²	70.5	73.7	73.8	75.6	73.6	73.9	73.1	76.4	81.3	--
	2000					2001				
	Apr	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr
Grower prices										
Apples (¢/pound) ⁴	19.7	19.5	23.3	21.8	18.5	18.1	16.1	15.2	14.2	15.8
Pears (¢/pound) ⁴	15.25	12.70	16.60	18.10	16.15	15.05	17.00	12.55	13.70	15.20
Oranges (\$/box) ⁵	4.36	2.17	0.93	1.09	3.16	2.94	2.82	3.29	4.13	5.02
Grapefruit (\$/box) ⁵	3.31	4.45	6.71	5.17	3.09	2.20	1.87	2.07	1.53	1.36
Stocks, ending										
Fresh apples (mil. lb.)	1,891	129	3,299	6,348	5,633	5,003	4,102	3,408	2,603	1,860
Fresh pears (mil. lb.)	105	147	532	426	426	339	250	181	113	55
Frozen fruits (mil. lb.)	1,017	1,303	1,234	1,626	1,602	1,569	1,471	1,372	1,270	1,122
Frozen conc. orange juice (mil. single-strength gallons)	742	595	550	477	491	564	657	745	708	768

-- = 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

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Production ¹										
Total vegetables (1,000 cwt)	565,754	689,070	692,022	785,798	751,715	765,645	763,532	732,803	834,654	798,773
Fresh (1,000 cwt) ^{2,4}	242,733	389,597	390,528	416,173	397,125	412,010	436,459	420,012	450,715	454,990
Processed (tons) ^{3,4}	16,151,030	14,973,630	15,074,707	18,481,238	17,729,497	17,681,732	16,353,639	15,639,548	19,196,942	17,189,152
Mushrooms (1,000 lbs) ⁵	746,832	776,357	750,799	782,340	777,870	776,677	808,678	847,760	854,394	--
Potatoes (1,000 cwt)	417,622	425,367	430,349	469,425	445,099	499,254	467,091	475,771	478,216	515,964
Sweet potatoes (1,000 cwt)	11,203	12,005	11,027	13,380	12,821	13,216	13,327	12,382	12,234	13,613
Dry edible beans (1,000 cwt)	33,765	22,615	21,862	28,950	30,689	27,912	29,370	30,418	33,085	26,440
	2000					2001				
	Apr	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr
Shipments (1,000 cwt)										
Fresh	24,169	21,877	15,097	16,561	22,509	18,685	14,775	23,799	20,494	23,645
Iceberg lettuce	2,859	3,930	3,072	3,216	3,710	2,918	2,168	3,517	3,270	3,017
Tomatoes, all	3,845	3,095	2,473	2,684	3,643	3,417	2,602	4,892	3,495	4,294
Dry-bulb onions	3,364	4,314	3,858	3,606	4,150	2,990	2,628	3,774	2,983	3,819
Others ⁶	14,101	10,538	5,694	7,055	11,006	9,360	7,377	11,616	10,746	12,515
Potatoes, all	24,432	11,100	13,020	12,433	14,159	14,897	10,001	15,572	14,624	18,926
Sweet potatoes	337	187	272	325	847	405	183	327	242	310

-- = 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				2001	
	1998	1999	2000	III	IV	I	II	III	IV	I	
Sugar											
Production ¹	7,891	9,083	8,912	749	4,667	2,681	922	772	4,537	2,660	
Deliveries ¹	9,851	10,167	10,091	2,693	2,609	2,348	2,513	2,641	2,589	2,399	
Stocks, ending ¹	3,423	3,855	4,338	1,639	3,855	4,551	3,498	2,219	4,338	5,122	
Coffee											
Composite green price ²											
N.Y. (¢/lb.)	114.43	88.49	71.94	77.40	91.79	85.66	75.78	66.73	59.63	54.95	
	Annual			1999		2000				2001	
	1997	1998	1999	Nov	Dec	Jan	Feb	Mar	Apr	May	
Tobacco											
Avg. price to grower ³											
Flue-cured (\$/lb.)	1.73	1.76	1.74	1.80	--	--	--	--	--	--	
Burley (\$/lb.)	1.91	1.90	1.90	1.90	1.91	1.90	1.88	1.77	--	--	
Domestic taxable removals											
Cigarettes (bil.)	471.4	457.9	432.6	37.6	34.0	28.8	32.5	38.8	29.3	40.8	
Large cigars (mil.) ⁴	3,552	3,721	3,844	334.7	320.0	250.7	285.5	333.9	314.0	345.7	

-- = 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, Fanny Jolly (202) 694-5249; tobacco, Tom Capehart (202) 694-5245

World Agriculture

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

	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00	2000/01 F	2001/02 F
<i>Million units</i>										
Wheat										
Area (hectares)	222.9	222.0	214.5	218.7	230.0	228.0	224.7	216.9	217.5	214.6
Production (metric tons)	562.4	558.7	524.0	538.4	581.9	609.2	588.8	587.0	580.3	572.4
Exports (metric tons) ¹	113.0	101.6	101.4	99.5	100.1	104.0	102.0	112.4	105.6	107.6
Consumption (metric tons) ²	550.3	561.6	546.2	549.0	576.4	583.9	585.1	594.3	589.1	591.5
Ending stocks (metric tons) ³	144.5	141.6	150.4	139.9	145.4	170.9	174.7	167.4	158.7	139.6
Coarse grains										
Area (hectares)	326.0	318.7	324.0	313.9	322.7	311.2	307.5	301.3	297.4	301.8
Production (metric tons)	871.8	798.9	871.3	802.9	908.5	884.1	890.2	877.7	856.6	889.8
Exports (metric tons) ¹	92.8	85.8	98.0	87.8	91.0	85.6	96.2	104.3	100.9	99.7
Consumption (metric tons) ²	843.3	838.7	859.3	841.2	874.7	872.8	869.0	883.0	878.0	894.5
Ending stocks (metric tons) ³	164.1	124.3	192.0	153.7	187.6	198.8	220.1	214.7	193.2	188.6
Rice, milled										
Area (hectares)	146.4	144.9	147.4	148.1	149.7	151.3	152.4	155.1	152.1	--
Production (metric tons)	355.7	355.4	364.5	371.4	380.2	386.8	394.0	408.6	398.2	399.9
Exports (metric tons) ¹	14.9	16.5	21.0	19.7	18.9	27.7	24.9	22.8	22.6	--
Consumption (metric tons) ²	358.6	359.4	367.6	372.4	379.3	379.9	387.8	399.1	400.8	404.5
Ending stocks (metric tons) ³	122.7	118.7	115.6	114.7	115.6	122.5	128.8	138.3	135.6	131.0
Total grains										
Area (hectares)	695.3	685.6	685.9	680.7	702.4	690.5	684.6	673.3	667.0	--
Production (metric tons)	1,789.9	1,713.0	1,759.8	1,712.7	1,870.6	1,880.1	1,873.0	1,873.3	1,835.1	1,862.1
Exports (metric tons) ¹	220.7	203.9	220.4	207.0	210.0	217.3	223.1	239.5	229.1	--
Consumption (metric tons) ²	1,752.2	1,759.7	1,773.1	1,762.6	1,830.4	1,836.6	1,841.9	1,876.4	1,867.9	1,890.5
Ending stocks (metric tons) ³	431.3	384.6	458.0	408.3	448.6	492.2	523.6	520.4	487.5	459.2
Oilseeds										
Crush (metric tons)	184.4	190.1	208.1	217.5	216.7	226.4	240.6	248.6	252.0	--
Production (metric tons)	227.5	229.4	261.9	258.9	261.4	286.6	294.7	302.6	307.7	--
Exports (metric tons)	38.2	38.7	44.1	44.3	49.6	54.0	54.8	63.9	65.9	--
Ending stocks (metric tons)	23.6	20.3	27.2	22.2	19.1	28.6	31.9	33.7	33.2	--
Meals										
Production (metric tons)	125.2	131.7	142.1	147.3	147.8	153.8	164.6	169.9	173.9	--
Exports (metric tons)	40.8	44.9	46.7	49.8	50.7	51.9	53.8	55.9	55.5	--
Oils										
Production (metric tons)	61.1	63.7	69.6	73.1	73.7	75.1	80.5	85.6	87.9	--
Exports (metric tons)	21.3	24.3	27.1	26.0	28.3	29.8	31.6	33.2	34.2	--
Cotton										
Area (hectares)	32.6	30.7	32.2	35.9	33.8	33.7	33.0	32.3	31.6	--
Production (bales)	82.5	77.1	86.0	93.1	89.6	91.6	84.9	87.2	87.2	--
Exports (bales)	25.5	26.8	28.4	27.5	26.8	26.7	23.7	27.2	26.0	--
Consumption (bales)	85.9	85.4	84.7	86.0	88.0	87.2	85.3	81.8	91.7	--
Ending stocks (bales)	34.7	26.8	29.8	36.7	40.1	43.7	44.9	41.1	37.1	--
	1992	1993	1994	1995	1996	1997	1998	1999	2000 E	2001 F
Beef and Pork⁴										
Production (metric tons)	111.6	111.6	116.7	122.1	116.6	122.1	127.1	130.4	131.8	133.1
Consumption (metric tons)	109.9	110.6	115.7	120.7	114.1	119.7	124.6	128.4	129.8	131.3
Exports (metric tons) ¹	6.6	6.6	7.2	7.4	7.7	8.2	8.0	9.2	9.1	8.8
Poultry⁴										
Production (metric tons)	38.0	40.5	43.2	47.5	50.4	52.7	53.5	56.5	58.0	59.6
Consumption (metric tons)	37.0	39.4	42.0	47.0	49.6	51.8	52.6	55.3	56.8	58.5
Exports (metric tons) ¹	2.4	2.8	3.6	4.5	5.1	5.6	5.7	6.0	6.6	6.8
Dairy										
Milk production (metric tons) ⁵	--	--	--	--	364.3	365.6	368.0	371.6	375.7	378.8

-- = 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, selected countries. 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			2000				2001		
	1998	1999	2000	Mar	Oct	Nov	Dec	Jan	Feb	Mar
Export commodities										
Wheat, f.o.b. vessel, Gulf ports (\$/bu.)	3.44	3.04	3.17	2.92	3.56	3.52	3.55	3.67	3.55	3.59
Corn, f.o.b. vessel, Gulf ports (\$/bu.)	2.59	2.30	2.24	2.42	2.16	2.26	2.43	2.41	2.35	2.32
Grain sorghum, f.o.b. vessel, Gulf ports (\$/bu.)	2.54	2.15	2.19	2.33	2.22	2.44	2.50	2.57	2.52	2.47
Soybeans, f.o.b. vessel, Gulf ports (\$/bu.)	6.37	5.02	5.26	5.40	4.94	5.06	5.42	5.22	4.96	4.81
Soybean oil, Decatur (¢/lb.)	25.78	17.51	15.01	16.22	13.51	13.37	13.12	12.54	12.38	13.91
Soybean meal, Decatur (\$/ton)	162.74	141.52	174.69	175.50	171.52	179.95	195.65	183.17	166.08	156.31
Cotton, 7-market avg. spot (¢/lb.)	67.04	52.30	57.47	57.67	60.52	62.16	61.04	56.66	54.10	47.22
Tobacco, avg. price at auction (¢/lb.)	179.77	177.82	182.73	179.06	181.01	117.45	197.00	205.05	205.97	169.51
Rice, f.o.b., mill, Houston (\$/cwt)	18.95	16.99	14.84	15.00	14.90	15.00	15.00	15.00	15.00	15.00
Inedible tallow, Chicago (¢/lb.)	17.67	12.99	9.92	10.25	10.00	11.00	11.88	10.73	8.59	8.90
Import commodities										
Coffee, N.Y. spot (\$/lb.)	1.39	1.05	0.92	1.10	0.81	0.72	0.67	0.65	0.68	0.68
Rubber, N.Y. spot (¢/lb.)	40.57	36.66	37.72	38.16	37.60	37.04	36.92	35.98	34.78	34.78
Cocoa beans, N.Y. (\$/lb.)	0.72	0.47	0.36	0.38	0.36	0.33	0.33	0.42	0.48	0.48

-- = Not available. Information contact: Mae Dean Johnson (202) 694-5299.

Table 25—Trade Balance

	Fiscal Year			2000				2001		
	1999	2000	2001 P	Mar	Oct	Nov	Dec	Jan	Feb	Mar
<i>\$ million</i>										
Exports										
Agricultural	49,148	50,911	53,000	4,666	4,987	4,764	4,613	4,373	4,536	4,871
Nonagricultural	586,606	647,384	--	58,202	59,241	56,978	55,898	52,345	53,115	59,467
Total ¹	635,754	698,295	--	62,868	64,228	61,742	60,511	56,718	57,651	64,338
Imports										
Agricultural	37,310	38,923	40,000	3,666	3,217	3,251	3,207	3,407	3,063	3,453
Nonagricultural	938,948	1,132,257	--	98,952	108,266	102,437	95,193	97,096	87,820	99,049
Total ²	976,258	1,171,180	--	102,618	111,483	105,688	98,400	100,503	90,883	102,502
Trade balance										
Agricultural	11,838	11,988	13,000	1,000	1,770	1,513	1,406	966	1,473	1,418
Nonagricultural	-352,342	-484,873	--	-40,750	-49,025	-45,459	-39,295	-44,751	-34,705	-39,582
Total	-340,504	-472,885	--	-39,750	-47,255	-43,946	-37,889	-43,785	-33,232	-38,164

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 Rates¹

	Annual			2000				2001		
	1998	1999	2000	Mar	Oct	Nov	Dec	Jan	Feb	Mar
1995 = 100										
Total U.S. Trade	114.0	114.2	119.0	115.9	123.1	123.4	121.7	122.0	123.6	126.6
U.S. markets										
All agricultural trade	119.2	117.5	120.2	119.4	126.0	126.8	126.5	126.8	128.2	131.7
Bulk commodities	118.3	116.6	121.2	118.4	125.2	126.1	126.2	126.4	127.7	130.8
Corn	122.1	116.3	119.2	115.1	120.1	121.8	123.4	124.1	124.7	128.7
Cotton	113.6	112.4	118.3	114.4	121.1	121.9	122.3	122.5	124.1	127.1
Rice	111.5	112.5	117.8	114.9	121.6	121.4	119.7	120.1	123.4	126.0
Soybeans	121.8	119.4	127.3	122.6	131.9	132.4	131.1	129.7	131.0	133.7
Tobacco, raw	108.1	112.8	134.3	129.8	141.1	141.5	138.7	137.6	141.2	145.6
Wheat	125.6	124.6	120.2	115.6	122.1	123.0	122.9	124.4	124.7	126.8
High-value products	119.9	118.3	119.4	120.3	126.7	127.3	126.7	127.1	128.6	132.3
Processed intermediates	115.9	115.1	120.2	117.6	125.0	125.6	124.3	124.1	125.8	128.9
Soymeal	106.6	107.2	117.0	110.4	117.9	117.0	115.3	115.8	116.9	118.9
Soyoil	89.1	98.1	105.2	104.3	108.3	108.0	107.0	107.6	108.8	109.8
Produce and horticulture	118.4	117.3	122.0	119.1	127.0	127.5	125.8	126.0	127.7	131.4
Fruits	120.4	116.8	119.2	116.7	123.0	123.7	123.5	124.3	125.7	129.8
Vegetables	115.9	113.6	114.4	112.3	117.8	118.4	116.9	118.0	119.8	124.3
High-value processed	123.9	121.4	117.8	123.0	128.0	128.8	129.0	130.0	131.3	135.6
Fruit juices	122.9	120.1	123.4	121.1	128.4	129.6	128.4	128.8	130.3	135.0
Poultry	139.2	155.0	116.9	176.8	174.1	173.0	172.3	173.0	174.1	175.2
Red meats	135.4	124.0	121.7	120.9	125.8	128.1	130.7	132.3	133.5	140.8
U.S. competitors										
All agricultural trade	115.7	122.1	135.5	130.9	144.4	144.0	138.9	137.0	139.2	141.3
Bulk commodities	122.2	130.4	134.0	138.2	149.0	148.8	145.1	144.7	146.8	149.2
Corn	113.1	120.5	134.0	129.5	141.2	141.0	136.7	135.2	136.6	137.9
Cotton	128.1	130.7	133.4	139.0	149.6	148.5	143.8	142.3	143.7	145.5
Rice	118.9	120.5	131.1	125.8	140.0	139.8	136.4	136.5	138.1	141.3
Soybeans	106.4	132.1	134.6	132.5	137.8	140.2	139.5	139.2	144.5	144.9
Tobacco, raw	115.3	127.3	121.8	120.2	126.8	125.4	121.6	120.0	125.1	125.3
Wheat	115.6	118.5	129.8	125.5	138.8	138.3	132.6	132.1	134.9	138.6
High-value products	118.4	125.2	139.1	135.6	150.0	149.4	143.9	141.3	143.6	145.7
Processed intermediates	119.9	127.1	138.2	135.9	149.0	148.6	144.0	142.3	144.8	147.1
Soymeal	107.8	132.0	136.9	133.0	140.9	143.0	141.7	140.6	145.5	145.6
Soyoil	107.1	123.3	130.0	126.3	134.2	135.9	133.3	133.4	136.8	137.4
Produce and horticulture	114.2	120.0	133.3	129.6	141.8	140.8	136.3	133.6	135.2	136.6
Fruits	121.0	123.5	135.9	130.5	143.5	143.0	138.6	137.9	139.5	142.4
Vegetables	102.4	109.2	121.7	117.8	128.2	127.6	123.7	121.8	123.3	124.4
High-value processed	118.7	125.7	141.3	137.2	153.1	152.5	146.1	142.9	145.4	147.7
Fruit juices	116.6	122.1	137.0	131.5	145.5	144.4	139.3	137.2	139.4	141.9
Poultry	109.5	121.6	134.9	129.8	143.0	143.1	138.2	136.6	139.4	141.1
Red meats	116.3	122.3	137.8	131.8	147.8	147.5	141.0	139.1	142.1	145.2
U.S. suppliers										
All agricultural trade	111.4	113.5	120.0	116.1	125.0	124.1	121.7	121.3	123.3	125.4
High-value products	108.8	111.6	118.2	114.7	123.6	122.6	119.9	119.4	121.0	123.0
Processed intermediates	112.3	114.8	121.4	118.0	127.8	127.1	124.0	123.7	125.5	128.1
Grains and feeds	112.5	113.0	117.9	114.3	122.7	122.7	119.5	119.7	121.7	125.2
Vegetable oils	123.1	120.9	130.1	125.3	138.2	136.8	133.9	132.7	134.5	137.1
Produce and horticulture	98.4	101.1	103.7	101.7	105.4	103.6	103.4	103.2	103.7	103.9
Fruits	96.5	97.2	98.0	94.8	101.4	97.6	99.5	99.4	100.2	101.5
Vegetables	88.7	84.1	81.3	80.1	82.6	80.8	80.6	81.1	81.7	81.2
High-value processed	111.8	114.9	123.7	119.2	130.4	129.7	125.8	125.0	127.1	129.7
Cocoa and products	120.3	126.1	137.6	133.7	143.0	142.7	138.8	137.6	139.6	142.5
Coffee and products	101.6	111.6	116.4	112.5	117.5	117.2	116.2	116.3	117.6	117.8
Dairy products	117.2	122.5	137.9	133.1	151.0	150.0	142.2	140.0	142.4	145.8
Fruit juices	109.2	122.3	127.8	123.8	133.2	132.6	131.3	130.6	134.1	135.3
Meats	102.1	105.6	115.4	117.6	129.1	128.6	123.8	124.0	126.4	130.1

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.

Information contact: Mathew Shane (202) 694-5282 or email: mshane@ers.usda.gov.

Table 27—U.S. Agricultural Exports & Imports

	Fiscal Year			Mar		Fiscal Year			Mar	
	1999	2000	2001 F	2000	2001	1999	2000	2001 F	2000	2001
	1,000 units					\$ million				
Exports										
Animals, live	--	--	--	--	--	476	608	--	33	34
Meats and preps., excl. poultry (mt) ¹	2,089	2,457	1,800	208	212	4,500	5,454	5,000	480	458
Dairy products	--	--	--	--	--	914	996	1,000	96	84
Poultry meats (mt)	2,402	2,845	2,900	218	232	1,750	1,961	2,000	158	157
Fats, oils, and greases (mt)	1,387	1,206	1,200	112	92	544	421	--	40	28
Hides and skins, incl. furskins	--	--	--	--	--	1,108	1,479	1,500	135	200
Cattle hides, whole (no.)	17,845	21,837	--	1,773	2,135	844	1,166	--	92	136
Mink pelts (no.)	4,172	4,352	--	1,027	841	98	111	--	28	28
Grains and feeds (mt) ²	104,576	104,009	--	8,186	8,718	14,272	13,788	14,500	1,155	1,231
Wheat (mt) ³	28,806	27,779	28,700	1,858	1,929	3,648	3,378	3,800	241	249
Wheat flour (mt)	958	825	800	50	43	177	132	--	9	9
Rice (mt)	3,076	3,299	3,100	312	350	1,010	903	800	88	80
Feed grains, incl. products (mt) ⁴	58,398	57,195	58,000	4,621	5,185	5,821	5,483	5,500	477	531
Feeds and fodders (mt)	11,800	13,386	14,100	1,209	1,094	2,252	2,496	2,700	217	229
Other grain products (mt)	1,538	1,525	--	136	117	1,363	1,397	--	123	133
Fruits, nuts, and preps. (mt)	3,439	3,736	--	329	418	3,805	3,871	4,800	280	343
Fruit juices, incl.										
froz. (1,000 hectoliters)	12,317	11,902	--	1,305	1,111	735	716	--	70	62
Vegetables and preps.	--	--	--	--	--	4,245	4,443	3,100	390	387
Tobacco, unmanufactured (mt)	205	180	200	25	15	1,376	1,229	1,200	149	92
Cotton, excl. linters (mt) ⁵	884	1,474	1,600	213	157	1,309	1,809	2,200	248	212
Seeds (mt)	579	730	--	95	67	800	787	800	90	67
Sugar, cane or beet (mt)	158	115	--	21	7	56	40	--	5	3
Oilseeds and products (mt)	33,597	36,055	35,900	4,047	4,810	8,638	8,386	8,400	913	1,052
Oilseeds (mt)	--	--	--	--	--	--	--	--	--	--
Soybeans (mt)	22,974	26,038	26,100	2,986	3,660	4,748	5,070	5,000	595	701
Protein meal (mt)	6,726	6,870	--	816	865	1,101	1,259	--	153	168
Vegetable oils (mt)	2,669	2,130	--	175	168	1,846	1,346	--	113	94
Essential oils (mt)	47	53	--	6	6	507	593	--	59	63
Other	--	--	--	--	--	4,112	4,330	--	363	397
Total	--	--	--	--	--	49,148	50,911	53,000	4,666	4,871
Imports										
Animals, live	--	--	--	--	--	1,411	1,737	2,000	166	202
Meats and preps., excl. poultry (mt)	1,403	1,555	1,600	142	136	3,108	3,724	3,900	338	352
Beef and veal (mt)	943	1,027	--	91	88	2,047	2,405	--	210	223
Pork (mt)	337	402	--	39	34	721	958	--	95	92
Dairy products	--	--	--	--	--	1,572	1,635	1,700	138	118
Poultry and products	--	--	--	--	--	201	288	--	20	21
Fats, oils, and greases (mt)	85	107	--	8	9	56	71	--	6	6
Hides and skins, incl. furskins (mt)	--	--	--	--	--	146	160	--	20	17
Wool, unmanufactured (mt)	29	25	--	2	2	75	66	--	5	6
Grains and feeds	--	--	--	--	--	2,943	3,058	3,200	248	263
Fruits, nuts, and preps.,										
excl. juices (mt) ⁶	8,171	8,366	8,300	894	778	4,619	4,546	5,600	480	430
Bananas and plantains (mt)	4,418	4,396	4,300	359	347	1,212	1,128	1,100	93	98
Fruit juices (1,000 hectoliters)	31,655	32,199	30,000	3,149	2,598	772	783	--	79	63
Vegetables and preps.	--	--	--	--	--	4,527	4,657	4,900	464	538
Tobacco, unmanufactured (mt)	217	220	200	23	19	742	651	600	46	62
Cotton, unmanufactured (mt)	144	34	--	4	12	150	28	--	2	4
Seeds (mt)	357	448	--	73	49	457	493	--	93	68
Nursery stock and cut flowers	--	--	--	--	--	1,076	1,165	1,200	83	87
Sugar, cane or beet (mt)	1,692	1,379	--	122	62	606	493	--	42	18
Oilseeds and products (mt)	3,767	4,069	4,300	362	298	1,899	1,873	1,800	183	127
Oilseeds (mt)	1,000	1,103	--	75	92	326	310	--	25	36
Protein meal (mt)	1,131	1,194	--	101	106	147	150	--	13	14
Vegetable oils (mt)	1,637	1,772	--	187	100	1,427	1,413	--	144	77
Beverages, excl. fruit										
juices (1,000 hectoliters)	--	--	--	--	--	4,258	4,702	--	394	419
Coffee, tea, cocoa, spices (mt)	2,520	2,841	--	279	222	5,306	5,218	--	524	352
Coffee, incl. products (mt)	1,294	1,411	1,300	145	114	2,967	2,905	2,800	325	164
Cocoa beans and products (mt)	865	1,046	1,000	101	77	1,531	1,466	1,400	134	119
Rubber and allied gums (mt)	1,148	1,249	1,200	121	97	739	841	900	88	67
Other	--	--	--	--	--	2,646	2,735	--	247	233
Total	--	--	--	--	--	37,310	38,923	40,000	3,666	3,453

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			2000				2001		
	1999	2000	2001 F	Mar	Oct	Nov	Dec	Jan	Feb	Mar
	\$ million									
Region & country										
Western Europe	7,528	6,712	6,600	577	795	650	704	626	718	574
European Union ¹	6,958	6,373	6,200	557	710	591	687	605	665	528
Belgium-Luxembourg	602	538	--	44	53	62	78	65	46	63
France	377	347	--	20	29	27	53	26	49	29
Germany	1,057	947	--	95	97	84	73	91	97	73
Italy	574	560	--	53	44	41	56	37	68	42
Netherlands	1,587	1,459	--	145	155	171	184	163	162	113
United Kingdom	1,122	1,033	--	79	144	101	72	84	80	87
Portugal	131	145	--	8	11	3	22	22	18	8
Spain, incl. Canary Islands	784	664	--	47	87	52	83	55	82	49
Other Western Europe	570	340	400	21	84	60	17	21	53	46
Switzerland	455	250	--	15	75	50	12	15	47	41
Eastern Europe	190	167	200	17	17	18	13	16	21	24
Poland	73	47	--	4	6	8	4	6	8	12
Former Yugoslavia	47	67	--	7	3	5	2	4	6	5
Romania	18	12	--	1	3	1	5	1	3	1
Newly Independent States	881	937	800	70	100	86	61	85	61	47
Russia	532	674	600	53	76	67	43	67	45	40
Asia²	20,441	22,051	20,200	2,202	1,964	1,978	1,970	1,905	1,967	2,297
West Asia (Mideast)	1,978	2,363	2,400	187	254	203	194	156	187	177
Turkey	448	701	700	55	30	59	68	34	30	55
Iraq	9	8	--	--	--	--	--	--	3	2
Israel, incl. Gaza and W. Bank	417	458	--	31	39	47	51	43	36	40
Saudi Arabia	468	462	500	30	46	44	41	40	40	33
South Asia	499	416	400	29	49	33	53	28	32	25
Bangladesh	165	82	--	9	6	4	16	6	13	7
India	189	186	--	14	23	21	20	18	9	13
Pakistan	89	93	--	4	8	6	6	2	2	5
China	1,011	1,474	1,800	261	200	195	167	177	252	396
Japan	8,933	9,353	9,200	906	709	776	775	840	737	843
Southeast Asia	2,218	2,602	2,800	258	270	307	195	274	291	296
Indonesia	499	681	800	69	84	47	50	92	89	89
Philippines	735	866	900	84	78	111	68	85	72	79
Other East Asia	5,803	5,844	6,000	562	482	464	585	430	468	559
Korea, Rep.	2,482	2,569	2,700	240	183	196	276	205	209	247
Hong Kong	1,264	1,255	1,300	106	118	128	123	84	95	115
Taiwan	2,047	2,011	2,000	216	175	139	186	141	163	197
Africa	2,160	2,272	2,500	178	253	175	213	166	208	167
North Africa	1,468	1,565	1,700	93	190	103	149	123	161	112
Morocco	162	141	--	10	30	6	24	7	6	8
Algeria	223	255	--	24	21	23	16	27	31	13
Egypt	1,002	1,094	1,000	50	134	61	80	74	112	82
Sub-Saharan	693	707	800	86	63	72	65	43	47	55
Nigeria	176	160	--	8	17	21	14	14	12	20
S. Africa	165	164	--	13	9	13	7	9	7	10
Latin America and Caribbean	10,495	10,639	11,500	915	989	1,054	985	889	919	1,037
Brazil	366	253	300	40	18	29	19	17	11	16
Caribbean Islands	1,453	1,457	--	121	130	137	114	105	110	124
Central America	1,209	1,129	--	93	89	113	96	84	93	106
Colombia	468	427	--	40	39	35	30	31	32	36
Mexico	5,672	6,329	7,100	550	634	624	648	574	599	681
Peru	347	201	--	16	8	19	5	9	16	11
Venezuela	458	404	400	31	42	31	30	30	24	23
Canada	6,951	7,520	8,100	658	726	689	607	656	599	680
Oceania	502	490	500	47	49	43	41	31	43	42
Total	49,148	50,911	53,000	4,666	4,987	4,764	4,613	4,373	4,536	4,871

F = Forecast. -- = 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

	1992	1993	1994	1995	1996	1997	1998	1999	2000P	2001F
	\$ billion									
Final crop output	88.9	82.4	100.3	95.7	115.6	112.3	102.1	93.1	95.5	96.2
Food grains	8.5	8.2	9.5	10.4	10.8	10.4	8.9	7.3	6.6	6.6
Feed crops	20.1	20.2	20.3	24.5	27.2	27.0	22.7	19.8	20.0	20.8
Cotton	5.2	5.2	6.7	6.9	7.0	6.3	6.1	4.7	4.6	4.4
Oil crops	13.3	13.2	14.7	15.5	16.4	19.8	17.5	13.6	13.9	13.8
Tobacco	3.0	2.9	2.7	2.5	2.8	2.9	2.8	2.3	1.8	1.8
Fruits and tree nuts	10.1	10.3	10.3	11.1	11.9	13.1	12.2	13.0	13.4	13.5
Vegetables	11.8	13.7	14.0	15.0	14.4	14.7	15.1	15.2	16.2	15.9
All other crops	13.7	13.7	14.7	15.0	15.8	16.9	17.1	17.4	18.3	18.6
Home consumption	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
Value of inventory adjustment ¹	3.2	-5.3	7.2	-5.3	9.1	1.1	-0.5	-0.2	0.7	0.6
Final animal output	87.1	92.0	89.7	87.7	92.0	96.5	94.2	95.1	99.6	106.9
Meat animals	47.7	51.0	46.7	44.9	44.2	49.7	43.3	45.6	53.0	54.0
Dairy products	19.7	19.3	20.0	19.9	22.8	20.9	24.1	23.2	20.6	24.9
Poultry and eggs	15.5	17.4	18.5	19.1	22.5	22.3	22.9	22.9	21.8	23.2
Miscellaneous livestock	2.6	2.9	3.1	3.3	3.4	3.6	3.7	3.7	4.4	4.4
Home consumption	0.5	0.4	0.4	0.4	0.3	0.4	0.3	0.4	0.4	0.4
Value of inventory adjustment ¹	1.0	1.1	1.1	0.2	-1.1	-0.4	-0.3	-0.7	-0.6	0.0
Services and forestry	15.2	17.0	18.1	19.9	20.8	22.1	24.7	26.7	27.8	27.8
Machine hire and customwork	1.8	1.9	2.1	1.9	2.2	2.4	2.2	2.0	2.1	2.3
Forest products sold	2.2	2.5	2.6	2.8	2.6	2.8	3.0	2.9	2.7	2.7
Other farm income	4.1	4.6	4.3	5.8	6.2	6.9	8.7	10.8	12.0	11.7
Gross imputed rental value of farm dwellings	7.2	8.1	9.0	9.4	9.9	10.1	10.8	10.9	10.9	11.0
Final agricultural sector output²	191.3	191.3	208.0	203.4	228.4	230.9	221.0	214.9	223.0	230.9
<i>Minus</i> Intermediate consumption outlays:	93.4	100.7	104.9	109.7	113.2	121.0	118.5	120.8	127.3	130.4
Farm origin	38.6	41.3	41.3	41.8	42.7	46.8	44.8	45.5	47.9	46.5
Feed purchased	20.1	21.4	22.6	23.8	25.2	26.3	25.0	24.5	25.1	24.7
Livestock and poultry purchased	13.6	14.7	13.3	12.5	11.3	13.8	12.5	13.8	15.5	14.4
Seed purchased	4.9	5.2	5.4	5.5	6.2	6.7	7.2	7.2	7.3	7.4
Manufactured inputs	22.7	23.1	24.4	26.1	28.6	29.2	28.2	27.3	30.3	33.1
Fertilizers and lime	8.3	8.4	9.2	10.0	10.9	10.9	10.6	9.9	10.4	12.2
Pesticides	6.5	6.7	7.2	7.7	8.5	9.0	9.0	8.6	8.5	8.8
Petroleum fuel and oils	5.3	5.4	5.3	5.4	6.0	6.2	5.6	5.8	8.3	8.8
Electricity	2.6	2.7	2.7	3.0	3.2	3.0	2.9	3.0	3.1	3.3
Other intermediate expenses	32.1	36.2	39.2	41.7	41.9	44.9	45.6	48.0	49.1	50.8
Repair and maintenance of capital items	8.5	9.2	9.1	9.5	10.3	10.4	10.4	10.5	10.6	10.9
Machine hire and customwork	3.8	4.4	4.8	4.8	4.7	4.9	5.4	5.3	5.5	5.6
Marketing, storage, and transportation	4.5	5.6	6.8	7.2	6.9	7.1	6.9	7.3	7.5	8.0
Contract labor	1.7	1.8	1.8	2.0	2.1	2.6	2.4	2.6	2.7	2.8
Miscellaneous expenses	13.6	15.2	16.7	18.3	17.8	19.9	20.6	22.3	22.8	23.5
<i>Plus</i> Net government transactions:	2.7	6.9	1.1	0.2	0.2	0.2	4.8	13.1	15.2	7.7
+ Direct government payments	9.2	13.4	7.9	7.3	7.3	7.5	12.2	20.6	22.9	15.7
- Motor vehicle registration and licensing fees	0.4	0.4	0.4	0.5	0.4	0.4	0.5	0.4	0.5	0.5
- Property taxes	6.1	6.2	6.4	6.6	6.7	6.8	6.9	7.1	7.2	7.5
Gross value added	100.5	97.5	104.3	93.9	115.4	110.1	107.3	107.2	110.9	108.2
<i>Minus</i> Capital consumption	18.3	18.3	18.7	19.2	19.4	19.6	19.7	19.9	19.8	20.1
Net value added²	82.2	79.2	85.6	74.7	96.0	90.6	87.5	87.3	91.1	88.1
<i>Minus</i> Factor payments:	34.6	34.8	36.8	37.8	41.1	42.0	42.9	43.9	45.9	45.7
Employee compensation (total hired labor)	12.3	13.2	13.5	14.3	15.2	16.0	16.9	17.5	18.0	18.9
Net rent received by nonoperator landlords	11.2	10.9	11.8	10.9	12.9	12.8	12.7	12.9	13.7	12.6
Real estate and non-real estate interest	11.0	10.7	11.6	12.6	13.0	13.1	13.4	13.6	14.2	14.2
Net farm income²	47.7	44.3	48.8	36.9	54.9	48.6	44.6	43.4	45.2	42.4

Values in last two columns are preliminary or forecast. 1. A positive value of inventory change represents current-year production not sold by December 31. 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

	1992	1993	1994	1995	1996	1997	1998	1999	2000P	2001F
<i>\$ billion</i>										
Cash income statement										
1. Cash receipts	171.3	177.9	181.1	188.0	199.1	207.6	196.6	188.6	194.4	202.0
Crops ¹	85.6	87.5	92.9	100.8	106.3	111.1	102.5	93.1	94.6	95.5
Livestock	85.7	90.4	88.2	87.1	92.8	96.5	94.1	95.5	99.8	106.5
2. Direct Government payments	9.2	13.4	7.9	7.3	7.3	7.5	12.2	20.6	22.9	15.7
3. Farm-related income ²	8.0	9.0	9.0	10.5	10.9	12.0	13.9	15.8	16.9	16.7
4. Gross cash income (1+2+3)	188.5	200.3	198.1	205.8	217.4	227.1	222.6	225.0	234.2	234.4
5. Cash expenses ³	133.5	141.2	147.4	153.2	159.8	168.6	167.2	170.4	178.9	182.1
6. Net cash income (4-5)	54.9	59.1	50.7	52.5	57.6	58.5	55.4	54.6	55.4	52.4
Farm income statement										
7. Gross cash income (4)	188.5	200.3	198.1	205.8	217.4	227.1	222.6	225.0	234.2	234.4
8. Noncash income ⁴	7.8	8.7	9.6	9.9	10.3	10.6	11.3	11.4	11.5	11.6
9. Value of inventory adjustment	4.2	-4.2	8.3	-5.0	8.0	0.7	-0.7	-0.9	0.2	0.6
10. Gross farm income (7+8+9)	200.4	204.7	215.9	210.7	235.7	238.4	233.2	235.5	245.9	246.6
11. Total production expenses	152.8	160.4	167.1	173.8	180.8	189.8	188.6	192.1	200.6	204.2
12. Net farm income (10-11)	47.7	44.3	48.8	36.9	54.9	48.6	44.6	43.4	45.2	42.4

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. *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 31—Average Income to Farm Operator Households¹

	1993	1994	1995	1996	1997	1998	1999	2000P	2001F
<i>\$ per farm</i>									
Net cash farm business income ²	11,248	11,389	11,218	13,502	12,676	14,357	13,194	12,981	11,177
Less depreciation ³	6,219	6,466	6,795	6,906	6,578	7,409	7,027	--	--
Less wages paid to operator ⁴	454	425	522	531	513	637	499	--	--
Less farmland rental income ⁵	534	701	769	672	568	543	802	--	--
Less adjusted farm business income due to other household(s) ⁶	872	815	649	1,094	*1,505	1,332	1,262	--	--
<i>\$ per farm operator household</i>									
Equals adjusted farm business income	3,168	2,981	2,484	4,300	3,513	4,436	3,603	--	--
Plus wages paid to operator	454	425	522	531	513	637	499	--	--
Plus net income from farmland rental ⁷	--	--	1,053	1,178	945	868	1,312	--	--
Equals farm self-employment income	3,623	3,407	4,059	6,009	4,971	5,941	5,415	--	--
Plus other farm-related earnings ⁸	1,192	970	661	1,898	1,234	1,165	944	--	--
Equals earnings of the operator household from farming activities	4,815	4,376	4,720	7,906	6,205	7,106	6,359	4,640	2,839
Plus earnings of the operator household from off-farm sources ⁹	35,408	38,092	39,671	42,455	46,358	52,628	57,988	60,058	62,178
Equals average farm operator household income	40,223	42,469	44,392	50,361	52,562	59,734	64,347	64,698	65,017
<i>\$ per U.S. household</i>									
U.S. average household income ¹⁰	41,428	43,133	44,938	47,123	49,692	51,855	54,842	--	--
<i>Percent</i>									
Average farm operator household income as percent of U.S. average household income	97.1	98.5	98.8	106.9	105.8	115.2	117.3	--	--
Average operator household earnings from farming activities as percent of average operator household income	12.0	10.3	10.6	15.7	11.8	11.9	9.9	--	--

-- = 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 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

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

	1992	1993	1994	1995	1996	1997	1998	1999	2000P	2001F
	\$ billion									
Farm assets	868.3	910.2	936.1	967.6	1,004.8	1,053.1	1,085.5	1,116.6	1,124.8	1,139.3
Real estate	640.8	677.6	704.1	740.5	769.5	808.2	841.8	870.0	874.4	883.1
Livestock and poultry ¹	71.0	72.8	67.9	57.8	60.3	67.1	63.4	70.6	73.5	77.7
Machinery and motor vehicles	85.4	86.4	88.1	89.4	89.8	90.1	90.2	89.0	89.3	89.9
Crops stored ^{2,3}	24.2	23.3	23.3	27.4	31.7	32.9	30.1	26.9	28.1	28.0
Purchased inputs	3.9	3.8	5.0	3.4	4.4	5.1	5.3	4.2	4.5	4.6
Financial assets	43.1	46.3	47.6	49.1	49.0	49.7	54.8	55.8	55.0	56.0
Total farm debt	139.1	142.0	146.8	150.8	156.1	165.4	172.9	176.4	183.6	185.2
Real estate debt ³	75.4	76.0	77.7	79.3	81.7	85.4	89.6	94.2	97.6	98.9
Non-real estate debt ⁴	63.6	65.9	69.1	71.5	74.4	80.1	83.2	82.2	86.0	86.3
Total farm equity	729.3	768.2	789.3	816.8	848.7	887.7	912.7	940.2	941.2	954.1
Selected ratios										
Debt to equity	19.1	18.5	18.6	18.5	18.4	18.6	18.9	18.8	19.5	19.4
Debt to assets	16.0	15.6	15.7	15.6	15.5	15.7	15.9	15.8	16.3	16.3

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.htm>

Table 33—Cash Receipts from Farming

	Annual			2000					2001	
	1998	1999	2000P	Feb	Sep	Oct	Nov	Dec	Jan	Feb
	\$ million									
Commodity cash receipts ¹	196,575	188,610	194,433	13,140	17,934	22,376	18,039	17,144	18,266	12,839
Livestock and products	94,112	95,463	99,797	7,843	8,186	9,072	8,283	8,200	8,624	7,325
Meat animals	43,336	45,600	52,994	4,238	4,395	5,170	4,115	4,425	4,724	3,779
Dairy products	24,114	23,204	20,622	1,682	1,623	1,673	1,600	1,700	1,816	1,683
Poultry and eggs	22,942	22,942	21,789	1,659	1,770	1,949	1,941	1,802	1,799	1,636
Other	3,719	3,717	4,392	264	398	281	628	273	284	226
Crops	102,463	93,146	94,636	5,297	9,748	13,305	9,756	8,944	9,642	5,514
Food grains	8,892	7,292	6,641	392	773	467	332	506	681	408
Feed crops	22,666	19,752	19,951	1,286	1,948	2,920	1,801	1,979	3,414	1,404
Cotton (lint and seed)	6,101	4,696	4,560	297	353	1,024	786	1,060	774	389
Tobacco	2,803	2,273	1,766	109	418	167	193	200	239	99
Oil-bearing crops	17,483	13,555	13,869	728	1,417	3,874	1,142	989	1,945	723
Vegetables and melons	15,145	15,164	16,201	761	1,909	1,737	1,103	873	840	792
Fruits and tree nuts	12,238	12,975	13,366	621	1,257	1,414	1,968	1,449	667	645
Other	17,136	17,441	18,282	1,102	1,674	1,701	2,431	1,888	1,082	1,055
Government payments	12,209	20,594	22,896	1,232	6,714	3,387	2,156	1,997	1,712	1,192
Total	208,784	209,204	217,329	14,372	24,648	25,764	20,195	19,141	19,978	14,031

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 ¹				Total ¹			
			Jan	Feb			Jan	Feb			Jan	Feb
	1999	2000P	2000	2001	1999	2000P	2000	2001	1999	2000P	2000	2001
\$ million												
North Atlantic												
Maine	286	262	25	23	229	244	16	17	515	506	41	39
New Hampshire	63	60	5	5	90	96	6	6	153	156	11	11
Vermont	473	441	36	33	68	66	3	3	541	507	39	36
Massachusetts	101	91	9	8	295	307	10	10	396	398	19	18
Rhode Island	8	8	1	1	39	41	2	2	48	48	3	3
Connecticut	180	165	15	14	302	332	14	15	482	498	30	28
New York	2,043	1,934	163	148	1,054	1,201	72	64	3,097	3,136	236	212
New Jersey	187	193	17	11	554	617	24	22	740	810	41	33
Pennsylvania	2,877	2,781	190	221	1,193	1,254	110	108	4,070	4,035	300	329
North Central												
Ohio	1,786	1,751	154	135	2,643	2,639	326	153	4,429	4,390	480	288
Indiana	1,581	1,695	121	137	2,792	2,892	414	234	4,373	4,586	535	370
Illinois	1,524	1,710	119	127	5,233	5,314	1,263	390	6,757	7,023	1,382	517
Michigan	1,331	1,704	109	100	2,139	2,153	175	87	3,470	3,857	284	187
Wisconsin	4,149	3,804	328	289	1,447	1,461	155	68	5,596	5,266	484	357
Minnesota	3,548	3,875	305	286	3,513	3,647	472	178	7,061	7,522	777	465
Iowa	4,712	5,747	432	409	5,004	5,039	784	290	9,716	10,786	1,216	698
Missouri	2,477	2,677	220	200	1,779	1,890	303	148	4,256	4,566	523	347
North Dakota	647	639	84	53	2,112	2,051	256	118	2,759	2,690	340	171
South Dakota	1,830	2,035	193	139	1,709	1,757	171	118	3,539	3,792	364	257
Nebraska	5,425	5,923	565	406	3,130	3,034	492	183	8,555	8,956	1,057	590
Kansas	5,009	5,488	538	396	2,607	2,550	357	148	7,616	8,038	895	544
Southern												
Delaware	566	557	48	43	153	182	7	9	718	740	56	52
Maryland	937	848	83	73	544	625	34	31	1,481	1,473	117	105
Virginia	1,580	1,549	137	127	704	739	53	33	2,283	2,288	190	161
West Virginia	334	339	24	24	53	53	6	4	387	392	30	28
North Carolina	3,850	4,274	313	301	2,838	2,883	174	116	6,688	7,157	487	417
South Carolina	773	789	59	52	633	710	43	29	1,406	1,499	102	81
Georgia	3,334	3,105	278	246	1,907	1,906	156	91	5,241	5,011	435	337
Florida	1,363	1,337	135	95	5,702	5,724	598	571	7,066	7,060	733	666
Kentucky	2,158	2,335	190	124	1,298	1,028	281	129	3,456	3,363	471	253
Tennessee	1,011	990	83	76	963	994	131	69	1,974	1,984	214	145
Alabama	2,777	2,684	222	212	662	622	40	28	3,438	3,306	262	240
Mississippi	2,143	2,037	178	172	1,031	885	106	85	3,174	2,921	283	257
Arkansas	3,397	3,248	287	259	1,863	1,641	135	87	5,259	4,889	422	347
Louisiana	620	653	56	58	1,228	1,165	151	46	1,848	1,818	207	105
Oklahoma	3,135	3,441	286	233	855	781	80	56	3,991	4,222	365	290
Texas	8,480	9,162	866	656	4,572	4,184	445	190	13,052	13,346	1,310	845
Western												
Montana	928	1,102	92	59	789	703	71	61	1,716	1,805	162	120
Idaho	1,603	1,628	150	116	1,744	1,952	110	92	3,347	3,580	260	208
Wyoming	680	795	54	73	172	160	10	7	852	954	64	80
Colorado	3,016	3,332	346	247	1,338	1,284	123	77	4,354	4,616	470	324
New Mexico	1,441	1,613	151	116	513	470	18	13	1,953	2,083	169	130
Arizona	987	1,063	95	89	1,191	1,219	180	146	2,178	2,283	274	235
Utah	724	770	61	56	243	241	19	16	967	1,011	79	72
Nevada	216	237	19	19	118	150	10	5	334	387	28	24
Washington	1,658	1,710	128	109	3,275	3,387	233	199	4,933	5,098	361	308
Oregon	790	826	71	53	2,262	2,229	122	108	3,052	3,055	193	161
California	6,714	6,269	574	488	18,087	19,669	849	823	24,801	25,938	1,423	1,312
Alaska	29	32	2	2	19	20	1	1	48	52	3	3
Hawaii	86	87	7	7	447	445	34	30	533	531	41	37
U.S.	95,567	99,797	8,624	7,325	93,134	94,636	9,642	5,515	188,701	194,433	18,266	12,839

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 & Function

	Fiscal year									
	1993	1994	1995	1996	1997	1998	1999	2000	2001 ⁴	2002 ⁴
	\$ million									
Commodity/Program										
Feed grains:										
Corn	5,143	625	2,090	2,021	2,587	2,873	5,402	10,203	4,386	3,013
Grain sorghum	410	130	153	261	284	296	502	983	274	293
Barley	186	202	129	114	109	168	224	399	156	112
Oats	16	5	19	8	8	17	41	61	61	27
Corn and oat products	10	10	1	0	0	0	0	5	3	1
Total feed grains	5,765	972	2,392	2,404	2,988	3,354	6,169	11,651	4,880	3,446
Wheat and products	2,185	1,729	803	1,491	1,332	2,187	3,435	5,365	2,121	1,120
Rice	887	836	814	499	459	491	911	1,894	920	859
Upland cotton	2,239	1,539	99	685	561	1,132	1,882	4,015	827	709
Tobacco	235	693	-298	-496	-156	376	113	634	148	-97
Dairy	253	158	4	-98	67	291	480	684	1,217	157
Soybeans	109	-183	77	-65	5	139	1,289	2,864	3,324	2,821
Peanuts	-13	37	120	100	6	-11	21	35	62	0
Sugar	-35	-24	-3	-63	-34	-30	-51	465	-37	-29
Honey	22	0	-9	-14	-2	0	2	7	26	-10
Wool and mohair	179	211	108	55	0	0	10	-2	35	-13
Operating expense ¹	6	6	6	6	6	5	4	60	5	5
Interest expenditure	129	-17	-1	140	-111	76	210	736	336	548
Export programs ²	2,193	1,950	1,361	-422	125	212	165	216	569	596
1988-2000 Disaster/tree/ livestock assistance	944	2,566	660	95	130	3	2,241	1,452	2,544	0
Conservation Reserve Program	0	0	0	2	1,671	1,693	1,462	1,511	1,693	1,788
Other conservation programs	0	0	0	7	105	197	292	263	367	277
Other	949	-137	-103	320	104	28	588	415	1,490	881
Total	16,047	10,336	6,030	4,646	7,256	10,143	19,223	32,265	20,527	13,058
Function										
Price support loans (net)	2,065	527	-119	-951	110	1,128	1,455	3,369	1,315	853
Cash direct payments: ³										
Production flexibility contract	0	0	0	5,141	6,320	5,672	5,476	5,057	4,072	3,952
Market loss assistance	0	0	0	0	0	0	3,011	11,046	675	0
Deficiency	8,607	4,391	4,008	567	-1,118	-7	-3	1	0	0
Loan deficiency	387	495	29	0	0	478	3,360	6,419	5,611	4,225
Oilseed	0	0	0	0	0	0	0	460	500	0
Cotton user marketing	114	149	88	34	6	416	280	446	214	151
Other	35	22	9	61	1	0	1	460	549	14
Conservation Reserve Program	0	0	0	2	1,671	1,693	1,435	1,476	1,665	1,788
Other conservation programs	0	0	0	0	85	156	247	215	306	233
Noninsured Assistance (NAP)	0	0	0	2	52	23	54	38	177	160
Total direct payments	9,143	5,057	4,134	5,807	7,017	8,431	13,861	25,618	13,769	10,523
1988-00 crop disaster	872	2,461	577	14	2	-2	1,913	1,251	1,995	0
Emergency livestock/tree/DRAP										
livestock indemn/forage assist.	72	105	83	81	128	5	328	201	549	0
Purchases (net)	525	293	-51	-249	-60	207	668	595	1,079	-42
Producer storage payments	9	12	23	0	0	0	0	0	0	0
Processing, storage, and transportation	136	112	72	51	33	38	62	81	95	81
Export donations ocean transportation	352	156	50	69	34	40	323	370	310	36
Operating expense ¹	6	6	6	6	6	5	4	60	5	5
Interest expenditure	129	-17	-1	140	-111	76	210	736	336	548
Export programs ²	2,193	1,950	1,361	-422	125	212	165	216	569	596
Other	545	-326	-105	100	-28	3	234	-232	505	458
Total	16,047	10,336	6,030	4,646	7,256	10,143	19,223	32,265	20,527	13,058

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, and Technical Assistance to Emerging Markets, and starting in FY 2000 Foreign Market Development Cooperative Program and Quality Samples Program. 3. Includes cash payments only. Excludes generic certificates in FY 86-96.

4. Estimated in FY 2002 President's Budget which was released on April 9, 2001 based on October 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-FY 2002 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			2001			Year-to-date cumulative		
	1997	1998	1999	Feb	Mar	Apr	Feb	Mar	Apr
\$ billion									
Sales ¹									
At home ²	383.8	392.3	407.3	33.3	35.3	34.5	68.0	103.3	137.8
Away from home ³	309.5	322.1	343.7	29.3	33.4	33.8	58.9	92.3	126.1
1998 \$ billion									
Sales ¹									
At home ²	392.4	392.3	397.8	31.3	33.0	32.3	64.0	97.0	129.3
Away from home ³	317.4	322.1	335.3	27.5	31.2	31.6	55.3	86.5	118.1
Percent change from year earlier (\$ billion)									
Sales ¹									
At home ²	3.8	2.2	3.8	2.8	-1.0	-2.4	4.3	2.4	1.2
Away from home ³	5.9	4.1	6.7	2.7	5.3	8.3	4.4	4.7	5.7
Percent change from year earlier (1998 \$ billion)									
Sales ¹									
At home ²	-0.2	0.0	1.4	-0.1	-4.2	-5.6	1.2	-0.7	-2.0
Away from home ³	3.0	1.5	4.1	0.2	2.6	5.6	1.8	2.1	3.0

-- = 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			2000				2001		
	1998	1999	2000	Mar	Oct	Nov	Dec	Jan	Feb	Mar
Rail freight rate index ¹ (Dec. 1984=100)										
All products	113.4	113.0	114.5	114.0	115.1	115.4	115.3	115.9	115.6	116.0
Farm products	123.9	121.7	123.1	122.5	124.9	124.6	125.2	124.8	124.3	124.6
Grain food products	107.4	99.7	100.4	100.4	100.9	101.1	101.2	101.3	102.5	102.3
Grain shipments										
Rail carloadings (1,000 cars) ²	22.8	24.2	23.2	22.8	24.9	21.0	19.3	23.0	23.1	23.2
Barge shipments (mil. ton) ³	3.0	3.5	3.1	3.2	3.1	3.8	2.2	1.0	1.9	2.6
Fresh fruit and vegetable shipments ⁴										
Piggy back (mil. cwt)	0.9	0.7	0.8	0.9	0.6	0.8	0.8	0.7	0.6	0.9
Rail (mil. cwt)	1.2	1.1	1.4	1.1	1.7	2.1	2.2	1.8	1.3	1.5
Truck (mil. cwt)	42.2	45.2	45.0	44.9	40.1	39.9	42.9	37.8	36.0	46.1

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. Annual data are monthly average. Agricultural Marketing Service, USDA. Information contact: Gary Vocke (202) 694-5285

Indicators of Farm Productivity

Table 38—Indexes of Farm Production, Input Use, & Productivity¹

See *Agricultural Outlook*, May 2001

Food Supply & Use

Table 39—Per Capita Consumption of Major Food Commodities¹

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
	Lbs.									
Red meats ^{2,3,4}	112.3	111.9	114.0	112.1	114.7	115.1	112.8	111.0	115.6	117.7
Beef	63.9	63.1	62.8	61.5	63.6	64.4	65.0	63.8	64.9	65.8
Veal	0.9	0.8	0.8	0.8	0.8	0.8	1.0	0.9	0.7	0.6
Lamb & mutton	1.0	1.0	1.0	1.0	0.9	0.9	0.8	0.8	0.9	0.9
Pork	46.4	46.9	49.4	48.9	49.5	49.0	45.9	45.5	49.2	50.5
Poultry ^{2,3,4}	56.3	58.3	60.8	62.5	63.3	62.9	64.1	64.2	65.0	68.3
Chicken	42.4	44.2	46.7	48.5	49.3	48.8	49.5	50.3	50.8	54.2
Turkey	13.8	14.1	14.1	14.0	14.1	14.1	14.6	13.9	14.2	14.1
Fish and shellfish ³	15.0	14.8	14.7	14.9	15.1	14.9	14.7	14.5	14.8	15.2
Eggs ⁴	30.2	30.1	30.3	30.4	30.6	30.2	30.4	30.7	31.8	32.8
Dairy products										
Cheese (excluding cottage) ^{2,5}	24.6	25.0	26.0	26.2	26.8	27.3	27.7	28.0	28.3	29.8
American	11.1	11.1	11.3	11.4	11.5	11.8	12.0	12.0	12.2	13.0
Italian	9.0	9.4	10.0	9.8	10.3	10.4	10.8	11.0	11.3	11.8
Other cheeses ⁶	4.5	4.6	4.7	5.0	5.0	5.0	5.0	5.0	4.8	5.0
Cottage cheese	3.4	3.3	3.1	2.9	2.8	2.7	2.6	2.7	2.7	2.7
Beverage milks ²	221.8	221.1	218.2	213.4	213.6	209.8	210.0	206.8	204.6	203.8
Fluid whole milk ⁷	90.4	87.3	84.0	80.1	78.8	75.3	74.6	72.7	71.6	72.4
Fluid lower fat milk ⁸	108.5	109.9	109.2	106.6	106.0	102.6	101.7	99.8	98.6	98.2
Fluid skim milk	22.9	23.9	25.0	26.7	28.8	31.9	33.7	34.3	34.4	33.2
Fluid cream products ⁹	7.6	7.7	8.0	8.0	8.1	8.4	8.7	9.0	9.2	9.7
Yogurt (excluding frozen)	4.0	4.2	4.2	4.3	4.7	5.1	4.8	5.1	5.1	4.9
Ice cream	15.8	16.3	16.3	16.1	16.1	15.7	15.9	16.4	16.6	16.8
Lowfat ice cream ¹⁰	7.7	7.4	7.1	6.9	7.6	7.5	7.6	7.9	8.3	7.9
Frozen yogurt	2.8	3.5	3.1	3.5	3.5	3.5	2.6	2.1	2.2	2.1
All dairy products, milk equivalent, milkfat basis ¹¹	568.3	565.6	565.8	574.1	585.9	583.8	574.6	577.6	581.7	597.9
Fats and oils--total fat content	63.0	64.8	66.8	69.7	68.0	66.3	65.3	64.9	65.6	68.5
Butter and margarine (product weight)	15.3	15.0	15.4	15.8	14.7	13.7	13.5	12.8	12.8	12.9
Shortening	22.2	22.4	22.4	25.1	24.1	22.5	22.3	20.9	21.0	21.6
Lard and edible tallow (direct use)	2.2	1.8	3.5	3.4	4.2	4.3	4.8	4.1	5.2	5.7
Salad and cooking oils	25.3	26.4	27.2	26.9	26.2	26.9	26.1	28.6	27.9	29.4
Fruits and vegetables ¹²	656.0	650.2	677.5	691.4	705.6	694.3	710.8	717.9	702.4	719.0
Fruit	272.6	255.3	283.7	283.2	290.9	284.9	290.2	296.9	284.4	297.9
Fresh fruits	116.3	113.0	123.5	124.5	126.3	124.1	128.1	131.9	131.3	132.5
Canned fruit	21.0	19.8	22.9	20.7	21.0	17.5	18.8	20.4	17.4	19.6
Dried fruit	12.1	12.3	10.8	12.6	12.8	12.8	11.3	10.8	12.4	10.5
Frozen fruit	3.8	3.8	3.9	3.7	3.8	4.2	4.0	3.7	4.2	3.7
Selected fruit juices	119.0	106.0	121.9	121.3	126.6	125.9	127.8	129.3	118.8	131.0
Vegetables	383.5	394.9	393.9	408.2	414.6	409.4	420.6	421.0	418.0	421.2
Fresh	167.1	167.4	171.1	178.1	184.5	179.1	184.1	188.9	185.5	192.1
Canning	111.5	114.3	112.2	112.8	112.3	110.8	109.5	107.8	109.3	105.7
Freezing	66.8	72.6	70.9	76.0	78.4	79.9	84.6	83.0	81.8	82.5
Dehydrated and chips	31.0	32.8	31.5	33.6	31.0	31.3	34.5	33.3	33.4	32.3
Pulses	7.1	7.8	8.1	7.7	8.4	8.4	8.0	8.1	7.9	8.6
Peanuts (shelled)	6.0	6.5	6.2	6.1	5.8	5.7	5.7	5.9	5.9	6.4
Tree nuts (shelled)	2.4	2.2	2.2	2.4	2.3	1.9	2.0	2.1	2.3	2.7
Flour and cereal products ¹³	181.0	182.7	185.7	190.7	194.0	192.8	199.2	200.9	198.4	201.9
Wheat flour	136.0	137.0	138.9	143.3	144.5	141.8	148.7	149.5	146.0	148.4
Rice (milled basis)	15.8	16.2	16.7	16.7	18.1	18.9	17.8	18.4	18.9	19.4
Caloric sweeteners ¹⁴	136.9	137.9	141.2	144.5	147.4	149.8	150.7	154.0	155.1	158.4
Coffee (green bean equiv.)	10.3	10.3	10.0	9.1	8.2	8.0	8.9	9.3	9.5	10.0
Cocoa (chocolate liquor equiv.)	4.3	4.6	4.6	4.3	3.9	3.6	4.2	4.1	4.4	4.6

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.

Information contact: Jane E. Allshouse (202) 694-5449.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, sex, religion, age, disability, political beliefs, sexual orientation, or marital or family status. (Not all prohibited bases apply to all programs). Persons with disabilities who require alternative means for communication of program information (braille, large print, audiotape, etc.) should contact USDA's Target Center at (202) 720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call (202) 720-5964 (voice or TDD). USDA is an equal opportunity provider and employer.