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AGRICULTURAL OUTLOOK

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In This Issue . . .

The meatpacking industry . . . Garlic demand . . . Marketing organic foods . . . Field crop supplies . . . Farming & the rural economy

Farm Commodity Abundance To Continue

Large supplies of major U.S. field crops, along with low prices, are expected again in 2000/01, according to USDA's first forecast for the season. While domestic consumption of most major oilseeds and grains is anticipated to remain strong because of low prices, export prospects will vary by crop, and ending stocks in 2000/01 will build for soybeans, corn, rice, and cotton.

Red meat and poultry production in 2001 is forecast at around 83 billion pounds, up less than 1 percent from this year's expected record. Despite plentiful meat supplies, strong consumer demand is likely to maintain hog prices that have risen in 2000, while poultry prices are expected to decline only slightly in 2001. Prices for both fed and feeder cattle will post modest gains as supplies continue to decline.

Garlic Demand Soars

U.S. garlic use has soared, hitting a record-high 3.1 pounds per person in 1999, three times the level in 1989. No other vegetable has experienced stronger growth in demand over the past 10 years. The strong surge in use during the 1990's likely reflects: rising popularity of ethnic foods and restaurants, persistent publicity about the health benefits of garlic, and demand from the health supplements industry. Vigorous demand has resulted in a doubling of U.S. garlic production over each of the last two decades. Output was record large in 1999, and wholesale garlic prices this spring are a third lower than a year earlier.

Consolidation in Meatpacking: Causes & Concerns

The U.S. meatpacking industry consolidated rapidly in the last two decades. Following the emergence of new and extensive scale economies in meatpacking, intense price competition led to the exit of higher cost smaller plants and their rapid replacement by larger and more efficient plants and significant increases in concentration and reductions in costs. If larger packers realize lower costs, then concentration, by reducing industry costs, can lead to improved prices for consumers and for livestock producers. However, with fewer competitors, meatpackers could reduce prices paid to livestock producers and may be able to raise meat prices charged to wholesalers and retailers. A challenge for policymakers is to ensure that a highly concentrated industry—a result of consolidation—does not limit price competition among packers.

Rewarding Environmentally Friendly Farming

Interest is growing in broadening the array of government programs that would improve the environmental performance of agriculture and at the same time provide income support to agricultural producers. Government "agri-environmental" payments programs compensate producers for maintaining beneficial impacts of agriculture or mitigating adverse environmental impacts. Net benefits of agri-environmental payments programs will be greater if policymakers, in designing the programs, assign higher priority to activities and practices that are more valued and/or less costly. The cost-effectiveness of such programs can also be enhanced by building in flexibility—i.e., giving farmers latitude in selecting or developing practices tailored to their own farming operations.

Marketing Organic Foods

The organic industry has grown at a remarkable rate during the past several years. Average annual growth in organic food sales is expected to continue at 20-24 percent into the next decade. Rapid growth in demand presents the organic industry with a major challenge—to ensure an adequate supply while maintaining product integrity as commodities move along the marketing chain from growers to retailers. Assurance of organic integrity may require 1) certification that the commodity was grown organically, 2) marketing and manufacturing techniques that preserve its organic identity, and 3) implementation of a national standard that precisely defines "certified organic." USDA's proposed national organic standards, expected to be finalized this year, will provide a national definition of organic production.

Farming's Role in The Rural Economy

The U.S. rural economy remains strong, largely unaffected by low farm prices of recent years. The ability of the rural economy to shake off downturns in the farm sector is a reminder that agriculture (including ag-related industries such as input suppliers and food retailing) is not the primary economic engine of rural America. Rural America's nonagricultural economy has grown steadily, outpacing growth in agriculture, so that agriculture's relative importance as a source of jobs and income has declined. In general, it is the strength of the overall economy that has sustained the rural economy. The growing service orientation of the U.S. economy suggests that the key to survival and growth for rural communities is developing and attracting service-sector businesses.

Briefs

Field Crops

Large Field Crop Supplies Expected Again in 2000/01

Large supplies of major U.S. field crops are expected again in 2000/01, keeping downward pressure on season-average farm prices for the fourth consecutive year, according to USDA's first forecast of production and prices for next year. Wheat deviates from the general output projection, with production expected to decline 3 percent and season-average farm price to rise 6 percent (midpoint of forecast range). While domestic consumption of most major oilseeds and grains is anticipated to remain strong because of low prices, export prospects will vary by crop, and ending stocks in 2000/01 will build for soybeans, corn, rice, and cotton.

U.S. *soybean* supplies for 2000/01 are expected to be large, exceeding 3 billion bushels for the first time. Plantings will increase for the 8th consecutive season, partly because the soybean loan rate supports higher expected returns relative to alternative crops. Planted acreage in 2000 is forecast at 74.9 million acres, up 1.5 percent from last year and the largest on record. Assuming trend yields, domestic soybean production is anticipated to leap 12 percent to an historic 2,955 million bushels. With large U.S. and foreign supplies, the season-average farm price will weaken for the fourth year in a row—to $4-$5 per bushel, with the midpoint down from an expected $4.65 in 1999/2000.

A modest gain is projected for domestic crush, based on improved crush earnings. USDA expects strong U.S. soybean exports at 970 million bushels in 2000/01, supported by a larger U.S. crop and low prices, a slowdown in foreign oilseed supply growth, and expanding foreign import demand. However, a weak euro and anticipated large Chinese oilseed crops will limit U.S. export gains. With expected large gains in domestic production, ending soybean stocks are projected to be the largest since 1985/86, despite a smaller carry-in and increasing world demand.

U.S. *corn* production in 2000 is projected to be the fifth consecutive crop to surpass the 9-billion-bushel mark, up over 300 million bushels from last year. Producers are expected to raise corn acreage slightly, and yields are forecast above trend (see page 4). Total domestic supplies are anticipated to increase by almost 3 percent with marginally lower carry-in stocks. The U.S. average farm price is pegged at $1.60-$2 per bushel, compared with a $1.90 midpoint for 1999/2000.

Domestic use of corn in 2000/01 is expected to increase less than 1 percent, with higher food, seed, and industrial (FSI) uses accounting for a majority of the gain. Feed and residual use of corn is projected to rise, partially offsetting lower feed and residual use for sorghum and barley. U.S. corn exports are anticipated to be slightly higher next season due to reduced competition from China.

U.S. *wheat* plantings for the 2000 crop are expected to decline for the fourth consecutive year as producers continue to favor planting oilseeds in many parts of the Corn Belt and Northern Plains states. As a result, production is projected to fall nearly 3 percent, but large carry-in stocks will keep supplies relatively plentiful. With higher wheat imports anticipated next year, the total U.S. wheat supply is expected to be down less than 2 percent from 1999.

Total use of wheat is projected to rise slightly as gains in food use and exports offset a decline in feed use—reflecting competition from weak corn prices. The

U.S. Field Crops—Market Outlook

	Area				Total	Domestic		Ending	Farm
	Planted	Harvested	Yield	Production	supply	use	Exports	stocks	price
	Mil. acres		Bu/acre	Mil. bu					$/bu
Wheat									
1999/2000	62.8	53.9	42.7	2,302	3,338	1,325	1,075	938	2.50
2000/2001	61.7	52.5	42.6	2,239	3,272	1,310	1,125	837	2.40-2.90
Corn									
1999/2000	77.4	70.5	133.8	9,437	11,239	7,580	1,875	1,784	1.85-1.95
2000/2001	77.9	71.1	137.0	9,740	11,534	7,650	1,900	1,984	1.60-2.00
Sorghum									
1999/2000	9.3	8.5	69.7	595	660	380	235	45	1.55-1.65
2000/2001	9.0	8.0	69.5	556	601	330	225	46	1.30-1.70
Barley									
1999/2000	5.2	4.8	59.2	282	449	307	30	112	2.15
2000/2001	5.7	5.3	61.0	320	462	302	25	135	1.75-2.15
Oats									
1999/2000	4.7	2.5	59.6	146	328	248	2	78	1.10
2000/2001	4.4	2.5	59.8	148	326	248	2	76	0.90-1.30
Soybeans									
1999/2000	73.8	72.5	36.5	2,643	2,994	1,754	940	300	4.65
2000/2001	74.9	73.9	40.0	2,955	3,258	1,793	970	495	4.00-5.00
			Lbs./acre	Mil. cwt (rough equiv.)					$/cwt
Rice									
1999/2000	3.58	3.56	5,908	210.5	243.3	116.8	87	39.5	6.05-6.15
2000/2001	3.40	3.37	5,935	200.0	250.5	119.6	87	43.9	4.75-5.75
			Lbs./acre	Mil. bales					¢/lb.
Cotton									
1999/2000	14.87	13.42	607	16.97	21.01	10.1	6.6	4.3	44.8
2000/2001	15.56	14.36	635	19.00	23.35	10.2	8.0	5.1	*

Based on May 12, 2000 *World Agricultural Supply and Demand Estimates.*
*USDA is prohibited from publishing cotton price projections.

Economic Research Service, USDA

U.S. is expected to capture a share of this year's expanding global import market, a result of production decreases in North Africa and Iran (due to drought) and in China. Given relatively flat total use, smaller U.S. supplies will likely lead to lower ending stocks, and the U.S. average wheat price for 2000/01 is expected to rise $0.15 per bushel to $2.65 (midpoint of forecast).

U.S. *rice* plantings are expected to be 3.4 million acres in 2000, a 5-percent decline from last season when prices were considerably higher. Production is also projected to fall 5 percent from last year's record harvest of 210.5 million cwt, but huge beginning stocks will more than make up for the shortfall. While medium and short grain rice production will likely rise, a significant anticipated reduction in long grain rice production will be responsible for the overall decline. With total use expected to increase only marginally, ending stocks are anticipated to total 44 million cwt, the largest level since 1986/87. Enormous domestic and foreign supplies will weigh heavily on prices next season. The season-average farm price is expected to fall to $4.75-$5.75 per cwt, down from $6.05-$6.15 in 1999/2000.

Total domestic use of rice (including food, seed, industrial, and residual) is projected to expand nearly 2.5 percent to a record level. Exports of milled and rough rice are anticipated to be the same as last year, with strong competition among major exporters for limited import markets. U.S. imports, mainly aromatic varieties from India and Pakistan, will likely continue to increase in 2000/01. A 2-percent rise in rice imports is forecast for next season.

Cotton production is projected to soar next season due to a nearly 5-percent increase in both planted acreage and yields. Production is forecast at 19 million bales (a 12-percent gain) in 2000, the largest crop since 1994. A second consecutive annual rise in area is attributable to higher expected net returns for cotton versus competing crops. In addition, ending stocks are projected to increase 800,000 bales, boosting the stocks-to-use ratio to 28 percent.

Domestic mill use is anticipated marginally higher in 2000/01. The modest increase will be due to strong retail demand as well as larger textile exports. Moreover, U.S. exports of raw cotton in 2000/01 are projected near the mid-1990's levels at 8 million bales. U.S. share of world trade is expected to increase from 25 percent to 29 percent because of greater domestic production, lower foreign production, record foreign demand, and continuation of USDA's Step 2 program (a mechanism for keeping U.S. cotton competitive on the world export market). AO

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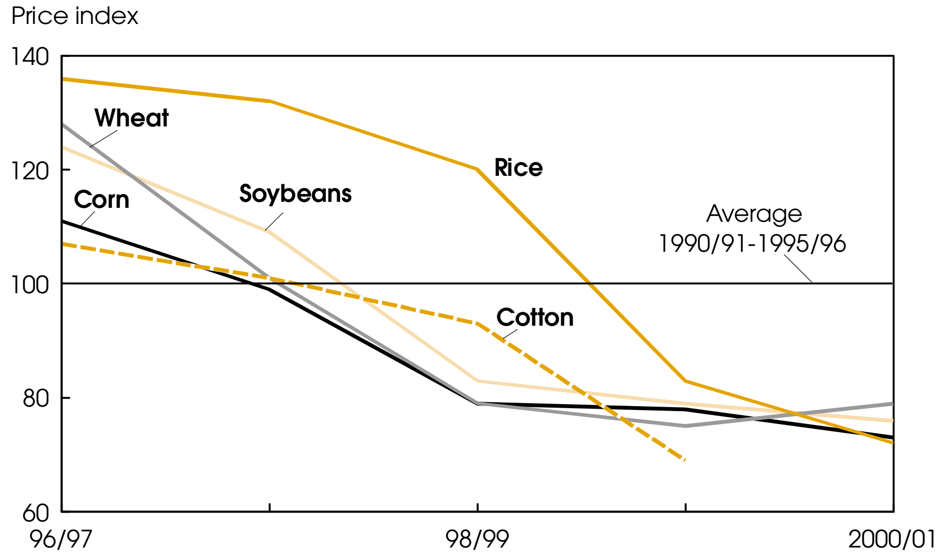
Field Crop Prices to Remain Low in 2000/01



Based on U.S. season-average farm price. 1999/2000 preliminary; 2000/01 forecast.
Cotton price forecasts not available.
Economic Research Service, USDA

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Planted area for field crops, excluding winter wheat, is based on USDA's *Prospective Plantings* report for 2000, released on March 31. 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, July weather, and planting progress (see page 4). 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.

Briefs

Planting Progress Enhances Corn Yield Prospects for 2000

USDA's initial projection for U.S. corn yields in 2000 is 137 bushels per acre, about 3 bushels higher than the long-term, straight-line trend would indicate. The above-trend yield projection reflects earlier-than-average planting of this year's corn crop. A crop planted earlier tends to have greater yield potential because it allows for more of the critical stages of crop development, especially pollination, to occur under typically more favorable weather conditions, avoiding the hotter and drier periods later in the summer. Through May 14, planting progress for 18 major corn production states reached more than 90 percent completion, compared with a 5-year average of 62 percent by mid-May.

To assess potential yield gains resulting from early plantings, a corn yield model was used, based on trend, weather, and planting progress. The model, developed by USDA's Economic Research Service, uses July weather (precipitation and average temperature) and mid-May plantings data for the five-state Corn Belt (Iowa, Illinois, Indiana, Ohio, and Missouri), which typically accounts for about half of U.S. corn production. The estimated regression equation explains about 90 percent of the variation in national corn yields in 1975-99.

The effects of mid-May planting progress and July temperatures on corn yield are each linear in the model—i.e., for these variables, each unit of change has a constant effect on yield. The effect of Corn Belt precipitation for July, however, is nonlinear because the response of corn yields to different amounts of precipitation is asymmetric. That is, reductions in corn yields when rainfall is below average are larger than gains in corn yields when rainfall is above average.

If planting progress by mid-May this year had been average—and assuming weather in July is average—the model suggests a corn yield of about 134 bushels per acre in 2000. However, a weighted average of corn yield estimates for alternative July weather outcomes, including both favorable and adverse weather, lowers the mean (average) expected corn yield to 131 bushels per acre, reflecting the asymmetric response to different amounts of rainfall. The mean expectation analyzed here accounts for most of the likely outcomes in July weather (95 percent of the statistical distribution of the weather variables).

Advanced planting progress this year adds to this average yield expectation. For every 10-percentage-point increase in planting progress above average, corn yield expectations are raised by 2.6 bushels per acre. So with 95 percent of the Corn Belt corn crop planted by mid-May (compared with the 1975-99 Corn Belt average of 71 percent by that date), mean expectations are raised to about 137 bushels per acre.

As the growing season for corn progresses, and actual data for July weather become available, the model can be used to update projections of this year's corn yield. Higher yields could result if July weather is more favorable than average, while a hotter and drier July could reduce corn yields.

USDA's first survey-based estimate of corn yields for this year will be released by the National Agricultural Statistics Service in the August 11 *Crop Production* report. AO

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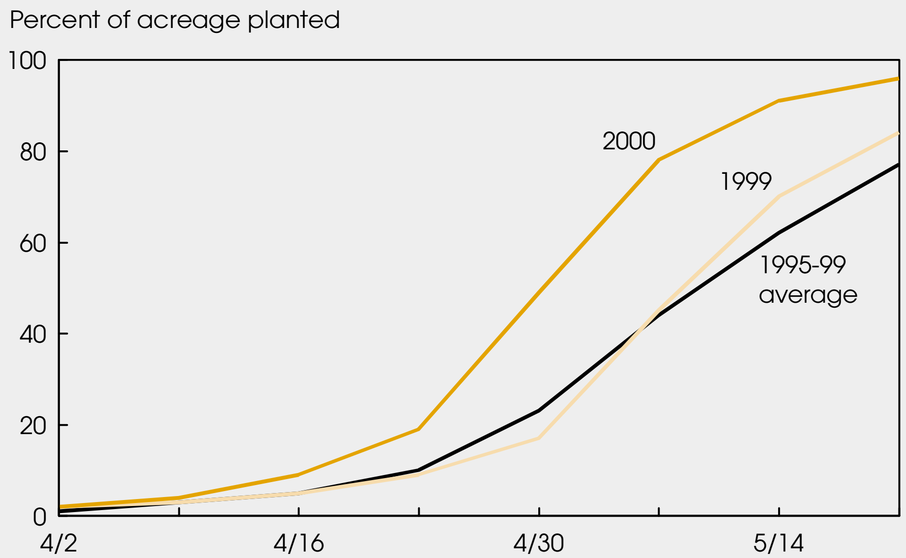
Corn Plantings Are Well Ahead of Average Pace



18 major corn-producing states.
Source: National Agricultural Statistics Service, USDA
Economic Research Service, USDA

Livestock, Dairy, & Poultry

Meat & Poultry Production To Continue Record-Setting Pace

Red meat and poultry production in 2001 is forecast at around 83 billion pounds, up less than 1 percent from this year's expected record. Increased poultry output and a turnaround in pork production, bolstered by profitability and relatively low corn and soybean prices, will more than offset a modest decline in beef production. Due to poor returns in recent years, beef producers have reduced breeding herds.

Although red meat and poultry supplies are record large, the robust economy is fueling demand and maintaining prices. Hog prices in 2001 are expected to average in the mid-$40's, about the same as in 2000, and broiler and turkey prices are expected to decline only slightly. Prices for both fed and feeder cattle are expected to post modest gains as supplies continue to decline.

Beef production is expected to decline 4-5 percent in 2001 as producers begin to retain heifers for the breeding herd rather than placing them on feed. Also, due to the declining cattle inventory, steer and cow slaughter will continue to decline. Heifer slaughter has remained large in early 2000, and many of the heifers that might have been bred this spring and summer to calve and enter the breeding herd have already been placed on feed. These additional heifers on feed are keeping beef production near the record reached last year.

Cattle inventories have been declining since 1996. Continuing decline in the breeding herd has resulted in what will likely be the smallest calf crop since at least the early 1990's in 2000, and the 2001 calf crop is likely to drop even further, possibly to the lowest since the early 1950's.

Cattle prices, in the face of large supplies of competing meats at relatively low prices, have rebounded from the lows reached in the mid-1990's. The robust U.S. economy underlies the current strength in meat demand, which has shored up prices despite large supplies. With expectations of higher prices, especially for cattle that will grade Choice, increased heifer retention for breeding following this year's calf crop is expected in 2001 provided adequate forage is available. The retention will further reduce an already much lower feeder cattle supply, which was 8 percent below a year ago on April 1. The feeder cattle supply is expected to continue to decline over the next couple of years until herd expansion begins.

Fed-cattle prices are expected to average in the lower $70's per cwt in 2001, up from near $70 this year. Lower feeder cattle supplies are boosting feeder cattle prices at a faster rate. Feeder cattle prices are expected to average in the high $80's per cwt in 2001, up about $3 after a $9 gain in 2000 and the highest price since the early 1990's. Retail beef prices are expected to rise only 1-3 percent in the face of large competing meat supplies.

Pork production in 2001 is forecast to be less than 1 percent above the 18.8 billion pounds expected this year. With greatly improved returns—hog prices have risen to about $50 per cwt from the high $30's earlier this year—producers are expected to begin an expansion phase in late 2000.

Poor returns from fall 1997 to spring 2000 have prompted producers to reduce the number kept for breeding. The March *Hogs and Pigs* report indicates that the number of animals kept for breeding was down 5 percent from the same period a year ago. Also, producers indicated inten-

U.S. Livestock and Poultry Products—Market Outlook

		Beginning stocks	Production	Imports	Total supply	Exports	Ending stocks	Consumption Total	Consumption Per capita	Primary market price
		Million lbs.							*Lbs.*	*$/cwt*
Beef	2000	411	26,359	3,015	29,785	2,400	365	27,020	68.6	68-71
	2001	365	25,206	3,050	28,621	2,345	365	25,911	65.3	70-76
Pork	2000	488	18,804	945	20,237	1,200	500	18,537	52.2	44-46
	2001	500	18,880	915	20,295	1,200	500	18,595	51.9	43-47
										¢/lb.
Broilers	2000	796	30,701	4	31,501	4,950	890	25,661	80.0	55-57
	2001	890	32,165	4	33,059	5,000	880	27,179	84.0	53-58
Turkeys	2000	254	5,341	0	5,595	400	250	4,945	17.9	68-71
	2001	250	5,380	1	5,631	410	275	4,945	17.8	65-71
		Million doz.							*No.*	*¢/doz.*
Eggs*	2000	7.6	7,067.0	4.0	7,078.6	160.0	5.0	5,941.2	258.6	60-62
	2001	5.0	7,170.0	5.0	7,180.0	170.0	5.0	5,990.0	258.6	56-60

Based on May 12, 2000 *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

tions to reduce the number of sows farrowing during March-August by 3 percent from actual farrowings a year earlier. Pigs farrowed during this period reach slaughter weight in late 2000 and early 2001.

Hog prices are expected to average in the mid-$40's per cwt in 2001, about the same as this year and up over 30 percent from 1999. Competing meat supplies will continue to be large. In addition, some uncertainty remains about the continuing demand boost from the robust economy. If Federal Reserve actions cool the economy, meat demand will likely slow somewhat.

Retail pork prices are expected to climb 1-2 percent in 2001, following an expected rise of 5-6 percent in 2000. The projected rises follow 2 years of declining prices.

Poultry output is expected to remain strong in 2001, with increases forecast for broilers, turkeys, and eggs. Net returns for processors in all three sectors are relatively attractive in 2000, although prices for soybean meal—a major component of poultry feed—are above year-earlier levels. Returns will likely be dampened in 2001 as poultry prices decline somewhat.

Broiler production is expected to rise about 5 percent in 2001, near the 5-year average. Wholesale broiler prices are expected to decline slightly but average in the mid-50-cent-per-pound range. The export market remains the key to broiler prices. In recent years, robust export growth was dampened by economic problems in Asia and Russia. Economic conditions appear to be improving in those countries, and as broiler exports edge higher, prices will likely hold in the mid-50-cent range.

Turkey production is expected to increase about 1 percent in 2001, with prices expected to average slightly lower. Turkey processor returns were quite high in 1999, as soybean meal prices plummeted. But rising meal prices and slightly lower turkey prices have eroded returns in 2000. AO

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Specialty Crops

Stone Fruit Supplies Likely to Rise in 2000

Favorable spring weather has led to what will likely be a strong crop of California stone fruits (peaches, nectarines, and plums) in 2000. California's stone fruit orchards—which account for most of U.S. stone fruit production—have received above-average rainfall, especially in February, the wettest on record with rainfall more than double the normal amount. Breaks in the rainfall, combined with good winds, allowed the blooms and orchard grounds to dry. Hence, fungicide application was not disrupted and blooms remained undamaged by the wet weather. Warm and sunny spring days during March allowed growers to work orchards with minimal disruption.

Winter 1999/2000 was milder than a year ago. In order for stone fruit trees to achieve dormancy during winter, they must have a sufficient number of chill hours (when the temperature remains below 45 degrees Fahrenheit). Trees that go through a full dormant stage usually produce strong fruit that is less susceptible to pests and diseases, less prone to bruising, and capable of a longer shelf life. According to the California Tree Fruit Agreement—a grower-funded organization that promotes fresh-market stone fruit—chill hours during the 1999/2000 winter totaled 897 compared with 1,331 chill hours the previous year, but still sufficient for the trees to achieve dormancy.

Timing of this season's California stone fruit development is ahead of normal compared with last season's late starts. Early varieties of nectarines, Mayglo in particular, were in full bloom by February 7, followed by Red Beaut plums on February 13. By late February, orchards were in full bloom, indicating a full crop for the year, and by the end of March, stone fruit trees were leafing out. Sunny weather toward the end of April has enabled growers to harvest some early-variety peaches and nectarines.

Favorable spring weather in California will lead to an increase in peach production. USDA forecasts total production of peaches in California (both freestone and cling varieties) to increase by 5 percent to 1.9 billion pounds in 2000. Total peach production was 1.8 billion pounds in 1999 and 1.7 billion in 1998.

Figures from the California Tree Fruit Agreement indicate that packout (number of 25-pound boxes harvested) of California stone fruit will be greater this year than last. Packout of peaches—both yellow- and whiteflesh varieties—is projected to rise by 2 percent over last year. Packouts of nectarines and plums are projected up by 4 percent and 5 percent from 1999.

Peaches account for over 80 percent of combined U.S. production of the three stone fruits. South Carolina and Georgia follow California's 73-percent share of peach production at a far distance, averaging about 6 and 5 percent of the U.S. total over the last 5 years. In 1999, a favorable growing season brought production in the two states to 160 and 110 million pounds, respectively. By the end of April 2000, 82 percent of South Carolina's peach crop and 79 percent of Georgia's peach crop appeared to be in good or excellent condition.

Grower prices for plums and nectarines were down in 1999 following recovery in production from 1998's heavy winter rains and spring hailstorms. Grower prices for peaches remained relatively stable. According to the Bureau of Labor Statistics, 1999 summer retail prices for peaches averaged 2 percent below 1998 but 11 percent above the average of the last 5 years (1994-98). During 2000, prices for fresh-market stone fruit will likely be about average, given increased supplies and good quality from this year's California harvest. AO

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Commodity Spotlight

Garlic: Flavor of the Ages

The famous French chef, X. Marcel Boulestin (1878-1943), is reputed to have said, “It is not really an exaggeration to say that peace and happiness begin, geographically, where garlic is used in cooking.” Garlic has a long and colorful history, with references in the Bible, in ancient Chinese writings, and in literary works by such luminaries as Shakespeare, Dante, and Sir Francis Bacon. Although used primarily today as a food flavoring agent and condiment, garlic has a history as a remedy for a wide variety of conditions and diseases.

Thought to have originated in central Asia around Siberia, garlic was revered by both the ancient Egyptians and the Chinese. In the U.S., garlic is grown for its strong-scented, pungent bulbs, although in some countries, the green tops are used in a manner similar to scallions

Garlic *(Allium sativum)* is a member of the Amaryllis (lily) family and is related to onions, shallots, chives, and leeks. In the U.S., garlic consumption has soared, especially in the 1990’s. Per capita garlic use was a record-high 3.1 pounds in 1999, three times the level of 1989. To satisfy this burgeoning demand, U.S. garlic production occupied more than 64 square miles (41,000 acres) in 1999, up from 25 square miles (16,000 acres) in 1989, and imports rose to more than 20 percent of domestic use in the 1990’s. The number of farms reporting garlic acreage between 1987 and 1997 jumped 150 percent to 1,121. At the farm level, the U.S. garlic crop is valued at about $200 million.

Garlic Production Is Concentrated

Garlic production is concentrated both internationally and domestically. With 13 billion pounds annually, China is the leading producer, accounting for 66 percent of world output. The majority comes from the Shandong Province—a prime agricultural area located southeast of Beijing. South Korea and India are second and third with 5 percent each, and the U.S. ranks fourth with 3 percent of world production.

According to the 1997 Census of Agriculture, California harvests 84 percent of U.S. commercial garlic acreage. Most of the domestic garlic that enters the fresh and dehydrated product markets is grown in California. Only four other states harvest more than 100 acres of garlic—Nevada, Oregon, Washington, and New York. Nevada and Oregon, producing largely seed garlic under contract with California firms, each account for about 7 percent of U.S. acreage, with smaller amounts scattered throughout 30 other states. As the garlic market has expanded, so too has acreage in these three contiguous states. Between 1992 and 1997, garlic area increased 50 percent in California, 295 percent in Nevada, and 153 percent in Oregon.

Three California counties provide the majority of garlic production—Fresno (82 percent of the crop), Kern (11 percent), and Monterey (5 percent). The community of Gilroy in Santa Clara County is billed as garlic capital of the world because a significant volume of California’s fresh-market garlic is shipped from there.

U.S. garlic production doubled over each of the last two decades. No other vegetable, including high flyers like onions, broccoli, and carrots, has exhibited such strong sustained growth. Since the 1950’s, California has been the only state for which USDA’s National Agricultural Statistics Service has estimated garlic production. In 1999, California’s garlic crop jumped 20 percent to a record 660 million pounds, recovering from a 2-percent decline in 1998. Shippers and processors had intended to increase production in 1998, but unusually cool, wet California weather triggered the most severe outbreak of garlic rust disease in many years, cutting yields by 15 percent.

Garlic falls into three broad product segments—fresh-market, dehydrating, and seed stock—with each differentiated by the way the crop is grown, handled, and used. About a fourth of all U.S. garlic is

Elephant garlic, a vegetable that appears to be gaining in popularity, is not true garlic, but a type of leek that is a close relative of garlic and onions. Much larger than true garlic, elephant garlic tends to have a milder flavor, which makes it well-suited for roasting and spreading on crackers and breads. In California, area devoted to elephant garlic is said to be small relative to regular garlic, and USDA combines the acreages in its estimates. Another vegetable, garlic chives (also called ku chai and Chinese chives), also imparts the classic garlic flavor and can be used fresh or in cooking.

Commodity Spotlight

sold as fresh-market produce. The remainder is sold as various dehydrated products or for certified seed. Under average market conditions, there is little overlap among these three markets, although some lower grade fresh-market garlic is occasionally sold to dehydrators. Changes in relative market prices and stock levels can prompt some shifting of sales between the segments, particularly between fresh and processing markets.

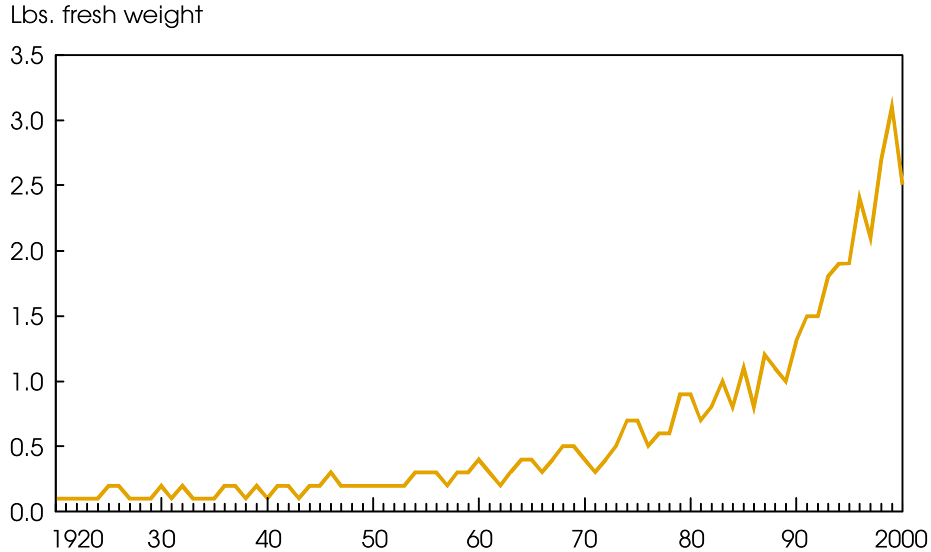
While seed and dehydrating garlic are mechanically harvested, fresh-market garlic is hand-harvested. Fresh product is carefully handled to preserve appearance (including sizing, grading, and storing) and is shipped and sold in the same manner as fresh produce. Fresh garlic can be marketed for up to 3 months from the time of harvest with standard warehouse storage, up to 6 months if kept in cold storage, and up to a year under controlled-atmosphere storage. Fresh garlic is used to manufacture crushed, chopped, peeled, and pureed garlic products.

Depending on variety and location, most garlic in California is planted during the fall (October-November) and harvested in summer (June-August). Virtually all major commercial garlic is grown under contract. The garlic industry is fairly concentrated in both the fresh and dehydration markets. Several large shippers account for the majority of fresh-market volume, while three or four firms process nearly all of the dehydrated product.

Demand Soars

Garlic was introduced into North America sometime in the 1700's, but adoption was slow to catch on. In 1919, when the first estimates were made, per capita garlic use was less than 0.05 pounds, edging up during the 1920's to average about 0.12 pounds. Garlic use rose 25 percent in the 1930's and continued to accelerate to a 2-pound average in the 1990's, a 115-percent leap over the 1980's. One theory for the steady rise in garlic's culinary stature throughout the mid-1900's is that soldiers and world travelers experiencing garlic-enhanced foods in places such as southern Europe, North Africa, and Asia brought a taste for it back to the U.S.

U.S. Per Capita Garlic Consumption Accelerates in 1990's



Includes fresh and processing uses. 2000 forecast.
Economic Research Service, USDA

The trend in garlic use is unique among vegetables in that demand has not only increased steadily over many decades but has grown at an increasing rate. Also, despite impressive growth for vegetables such as broccoli, bell peppers, and carrots, no vegetable has experienced stronger growth in demand over the past 10 years. The strong surge in use during the 1990's likely reflects several factors:

- rising popularity of ethnic foods and restaurants;
- persistent health messages circulating in the press about garlic;
- demand from the health supplements industry; and
- the never-ending quest by consumers for new taste experiences.

These demand factors reflect a broadening view of garlic as a "functional food"—one that imparts both the usual taste and nutritional attributes of food, plus certain perceived health-enhancing benefits (broccoli is another example of such a food). Used primarily in cooking to flavor a wide variety of foods, garlic provides vitamin C, potassium, phosphorous, selenium, several amino acids, and a variety of sulfur compounds, including allicin—a naturally occurring compound whose promising health effects are now being studied at several major universities.

For centuries garlic was valued as a medicinal herb by such cultures as the Chinese and the Egyptians. Adding to the recent surge in U.S. demand for garlic (especially in the 1990's) has been a large and growing body of nutritional and medical research, which points to a wide variety of actual and potential health benefits ascribed to garlic. This research has spawned renewed interest in garlic as a health-enhancing supplement. Although this use is said to be small relative to food use, it has been rising. Various garlic powder pills and garlic oil pills are now commonly available.

During the 1990's, U.S. imports furnished about 23 percent of all garlic used domestically (fresh and processed), up from 17 percent in the 1980's. While the domestic market is primary to U.S. garlic marketers, the export market has also been slowly gaining in importance over the past two decades. During the 1990's, the U.S. exported 12 percent of its total garlic supply—up slightly from the 1980's share and double the share of the 1970's.

Annual garlic prices gained an average 2.7 percent (90 cents per cwt) a year between 1970 and 1996. The season-

To Your Health

For thousands of years, garlic has been recognized for both its culinary qualities and a variety of medicinal properties. Garlic cloves, for example, were reportedly applied to the feet of smallpox victims as “treatment” for the disease. In today’s more science-oriented world, research has shown garlic to have a host of positive health effects, including antiseptic qualities that have been credited to sulfur compounds in the cloves. The Chinese have long used garlic to reduce blood pressure and treat cardiovascular disease—a few of the many medicinal effects under study in the U.S.

Despite a flurry of research on garlic in the 1990’s, much remains to be learned. Scientific and medical research continues worldwide on the health properties of various forms of garlic and garlic supplements. Health benefits ascribed to garlic and garlic supplements include:

- antibiotic/antifungal effects;
- antiseptic properties useful in fighting infections and dysentery-causing amoebas;
- antioxidant effects, protecting cells from free-radical damage and cancer;
- cholesterol reduction, lowering LDL and increasing HDL;
- natural anticoagulant properties, preventing blood clots and strokes; and
- anti-hypertensive effects, reducing blood pressure.

Documented medical research studies supporting the presence of these health benefits are numerous. A 1993 study at Pennsylvania State University found that garlic reduces triglycerides and cholesterol in livers and blood of laboratory rats. The Mayo Clinic reports that garlic is an effective blood thinner, reducing platelet-clotting action. The clinic also states that garlic may reduce hypertension and help fight infection. Further, in a study involving more than 100,000 people, research released this year at the University of North Carolina found that eating one clove of raw or cooked garlic each day may reduce colon and stomach cancer. Allylic sulfides (found in garlic and onions) are considered by many researchers to be among the most potent of all nutrients from plants and may prevent some cancers and coronary disease.

Further research is underway in institutions such as the Mayo Clinic, the Harvard Medical School, and the Cornell University Medical Center (which has a toll-free garlic hotline). In addition, the National Cancer Institute is funding research at Queen’s University in Ontario on garlic’s ability to shield lungs against chemical toxicants and potential carcinogens.

Whole raw garlic in its natural state produces very little odor. The familiar smell of garlic is produced when garlic cloves are chopped, sliced, or crushed. This action releases an enzyme that reacts with another compound to form allicin, the active sulfur-containing molecule that produces the classic garlic aroma.

Although it is uncertain how allicin and other garlic compounds work in the body, it is apparently one of many biologically active compounds that may one day be proven to provide a host of beneficial health effects. Some of these health-enhancing features of garlic may have been “known” for centuries, but only recently has modern science begun addressing the subject, slowly adding credence to long-held folklore.

average price declined about 20 percent in 1998 and 1999 after peaking at $47.90 per cwt in 1997 with reduced production and increasing demand. During the 1990’s, few vegetable prices were able to keep pace with inflation, despite stronger demand and lower price inflation in the economy, with most declining 13 to 24 percent. After adjusting for inflation, constant-dollar garlic prices have increased or remained steady for 8 of the past 11 years and actually increased 18 percent during the 1990’s, in contrast to a 10-percent decline in the 1980’s. This spring, however, nominal wholesale garlic prices were as much as one-third lower than a year earlier, following the record-large 1999 crop.

Segmenting the Garlic Market

On any given day, 18 percent of Americans consume at least one food containing garlic, according to data derived from USDA’s 1994-96 Continuing Survey of Food Intakes by Individuals. This is relatively high compared with such popular foods as french fries (13 percent), catsup (16 percent), and fresh-market tomatoes (28 percent). This level of daily consumption, which may be even higher today than during the survey period, reflects the breadth of foods for which garlic is used as a seasoning—meat dishes, sauces, stews, soups, casseroles, dressings, catsup, pickles, salsas, oils, breads, etc. In some of these foods, of course, garlic is a minor ingredient and may not be readily apparent.

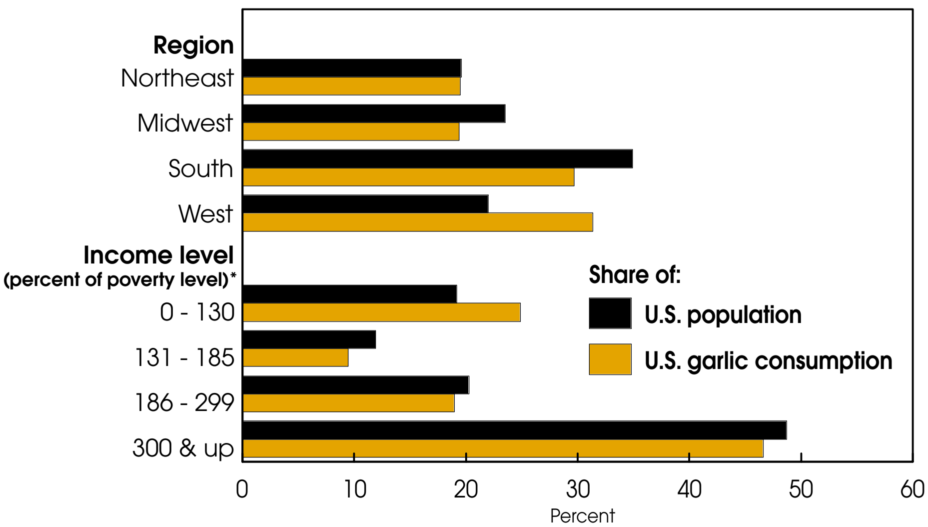
Dehydrated garlic accounts for about three-fourths of the garlic consumed in this country, and is an ingredient in a wide variety of processed foods. Other forms of garlic include whole bulk garlic, garlic in oil, garlic puree, garlic in vinegar, dehydrated garlic powder, garlic salt, garlic bread, chopped garlic, garlic juice and concentrate, garlic dill mustard, garlic dressing, garlic spread, garlic toast, and garlic braids (garlic cloves with tops braided into strips).

The majority of garlic, like most foods, is consumed at home (56 percent). This partly reflects the increasing use of garlic by food manufacturers, rather than simply its use in home cooking. In the away-from-home market, fast food accounts for 19 percent of garlic consumption, with standard “white table cloth” restaurants accounting for another 15 percent. Many ethnic restaurants (e.g., Italian, Chinese, Lebanese, Korean, and Indian) provide consumers a healthy dose of garlic in their cuisine.

Garlic is most favored by consumers in the western states (a 13-state region defined

Commodity Spotlight

Garlic Consumption Share Exceeds Population Share in West And in Lowest Income Group



*130 percent of poverty level = cutoff point for food stamp eligibility. Poverty level varies by household size. For example, the poverty level for a three-person household was $12,158 in 1995.
Source: Derived from USDA's Continuing Survey of Food Intakes by Individuals, 1994-96.

Economic Research Service, USDA

by the Census Bureau). With 22 percent of the nation's population, this region accounts for 31 percent of all garlic consumption. While the Northeast region consumes garlic in proportion to its share of the nation's population (20 percent), the South and Midwest consume less than their share. Some of this may be explained by the fact that Hispanics (of Mexican origin) and Asians, two groups more numerous in the West than the Midwest, consume proportionally more garlic than non-Hispanic white and black consumers. Hispanics, who make up 11 percent of the U.S. population, account for 20 percent of all U.S. garlic consumption.

Low-income Americans appear to use garlic proportionally more than other income groups. Households with income less than 130 percent of the poverty level (the cutoff point for food stamp eligibility) represent 19 percent of the U.S. population but consume 25 percent of all garlic. This is the only defined income class that consumes proportionally more, although individuals in the higher income bracket (above 300 percent of the poverty level) come close, with 49 percent of the population consuming 47 percent of garlic.

Garlic appears to be more popular among men than women, with men consuming 62 percent of all garlic. Men aged 20-59 account for 27 percent of the population but consumed 41 percent of all garlic. Teenaged boys (and girls to a slight extent) also consumed proportionally more garlic (6 percent of the population, 11 percent of garlic consumption).

Garlic has proven itself as a popular food and nutrition item, and is gaining scientific credibility as a significant contributor to good health. Garlic and its benefits are solidly launched, and U.S. production and consumption are likely to continue to grow in the next few years. AO

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June Releases—USDA's Agricultural Statistics Board

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

June

1	*Hops*
2	*Dairy Products Prices (8:30 am)*
	Dairy Products
	Egg Products
	Poultry Slaughter
5	*Minn.-Wis.- Base Month Price - Final 1997-99*
	Crop Progress (4 pm)
6	*Weather - Crop Summary*
7	*Broiler Hatchery*
9	*Crop Production (8:30 am)*
	Dairy Products Prices (8:30 am)
12	*Crop Progress (4 pm)*
13	*Weather - Crop Summary*
	Turkey Hatchery
14	*Broiler Hatchery*
	Potato Stocks
16	*Dairy Products Prices (8:30 am)*
	Cattle on Feed
	Milk Production
19	*Crop Progress (4 pm)*
20	*Weather - Crop Summary*
	Cold Storage
21	*Broiler Hatchery*
22	*Cherry Production (Tent.—8:30 am)*
	Catfish Processing
23	*Dairy Products Prices (8:30 am)*
	Chickens & Eggs
	Hogs & Pigs
	Livestock Slaughter
26	*Peanut Stocks & Processing*
	Crop Progress (4 pm)
27	*Weather - Crop Summary*
28	*Broiler Hatchery*
29	*Agricultural Prices*
30	*Acreage (8:30 am)*
	Dairy Products Prices (8:30 am)
	Grain Stocks (8:30 am)

Food & Marketing

California Certified Organic Farmers

Organic Foods: Niche Marketers Venture into the Mainstream

The organic foods industry has been growing at a remarkable rate during the past several years. Sales of organic commodities in natural foods stores approached $3.3 billion in 1998, compared with $2.08 billion in 1995, according to industry sources. Sales of organic products in conventional supermarkets are also rising. Industry experts expect the current average annual growth rate of 20-24 percent for organic food sales to continue into the next decade.

Such growth continues to transform the organic foods industry. Firms that have been in the industry for many years face pressure to expand, and some struggle to keep up with demand for their products even as they confront competition from new entrants.

Some established firms may welcome industry growth because they expect to benefit from increasing numbers of organic growers, manufacturers, wholesalers, and distributors serving a larger national and international market. They see an expanded market as an opportunity to modify marketing approaches and bring organic products to a broader range of consumers. In contrast, other established organic foods businesses maintain that organic foods should be produced and marketed on a local or regional scale, in part to preserve opportunities for small family farms and ranches in rural areas.

Rapid growth in demand presents the organic industry with a major challenge—to ensure an adequate supply while maintaining product integrity. Firms seek to meet rising demand by developing more efficient ways to bring larger quantities of organic products to the market. At the same time, the industry seeks to combat the potential for fraud—i.e., marketing conventionally grown products as organically grown. Implementation of USDA's proposed national organic program should facilitate this effort.

This article is based on results of research partially funded by USDA's Fund for Rural America. The research project uses survey data, case studies, and industry analysis. The case studies generally include one large national firm and one smaller regional firm for each stage along the marketing chain (although both manufacturers are large national firms). The full report, *Organic Food Markets in Transition,* is published by the Henry A. Wallace Center for Agricultural & Environmental Policy, Winrock International. Copies are available from the authors.

Maintaining Integrity Of Organic Products

A unique aspect of the organic market is that it does not rely solely on economic factors to differentiate its products. Buyers of organic food products, both businesses and consumers, make purchasing decisions by considering not only price and quality, but also the perceived social and environmental benefits that organic production represents. Buyers expect that the organic characteristics for which they pay premium prices will be preserved as the commodity moves along the marketing chain. Ensuring integrity of the product may require 1) certifying to provide credible assurance that the commodity was grown organically, 2) utilizing marketing and manufacturing techniques that preserve the organic identity of the product, and 3) implementing a national standard that defines exactly what "certified organic" means.

From the industry's inception, a key problem has been lack of a universally accepted definition for "organic," making it difficult for buyers to know what they are getting when they pay higher prices for so-called organic foods. In 1973, a group of 50 California farmers was the first to address the issue. They formed the California Certified Organic Farmers (CCOF), which defined standards for organically grown food and created a certification system. The CCOF standards were used as a model for the California Organic Foods Act passed in 1990.

Since formation of the CCOF, there has been a proliferation of attempts to develop organic standards and certification. In the U.S, there are currently 13 states with certification programs and at least 36 private certifiers. Several certifiers assess providers of organic handling services, such as distributors, packers and re-packers, and processors, to ensure that organic food does not become commingled or contaminated during processing. Other countries, such as the European Union, Canada, and Japan, have their own standards for organic foods, and many are different from those in the U.S.

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In the absence of a uniform definition, rising demand combined with a premium price for most organic products provides a powerful incentive to fraudulently label conventionally grown products as organic or to compromise organic production practices. The Organic Farming Research Foundation reports that several firms were recently fined for violating the California Organic Foods Act.

In an effort to resolve these kinds of problems, Congress included the Organic Food Production Act in the 1990 farm legislation. The Act led to the creation of the National Organic Program (NOP) within USDA's Agricultural Marketing Service (AMS) and the National Organic Standards Board (NOSB). NOSB, an advisory board which includes food industry, consumer, and environmental representatives, provides recommendations to the NOP, which is charged with writing regulations to implement the Act. In March 2000, USDA released a proposed regulation that incorporates recommendations of the NOSB and responds to numerous comments from the public that emphasized the need to tighten regulations for practices permitted in organic production (*AO* April 2000). Based on comments received so far, the proposal appears to have moved a national definition of organic production closer to consensus among views of consumers, the organic industry, and USDA.

Links in the Marketing Chain

As the quest for a uniform national standard nears resolution, the organic food industry continues to focus on how to move ever larger quantities of quality products from farm gate to consumer. Maintaining quality at each step along the marketing chain presents challenges for each agent. Although premium prices at the farm gate give farmers a strong incentive to grow a high quality commodity, food products pass through a number of intermediaries as they travel from producer to retailer. Producers who use organic farming methods want to be sure the food they grow will be handled and processed according to standards that allow consumers to buy with confidence, especially since the products usually command a price premium for qualities that are often unobservable. Maintaining quality from grower to retailer assures that all who participate in providing organic foods have an opportunity to realize the profit potential from this market.

Moving the product quickly to the next agent is key to maintaining the value that underlies the organic price differential, particularly for products to be sold as fresh, but also for those destined for processing. Food processors often specify their own organic standards, along with freshness and other required characteristics such as shape and size. Transmitting accurate demand information back through the industry's marketing chain from consumers to retailers, then to wholesalers, manufacturers, and farmers, enables the industry to offer what consumers wish to purchase.

Farmers using organic agricultural methods to produce food commodities face a market that has become significantly larger and more complex. To succeed in this market, farmers must grow the right product and be able to ensure the quality of their output. Some organic farmers market their products through direct sales—e.g., at farmers' markets and onfarm stands, or to local restaurants and grocery stores—but most market through wholesalers. Commercial buyers (manufacturers, distributors, and retailers) often have the best knowledge of what consumers want and what they are willing to pay for organic foods. Farmers are often able to get accurate and timely information about prices and market opportunities by listening carefully to buyers.

Even with access to information about what consumers want, organic farmers often face major challenges in finding markets, negotiating prices, and delivering food commodities while maintaining product integrity. Marketing agreements and strategic alliances among various combinations of farmers and shippers—organic or conventional—are designed to enable participants to draw on each other's inventories and distribution networks, thereby increasing their ability to service a larger market share. For example, in 1999, the country's second-largest conventional lettuce grower (Tanimura and Antle) and the nation's largest organic vegetable shipper (Natural Selection Foods, marketer of the Earthbound Farm brand) became partners in supplying organic lettuce to large, mass-market supermarkets. Strategically allied farmers and shippers gain an advantage by providing a wider range of crops and varieties than each could supply independently.

What Do Consumers Look For in Organic Foods?

Consumers shopping for organic foods look for many of the same qualities that are valued in nonorganic products. Taste, appearance, and freshness top the list, followed by convenience and price, and then certain critical qualities unique to organic foods. In a 1994 survey commissioned by The Food Alliance in Portland, Oregon, 600 consumers—all of whom had indicated an interest in environmental issues—rated possible considerations in their organic food choices. Eight qualities rated as "extremely important" by at least 50 percent of the sample were:

- *absence of* 1) synthetic pesticides, 2) synthetic herbicides, 3) *e-coli* or other harmful bacteria, 4) artificial ingredients or preservatives, and 5) synthetic fertilizers;
- *production facilities* 6) in compliance with their environmental permits, 7) using only earth-sustainable techniques, and 8) using techniques that protect water resources.

In addition, well over half of survey respondents reported they preferred organic foods to be "certified by an independent testing laboratory" and that they were willing to "pay more for an eco-labeled product."

From grower case studies:

Pavich Family Farms is the world's largest grower of certified organic table grapes, as well as a marketer of more than 100 products from a network of other organic farmers. Like conventional produce shippers, Pavich strives to provide year-round supplies of fresh produce by working with certified organic fruit growers in Chile, Costa Rica, El Salvador, and South Africa. Flickerville Mountain Farm and Groundhog Ranch is a small, highly diversified farming operation located in south central Pennsylvania. The operators handle most of the marketing themselves, selling most of their products through farmers' markets and direct sales to restaurants in Washington, DC.

Manufacturers of both conventional and organic foods face problems associated with buying adequate amounts of ingredients at reasonable prices, producing a uniformly consistent product, and securing shelf space in the supermarket. However, manufacturers of organic products have added challenges in dealing with organic ingredients: locating sufficiently large supplies, verifying they are organic, and maintaining organic integrity of the commodities during processing.

Some large organic food manufacturers have recently begun to follow the lead of conventional food processors to overcome the sourcing problem by working closely with farmers to provide guidelines for the kinds of products they require, or by entering into formal contract agreements.

Organic foods have traditionally been manufactured by small businesses that fit into a profitable niche market in a region. Their success, like many other organic food businesses, can be attributed in many cases to buyers ascribing quality, taste, safety, and environmental characteristics to organic products, and consumers' partiality toward local production. However, the market for organic foods was fairly small and very specialized when many of these businesses first opened their doors. That market is much larger now, and as mass-market food businesses enter, many long-time organic foods manufacturers are realizing they must expand and/or merge in order to stay competitive.

Rising demand presents opportunities for traditional organic manufacturers that have been able to increase their scale of operations, although increased market size and competition may erode the market premium that their product once commanded. Survival for these manufacturers depends in large part on whether they can carve out a niche for themselves and maintain market share through quality and price competitiveness.

Until recently, most organic products were sold in "natural foods" markets. As the organic market grows, manufacturers of organic foods are increasingly interested in selling in mass-market venues. Many lack the expertise and experience of their competition (mass-market distributors) when it comes to gauging customer preferences. They have been slow to adopt supply-chain management techniques, which can be invaluable in streamlining and minimizing the costs incurred on the path from assembly line to shopping cart. In fact, many organic foods manufacturers that have been growing swiftly without well-defined management plans have run into severe logistical problems such as matching the flow of inputs to consumer purchasing patterns.

From manufacturer case studies:

Cascadian Farm, the world's largest organic foods company, produces, manufactures, distributes, and markets a wide variety of organic products. The company contracts directly with farmers and helps them to make the transition from conventional to organic farming. Following the lead of most conventional dairy producers, Wisconsin-based Coulee Region Organic Produce Pool (CROPP) Cooperative represents small and midsized farmers from Maine to Oregon to manufacture and sell a line of organic dairy products, as well as meat, poultry, and produce. CROPP's gross revenue topped $30 million in 1999.

Distributors of organic foods sit between producers (for foods sold as fresh) or manufacturers (for processed foods), and retailers in the marketing chain. Distributors warehouse food products from manufacturers and deliver them to retailers. Ten years ago, these distributors were specialized, regional businesses that served small, regional health food stores. Now, changes in the natural foods business environment (including but not limited to organic foods) have made it possible for a few of these distributors to become nationally recognized corporations.

Whether large or small, today's natural foods distributors are operating in an increasingly competitive environment that in some respects is more risky than for distributors in the well-established mass market. Organic foods distributors may have to develop working relationships with unfamiliar mass-market retailers whose buyers are new to the natural foods industry. Mass-market buyers may use a different type of language when ordering and lack familiarity with some of the constraints of organic product marketing—e.g., timing product purchases to accommodate seasonal variation or dealing with occasional shortages. At the same time,

Use of the Term "Natural" in Food Marketing

In the 1970's, the Federal Trade Commission determined that food to be advertised as "natural" could not contain synthetic or artificial ingredients, and could not be more than minimally processed—i.e., processed with a technique that could not be used in a home kitchen. In 1982, USDA's Food Safety and Inspection Service issued a policy for labeling meat and poultry products, stating that the term "natural may be applied only to products that contain no artificial ingredients, coloring ingredients, or chemical preservatives; and the product and its ingredients are not more than minimally processed."

The term "natural" is still used rather loosely in the food industry. For example, "natural" may be used to describe organic foods, meat or poultry meeting USDA's conditions for "natural" labeling, or vitamins and other food supplements. Natural foods markets frequently specialize in selling organic foods, but characteristics of these markets and the products they stock vary greatly. Therefore, a natural foods store cannot be defined as one that sells only organic products.

organic foods distributors continue to do business with traditional organic buyers, quite often small and sometimes uninformed about current industry pricing practices. In addition, new competition emerges as many mass-market distributors begin to carry organic products.

Margins in the natural foods distribution field are shrinking by most accounts. The *Natural Foods Merchandiser*, a trade journal, estimates that margins for distributors of natural products (the difference between acquisition cost and selling price) were 19-21 percent in 1995, down from 33 percent in previous years, although still higher than the 12 percent or less realized by their mass-market counterparts. As competition increases, natural foods distributors may respond by adding new products, carrying brand-name commodities, or simply becoming larger.

From distributor case studies:

A large national publicly held organic distributor, United Natural Foods, indicates the company uses many techniques employed by mass-market distributors such as offering a range of products (e.g., food, general merchandise, and personal care products), streamlining administrative functions, consolidating systems applications between physical locations and between regions, and reducing geographic overlap of the regions. Rootabaga Enterprises, a regional Washington State distributor, specializes in distributing transitional (moving toward organic production) and organic apples, pears, fruit, vegetables, jams, jellies, and apple juices, and emphasizing customer service and personal relationships in business dealings.

Retailers in the organic and natural foods industry behave much like their mass-market counterparts by working to choose the optimal product mix and price structure. To meet these goals, retailers attempt to provide customers with a wide variety of high-quality foods. Traditional purveyors of natural products have functioned in this fashion since the inception of the organic movement. However, as consumer demand for organic products increases, a growing number of mass-market retailers has become interested in selling organic foods. Organic foods are usually clustered together in "natural" food sections, but they may be integrated with nonorganic foods on supermarket shelves.

All retailers of organic foods want consistent supplies of products, and want assurances that the foods they sell as organic will generally meet purchasers' expectations. Consequently, retailers work to establish long-term relationships with wholesalers, who keep the retailers' needs in mind when purchasing commodities. More recently, however, a significant number of mass-market retailers have begun purchasing directly from organic growers or manufacturers. Most of these retailers have their own warehouses and distribution centers.

From retailer case studies:

Marketing strategies used by Whole Foods, the nation's largest natural foods supermarket chain (gross sales $8.4 billion in 1997), are similar to those used by mass-market stores, and include in-store advertising, cooking demonstrations, food samples, private labels, and handling much of its own distribution. My Organic Market is a regional, relatively small natural foods retailer (sales over $100,000 per week in 1998) in the suburbs of Washington, DC, that has focused primarily on providing personally selected, high-quality organic produce and personalized customer service, in addition to product demonstrations and samples.

Looking Ahead

Trends in the organic foods industry indicate the organic market is growing and that the market structure—from farmer to retailer—is shifting as it adjusts to change. However, definitive statistics on market changes are currently unavailable. USDA has measured some segments of organic production (e.g., acreage devoted to organic production and livestock produced organically), although for most commodities the market appears too small to warrant separate farm-to-retail tracking. Several private firms track the organic foods industry, but the data are not comprehensive and not readily available.

Despite shortcomings in the data, it is possible to point to some next steps for the growing organic foods market. Traditional small local or regional firms that have been in the organic foods industry for decades will increasingly share the market with large, corporate firms that are just beginning to enter. Producers and manufacturers will likely expand product lines. A greater variety of organic commodities will be sold in a widening array of retail outlets as the organic industry remains specialized but becomes more mainstream.

Participants would benefit from a national organic regulation, and from using procedures to maintain the integrity of their products until they reach the consumer. Purchasers would then be able to rely on uniform and consistent national standards for defining the term "organic." USDA's proposed national organic standards are expected to be finalized this year. Operations that grow or process organic foods would be certified by USDA-accredited certifying agents.

If the industry addresses the challenges of adjustment to an expanding market in a timely fashion, and participants have the benefit of detailed information to guide decisionmaking, the future of the organic foods industry looks bright. AO

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Upcoming Reports—USDA's Economic Research Service

The following reports are issued electronically on dates and at times indicated.

June

2 *Outlook for U.S. Agricultural Trade (3 pm)**
9 *World Agricultural Supply & Demand (8:30 am)*
12 *Cotton & Wool Outlook (4 pm)***
*Oil Crops Outlook (4 pm)***
*Rice Outlook (4 pm)***
13 *Feed Outlook (9 am)***
*Wheat Outlook (9 am)***
23 *U.S. Agricultural Trade Update (3 pm)*
28 *Livestock, Dairy & Poultry (4 pm)***

* Summary released 3 pm
** Available electronically only

Resources & Environment

USDA photo by Tim McCabe

Environmental Payments To Farmers: Issues of Program Design

Interest is growing in broadening the array of government programs that would help to improve the environmental performance of agriculture and at the same time provide some income support to agricultural producers. Associated with agricultural production are beneficial environmental impacts—e.g., rural landscape amenities, habitat for plants and wildlife, and cleaner air from emissions-absorbing land sinks—as well as adverse impacts—e.g., soil erosion, runoff from nutrients and pesticides, and loss of wetlands and other natural habitats. In a competitive economy, agricultural producers have few, if any, financial incentives to provide *environmental services*—i.e., maintain beneficial impacts or mitigate adverse environmental impacts—without government involvement. Government "agri-environmental" payments programs pay producers to provide environmental services.

Existing agri-environmental payments programs include the Conservation Reserve Program (CRP), the Wetlands Reserve Program (WRP), and the Environmental Quality Incentives Program (EQIP). Efforts undertaken under these programs have significantly reduced erosion of farmland, restored over 900,000 acres of wetland previously converted to crop production, and generally improved wildlife habitat on agricultural land. Nevertheless, agriculture continues to confront environmental problems, particularly water pollution from runoff that carries nitrogen and phosphorous from fertilizer and animal waste. Government efforts to help reach environmental goals as well as to supplement farm income could include a program of payments to farmers who are "certified" as environmentally sound or could resemble a recently proposed "conservation security program" to provide payments to farmers based on their adoption of designated conservation practices.

This article explores some common but complex features of agri-environmental relationships that will affect the design of agri-environmental payments programs. While not critiquing current or proposed policies, the discussion highlights some program design features necessary for an agri-environmental payments program that is environmentally cost-effective.

Agri-Environmental Problems Are Complex

Many of the ways that agriculture affects environmental quality appear quite obvious. For example, farmers may use nutrient management practices to help prevent water pollution, which in turn enhances opportunities for water-based recreation. However, relationships among management practices on specific farms, effects on environmental services, and benefits derived from these services are often complex and not completely understood. The interactions, along with a number of characteristics common to many agri-environmental problems, complicate the design of any potential agri-environmental payments program. These characteristics include the following:

Multiple contributors to problems. A large share of agri-environmental problems are the result of the accumulation of small effects from a large number of farms. Under most circumstances, reducing sediment flows from a single farm or restoring a single area as wetland has no noticeable impact on water quality or on populations of wetland-dependent wildlife. However, the collective impact of many actors who reduce sediment flows or restore wetlands may result in significant improvements in water quality or wildlife populations.

Difficulty in observing and/or measuring impacts. A particular contribution to agri-environmental impacts is often difficult to observe and measure, and the more numerous the contributors to the problem, the more difficult monitoring becomes. For example, erosion and nutrient runoff do not originate at any fixed point, unlike emissions from industrial sources of pollution. Instead, these so-called "nonpoint" emissions occur diffusely over broad land areas, and sediment and nutrients leave multiple fields in many places, making accurate monitoring too costly under current technologies.

Even where certain positive environmental outcomes might be easy to observe, the full flow of environmental services often cannot be directly measured. For example, it may be easy to observe the creation of suitable habitat for migrating waterfowl, measure the size of the area, and identify improvements in overall habitat quality. However, it may be difficult to quantify the impact of this new and improved habitat on bird populations.

Heterogeneity in underlying conditions. Agriculture is extremely diverse. Crops and production management practices vary widely among regions. Management skills, preferences, and attitudes regarding environmental protection, as well as the costs of protection, vary widely among agricultural producers. And environmental impacts of agricultural production depend on the mix of fixed, site-specific characteristics such as climate, soil type, topography, and location in relation to affected resources (e.g., rivers and lakes). This diversity in production conditions implies that one-size-fits-all agri-environmental policies are unlikely to be environmentally cost-effective nationwide. A specific conservation practice may be a good fit in one farming operation and provide significant environmental services, but in another setting may be either inappropriate or ineffective.

Unpredictability of natural events. Many agri-environmental problems are subject to significant year-to-year variation in weather conditions as well as variation across farms and regions. For example, erosion and polluted runoff (including transport to water or other resources) can vary greatly due to weather-related events and other environmental conditions outside producers' control. Encouraging practices that reduce the *average* level of erosion or polluted runoff may not prevent excessive erosion or runoff during particularly large or intense weather "events," although such events may have the greatest overall impact on the environment. If payments are made contingent on actual positive environmental impacts (to the extent that these can be measured), producers could see fluctuations in their payments due to unpredictable factors outside their control.

Zeroing in on Cost-Effectiveness

A cost-effective agri-environmental payments program aims to achieve the greatest possible environmental benefit for the level of resources committed to the program. Such a program would:

- assign greater priority to providing agri-environmental services that are more highly valued and/or that can be provided at lower cost;
- target or direct program payments to producers and activities to reflect these priorities;
- incorporate sufficient flexibility to allow producers, when possible, to select the lowest cost method of producing environmental services.; and
- consider the feasibility and cost of ensuring that promised activities to improve environmental performance are effectively implemented.

Net benefits stemming from an agri-environmental payments program will be larger if higher priority is assigned to agri-environmental services that are more valued and/or less costly. Priorities could be assigned taking into consideration a spread of agri-environmental issues and goals (e.g., cutting nutrient loads to a coastal zone vs. enhancing wildlife habitat) across various regions of the country (e.g., Northern Crescent vs. the Heartland). Priorities could also take into consideration whether providing environmental services adds value to agricultural activities or mitigates damages. Unfortunately, a measure of benefits from "non-market" items (e.g., enhanced recreation) is necessary for prioritization but often difficult to value.

Even with limited information on the value of benefits, it may still be possible to prioritize environmental services. The Environmental Benefits Index (EBI)—which USDA uses to determine acreage to accept in the CRP—is a good example of environmental targeting that makes the most of available information (*AO* June-July 1999). USDA estimates an EBI environmental score for proposed CRP contracts based on weighted values for environmental services likely to be derived, and ranks contracts by the EBI score (sum of the environmental score and the proposed cost, i.e., the landowner's bid).

Although the EBI is a less-than-comprehensive benefit measure—it is limited to six environmental factors plus rental cost—a study by USDA's Economic Research Service (ERS) indicates that use of the EBI has doubled CRP-related benefits from freshwater-based recreation and wildlife viewing. The study also shows that the EBI can be improved. For example, ERS research suggests that wildlife recreation benefits are generally greater than benefits from enhanced freshwater-based recreation, but they receive equal weight in the current EBI. Also, the EBI could more fully reflect the likelihood of higher value of benefits when environmental improvements are located near populated areas, where more people have relatively easy access to recreational amenities.

Once priorities for environmental services have been established, the focus turns to administration of payments to farmers providing the services. Program requirements will generally be realistic only if payments are based on farming practices or environmental outcomes that are controllable by the producer and are observable. Environmental cost-effectiveness is maximized when 1) subsidized actions are linked as directly as possible to provision of high-priority environmental services, and 2) producers who take these actions are given greater incentive to participate or higher priority in the programs' selection process. In other words, if payments are targeted, program goals may be achieved with relatively lower outlays.

Linking changes in specific practices on specific farms to the provision of environmental services is crucial to designing an environmentally cost-effective agri-environmental payments program. These links can sometimes be described using *physi-*

In upcoming issues of *Agricultural Outlook*

* Adopting Biotech Crops: Impacts on Pesticide Use and Environmental Quality
* Environmental Regulations and Location of Animal Production

cal process models that estimate the effects of management practice changes on soil erosion or nutrient runoff. Other models can sometimes be used to trace the flow of sediment, nutrients, or pesticides downstream or to ground water.

A major barrier to broad use of physical process models to link practices to performance is the level of information and technical assistance necessary for implementation. Some physical process models, such as the Universal Soil Loss Equation (USLE) and Wind Erosion Equation (WEE) are comparatively simple, requiring a total of six variables (e.g., soil characteristics, topography, climate, and farming practices) to estimate average annual erosion. In contrast, physical process models of nutrient and pesticide runoff are far more complex, often requiring dozens of variables and substantial training for successful use.

In prioritizing environmental services and targeting agricultural practices, policymakers could also consider patterns in the occurrence of natural events. For example, since nutrient loads (quantity of waterborne nutrients such as nitrogen and phosphorus) to a body of water often vary with weather conditions, degree of variability instead of average load may be key to assessing recreation potential of a water resource and to targeting desired practices for prevention of excess loadings. Such a situation might occur if infrequent but severe flooding increased estuarine nutrient loadings and caused massive fish kills, which could ruin recreation and commercial fishing for several seasons. In such circumstances, assigning greater priority to practices that tend to mitigate runoff due to large storm events may be more environmentally cost-effective than encouraging practices that reduce average loads over a period of years.

Another element for identifying the size of producer actions or practices eligible for an agri-environmental payment is determination of an appropriate “baseline.” Baselines represent the level of practice adoption, input use, or other indicators of environmental performance from which changes can be measured for the purpose of calculating payments. Baselines may be farm-specific or may be specific only to geographic areas and/or specific soil types, because information on farm-specific crop mixes, management and production practices, and input use is often limited. For example, a soil erosion baseline could be defined by the average annual erosion rate for a production system involving a predominant crop rotation and conventional tillage practices. If producers adopt or have previously adopted a less erosive crop rotation or a reduced tillage practice, they could receive payments proportional to the erosion reduction achieved (as measured by the USLE).

Establishing appropriate baseline levels may help avoid unintended negative consequences. In the erosion example, if baselines are set too high, an agri-environmental payments program may serve to maintain or even to expand production on marginal farmland to take advantage of agri-environmental payments, perhaps rewarding inefficiency and limiting the program’s environmental effectiveness. Limiting eligibility to land that has previously been in production may be an effective restriction, and enforcing swampbuster and sodbuster regulations—which deny government program benefits to farmers who convert land designated as wetlands to crop production, or who fail to implement approved soil conservation systems on highly erodible land—may provide a strong disincentive to convert environmentally sensitive land to crop production.

Once policymakers have determined standards for farms that should be eligible for payments and have delineated the associated program requirements, they must decide the size of the payments. Producers will participate only if payments cover the full cost of program participation, or if the program generates some private benefit beyond program payments (e.g., if controlling soil erosion also enhances soil productivity). Environmental cost-effectiveness may be increased by providing larger payments to producers and actions most directly associated with environmental priorities of the program, so long as payments are commensurate with ensuing benefits. Larger payments could serve as an inducement to farmers whose actions can produce greater environmental services, particularly those who can produce those services at a relatively low cost.

A second way to prioritize expenditure of program funds is to solicit bids from producers for their application of management practices. In the CRP, for example, producer bids for rental payments are factored in with EBI environmental scores to determine which contracts will be accepted. Producers who exhibit high environmental scores relative to costs can proffer bids that are more likely to be accepted, highlighting the complementarity of potential environmental services and cost of producing those services.

Suppose, for example, that reducing nutrient loads to coastal estuaries is a priority. If actions taken to reduce nutrient loads to coastal estuaries are twice as effective on farm A as on farm B, farm A would be eligible for a larger payment because its potential contribution to reducing nutrient loads is larger. However, the environmental cost-effectiveness of subsidizing a specific action taken by a given producer also depends on the cost of taking the action. Using the same example, if the cost of actions to reduce nutrient loads are much lower on farm B than on farm A, farm B may actually be able to reduce estuarine nutrient loadings more cost-effectively.

Customized Plans For Common Goals

Once the link is established between environmental services, farms, and management practices, there is often more than one farm and resource management strategy a producer could use to achieve a conservation or environmental objective. A flexible, environmentally cost-effective agri-environmental payments program would give producers an opportunity to design conservation plans that minimize their cost of meeting environmental objectives.

For example, EQIP—which provides technical and financial assistance for improved irrigation, cropping and grazing systems, wildlife habitat, sediment control, and manure, nutrient, and pest management—is a flexible program that allows potential participants a great deal of latitude in selecting practices tailored to their own farming operation. Producers who enter into 5- to 10-year contracts implementing EQIP conservation plans receive technical assistance, education, cost-sharing, and incentive payments. In contrast, the CRP requires a single fixed action (retire land for a period of 10 years) in return for annual rental payments, and some producers may be reluctant to relinquish control of land use for such a long period of time. However, since most agricultural activity ceases on land enrolled in the CRP, the program is relatively easy to enforce and therefore likely to produce expected environmental improvements.

Another relatively flexible agri-environmental payments mechanism would be a per-unit subsidy for increases in environmental services or actions likely to improve environmental services. For example, a fixed payment could be made for each pound of reduced fertilizer inputs. Producers would be free to vary fertilizer use, weighing tradeoffs between the amount of the agri-environmental payment and the net cost of changing fertilizer use, which will fluctuate with economic conditions.

When links between agricultural practices and environmental services are strong, conservation plans can be designed with performance objectives in mind, allowing producers to devise individualized farm plans to meet conservation and environmental objectives. For example, USDA's Conservation Compliance Program requires producers who farm highly erodible land to implement soil conservation plans in order to remain eligible for farm program payments. USDA determines whether proposed plans meet erosion reduction requirements by using the Universal Soil Loss Equation and/or the Wind Erosion Equation.

A 1997 USDA review of conservation compliance plans found 1,674 different sets of practices in approved conservation plans. Plans involving conservation cropping sequences, conservation tillage, crop residue use, or some combination of these three practices were applied on 54 percent of land subject to Conservation Compliance Program regulations. Nonetheless, individual plans vary widely among regions, based on cropping patterns, production systems, climate, and soils, demonstrating that producers do take advantage of flexibility in national programs.

Effects Beyond the Environment

Agri-environmental payments is a policy instrument that could be used more extensively to reduce environmental damages and increase environmental benefits associated with agricultural production. But an agri-environmental payments program may also affect commodity markets and farm income. Farm income could be affected through 1) payment size and distribution; 2) changes in direct farm costs resulting from changes in production practices and enterprise mix, cropping patterns, or crop yields; and 3) swings in commodity market prices resulting from shifts in production. An extensive agri-environmental payments program could also affect commodity trade flows (*AO* May 2000). If agri-environmental payments from programs designed to bolster farm income and produce environmental amenities are large, they could become a foreign trade issue because of World Trade Organization rules on trade-distorting domestic policies. Research is under way at ERS that will help to determine whether and how a more extensive program of agri-environmental payments could affect commodity markets and trade.

In a sense, an agri-environmental payments program provides a market for environmental services that are produced along with agricultural commodities. Those who can produce environmental services at a low cost can reap the benefits of the "agri-environmental" market by participating in the program. Nonparticipating producers may also feel some effects from agri-environmental payments programs if shifts from production of commodities to production of environmental services cause movement in commodity prices. AO

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July Releases—USDA's Agricultural Statistics Board

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

July

3 *Dairy Products*
Crop Progress (4 pm)
5 *Weather - Crop Summary*
6 *Broiler Hatchery*
Egg Products
7 *Dairy Products Prices (8:30 am)*
Agricultural Cash Rents
Noncitrus Fruits & Nuts - Ann.
Poultry Slaughter
10 *Vegetables*
Crop Progress (4 pm)
11 *Weather - Crop Summary*
12 *Crop Production (8:30 am)*
Broiler Hatchery
13 *Turkey Hatchery*
14 *Dairy Products Prices (8:30 am)*
17 *Milk Production*
Crop Progress (4 pm)
18 *Weather - Crop Summary*
19 *Agricultural Chemical Usage - Fruits*
Broiler Hatchery
20 *Farm Production Expenditures*
Mink
21 *Dairy Products Prices (8:30 am)*
Cattle
Cattle on Feed
Cold Storage
Livestock Slaughter
Sheep
24 *Agricultural Prices - Ann.*
Chickens & Eggs
Crop Progress (4 pm)
25 *Weather - Crop Summary*
Catfish Processing
26 *Broiler Hatchery*
28 *Dairy Products Prices (8:30 am)*
Peanut Stocks & Processing
31 *Agricultural Prices*
Catfish Production
Crop Progress (4 pm)

Farm & Rural Communities

Jack Harrison

Farming's Role in the Rural Economy

The U.S. rural economy remains strong, despite low commodity prices that have besieged the farm sector in recent years. In most rural communities, problems in the farm sector have not spilled over to cause a general rural downturn. In fact, the unemployment rate in nonmetropolitan counties decreased as crop prices were falling, dropping to 4.25 percent in 1999. In general, the strength of the overall economy has sustained the rural economy.

While many view "rural" and "agriculture" as virtually synonymous, the ability of the rural economy to shake off severe problems in the agricultural sector is a reminder that agriculture is no longer the primary economic engine of rural America. Growth in other rural industries combined with structural changes in the farm sector have reduced farming's relative importance and altered traditional perceptions of farms.

This article, based on a forthcoming Economic Research Service (ERS) report, examines the changing role of agriculture in the rural economy and highlights two changes. First, the nonagricultural economy in rural America has grown steadily, outpacing growth in agriculture, so that agriculture's relative importance as a source of jobs and income has declined. Second, the growing service orientation of the U.S. economy suggests that the key to survival and growth for rural communities is to develop and attract service-sector businesses.

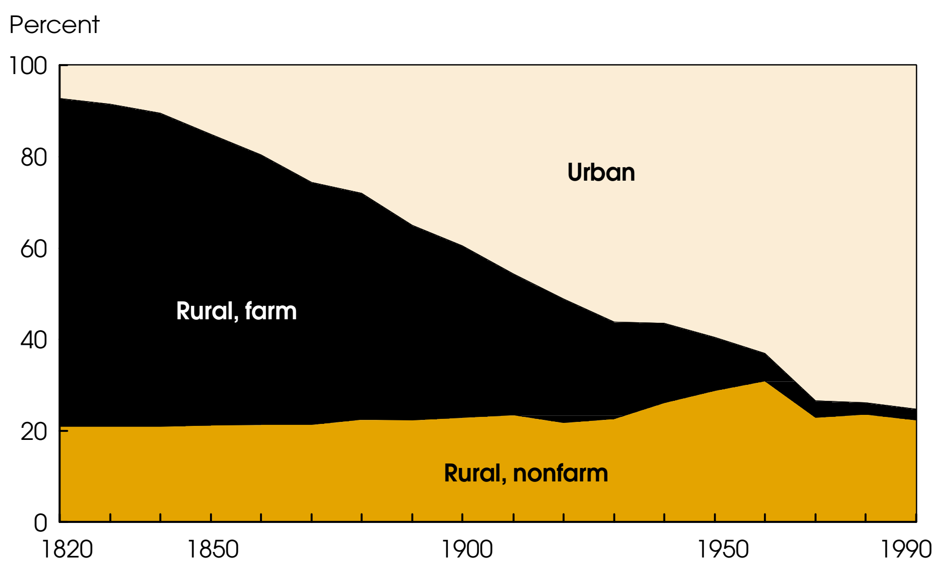
Agriculture's Share of the Economy Shrinks

Over the past two centuries, the U.S. has evolved from a rural society, with most of the population engaged in farming, to a predominantly urban society. The urban share of U.S. population, less than 10 percent in 1820, rose to about 75 percent in 1990, while the farm share of population fell from about 70 to 2 percent over the same period. The loss in farm population pulled down the overall share of the rural (nonmetropolitan) population until the late 1960's, when rural nonfarm job growth exceeded the decline in farm employment.

While growth in population and income created new demand for food and fiber as the nation expanded, agriculture's growth was limited because, as incomes rise, demand for food advances more slowly than demand for other goods and services. Consequently, other sectors expanded much more rapidly than agriculture. Furthermore, farm productivity (output per unit of input) outpaced the demand for food and fiber, releasing labor and capital to be put to work in other industries.

Thus, the farm population did not have to grow as rapidly as the population it was

Rural Nonfarm Share of U.S. Population Has Remained Fairly Stable



Source: Census of Population data compiled by Woods and Poole Economics.
Economic Research Service, USDA

Farm & Rural Communities

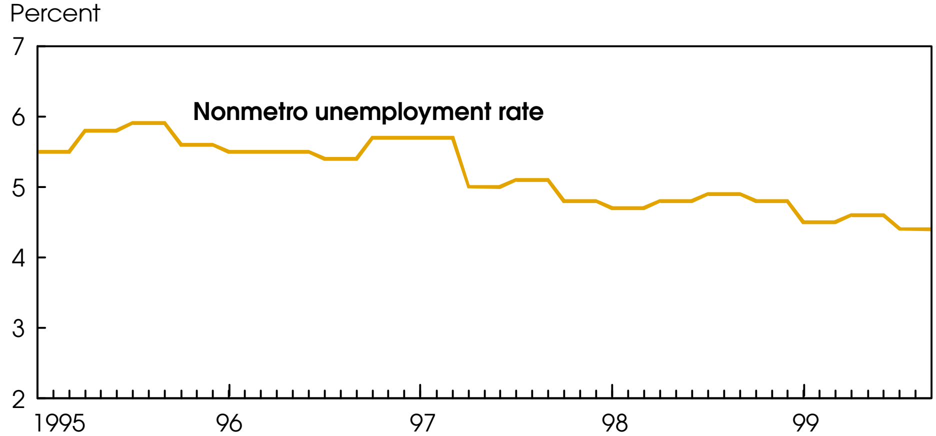
supplying with food. While growth in farm productivity accelerated in the 20th century, the farm population actually declined in absolute numbers after the 1930's. ERS research has found that farm productivity rose an average of 1.9 percent annually from 1948 to 1996 (*AO* May 1998). Productivity of all farm inputs rose, but increase in labor productivity was particularly rapid as farms mechanized and more efficient practices were adopted. While farm labor use fell over 70 percent between 1948 and 1996, the farm sector's output more than doubled, making it one of the fastest-growing sectors.

Jobs in farming are expected to continue declining during the coming decade. The Bureau of Labor Statistics (BLS) projects a 13-percent decline in farmers and farm managers between 1998 and 2008, the largest projected decline of any occupational category in the U.S. economy. Employment of hired farm workers is projected to decline 6.6 percent. By comparison, nonfarm employment is projected to grow 14 percent between 1998 and 2008. Agricultural output is expected to grow, but at a slower rate than that of most other industries.

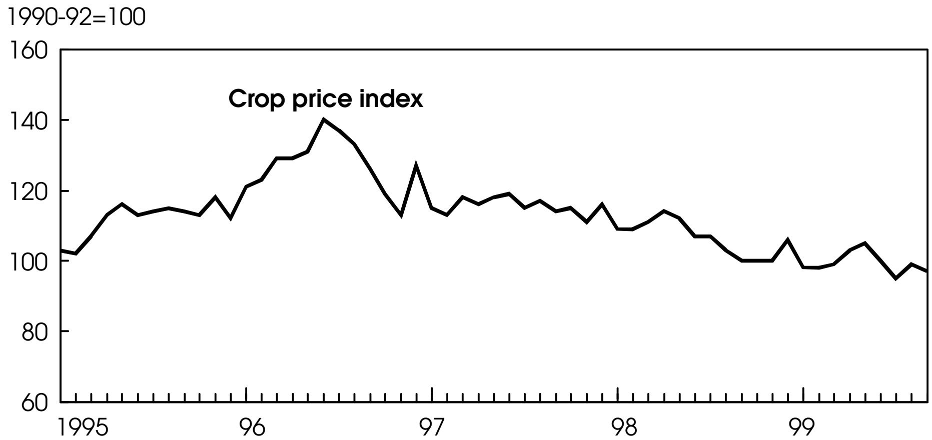
Increased farm productivity brings benefits to the economy as a whole. Consumers benefit from high farm productivity, which ensures an abundant supply of food at low prices. Other sectors (and ultimately consumers) benefit from farming's efficient use of resources, which frees up labor and capital for other industries (initially for manufacturing in the 1940's to 1960's and more recently for service industries). Agricultural exports also make a positive contribution to the balance of trade. While agriculture's *share* of the economy and the *number of people* that depend on it for income and jobs is shrinking, both nationally and in rural areas, its role in the economy is important.

Movement of farm labor into other sectors is reflected in the declining farm population. What is less well known is that the rural *nonfarm* share of the nation's population has remained remarkably stable at around 20 percent since the early 1800's. While farming is perhaps the most visible rural activity, it is clearly not the major economic activity in rural America. There is enough activity in rural America to employ and provide economic support for over one-fifth of the nation's population, but farming supports only about 2-3 percent.

Rural Unemployment Rate Unaffected by Fall in Crop Prices



Source: *Current Population Survey*, Bureau of Labor Statistics, U.S. Department of Labor.



Source: National Agricultural Statistics Service, USDA.

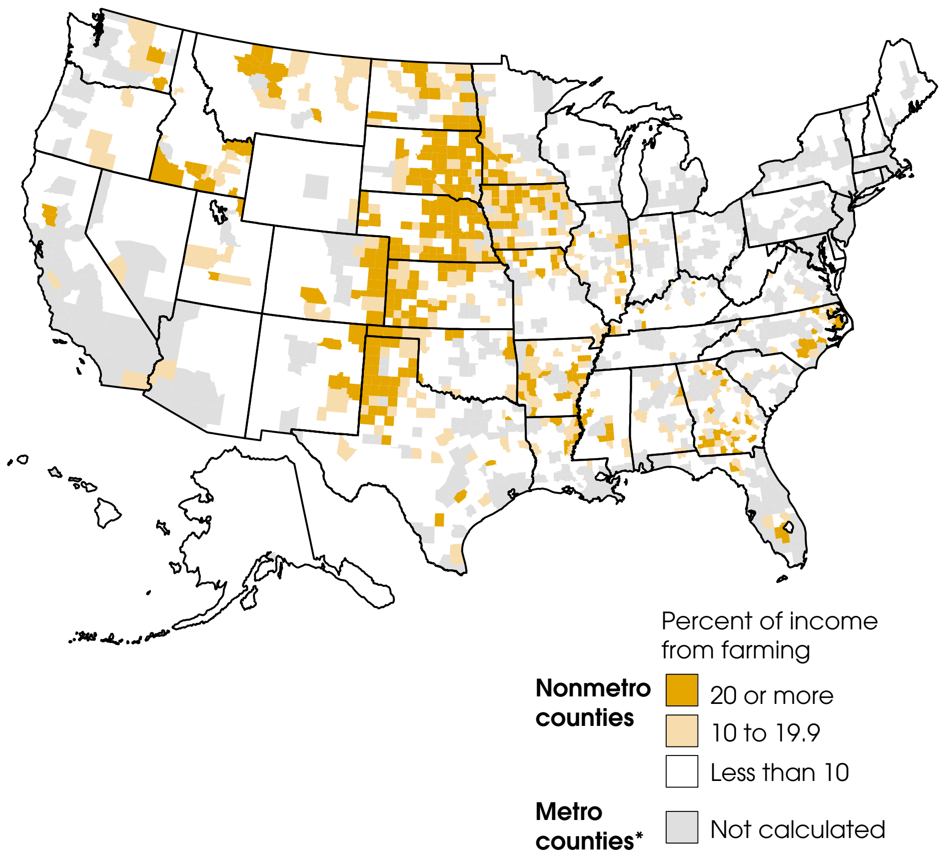
Economic Research Service, USDA

In other words, rural areas have created enough new economic opportunities to maintain a constant rural nonfarm share of population. Until the late 1960's, rural nonfarm jobs were not created fast enough to absorb most of the labor released from the farm sector, and consequently the overall rural share of population fell. But the rural share of population stabilized during the last part of the 20th century, as the loss of farm population slowed and rural areas continued to create new nonfarm jobs. Today, manufacturing and services, rather than farming, characterize the economic landscape of rural America.

Fewer Communities Rely on Farming

U.S. economic expansion during the 1990's appears to have reduced the number of farming-dependent counties (those that derive at least 20 percent of their income from farming) by adding jobs in manufacturing and services. But farming is still a primary source of income and jobs in some areas, notably the sparsely populated areas of the nation's heartland. Counties that remained in the farming-dependent category shared in the nation's economic growth during the 1990's, although to a lesser extent than other rural counties.

Many Local Areas in Nation's Midsection Rely on Farming



*Metro counties are located in Metropolitan Statistical Areas. An MSA is a contiguous grouping of counties and contains a city of at least 50,000 and a total area population of at least 100,000.
Source: ERS analysis of data from Bureau of Economic Analysis, Department of Commerce.

Economic Research Service, USDA

Of course, agriculture's economic influence extends well beyond the farm gate. To gauge this, ERS produces two measures of employment in the more broadly defined agriculture sector that includes businesses that manufacture, transport, and market food and fiber products: Food and Fiber System and Farm and Farm-Related Employment. Both data series tell a similar story about agricultural jobs over the last two decades. While jobs in farming have declined steadily, jobs in food retail and wholesale sectors have grown.

But food retail and wholesale activities tend to locate close to consumers, so that much of the growth in agriculture-related employment has occurred in more urbanized areas. Sparsely populated states, including those heavily represented in the farming-dependent category, have gained relatively few retail and wholesale jobs to offset their loss of farm jobs.

Faced with continuous loss of farm jobs, many rural areas have pursued value-added development strategies that encourage agriculture-related businesses (e.g., food processing and marketing) to choose rural locations. This strategy may be successful for some communities, but food processing does not appear to be a universal engine for rural job growth. Many types of food processors do not use raw farm commodities, and they choose urban locations to gain access to suppliers of other inputs and distribution networks.

Participation in the Service Economy a Key

Farming, food processing, and other manufacturing industries face competitive pressures to cut unit production costs by raising worker productivity (output per worker). This means employment will be stagnant or declining in all but the most rapidly growing industries. Thus, even though the BLS projects annual growth of 1.2 percent in food manufacturing output between 1998 and 2008, it projects only 0.2 percent growth in food manufacturing employment. BLS projects a 1-percent decline in overall employment in agriculture (including ag-related industries such as input suppliers and food retailing), with the decline in farm jobs pulling down the total. Projected output growth exceeds projected job growth for nearly all goods-producing industries.

The growing service orientation of the U.S. economy suggests that the key to survival and growth for rural communities is to develop and attract service-sector businesses. During the coming decade, jobs are projected to grow fastest in service-producing industries: transportation, communications, public utilities; wholesale and retail trade; finance, insurance, and real estate; and personal, business, and health services. Between 1991 and 1996, service-producing sectors created about 70 percent of new nonmetro jobs, and BLS expects these industries to account for nearly all of U.S. job growth between 1998 and 2008. Nearly all growth in agriculture-related employment from 1975 to 1996 was in service-oriented food retail and wholesale activities.

Rural communities that can attract service jobs will be the best positioned to grow. Many rural areas are participating in the service economy, especially those enjoying the spillover effects of prosperity in urban communities and amenity-rich areas that attract retirees, telecommuters, vacationers, and others. However, for many rural communities, prospects for participating in the service economy seem less promising because service and trade industries have a greater tendency than other activities to concentrate in cities where there is access to large numbers of consumers, transportation nodes, related industries, and business service firms.

Farm & Rural Communities

The increasing service orientation of the economy holds lessons for planners and policymakers. For example, contracting and supply-chain arrangements in agriculture have become more prevalent in recent years, partly because consumers are demanding food products with specific attributes.

Businesses and communities have taken advantage of these emerging consumer preferences to create brands associated with their particular region, production practice, or some other attribute that can command a premium price. This can give local farming industries a competitive edge in the marketplace and can create opportunities to “add value” to their products by processing and packaging distinctive products for niche markets, selling directly to consumers, or attracting people to farm or vineyard tours or festivals. In recent years, many farms have broadened the scope of their business to offer entertainment and recreation in the form of agricultural tourism, theme-oriented farm visits, fee-based fishing and hunting access, and other services. Advances in information technology also make it possible for businesses in remote areas to communicate with consumers and sell directly to them.

In today’s service-oriented economy, it is this type of consumer-savvy search for new market niches that is likely to lead to development. This will be a particularly challenging task for rural communities that are highly dependent on agriculture and other goods-producing industries. AO

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Special Article

Consolidation in Meatpacking: Causes & Concerns

The U.S. meatpacking industry consolidated rapidly in the last two decades, as today's leading firms built very large plants and many independent packers disappeared. Today, four firms handle nearly 80 percent of all steer and heifer slaughter; just two decades ago, concentration was less than half as high. Concentration in hog slaughter has also increased, although not to the same extent, and today four firms handle over half of all slaughter.

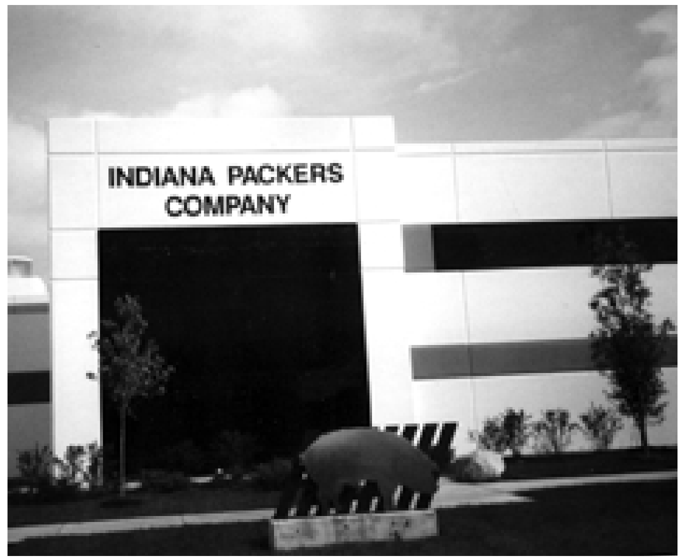
Meatpacking concentration raises important policy issues. If larger packers realize lower costs, then concentration, by reducing industry costs, can lead to improved prices for consumers and livestock producers. However, because they face fewer competitors, meatpackers could reduce prices paid to livestock producers, and they may be able to raise meat prices charged to wholesalers and retailers.

Based on a recent report by USDA's Economic Research Service (ERS), this article assesses the factors behind concentration by analyzing packing plant costs and examining several developments that have reduced slaughter costs and promoted industry consolidation.

The Path to Concentration & Consolidation

Recent concentration trends in meatpacking can be defined in terms of livestock procurement—the share of steers and heifers purchased by the four largest steer and heifer packers, and the share of slaughter hogs purchased by the four largest hog packers. These measures are known as four-firm concentration ratios, or CR4.

CR4 in steers and heifers is quite high—four firms account for nearly 80 percent of purchases, in contrast to the average CR4 of 40 percent across all U.S. manufacturing industries. Moreover, local market concentration may be higher, because slaughter cattle usually are not shipped far and many producers may see buyers from only two or three nearby packers. The other striking feature of steer and heifer CR4 is the increase—from 36 percent in 1980 to 72 in 1990 and 78 in 1997. No other manufacturing industry shows as dramatic an increase since the U.S. Census Bureau began regularly publishing concentration data in 1947.



Felix Spinelli

Largest Meatpackers Captured a Growing Share of the Industry Since the 1980's

	1980	1985	1990	1995	1997
Share held by:			*Percent*		
Four largest firms					
Hogs	34	32	40	46	54
Steers and heifers	36	50	72	79	78
Large plants*					
Hogs	63	67	79	86	88
Steers and Heifers	24	53	66	81	80

*Large hog plants slaughter at least 1 million head annually; large steer and heifer plants slaughter at least 500,000 head.
Source: Grain Inspection, Packers and Stockyards Administration, USDA.
Economic Research Service, USDA

Hog slaughter is less concentrated—the top four hog packers handled 54 percent of slaughter in 1997. But CR4 in hog slaughter has increased sharply, from 32 percent just 12 years earlier. Like other livestock, hogs are not transported far to market, and as a result many producers may have more limited options locally, with a choice of buyers from only two or three packers.

Meatpacking has also shifted sharply toward larger plants that annually slaughter at least 1 million hogs or 500,000 steers and heifers. Such large plants, which handled less than a fourth of steer and heifer slaughter in 1980, accounted for over three-fourths just 15 years later. Large plants handled 63 percent of all hog slaughter in 1980, compared with 88 percent by 1997.

Shifts in plant size suggest that there may be economies of scale in slaughter, and that scale economies and the resultant shift to large plants may account in part for the increase in concentration. If there are scale economies, then increasing meatpacker concentration may lead to lower meat prices for consumers.

Costs & Plant Size in Meatpacking

Total plant costs include costs of purchasing livestock and expenses incurred in obtaining materials, capital, and labor to produce meat in slaughter plants. Because livestock prices can fluctuate sharply over short periods of time, analysts frequently distinguish between total costs and slaughter costs, which are the plant's costs exclusive of livestock purchase expenses.

Special Article

Meatpacking Costs Decline as Plant Size Increases

Size	Slaughter costs	Total costs
1,000 head per year	*Cost index*	
Hogs:		
400	117.5	104.5
1,000	100.0	100.0
2,000	84.6	96.1
4,000	74.5	93.5
Cattle:		
175	130.7	104.3
425	100.0	100.0
850	85.0	97.9
1,350	78.6	97.0

For hogs, index value of costs is relative to costs at a 1-million-head plant; for cattle, a 425,000-head plant.
Data derived from Longitudinal Research Database, U.S. Census Bureau.
Economic Research Service, USDA

Plants can reduce average slaughter costs per head in three ways. First, some plants may be able to lower prices paid for production workers, energy, transportation, or packaging. Second, plants perform different operations; those that do less in-plant processing (e.g., ship whole carcasses instead of cut-up carcasses or retail packages) have lower costs. Third, plants may reorganize their processes to use inputs more intensively, thereby using fewer inputs per pound of meat produced.

Data for this analysis contain information on plant sizes, input prices, and product mix, which allow for identifying the separate effects of these different factors on plant costs. To ensure confidentiality regarding costs, index numbers for costs are reported, rather than dollars per head. This also allows for a focus on how costs vary as plant size changes, since dollar costs per head will vary up and down as input prices change from year to year, but scale relations (i.e., unit costs according to firm size) change more slowly.

For this article, data are reported separately for hog plants and cattle plants; for each plant type, indexes are reported based on per-head slaughter costs and per-head total costs (slaughter costs plus livestock purchase expenses). The cost indexes are based on the 1992 Census of Manufactures, when the industry's consolidation was completed.

Slaughter costs per head at a large hog plant (four million head per year) are more than 25 percent lower than costs per head at a mid-size plant (one million head), and nearly 40 percent lower than costs in a small commercial plant (400,000 head). For cattle, a large plant (1.35 million head) realizes slaughter costs per head that are over 20 percent lower than a plant slaughtering 425,000 head, and 40 percent lower than slaughter costs in a small commercial plant (175,000 head per year). Because the analysis accounts for varying input prices and levels of processing, cost differences reflect differing intensity of input use—larger plants realize substantial scale economies in slaughter because they are able to use labor, energy, materials, and equipment more intensively.

Costs discussed so far include slaughter costs only, exclusive of livestock purchase expenses. Livestock purchase expenses account for very large shares of total costs—90 percent of the total at large cattle plants and 80 percent at large hog plants. Because slaughter costs are a small part of total costs, large scale economies in slaughter should translate into small scale economies in total costs. This, in fact, is the case. Total costs per head at a 4-million-head hog plant are 6.5 percent lower than at a million-head plant, while the largest cattle plant realizes total costs of delivering meat to buyers that are only 3 percent below those at a 425,000-head plant, compared with slaughter cost differences of 25 and 20 percent, respectively.

Large plants had much smaller costs advantages over small plants in the 1970's. Large plant cost advantages widened noticeably after the early 1980's, for two reasons. First, scale economies related to intensity of input use expanded. The largest hog plant's relative cost advantage over smaller plants was about twice as large in 1992 as in 1982, and the largest cattle plant's 1992 cost advantage was half again larger than its 1982 index value. Scale economies grew more important with time.

Second, large plants in the 1970's and early 1980's faced an important input price disadvantage—they paid much higher wages than smaller plants. For example, in 1982, average hourly production worker wages at a 1-million-head hog slaughter plant in the western Corn Belt were about 10-12 percent higher than wages at a smaller western Corn Belt plant. Firms were not building 4-million-head plants then, but an estimated size-wage relation suggests that wages at those plants would have been another 15-18 percent higher than wages at the 1-million-head plant. (Similar but somewhat smaller effects existed at cattle plants.) In addition, there was a striking regional pattern—wages at southeastern hog slaughter plants were about one-third lower than in the western Corn Belt.

Labor relations in meatpacking have undergone key changes since the early 1980's when half the workers in the meat products industry were union members (meat products, in the broad survey that captures unionization data, includes red meat and poultry slaughter and processing). Most unionized workers belonged to the United Food and Commercial Workers union, whose base wage rate was $10.69 an hour in 1982. In that year, many unionized firms began to press for large reductions in base

Meatpacking Industry Wage Differentials by Size and Region Have Declined

Plant characteristics				
Head/year	Location	1972	1982	1992
			$/hour	
400,000	W. Corn Belt	5.04	12.17	8.08
1 million	W. Corn Belt	5.54	13.61	8.22
1 million	Southeast	3.64	9.15	7.81
4 million	W. Corn Belt	6.40	16.11	8.44

Estimated wages for production workers based on U..S. Census Bureau's Longitudinal Research Database.
Economic Research Service, USDA

wages, to $8.25 an hour, consistent with what was being offered in non-union plants. Between 1983 and 1986, 158 work stoppages involving 40,000 workers occurred in cattle and hog slaughter plants, followed by widespread plant closings and deunionization.

By 1987, union membership in meatpacking had fallen to a fifth of the workforce, where it has remained. Average wages fell sharply at slaughter plants of all sizes after 1982, and regional and size differentials virtually disappeared (in fact, preliminary 1997 data show no size or regional differentials).

The 1982 wage differential had provided a 1-million-head hog plant with a slaughter cost advantage of 6 percent per head over a 4-million-head plant (assuming that production worker pay accounts for one-third of slaughter costs), and provided a 400,000-head plant with a 10-percent cost advantage over the largest plant, thereby attenuating large plants' advantages in the intensity of input use. After 1982, disappearing wage differentials reinforced expanding scale economies to provide large plants with substantial slaughter cost advantages.

Did Packers Pass On Scale Economy Gains?

As larger plants realized lower slaughter costs in the 1980's and 1990's, production shifted rapidly toward them. As a result, industry-wide average meatpacking costs fell, and the industry (particularly steer and heifer slaughter) became far more concentrated as a small number of firms each operated several very large plants. In highly competitive industries, cost declines should be quickly passed through, either as lower prices to buyers or as higher prices paid to livestock producers. But in an industry that has become highly concentrated, large firms may be able to retain the cost advantage as profits.

ERS data on farm-to-wholesale price spreads for Choice beef provide some evidence on the effects of the industry's consolidation (beef is examined here because of the striking CR4 increase). Price spread is the dollar difference between what packers receive for beef and the price they pay for animals; it includes costs of slaughter, transportation expenses for moving animals from feedlot to packing plant, and packer profits.

Slaughter and transportation costs reflect the prices and quantities of inputs used in those functions. Because the price spread is deflated with an index of packer input prices, the resulting real spread measures changes in packer profits and input quantities per retail pound of beef, holding input prices constant. The data are expressed as annual averages of cents per retail pound, which smooths the sharp fluctuations in monthly data.

Real spreads fell in the 1970's, reflecting meatpacking productivity growth. The trend continued during the period of rapid concentration increase, through 1992, as cost declines realized through scale economies were passed through to meat buyers and livestock producers. From 1993 to 1998, spreads fluctuated much more widely, but showed no long-term increase. The picture tells a strong story: if large increases in concentration had important effects on packer pricing and profits, they don't show up in the price-spread statistics. Sufficient competition apparently prevailed, such that packer cost declines were passed on to consumers or producers.

Although spreads fell while the industry concentrated, there has been a noticeable increase in the real farm-to-wholesale spread at the end of the period, a rise of 40 percent in 1997-99. To put the change in context, the packers' spread rose by 9.4 cents per retail pound of beef during 1997-99 (in nominal terms; the real spread rose by 7.1 cents per pound since input prices rose 2.3 cents). During the period, average retail prices for choice beef rose from $2.80 to $2.94 a pound and cattle producers' prices increased from $1.37 to $1.47 per retail pound. The spread's increase should largely reflect higher packer profits since there's no evidence of productivity deterioration.

Short-term spikes in the farm-to-wholesale spread have occurred before, but previous sharp increases in 1980, 1991, and 1995 didn't last long. Short-term fluctuations usually result from sharp changes in livestock supplies or meat demand, and the spikes quickly fell as packers, buyers, and producers adjusted. Such spikes don't necessarily indicate any significant change in the nature of competition in an industry.

Data Sources

Data on concentration and large plant livestock purchases are gathered in annual surveys of meatpackers carried out by USDA's Grain Inspection, Packers and Stockyards Administration (GIPSA).

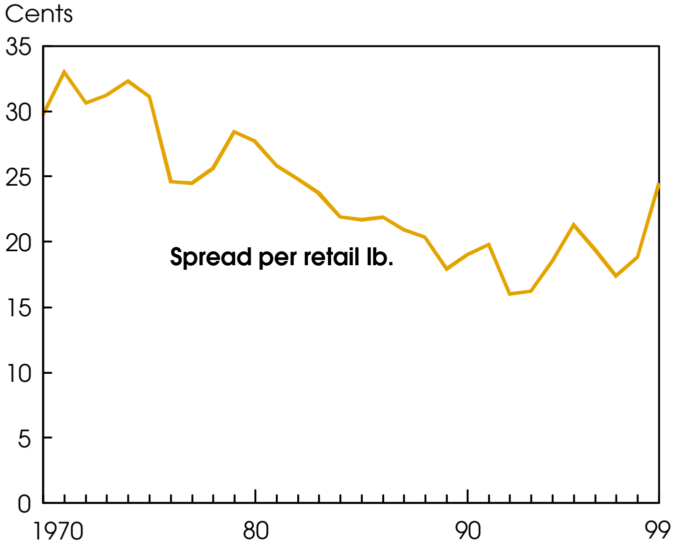
The primary data source for the analyses of plant costs is the U.S. Census Bureau's Longitudinal Research Database (LRD). The LRD details the records of individual establishments reported in the Census of Manufactures. Since 1967, the Economic Censuses have been taken in every year ending in "2" or "7" (the most recent data available for this study was from the 1992 Census; data from the 1997 Census are not yet available for use in the LRD).

The file also includes establishment records from a census taken in 1963. The data provide detailed information on the mix of products, quantities and prices of material inputs, employment and average wages, and ownership and location for each establishment.

Because the LRD contains data on individual plants over several censuses, researchers can make comparisons across plants at a point in time, and can also trace changes in product and input mixes, costs, and concentration over time. While researchers have access to individual establishment records for research purposes, they may not divulge information on any individual plant or firm, and may only publish aggregated information.

Special Article

Farm-Wholesale Price Spread for Beef Fell During Consolidation but Ticked Up in the Late 1990's



Choice beef. Inflation-adjusted 1982 dollars.
Economic Research Service, USDA

Nevertheless, a long-term increase would be troubling. Increasing concentration in other sectors of the economy has often reflected intense competition and frequently led to falling costs and prices for the concentrating firms. But after an industry consolidates, when few firms face each other in a stable environment, competition may often become less intense.

Following the emergence of new and extensive scale economies in meatpacking, intense price competition led to the exit of high-cost smaller plants, their rapid replacement by larger and more efficient plants, and significant increases in concentration and reductions in costs. As consolidation is completed, will packers successfully limit price competition among themselves and maintain 1999's high spreads? Or will they continue to compete aggressively, thereby ensuring that cost reductions in meatpacking are passed through?

Spreads have remained high through the first quarter of 2000, and the coming months will tell whether the spike is short-term, to be eroded by continuing competition. The policy challenge for the future is to ensure that a highly concentrated industry—a result of consolidation—does not limit price competition among packers. AO

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For more information, see *Consolidation in U.S. Meatpacking,* Agricultural Economics Report No. 785, February, 2000. Access on the ERS website at: www.ers.usda.gov/epubs/pdf/aer785/index.htm. Printed copies may be purchased by calling 1 (800) 999-6779.

Upcoming Reports—USDA's Economic Research Service

The following reports are issued electronically on dates and at times indicated.

July

12 *World Agricultural Supply & Demand (8:30 am)*
13 *Cotton & Wool Outlook (4 pm)***
*Oil Crops Outlook (4 pm)***
*Rice Outlook (4 pm)***
14 *Feed Outlook (9 am)***
*Wheat Outlook (9 am)***
20 *Agricultural Outlook**
26 *U.S. Agricultural Trade Update (3 pm)*
*Livestock, Dairy & Poultry (4 pm)***
27 *Vegetables & Specialties Yearbook**

* Summary released 3 pm
** Available electronically only

The next issue of *Agricultural Outlook* will appear in August.

Statistical Indicators

Summary Data

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

				1999			2000			
	1998	1999	2000	II	III	IV	I	II	III	IV
Prices received by farmers (1990-92=100)	101	95	--	97	96	92	--	--	--	--
Livestock & products	97	95	--	93	96	96	--	--	--	--
Crops	106	96	--	102	96	89	--	--	--	--
Prices paid by farmers (1990-92=100)										
Production items	113	112	--	111	111	113	--	--	--	--
Commodities and services, interest, taxes, and wage rates (PPITW)	115	115	--	115	115	116	--	--	--	--
Cash receipts ($ bil.)[1]	197	189	194	41	47	56	46	43	48	58
Livestock	95	95	101	23	24	24	24	24	26	26
Crops	102	93	94	18	23	32	21	19	22	32
Market basket (1982-84=100)										
Retail cost	163	167	--	167	167	169	--	--	--	--
Farm value	103	98	--	97	98	97	--	--	--	--
Spread	195	205	--	204	204	207	--	--	--	--
Farm value/retail cost (%)	22	21	--	21	21	20	--	--	--	--
Retail prices (1982-84=100)										
All food	161	164	167	164	164	165	166	167	167	168
At home	161	164	167	164	164	165	166	167	167	167
Away from home	161	165	169	165	166	167	168	168	169	170
Agricultural exports ($ bil.)[2]	53.6	49.0	49.5	11.3	11.6	13.6	13.1	11.6	11.2	13.2
Agricultural imports ($ bil.)[2]	37.0	37.4	38.0	9.9	8.8	9.6	9.1	9.3	10.0	9.2
Commercial production										
Red meat (mil. lb.)	45,134	46,134	45,462	11,367	11,624	11,756	11,595	11,357	11,452	11,058
Poultry (mil. lb.)	33,667	35,590	36,954	9,070	8,986	8,894	9,009	9,295	9,315	9,335
Eggs (mil. doz.)	6,658	6,912	7,067	1,706	1,728	1,786	1,752	1,740	1,760	1,815
Milk (bil. lb.)	157.3	162.7	167.4	42.0	39.8	40.4	42.6	43.4	40.8	40.7
Consumption, per capita										
Red meat and poultry (lb.)	213.5	221.3	220.9	55.0	55.6	56.6	54.4	55.2	55.5	55.8
Corn beginning stocks (mil. bu.)[3]	883.2	1,307.8	1,787.0	8,051.9	5,698.4	3,616.2	1,787.0	8,024.7	5,605.5	--
Corn use (mil. bu.)[3]	8,791.0	9,298.3	9,455.0	2,359.2	2,089.4	1,831.1	3,203.2	2,422.6	--	--
Prices[4]										
Choice steers--Neb. Direct ($/cwt)	61.48	65.56	68-74	65.04	65.12	69.65	69.32	69-71	67-71	68-74
Barrows and gilts--IA, So. MN ($/cwt)	34.72	34.00	44-46	35.18	35.70	36.29	41.14	49-51	47-49	40-44
Broilers--12-city (cents/lb.)	63.10	58.10	55-57	58.60	58.10	57.60	54.60	55-57	56-60	54-58
Eggs--NY gr. A large (cents/doz.)	75.80	65.60	60-62	58.10	66.20	63.20	63.30	55-57	58-62	62-68
Milk--all at plant ($/cwt)	15.42	14.36	12.45-12.95	12.80	14.87	13.83	11.90	11.70-12.00	12.50-13.10	13.75-14.65
Wheat--KC HRW ordinary ($/bu.)	3.27	2.92	--	2.92	2.82	2.83	2.92	--	--	--
Corn--Chicago ($/bu.)	2.41	2.01	--	2.13	1.83	1.91	2.12	--	--	--
Soybeans--Chicago ($/bu.)	6.01	4.61	--	4.58	4.40	4.53	4.95	--	--	--
Cotton--avg. spot 41-34 (cents/lb)	67.02	52.31	--	55.43	49.11	48.08	54.63	--	--	--

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Farm real estate values[5]										
Nominal ($ per acre)	703	713	740	798	844	887	926	974	1,020	1,050
Real (1982 $)	521	507	514	540	558	572	586	606	627	636
U.S. civilian employment (mil.)[6]	126.3	128.1	129.2	131.1	132.3	133.9	136.3	137.7	--	--
Food and fiber (mil.)	23.5	23.1	23.6	24.3	24.7	24.5	24.6	24.8	--	--
Farm sector (mil.)	2.0	1.9	1.8	1.9	2.0	2.0	1.9	1.8	--	--
U.S. gross domestic product ($ bil.)	5,986.2	6,318.9	6,642.3	7,054.3	7,400.5	7,813.2	8,300.8	8,759.9	--	--
Food and fiber--net value added ($ bil.)	881.8	924.8	971.4	1,077.1	1,140.8	1,216.5	1,323.3	1,367.2	--	--
Farm sector--net value added ($ bil.)[7]	71.1	75.5	73.1	78.3	75.3	86.7	84.5	74.3	--	--

Annual and quarterly data for the most recent year contain forecasts. 2. Annual data based on Oct.-Sept. fiscal years ending with year indicated. 3. 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. 4. Simple averages, Jan.-Dec. 5. As of January 1. 6. 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. 7. The value-added data presented here is consistent with accounting conventions of the National Income and Product Accounts, U.S. Department of Commerce.

U.S. & Foreign Economic Data

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

	1997	1998	1999	1998 III	1998 IV	1999 I	1999 II	1999 III	1999 IV	2000 I
Billions of current dollars (quarterly data seasonally adjusted at annual rates)										
Gross Domestic Product	8,300.8	8,759.9	9,256.1	8,797.9	8,947.6	9,072.7	9,146.2	9,297.8	9,507.9	9,697.2
Gross National Product	8,305.0	8,750.0	9,236.2	8,772.2	8,930.5	9,058.2	9,131.9	9,282.3	9,472.3	--
Personal consumption expenditures	5,524.4	5,848.6	6,257.3	5,889.6	5,973.7	6,090.8	6,200.8	6,303.7	6,434.1	6,615.2
Durable goods	642.9	698.2	758.8	696.9	722.8	739.0	751.6	761.8	782.1	825.5
Nondurable goods	1,641.7	1,708.9	1,843.1	1,716.6	1,742.9	1,787.8	1,824.8	1,853.9	1,905.8	1,963.3
Food	817.0	853.4	904.1	857.6	875.6	885.4	893.4	903.9	933.8	946.3
Clothing and shoes	271.2	286.3	306.3	286.6	289.2	301.8	306.7	308.1	308.6	324.6
Services	3,239.8	3,441.5	3,655.6	3,476.1	3,508.0	3,564.0	3,624.3	3,688.0	3,746.2	3,826.5
Gross private domestic investment	1,383.7	1,531.2	1,622.7	1,535.3	1,580.3	1,594.3	1,585.4	1,635.0	1,675.8	1,709.9
Fixed investment	1,315.4	1,460.0	1,578.0	1,461.7	1,508.9	1,543.3	1,567.8	1,594.2	1,606.8	1,675.4
Change in private inventories	68.3	71.2	44.6	73.7	71.4	51.0	17.6	40.8	69.1	34.4
Net exports of goods and services	-88.3	-149.6	-253.9	-165.7	-161.2	-201.6	-245.8	-278.2	-290.1	-335.0
Government consumption expenditures and gross investment	1,481.0	1,529.7	1,630.1	1,538.7	1,554.8	1,589.1	1,605.9	1,637.2	1,688.0	1,707.1
Billions of 1996 dollars (quarterly data seasonally adjusted at annual rates)[1]										
Gross Domestic Product	8,165.1	8,516.3	8,848.2	8,536.0	8,639.5	8,717.6	8,758.3	8,879.8	9,037.2	9,156.6
Gross National Product	8,168.8	8,506.0	8,830.8	8,510.6	8,624.4	8,705.1	8,746.0	8,866.8	9,005.2	--
Personal consumption expenditures	5,433.7	5,698.6	5,983.6	5,730.7	5,779.3	5,871.3	5,944.5	6,015.7	6,102.9	6,225.2
Durable goods	657.4	731.5	815.7	731.2	766.0	788.8	806.1	821.2	846.7	898.1
Nondurable goods	1,619.9	1,685.3	1,776.1	1,692.0	1,712.6	1,749.5	1,763.7	1,779.3	1,812.0	1,842.4
Food	799.1	820.6	851.8	823.0	835.4	839.5	844.6	850.0	873.1	879.6
Clothing and shoes	271.1	292.2	317.8	292.2	295.6	314.7	316.8	321.6	318.1	338.6
Services	3,156.7	3,284.5	3,400.1	3,309.6	3,305.9	3,339.8	3,382.3	3,423.4	3,454.7	3,500.6
Gross private domestic investment	1,385.8	1,547.4	1,637.7	1,551.1	1,593.9	1,608.2	1,599.8	1,651.6	1,691.4	1,724.2
Fixed investment	1,316.0	1,471.8	1,590.5	1,474.0	1,522.5	1,555.9	1,581.0	1,607.3	1,617.8	1,683.7
Change in private inventories	69.1	74.3	42.2	76.1	70.7	50.1	14.0	38.0	66.7	31.1
Net exports of goods and services	-109.8	-215.1	-323.0	-237.9	-234.4	-286.6	-321.1	-340.4	-344.1	-377.1
Government consumption expenditures and gross investment	1,455.1	1,480.3	1,534.1	1,485.3	1,494.7	1,513.4	1,518.3	1,535.3	1,569.6	1,565.2
GDP implicit price deflator (% change)	1.9	1.2	1.5	1.5	1.0	2.0	1.4	1.1	1.9	2.7
Disposable personal income ($ bil.)	5,982.8	6,286.2	6,639.7	6,325.3	6,417.8	6,505.4	6,593.2	6,671.0	6,789.1	6,896.8
Disposable pers. income (1996 $ bil.)	5,866.7	6,107.1	6,349.4	6,136.9	6,209.0	6,271.0	6,320.7	6,366.2	6,439.6	6,490.2
Per capita disposable pers. income ($)	22,320	23,231	24,307	23,345	23,628	23,904	24,171	24,389	24,759	25,106
Per capita disp. pers. income (1996 $)	21,887	22,569	23,244	22,650	22,859	23,043	23,172	23,275	23,485	23,625
U.S. resident population plus Armed Forces overseas (mil.)[2]	268.0	270.5	272.9	270.8	271.5	272.0	272.5	273.2	273.9	274.4
Civilian population (mil.)[2]	266.5	269.0	271.5	269.3	270.0	270.5	271.1	271.7	272.4	273.0

	Annual 1997	Annual 1998	Annual 1999	1999 Mar	1999 Oct	1999 Nov	1999 Dec	2000 Jan	2000 Feb	2000 Mar
Monthly data seasonally adjusted										
Total industrial production (1992=100)	130.1	136.4	142.3	139.7	144.2	145.0	145.6	146.8	147.0	147.6
Leading economic indicators (1992=100)	103.9	105.5	105.2	104.8	105.5	105.7	106.1	106.3	106.0	106.1
Civilian employment (mil. persons)[3]	129.6	131.5	133.5	133.0	133.9	134.1	134.4	135.2	135.4	132.2
Civilian unemployment rate (%)[3]	4.9	4.5	4.2	4.2	4.1	4.1	4.1	4.0	4.1	4.1
Personal income ($ bil. annual rate)	6,951.1	7,358.9	7,791.8	7,655.3	7,943.4	7,976.8	7,998.6	8,054.8	8,088.2	8,144.8
Money stock-M2 (daily avg.) ($ bil.)[4]	4,040.8	4,397.0	4,652.2	4,463.4	4,605.3	4,624.2	4,652.2	4,675.7	4,684.9	4,719.8
Three-month Treasury bill rate (%)	5.07	4.81	4.66	4.48	4.88	5.07	5.23	5.34	5.57	5.72
AAA corporate bond yield (Moody's) (%)	7.26	6.53	7.04	6.62	7.55	7.36	7.55	7.78	7.68	7.68
Total housing starts (1,000)[5]	1,474.0	1,616.9	1,666.5	1,737	1,636	1,663	1,769	1,769	1,744	1,807
Business inventory/sales ratio[6]	1.38	1.39	1.35	1.37	1.34	1.33	1.32	1.32	1.32	--
Sales of all retail stores ($ bil.)[7]	2,546.3	2,696.5	--	240.5	253.5	256.9	261.8	263.5	265.1	266.5
Nondurable goods stores ($ bil.)	1,505.4	1,563.8	--	140.1	147.7	148.5	151.8	151.0	153.0	154.8
Food stores ($bil.)	432.1	443.0	--	37.2	38.9	39.3	40.6	38.8	39.1	39.4
Apparel and accessory stores ($ bil.)	116.8	124.2	--	11.1	11.3	11.2	11.2	11.3	11.7	11.9
Eating and drinking places ($ bil.)	244.1	247.1	--	22.8	24.5	24.7	24.8	25.2	24.7	25.0

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

Table 3—World Economic Growth

	Calendar year									
	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
	Real GDP, annual percent change									
World	1.8	1.4	3.0	2.6	3.5	3.3	1.8	2.7	3.8	3.2
less U.S.	1.4	1.0	2.7	2.6	3.4	3.0	0.9	2.2	3.4	3.4
Developed economies	1.7	0.9	2.7	2.2	3.1	2.9	2.0	2.5	3.4	2.6
less U.S.	1.1	0.1	2.1	2.0	2.9	2.2	0.9	1.7	2.6	2.6
United States	3.1	2.7	4.0	2.7	3.6	4.2	4.3	4.1	4.9	2.7
Canada	0.9	2.3	4.7	2.8	1.7	4.0	3.1	4.2	4.0	2.4
Japan	1.0	0.3	0.7	1.4	5.2	1.6	-2.5	0.3	1.2	1.9
Australia	2.4	3.8	5.2	3.8	4.3	4.1	4.8	4.4	4.0	3.4
European Union	1.1	-0.4	2.7	2.3	1.6	2.5	2.6	2.3	3.3	3.0
Transition economies	-10.6	-6.8	-9.1	-1.8	-1.3	1.4	-1.3	2.1	3.6	2.1
Eastern Europe	-2.7	1.1	4.0	5.8	3.9	3.3	2.3	2.3	4.4	4.4
Poland	2.6	3.8	5.2	7.0	6.1	6.9	4.9	4.0	5.3	5.1
Former Soviet Union	-13.4	-10.0	-14.9	-5.9	-4.6	0.1	-3.8	1.9	3.0	0.3
Russia	-14.5	-8.7	-12.6	-4.1	-3.5	0.8	-4.3	3.1	3.7	-0.4
Developing economies	5.3	5.8	6.4	5.1	5.8	5.5	1.2	3.3	5.4	5.6
Asia	7.7	8.0	8.8	8.3	7.5	6.1	0.4	6.1	6.9	6.5
East Asia	9.4	9.2	9.7	8.8	7.8	7.0	2.0	7.5	7.5	7.0
China	14.2	13.5	12.6	10.5	9.6	8.8	7.8	7.1	7.9	8.6
Taiwan	7.5	7.0	7.1	6.4	6.1	6.7	4.6	5.7	6.4	5.9
Korea	5.4	5.5	8.2	8.9	6.7	5.0	-6.7	10.7	7.7	5.4
Southeast Asia	5.6	7.7	7.9	8.1	7.1	4.8	-6.1	3.3	6.3	6.0
Indonesia	7.2	7.3	7.5	8.2	7.8	4.9	-13.1	0.2	7.6	7.3
Malaysia	7.8	8.3	9.2	9.5	8.6	7.8	-7.4	5.3	8.0	6.3
Philippines	0.3	2.1	4.4	4.7	5.8	5.2	-0.5	3.2	3.7	4.0
Thailand	8.1	8.4	8.9	8.8	5.5	-0.4	-10.2	4.2	6.6	6.0
South Asia	5.7	4.5	7.1	6.9	7.0	4.9	5.3	5.5	5.5	5.6
India	5.4	5.0	8.1	7.4	7.7	5.7	5.6	6.1	5.8	5.9
Pakistan	7.8	1.9	3.9	5.1	4.7	-0.4	3.7	3.0	4.0	4.5
Latin America	3.2	4.3	5.7	1.0	3.5	5.2	2.0	0.0	3.8	4.5
Mexico	3.6	1.9	4.5	-6.2	5.1	6.8	4.8	3.7	4.5	4.1
Caribbean/Central	8.0	4.7	4.0	3.2	3.5	5.4	5.5	3.3	3.7	4.7
South America	2.9	4.9	6.1	2.7	3.2	4.9	1.3	-0.9	3.7	4.6
Argentina	9.6	5.7	8.0	-4.0	4.8	8.6	4.0	-3.0	3.0	4.6
Brazil	-0.5	4.9	5.9	4.2	2.8	3.2	0.1	0.8	4.2	4.8
Colombia	3.9	5.4	5.8	5.8	2.0	3.1	0.4	-4.4	2.9	4.5
Venezuela	6.1	0.3	-2.3	3.7	-0.5	5.1	-0.7	-6.3	1.1	1.5
Middle East	4.8	3.8	-0.1	3.6	4.4	4.9	2.1	-1.3	2.9	4.4
Israel	5.6	5.6	6.9	7.0	4.6	2.2	1.9	2.1	3.7	3.7
Saudi Arabia	2.8	-0.6	0.5	0.5	1.4	1.9	1.4	-1.5	1.6	3.0
Turkey	6.4	8.7	-5.2	7.8	7.0	7.5	2.8	-4.8	3.8	7.2
Africa	0.2	1.0	2.9	3.0	5.1	2.5	3.2	2.8	4.5	4.2
North Africa	2.0	0.5	3.9	1.5	6.5	2.6	5.4	4.1	5.5	4.8
Egypt	4.4	2.9	3.9	4.7	5.0	5.5	5.6	5.2	5.6	5.6
Sub-Sahara	-1.1	1.4	2.1	4.2	4.0	2.4	1.4	1.8	3.6	3.7
South Africa	-2.2	1.3	2.7	3.4	3.2	1.7	0.6	1.4	3.3	3.6
	Consumer Prices, annual percent change									
Developed Economies	3.5	3.1	2.6	2.6	2.4	2.1	1.5	1.4	1.9	2.0
Transition Economies	788.9	634.3	273.3	133.5	42.4	27.3	21.8	43.7	19.5	14.2
Developing Economies	36.1	49.8	55.1	22.9	15.1	9.5	10.1	6.5	5.7	4.7
Asia	8.6	10.8	16.0	13.2	8.2	4.7	7.6	2.5	2.6	3.0
Latin America	109.1	202.6	202.5	34.4	21.4	13.0	9.8	8.8	7.7	6.4
Middle East	26.5	26.6	33.3	38.9	26.6	25.3	26.0	20.3	16.2	9.4
Africa	47.1	38.7	54.8	35.5	30.0	13.6	9.2	11.0	9.6	6.1

-- = 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			1999			2000			
	1997	1998	1999	Apr	Nov	Dec	Jan	Feb	Mar	Apr
	1990-92=100									
Prices received										
All farm products	107	101	96	96	93	92	90	92	95	99
All crops	115	106	96	103	89	90	87	90	94	99
Food grains	128	103	91	96	89	85	85	85	86	85
Feed grains and hay	117	100	86	92	77	81	84	88	90	91
Cotton	112	107	85	92	74	71	71	76	79	74
Tobacco	104	104	103	86	105	109	110	109	103	89
Oil-bearing crops	131	107	83	83	82	82	82	86	88	89
Fruit and nuts, all	109	111	114	106	119	91	78	82	82	92
Commercial vegetables	118	121	108	129	97	116	97	87	106	120
Potatoes and dry beans	90	99	101	108	94	94	98	99	104	108
Livestock and products	98	97	95	91	98	95	94	94	96	99
Meat animals	92	79	83	81	87	88	90	92	95	98
Dairy products	102	119	110	96	109	93	92	90	91	91
Poultry and eggs	113	117	111	107	114	110	104	104	104	111
Prices paid										
Commodities and services,										
interest, taxes, and wage rates (PPITW)	118	115	115	115	117	118	118	119	119	119
Production items	119	113	112	111	113	115	115	116	115	115
Feed	125	110	100	102	99	101	102	105	102	102
Livestock and poultry	94	88	95	92	105	110	111	109	108	111
Seeds	119	122	121	121	121	121	121	121	121	124
Fertilizer	121	112	105	107	104	105	107	108	107	106
Agricultural chemicals	121	122	121	121	123	123	121	122	119	119
Fuels	106	84	93	88	119	124	125	138	129	125
Supplies and repairs	118	119	121	121	122	122	122	122	123	123
Autos and trucks	119	119	119	119	120	120	119	119	119	119
Farm machinery	128	132	136	135	133	133	133	133	138	138
Building material	118	118	120	119	120	120	121	121	122	122
Farm services	116	115	115	114	115	115	115	115	116	116
Rent	136	120	117	117	117	117	117	117	117	117
Interest payable per acre on farm real estate debt	105	104	106	106	105	105	108	108	110	110
Taxes payable per acre on farm real estate	115	119	120	120	120	120	123	123	123	123
Wage rates (seasonally adjusted)	123	129	135	135	135	135	140	140	140	140
Prod. items, interest, taxes & wage rates (PITW)	118	114	113	113	115	116	117	118	117	118
Ratio, prices received to prices paid (%)*	91	81	75	83	80	78	76	78	80	83
Prices received (1910-14=100)	678	643	607	611	592	578	572	586	604	628
Prices paid, etc. (parity index) (1910-14=100)	1,574	1,532	1,535	1,534	1,558	1,566	1,577	1,589	1,584	1,587
Parity ratio (1910-14=100) (%)*	43	38	36	40	38	37	37	37	38	40

-- = 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]			1999			2000			
	1996	1997	1998	Apr	Nov	Dec	Jan	Feb	Mar	Apr
Crops										
All wheat ($/bu.)	4.30	3.38	2.70	2.62	2.66	2.52	2.50	2.54	2.59	2.55
Rice, rough ($/cwt)	9.96	9.70	8.50	8.49	6.11	6.19	6.03	5.98	5.82	5.82
Corn ($/bu.)	2.71	2.43	1.95	2.04	1.70	1.82	1.90	1.98	2.03	2.01
Sorghum ($/cwt)	4.17	3.95	3.10	3.09	2.58	2.65	2.86	3.08	3.21	3.15
All hay, baled ($/ton)	95.80	100.00	87.00	82.50	74.00	71.10	71.80	72.60	74.80	80.70
Soybeans ($/bu.)	7.35	6.47	5.35	4.63	4.45	4.44	4.62	4.79	4.91	4.99
Cotton, upland (¢/lb.)	69.30	65.20	64.20	55.60	44.70	43.00	43.10	45.90	47.90	45.00
Potatoes ($/cwt)	4.93	5.62	5.24	6.50	5.51	5.58	5.91	5.96	6.33	6.62
Lettuce ($/cwt)[2]	14.70	17.60	15.20	20.50	10.50	16.10	14.60	9.28	14.00	14.70
Tomatoes, fresh ($/cwt)[2]	28.10	31.70	35.00	23.70	26.60	31.40	22.50	23.50	30.00	37.80
Onions ($/cwt)	10.50	12.60	13.80	14.10	8.30	7.88	6.79	5.63	6.67	12.50
Beans, dry edible ($/cwt)	23.50	19.30	19.80	16.60	17.30	17.00	16.70	16.00	15.20	14.90
Apples for fresh use (¢/lb.)	20.80	22.10	17.10	14.10	23.30	23.70	23.50	21.10	20.50	19.70
Pears for fresh use ($/ton)	376.00	276.00	291.00	337.00	461.00	414.00	414.00	386.00	313.00	269.00
Oranges, all uses ($/box)[3]	4.79	4.22	4.29	6.09	4.33	3.41	3.27	3.51	3.54	4.14
Grapefruit, all uses ($/box)[3]	2.30	1.91	1.41	2.49	5.21	3.71	2.40	3.64	3.63	2.82
Livestock										
Cattle, all beef ($/cwt)	58.70	63.10	59.60	62.70	66.20	66.60	67.80	67.60	69.80	70.10
Calves ($/cwt)	58.40	78.90	78.80	88.20	93.00	98.60	102.00	105.00	109.00	110.00
Hogs, all ($/cwt)	51.90	52.90	34.40	30.10	33.40	35.60	36.80	39.90	41.80	46.90
Lambs ($/cwt)	88.20	90.30	72.30	67.40	76.30	77.60	70.90	72.00	80.20	--
All milk, sold to plants ($/cwt)	14.75	13.36	15.41	12.60	14.30	12.20	12.00	11.80	11.90	11.90
Milk, manuf. grade ($/cwt)	13.43	12.17	14.33	12.20	11.00	10.70	10.70	10.20	10.10	10.00
Broilers, live (¢/lb.)	38.10	37.70	39.30	35.40	37.40	36.80	35.00	33.50	34.90	36.50
Eggs, all (¢/doz.)[4]	74.90	70.30	65.50	61.50	64.30	61.30	58.00	68.60	57.40	65.50
Turkeys (¢/lb.)	43.30	39.90	38.00	38.70	45.60	42.20	36.40	35.70	38.20	39.80

-- = 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			1999			2000			
	1997	1998	1999	Apr	Nov	Dec	Jan	Feb	Mar	Apr
	1982-84=100									
Consumer Price Index, all items	160.5	163.0	166.6	166.2	168.3	168.3	168.7	169.7	171.1	171.2
CPI, all items less food	161.1	163.6	167.0	166.7	168.8	168.8	169.2	170.3	171.9	172.0
All food	157.3	160.7	164.1	163.4	165.2	165.4	166.1	166.3	166.5	166.6
Food away from home	157.0	161.1	165.1	164.5	166.5	166.8	167.2	167.6	167.9	168.1
Food at home	158.1	161.1	164.2	163.5	165.1	165.4	166.3	166.3	166.4	166.5
Meats[1]	144.4	141.6	142.3	140.5	145.3	145.3	144.7	146.4	148.3	148.8
Beef and veal	136.8	136.5	139.2	137.9	142.2	143.1	143.2	144.3	145.7	147.0
Pork	155.9	148.5	145.9	141.8	149.3	148.6	147.8	150.7	153.8	153.5
Poultry	156.6	157.1	157.9	157.6	159.4	157.5	159.9	157.9	158.6	158.5
Fish and seafood	177.1	181.7	185.3	185.3	187.9	186.9	186.0	190.0	189.9	189.8
Eggs	140.0	135.4	128.1	129.6	128.8	124.0	133.9	131.7	127.1	129.5
Dairy and related products[2]	145.5	150.8	159.6	156.1	164.6	162.1	160.4	160.9	159.1	160.6
Fats and oils[3]	141.7	146.9	148.3	149.0	145.3	145.1	147.0	145.6	145.9	144.8
Fresh fruits	236.3	246.5	266.3	271.9	260.5	266.9	266.6	263.0	257.9	257.0
Fresh vegetables	194.6	215.8	209.3	206.2	209.1	214.0	223.0	211.0	212.1	213.6
Potatoes	174.2	185.2	193.1	183.3	186.1	190.7	196.6	198.1	197.9	194.9
Cereals and bakery products	177.6	181.1	185.0	184.8	184.8	185.9	185.6	186.0	186.1	187.2
Sugar and sweets	147.8	150.2	152.3	151.7	152.1	152.3	154.8	154.4	154.6	152.4
Nonalcoholic beverages[4]	133.4	133.0	134.3	134.3	133.9	134.7	137.1	138.4	138.5	137.6
Apparel										
Footwear	127.6	128.0	125.7	129.2	126.4	123.7	121.6	122.1	124.7	126.7
Tobacco and smoking products	243.7	274.8	355.8	349.9	369.8	369.1	375.1	383.0	387.3	404.4
Alcoholic beverages	162.8	165.7	169.7	168.8	171.2	171.8	172.4	173.0	173.5	173.6

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

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

	Annual			1999			2000			
	1997	1998	1999	Apr	Nov	Dec	Jan	Feb	Mar	Apr
	1982=100									
All commodities	127.6	124.4	125.5	123.6	128.3	127.8	128.3	129.8	131.0	130.7
Finished goods[1]	131.8	130.6	133.0	131.9	134.9	134.9	134.7	136.0	137.0	137.0
All foods[2]	132.8	132.4	132.2	130.3	132.2	131.8	131.2	131.8	131.8	133.3
Consumer foods	134.5	134.3	135.1	133.4	135.4	135.6	135.0	135.9	135.9	137.1
Fresh fruits and melons	99.4	90.0	103.6	103.1	94.9	95.5	91.7	98.1	94.1	91.4
Fresh and dry vegetables	123.1	139.5	118.0	132.5	108.8	143.9	115.3	107.6	122.4	125.4
Dried and dehydrated fruits	124.9	124.4	121.2	122.6	119.5	122.9	123.3	122.4	122.5	122.7
Canned fruits and juices	137.6	134.4	137.8	138.0	138.0	138.7	140.3	140.2	140.2	140.0
Frozen fruits, juices and ades	117.2	116.1	123.0	123.6	123.7	126.0	124.0	124.3	123.8	123.6
Fresh veg. except potatoes	121.3	137.9	117.7	144.4	100.9	151.6	111.3	100.5	122.3	126.8
Canned vegetables and juices	120.1	121.5	120.9	120.9	121.3	121.3	121.4	121.2	121.9	120.9
Frozen vegetables	125.8	125.4	126.1	126.7	125.5	125.3	125.5	127.2	127.4	127.0
Potatoes	106.1	122.5	126.9	106.4	110.8	107.7	109.0	111.0	99.2	97.1
Eggs for fresh use (1991=100)	97.1	90.1	77.9	74.8	85.8	74.7	81.1	95.3	70.0	87.1
Bakery products	173.9	175.8	178.0	177.8	179.0	179.6	179.5	180.2	180.6	181.2
Meats	111.6	101.4	104.6	99.8	106.5	108.9	109.8	111.2	112.9	115.1
Beef and veal	102.8	99.5	106.3	103.0	109.0	109.5	111.1	110.1	111.8	114.3
Pork	123.1	96.6	96.0	86.3	96.9	104.1	103.9	110.3	111.1	115.4
Processed poultry	117.4	120.7	114.0	111.8	114.1	113.9	111.9	108.9	109.9	111.5
Unprocessed and packaged fish	178.1	183.0	190.9	185.0	198.9	191.0	194.9	207.3	197.5	211.3
Dairy products	128.1	138.1	139.2	132.1	141.3	132.0	130.9	130.1	130.5	131.7
Processed fruits and vegetables	126.4	125.8	128.1	128.4	128.3	129.0	129.0	129.5	129.4	129.0
Shortening and cooking oil	137.8	143.4	--	--	--	--	--	--	--	--
Soft drinks	133.2	134.8	137.9	137.4	139.4	139.3	139.6	143.0	143.4	144.0
Finished consumer goods less foods	128.2	126.4	130.5	129.0	133.6	133.6	133.3	135.4	137.3	136.6
Alcoholic beverages	135.1	135.2	136.7	136.0	136.7	137.3	136.6	140.1	137.9	138.6
Apparel	125.7	126.6	127.1	127.1	126.9	127.4	126.9	127.0	127.2	127.0
Footwear	143.7	144.7	144.5	144.6	144.6	144.5	145.0	145.1	144.9	145.0
Tobacco products	248.9	283.4	374.0	363.4	394.7	395.2	378.5	399.6	399.0	398.9
Intermediate materials[3]	125.6	123.0	123.2	121.6	125.2	125.4	125.9	126.8	127.9	128.0
Materials for food manufacturing	123.2	123.1	120.8	118.1	120.9	118.2	117.9	117.8	118.1	119.6
Flour	118.7	109.2	104.3	103.0	103.9	99.2	101.8	102.6	102.6	102.3
Refined sugar[4]	123.6	119.8	121.0	122.0	119.1	117.7	116.5	115.0	114.7	110.2
Crude vegetable oils	116.6	131.1	90.2	97.4	78.9	76.3	76.1	76.0	77.6	84.2
Crude materials[5]	111.1	96.7	98.2	91.1	109.2	103.5	106.3	111.2	113.3	110.6
Foodstuffs and feedstuffs	112.2	103.8	98.7	95.4	99.5	96.9	96.4	97.6	101.3	103.5
Fruits and vegetables and nuts[6]	115.5	117.2	117.4	123.5	105.9	119.9	106.8	107.3	110.8	110.4
Grains	111.2	93.4	80.1	83.1	77.2	74.0	77.8	82.4	85.9	82.6
Slaughter livestock	96.3	82.3	86.4	83.8	89.6	91.9	91.6	92.4	98.3	102.4
Slaughter poultry, live	131.0	141.4	129.9	118.7	137.7	130.7	122.2	113.4	117.8	121.0
Plant and animal fibers	117.0	110.4	86.5	94.4	79.4	77.3	83.9	88.1	97.6	86.2
Fluid milk	97.5	112.6	106.3	93.4	104.6	91.0	89.5	88.8	88.6	89.2
Oilseeds	140.8	114.4	90.8	93.5	87.1	87.1	90.0	94.4	98.3	98.4
Leaf tobacco	105.1	104.6	101.6	88.5	107.3	112.0	111.7	112.9	110.5	91.4
Raw cane sugar	116.8	117.2	113.7	119.6	100.2	97.9	96.8	92.7	100.2	101.6

-- = 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			1999			2000			
	1997	1998	1999	Apr	Nov	Dec	Jan	Feb	Mar	Apr
Market basket[1]										
Retail cost (1982-84=100)	159.7	163.1	167.3	166.4	168.4	168.7	169.2	168.6	168.0	168.5
Farm value (1982-84=100)	106.2	103.3	98.3	96.2	99.2	95.2	95.0	94.0	94.7	96.7
Farm-retail spread (1982-84=100)	188.6	195.4	204.5	204.3	205.7	208.3	209.1	208.8	207.5	207.2
Farm value-retail cost (%)	23.3	22.2	20.6	20.2	20.6	19.8	19.7	19.5	19.7	20.1
Meat products										
Retail cost (1982-84=100)	144.4	141.6	142.3	140.5	145.3	145.3	144.7	146.4	145.7	147.0
Farm value (1982-84=100)	101.2	84.8	81.6	83.8	85.4	85.7	86.4	86.6	86.9	86.1
Farm-retail spread (1982-84=100)	188.6	200.0	204.7	198.7	206.7	206.5	204.6	207.8	206.1	209.5
Farm value-retail cost (%)	35.5	30.3	29	30.2	29.8	29.9	30.2	30.0	30.2	29.7
Dairy products										
Retail cost (1982-84=100)	145.5	150.8	159.6	156.1	164.6	162.1	160.4	160.9	159.1	160.6
Farm value (1982-84=100)	98.0	113.0	107.9	89.8	112.9	92.8	93.6	93.8	95.0	95.3
Farm-retail spread (1982-84=100)	189.3	185.6	207.2	217.2	212.2	226.0	222.0	222.8	218.2	220.8
Farm value-retail cost (%)	32.3	36.0	32.4	27.6	32.9	27.5	28.0	28.0	28.7	28.5
Poultry										
Retail cost (1982-84=100)	156.6	157.1	157.9	157.6	159.4	157.5	159.9	157.9	158.6	158.5
Farm value (1982-84=100)	120.6	126.1	119.0	111.7	123.4	120.2	112.5	108.1	113.1	118.2
Farm-retail spread (1982-84=100)	198.1	192.9	202.7	210.5	200.8	200.5	214.5	215.3	211.0	204.9
Farm value-retail cost (%)	41.2	42.9	40.3	37.9	41.4	40.8	37.6	36.6	38.2	39.9
Eggs										
Retail cost (1982-84=100)	140.0	137.1	128.1	129.6	128.8	124.0	133.9	131.7	127.1	129.5
Farm value (1982-84=100)	99.3	89.6	74.9	74.2	84.2	74.4	68.2	89.9	65.6	82.0
Farm-retail spread (1982-84=100)	213.0	222.5	223.7	229.1	208.9	213.0	251.9	206.8	237.5	214.9
Farm value-retail cost (%)	45.6	42.0	37.6	36.8	42.0	38.6	32.7	43.9	33.2	40.7
Cereal and bakery products										
Retail cost (1982-84=100)	177.6	181.1	185.0	184.8	184.8	185.9	185.6	186.0	186.1	187.2
Farm value (1982-84=100)	107.7	94.4	82.5	85.7	77.7	75.1	75.0	75.1	75.6	76.2
Farm-retail spread (1982-84=100)	187.4	193.2	199.2	198.6	199.7	201.4	201.0	201.5	201.5	202.7
Farm value-retail cost (%)	7.4	6.4	5.5	5.7	5.1	4.9	4.9	4.9	5.0	5.0
Fresh fruit										
Retail cost (1982-84=100)	245.1	258.2	294.3	301.7	287.8	294.8	294.7	288.4	283.0	282.2
Farm value (1982-84=100)	137.0	141.3	153.7	155.4	146.9	144.2	151.7	149.8	149.9	149.9
Farm-retail spread (1982-84=100)	295.0	312.2	359.3	369.2	352.8	364.3	360.7	352.4	344.5	343.3
Farm value-retail cost (%)	17.7	17.3	16.5	16.3	16.1	15.5	16.3	16.4	16.7	16.8
Fresh vegetables										
Retail cost (1982-84=100)	194.6	215.8	209.3	206.2	209.1	214.0	223.0	211.0	212.1	213.6
Farm value (1982-84=100)	118.7	124.5	118.1	135.0	104.4	121.1	120.8	95.8	109.4	126.0
Farm-retail spread (1982-84=100)	233.6	262.7	256.2	242.8	262.9	261.8	275.6	270.2	264.9	258.6
Farm value-retail cost (%)	20.7	19.6	19.2	22.2	17.0	19.2	18.4	15.4	17.5	20.0
Processed fruits and vegetables										
Retail cost (1982-84=100)	147.9	150.6	154.8	153.3	154.7	154.7	152.8	152.6	152.4	151.7
Farm value (1982-84=100)	115.9	115.1	113.5	113.2	111.2	111.7	113.7	113.6	113.2	113.1
Farm-retail spread (1982-84=100)	157.9	161.7	167.7	165.8	168.3	168.1	165	164.8	164.6	163.7
Farm value-retail cost (%)	18.6	18.2	17.4	17.6	17.1	17.2	17.7	17.7	17.7	17.7
Fats and oils										
Retail cost (1982-84=100)	141.7	146.9	148.3	149.0	145.3	145.1	147.0	145.6	145.9	144.8
Farm value (1982-84=100)	109.4	118.9	89.0	96.4	79.4	78.2	81.0	80.3	86.5	88.4
Farm-retail spread (1982-84=100)	153.6	157.2	170.0	168.4	169.5	169.7	171.3	169.6	167.8	165.5
Farm value-retail cost (%)	20.8	21.8	16.2	17.4	14.7	14.5	14.8	14.8	15.9	16.4

See footnotes at end of table, next page.

Table 8—Farm-Retail Price Spreads (continued)

	Annual			1999			2000			
	1997	1998	1999	Apr	Nov	Dec	Jan	Feb	Mar	Apr
Beef, all fresh retail value (cts/lb)	253.8	253.3	260.5	259.0	263.5	265.2	265.9	270.2	271.2	273.8
Beef, Choice										
Retail value (cents/lb.)[2]	279.5	277.1	287.8	283.9	300.0	301.8	294.7	293.6	297.9	305.4
Wholesale value (cents/lb)[3]	158.2	153.8	171.6	166.1	180.5	181.8	177.5	174.5	183.3	191.0
Net farm value (cents/lb)[4]	137.2	130.8	141.1	141.1	149.7	147.9	146.0	146.5	154.2	158.9
Farm-retail spread (cents/lb)	142.3	146.3	146.7	142.8	150.3	153.9	148.7	147.1	143.7	146.5
Wholesale-retail (cents/lb)[5]	121.3	123.3	116.2	117.8	119.5	120.0	117.2	119.1	114.6	114.4
Farm-wholesale (cents/lb)[6]	21.0	23.0	30.5	25.0	30.8	33.9	31.5	28.0	29.1	32.1
Farm value-retail value (%)	49.1	47.2	49.0	49.7	49.9	49.0	49.5	49.9	51.8	52.0
Pork										
Retail value (cents/lb.)[2]	245.0	242.7	241.5	234.8	244.7	246.1	245.7	251.0	252.8	255.5
Wholesale value (cents/lb)[3]	123.1	97.3	99.0	95.0	97.7	103.6	104.6	110.1	112.6	118.6
Net farm value (cents/lb)[4]	95.3	61.2	60.4	56.4	62.4	66.8	68.0	74.1	77.4	88.4
Farm-retail spread (cents/lb)	149.7	181.5	181.1	178.4	182.3	179.3	177.7	176.9	175.4	167.1
Wholesale-retail (cents/lb)[5]	121.9	145.4	142.5	139.8	147.0	142.5	141.1	140.9	140.2	136.9
Farm-wholesale (cents/lb)[6]	27.8	36.1	38.6	38.6	35.3	36.8	36.6	36.0	35.2	30.2
Farm value-retail value (%)	38.9	25.2	25.0	24.0	25.5	27.1	27.7	29.5	30.6	34.6

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			1998			1999			
	1997	1998	1999	II	III	IV	I	II	III	IV
					*1987=100**					
Labor—hourly earnings										
and benefits	474.3	490.4	502.5	488.3	493.0	494.6	497.8	502.5	503.4	506.3
Processing	486.0	499.3	511.8	497.7	500.7	504.9	504.6	513.0	513.7	516.2
Wholesaling	536.2	552.5	564.6	552.5	555.4	555.1	556.9	562.3	566.4	572.4
Retailing	435.2	454.1	465.8	450.6	457.8	459.4	464.9	465.6	465.3	467.3
Packaging and containers	390.3	395.5	399.4	396.7	394.9	391.9	390.3	396.4	403.0	407.7
Paperboard boxes and containers	341.9	365.2	373.0	368.7	366.8	359.8	355.7	368.3	380.2	387.8
Metal cans	491.0	487.9	486.6	484.7	486.0	486.6	486.6	486.6	486.6	486.6
Paper bags and related products	441.9	432.9	440.9	434.0	430.2	428.5	425.6	435.7	446.3	455.8
Plastic films and bottles	326.6	322.8	324.2	325.0	321.0	318.5	319.7	321.4	325.9	329.6
Glass containers	447.4	446.8	447.1	446.9	446.1	447.3	447.8	447.8	447.0	445.8
Metal foil	233.4	232.0	227.3	232.6	232.6	230.9	228.2	226.1	226.7	228.0
Transportation services	430.0	428.3	394.0	431.8	426.3	425.0	403.9	393.7	394.2	394.2
Advertising	609.4	624.5	623.7	624.2	624.5	626.2	622.2	622.9	623.9	625.6
Fuel and power	668.5	619.7	651.5	622.9	629.2	601.6	586.6	627.3	681.1	711.9
Electric	499.2	492.1	489.4	489.3	511.8	485.0	479.0	484.0	505.9	488.5
Petroleum	616.7	457.0	565.9	470.0	439.2	423.3	388.4	504.0	613.2	758.1
Natural gas	1,214.0	1,239.4	1,235.6	1,242.1	1,268.5	1,217.7	1,206.3	1,222.8	1,272.7	1,240.4
Communications, water and sewage	302.8	307.6	309.3	308.0	308.5	308.5	309.3	308.5	308.9	310.6
Rent	265.6	260.5	256.9	260.4	260.4	258.8	257.5	257.3	256.4	256.3
Maintenance and repair	514.9	529.3	541.6	527.1	531.1	535.1	537.9	540.7	542.5	545.3
Business services	512.3	522.9	531.9	521.2	521.8	530.3	527.7	528.7	533.3	536.1
Supplies	337.8	332.3	327.7	332.4	331.4	329.5	326.1	325.9	327.1	331.7
Property taxes and insurance	580.1	598.3	619.7	595.4	600.7	606.1	609.6	615.2	622.8	631.3
Interest, short-term	108.9	103.7	103.7	106.7	105.6	96.0	93.2	96.7	109.7	115.2
Total marketing cost index	459.9	467.2	472.2	466.9	468.6	468.0	464.8	470.2	474.8	479.0

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

Livestock & Products

Table 10—U.S. Meat Supply & Use

	Beg. stocks	Production[1]	Imports	Total supply	Exports	Ending stocks	Consumption Total	Consumption Per capita[2]	Conversion factor[3]	Primary market price[4]
	Million lbs.[5]							Lbs.		$/cwt
Beef										
1997	377	25,490	2,343	28,210	2,136	465	25,609	67	0.700	66.32
1998	465	25,760	2,642	28,867	2,171	393	26,303	68	0.700	61.48
1999	393	26,493	2,874	29,760	2,329	411	27,020	69	0.700	65.56
2000	411	26,359	3,015	29,785	2,400	365	27,020	69	0.700	68-71
2001	365	25,206	3,050	28,621	2,345	365	25,911	65	0.700	70-76
Pork										
1997	366	17,274	633	18,273	1,044	408	16,821	49	0.776	54.30
1998	408	19,011	704	20,123	1,229	586	18,308	53	0.776	34.72
1999	586	19,308	827	20,721	1,168	488	19,065	54	0.776	34.00
2000	488	18,804	945	20,237	1,200	500	18,537	52	0.776	44-46
2001	500	18,880	915	20,295	1,200	500	18,595	52	0.776	43-47
Veal[6]										
1997	7	334	0	341	0	8	333	1	0.83	82
1998	8	262	0	270	0	5	265	1	0.83	82
1999	5	235	0	240	0	5	235	1	0.83	90
2000	5	223	0	228	0	4	224	1	0.83	101
2001	4	208	0	212	0	4	208	1	0.83	105
Lamb and mutton										
1997	9	260	83	352	5	14	333	1	0.89	88
1998	14	251	112	377	6	12	359	1	0.89	74
1999	12	248	113	373	5	9	359	1	0.89	76
2000	9	225	114	348	6	10	332	1	0.89	77
2001	10	220	114	344	4	10	330	1	0.89	78
Total red meat										
1997	759	43,358	3,059	47,176	3,185	895	43,096	118	--	--
1998	895	45,284	3,458	49,637	3,406	996	45,235	123	--	--
1999	996	46,284	3,814	51,094	3,502	913	46,679	125	--	--
2000	913	45,611	4,074	50,598	3,606	879	46,113	122	--	--
2001	879	44,514	4,079	49,472	3,549	879	45,044	119		
										¢/lb
Broilers										
1997	641	27,041	5	27,687	4,664	607	22,416	72	0.859	59
1998	607	27,612	5	28,225	4,673	711	22,841	73	0.859	63
1999	711	29,468	4	30,183	4,741	796	24,647	78	0.859	58
2000	796	30,701	4	31,501	4,950	890	25,661	80	0.859	56
2001	890	32,165	4	33,059	5,000	880	27,179	84	0.859	56
Mature chickens										
1997	6	510	0	516	384	7	125	1	1.0	--
1998	7	525	0	533	426	6	101	1	1.0	--
1999	6	554	0	562	393	8	162	1	1.0	--
2000	8	554	0	564	425	5	132	1	1.0	--
2001	5	564	0	571	440	10	121	1	1.0	--
Turkeys										
1997	328	5,412	1	5,741	606	415	4,720	18	1.0	65
1998	415	5,215	0	5,630	446	304	4,880	18	1.0	62
1999	304	5,230	1	5,535	379	254	4,902	18	1.0	69
2000	254	5,341	0	5,595	400	250	4,945	18	1.0	70
2001	250	5,380	1	5,631	410	275	4,945	18	1.0	68
Total poultry										
1997	975	32,964	6	33,944	5,654	1,029	27,261	90	--	--
1998	1,029	33,352	6	34,387	5,545	1,022	27,821	91	--	--
1999	1,022	35,252	7	36,281	5,513	1,058	29,710	96	--	--
2000	1,058	36,596	6	37,659	5,775	1,145	30,737	98	--	--
2001	1,145	38,109	7	39,261	5,850	1,165	32,245	102		
Red meat and poultry										
1997	1,734	76,322	3,065	81,120	8,839	1,924	70,357	208	--	--
1998	1,924	78,636	3,464	84,024	8,950	2,018	73,057	214	--	--
1999	2,018	81,536	3,821	87,375	9,014	1,971	76,390	221	--	--
2000	1,971	82,207	4,080	88,257	9,381	2,024	76,851	221	--	--
2001	2,024	82,623	4,086	88,733	9,399	2,044	77,289	221	--	--

-- = 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 Total	Consumption Per capita	Primary market price*
	Million doz.								No.	¢/doz.
1994	10.7	6,177.6	3.7	6,192.0	187.6	805.4	14.9	5,184.1	238.7	67.3
1995	14.9	6,215.6	4.1	6,234.6	208.9	847.2	11.2	5,167.3	235.6	72.9
1996	11.2	6,350.7	5.4	6,367.3	253.1	863.8	8.5	5,241.8	236.8	88.2
1997	8.5	6,473.1	6.9	6,488.5	227.8	894.7	7.4	5,358.6	240.1	81.2
1998	7.4	6,657.9	5.8	6,671.2	218.8	921.8	8.4	5,522.2	244.9	75.8
1999	8.4	6,912.0	7.4	6,927.8	161.7	941.7	7.6	5,816.8	255.5	65.6
2000	7.6	7,067.0	4.0	7,078.6	160.0	972.4	5.0	5,941.2	258.6	61.1
2001	5.0	7,170.0	5.0	7,180.0	170.0	1,015.0	5.0	5,990.0	258.6	58.0

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

Table 12—U.S. Milk Supply & Use[1]

	Production	Farm use	Commercial Farm marketings	Commercial Beg. stocks	Imports	Total commercial supply	CCC net removals	Commercial Ending stocks	Commercial Disappearance	All milk price[1]	CCC net removals Skim solids basis	CCC net removals Total solids basis[2]
	Million lbs. (milkfat basis)									$/cwt	Billion lbs.	
1993	150.6	1.8	148.8	4.7	2.8	156.3	6.6	4.5	145.1	12.80	3.9	5.0
1994	153.6	1.7	151.9	4.5	2.9	159.3	4.8	4.3	150.3	12.97	3.7	4.2
1995	155.3	1.6	153.7	4.3	2.9	160.9	2.1	4.1	154.9	12.74	4.4	3.5
1996	154.0	1.5	153.5	4.1	2.9	159.5	0.1	4.7	154.7	14.74	0.7	0.5
1997	156.1	1.4	154.7	4.7	2.7	162.1	1.1	4.9	156.1	13.34	3.7	2.7
1998	157.4	1.4	156.1	4.9	4.6	165.5	0.4	5.3	159.9	15.42	4.0	2.6
1999	162.7	1.4	161.3	5.3	4.7	171.4	0.3	6.1	164.9	14.36	6.5	4.0
2000	167.4	1.3	166.1	6.1	4.0	176.2	0.8	5.5	169.9	12.70	8.3	5.3
2001	167.1	1.3	165.8	5.5	4.0	175.3	0.3	5.5	169.5	12.75	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 1997	Annual 1998	Annual 1999	1999 Mar	1999 Oct	1999 Nov	1999 Dec	Jan	Feb	Mar
Broilers										
Federally inspected slaughter certified (mil. lb.)	27,270.7	27,862.7	29,741.4	2,607.4	2,481.0	2,420.1	2,466.0	2,420.3	2,487.5	2,678.7
Wholesale price, 12-city (cents/lb.)	58.8	63.1	58.1	56.8	54.9	59.5	58.4	55.4	53.8	54.5
Price of grower feed ($/ton)[1]	157.7	128.8	102.8	106.9	97.1	97.1	99.5	104.5	108.1	110.8
Broiler-feed price ratio[2]	4.7	6.3	7.2	6.7	6.9	7.7	7.4	6.7	6.2	6.3
Stocks beginning of period (mil. lb.)	641.3	606.8	711.1	713.7	884.7	811.1	787.1	795.6	796.4	786.7
Broiler-type chicks hatched (mil.)	8,321.6	8,495.1	8,708.7	755.8	697.8	673.7	747.9	749.4	701.0	756.4
Turkeys										
Federally inspected slaughter certified (mil. lb.)	5,477.9	5,280.6	5,296.5	431.7	472.6	490.0	430.0	399.9	414.9	469.6
Wholesale price, Eastern U.S. 8-16 lb. young hens (cents/lb.)	64.9	62.2	69.0	61.7	79.3	79.0	72.4	61.6	61.8	65.4
Price of turkey grower feed ($/ton)[1]	142.7	115.9	94.9	98.7	90.8	91.2	91.7	95.8	99.2	100.1
Turkey-feed price ratio[2]	5.6	6.7	8.7	7.5	10.0	10.0	9.2	7.6	7.2	7.6
Stocks beginning of period (mil. lb.)	328.0	415.1	304.3	375.6	596.4	494.5	252.3	254.3	312.4	347.3
Poults placed in U.S. (mil.)	321.5	297.8	297.3	25.9	22.3	23.4	25.5	24.7	24.2	25.7
Eggs										
Farm production (mil.)	77,677	79,941	82,939	7,052	7,131	7,016	7,279	7,155	6,659	7,220
Average number of layers (mil.)	304	313	323	323	325	328	329	329	330	331
Rate of lay (eggs per layer on farms)	255.3	255.4	256.8	21.9	21.9	21.4	22.1	21.8	20.2	21.8
Cartoned price, New York, grade A large (cents/doz.)[3]	81.2	75.8	65.6	75.5	56.9	67.2	65.4	62.2	67.1	60.7
Price of laying feed ($/ton)[1]	160.0	137.7	123.2	120.2	128.5	108.1	121.4	130.3	121.4	143.5
Egg-feed price ratio[2]	8.8	9.8	9.8	11.3	7.8	11.9	10.1	8.9	11.3	8.0
Stocks, first of month Frozen (mil. doz.)	7.7	7.4	8.4	8.2	7.2	6.8	6.4	7.6	9.2	7.0
Replacement chicks hatched (mil.)	424.5	438.4	448.8	41.2	38.6	33.1	32.7	34.1	35.5	39.6

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

Table 14—Dairy

	Annual			1999						
	1997	1998	1999	Mar	Oct	Nov	Dec	Jan	Feb	Mar
Class III (BFP before 2000) 3.5% fat	12.05	14.20	12.43	11.62	11.49	9.79	9.63	10.05	9.54	9.54
Wholesale prices										
Butter, Central States (cents/lb.) [1]	116.2	177.6	125.2	130.3	113.7	109.6	94.2	91.6	92.9	99.7
Am. cheese, Wis. assembly pt. (cents/lb.)	132.4	158.1	142.2	134.0	134.0	117.3	115.7	114.6	111.6	112.2
Nonfat dry milk (cents/lb.) [2]	110.0	106.9	103.5	102.4	104.5	103.4	101.7	100.9	100.2	100.1
USDA net removals										
Total (mil. lb.) [3]	1,090.3	365.6	343.5	32.2	27.2	40.3	55.1	88.4	99.3	86.3
Butter (mil. lb.)	38.4	6.3	3.7	0.4	0.5	0.8	1.0	2.0	2.6	1.6
Am. cheese (mil. lb.)	11.3	8.2	4.6	0.4	0.4	0.2	0.4	0.4	0.7	1.8
Nonfat dry milk (mil. lb.)	298.0	326.4	540.6	37.3	33.4	38.7	68.8	60.3	63.5	76.5
Milk										
Milk prod. 20 states (mil. lb.)	133,314	134,900	140,029	12,228	11,549	11,315	11,928	12,256	11,691	12,679
Milk per cow (lb.)	17,180	17,501	18,103	1,585	1,491	1,459	1,538	1,578	1,505	1,631
Number of milk cows (1,000)	7,760	7,708	7,735	7,713	7,746	7,756	7,757	7,765	7,766	7,774
U.S. milk production (mil. lb.) [4]	156,091	157,348	162,711	14,265	13,418	13,141	13,847	14,252	13,590	14,734
Stocks, beginning [3]										
Total (mil. lb.)	4,714	4,907	5,301	7,823	7,487	7,060	6,036	6,179	7,623	8,357
Commercial (mil. lb.)	4,704	4,889	5,274	7,795	7,444	7,016	5,992	6,135	7,576	8,301
Government (mil. lb.)	10	18	28	28	43	44	44	44	47	57
Imports, total (mil. lb.) [3]	2,698	4,588	4,741	397	471	371	431	265	316	--
Commercial disappearance (mil. lb.) [3]	156,118	159,779	164,881	14,145	14,174	14,384	13,964	12,875	12,978	--
Butter										
Production (mil. lb.)	1,151.2	1,168.0	1,275.0	119.4	103.1	103.5	119.8	142.3	130.3	124.3
Stocks, beginning (mil. lb.)	13.4	20.5	25.9	95.0	71.4	64.2	30.2	25.1	72.9	88.9
Commercial disappearance (mil. lb.)	1,108.7	1,222.5	1,308.4	115.2	113.2	137.2	124.4	93.2	113.8	--
American cheese										
Production (mil. lb.)	3,285.6	3,314.7	3,576.5	317.7	295.3	288.1	307.7	316.7	302.3	317.5
Stocks, beginning (mil. lb.)	379.7	410.4	407.7	464.7	473.6	259.4	448.2	458.0	480.1	515.3
Commercial disappearance (mil. lb.)	3,269.0	3,338.6	3,586.1	318.2	318.5	305.1	307.2	296.5	268.4	--
Other cheese										
Production (mil. lb.)	4,044.9	4,177.5	4,367.5	379.7	376.6	400.3	396.1	370.2	342.3	397.9
Stocks, beginning (mil. lb.)	107.3	70.0	109.5	171.1	177.6	162.6	143.5	163.3	187.9	193.0
Commercial disappearance (mil. lb.)	4,366.6	4,452.0	4,678.2	404.1	426.8	454.0	416.9	367.4	362.1	--
Nonfat dry milk										
Production (mil. lb.)	1,271.6	1,135.4	1,378.2	128.8	105.3	102.4	126.1	133.6	133.1	142.7
Stocks, beginning (mil. lb.)	71.1	103.3	56.9	112.6	96.6	97.7	102.2	115.5	115.5	173.4
Commercial disappearance (mil. lb.)	894.1	866.9	790.6	82.0	72.3	60.6	44.9	43.1	43.1	--
Frozen dessert										
Production (mil. gal.) [5]	1,290.0	1,324.3	1,311.8	116.3	94.5	88.0	84.8	83.8	95.6	120.1

	Annual			1998		1999				2000
	1,997	1,998	1,999	III	IV	I	II	III	IV	I
Milk production (mil. lb.)	156,091	157,348	162,711	38,513	38,901	40,505	42,029	39,771	40,406	42,576
Milk per cow (lb.)	16,871	17,189	17,771	4,211	4,262	4,437	4,591	4,337	4,406	4,634
No. of milk cows (1,000)	9,252.00	9,154.00	9,156.00	9,145.00	9,128.00	9,128.00	9,155.00	9,171.00	9,170.00	9,187.00
Milk-feed price ratio	1.54	1.97	2.03	2.05	2.46	2.20	1.81	2.12	1.99	1.67
Returns over concentrate	9.8	12.15	11.45	12.25	14.8	13	9.90	11.9	10.95	8.9

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

Information contact: LaVerne Williams (202) 694-5190

Table 15—Wool

	Annual			1998		1999				2000
	1997	1998	1999	III	IV	I	II	III	IV	I
U.S. wool price (¢/lb.) [1]	238	162	110	142	115	115	116	110	98	97
Imported wool price (¢/lb.) [2]	206	164	136	141	141	146	142	133	125	133
U.S. mill consumption, scoured										
Apparel wool (1,000 lb.)	130,386	98,373	65,468	21,948	17,530	17,767	17,352	16,253	14,096	--
Carpet wool (1,000 lb.)	13,576	16,331	15,017	4,020	4,388	4,538	3,855	3,426	3,198	--

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

Information contact: Mae Dean Johnson (202) 694-5299

Table 16—Meat Animals

	Annual			1999			2000			
	1997	1998	1999	Apr	Nov	Dec	Jan	Feb	Mar	Apr
Cattle on feed (7 states, 1000+ head capacity)										
Number on feed (1,000 head)[1]	8,943	9,455	9,021	8,899	9,776	10,020	9,752	9,885	9,695	9,573
Placed on feed (1,000 head)	20,765	19,697	21,446	1,443	1,823	1,408	1,931	1,606	1,716	1,450
Marketings (1,000 head)	19,552	19,440	20,124	1,681	1,530	1,601	1,747	1,749	1,764	1,591
Other disappearance (1,000 head)	701	691	676	78	62	75	51	47	74	71
Market prices ($/cwt)										
Slaughter cattle										
Choice steers, 1,100-1,300 lb.										
Texas	65.99	61.75	65.89	65.34	70.28	69.01	69.07	68.88	71.74	73.13
Neb. direct	66.32	61.48	65.65	65.19	70.31	69.05	67.97	68.24	71.74	73.52
Boning utility cows, Sioux Falls	34.27	36.20	38.40	36.80	37.88	38.80	39.19	38.80	41.58	43.81
Feeder steers										
Medium no. 1, Oklahoma City										
600-650 lb.	81.34	77.70	82.64	82.73	87.19	91.33	93.13	94.55	98.96	95.47
750-800 lb.	76.19	71.80	76.39	70.50	82.59	88.48	87.50	84.03	83.84	84.28
Slaughter hogs										
Barrows and gilts, 51-52 percent lean										
National Base converted to live equal.	54.30	34.72	34.02	31.69	35.54	37.70	38.32	41.58	43.52	49.59
Sows, Iowa, S.MN 1-2 300-400 lb.	40.24	20.29	19.26	19.49	19.25	19.96	24.60	25.35	26.86	30.33
Slaughter sheep and lambs										
Lambs, Choice, San Angelo	87.95	74.20	75.97	70.50	78.00	83.29	73.71	76.83	78.17	78.25
Ewes, Good, San Angelo	49.33	40.90	42.32	46.63	41.17	41.21	45.67	51.92	49.92	47.08
Feeder lambs										
Choice, San Angelo	104.43	79.59	81.05	83.57	82.54	88.67	84.63	99.54	99.58	90.97
Wholesale meat prices, Midwest										
Boxed beef cut-out value										
Choice, 700-800 lb.	102.75	98.60	111.55	107.42	117.20	116.88	113.74	112.18	118.25	123.97
Select, 700-800 lb.	96.15	92.19	101.99	102.11	103.19	105.67	106.09	106.88	112.56	115.40
Canner and cutter cow beef	64.50	61.49	66.66	63.51	--	68.38	69.86	72.38	72.67	74.38
Pork cutout	--	53.07	53.45	49.83	54.50	58.64	57.65	62.18	63.62	68.92
Pork loins, bone-in, 1/4 " trim,14-19 lb.	128.75	102.04	100.25	99.35	93.13	102.57	99.29	110.66	110.06	127.48
Pork bellies, 12-14 lb.	73.91	52.38	57.43	49.23	71.50	71.37	80.45	82.40	85.00	93.70
Hams, bone-in, trimmed, 20-23 lb.	--	--	47.90	40.06	66.50	55.96	47.41	46.50	49.31	48.84
All fresh beef retail price	253.77	253.28	260.50	259.00	263.50	265.20	265.90	270.20	271.20	273.80
Commercial slaughter (1,000 head)[2]										
Cattle	36,318	35,465	36,150	2,971	2,940	2,875	2,937	2,937	3,131	2,782
Steers	17,529	17,428	17,936	1,479	1,376	1,425	1,432	1,396	1,526	1,409
Heifers	11,528	11,448	11,866	977	980	901	980	1,046	1,077	923
Cows	6,564	5,983	5,708	461	533	498	474	445	472	402
Bull and stags	696	606	639	54	52	51	51	50	56	48
Calves	1,575	1,458	1,484	97	104	113	93	95	103	81
Sheep and lambs	3,911	3,911	3,698	310	329	356	282	293	344	345
Hogs	91,960	101,029	101,544	8,530	8,896	8,885	8,141	8,067	8,811	7,210
Barrows and gilts	88,409	97,030	97,738	8,212	8,581	8,583	7,881	7,807	8,516	6,963
Commercial production (mil. lb.)										
Beef	25,384	25,653	25,656	2,155	2,146	2,114	2,178	2,175	2,300	2,026
Veal	324	252	250	18	19	21	17	18	20	17
Lamb and mutton	257	248	247	21	22	24	19	20	24	23
Pork	17,244	18,981	18,981	1,629	1,708	1,704	1,570	1,554	1,700	1,394

	Annual			1998	1999				2000	
	1997	1998	1999	IV	I	II	III	IV	I	II
Hogs and pigs (U.S.)[3]										
Inventory (1,000 head)[1]	56,124	61,158	62,206	63,488	62,206	60,191	60,896	60,776	59,507	58,147
Breeding (1,000 head)[1]	6,578	6,957	6,682	6,875	6,682	6,527	6,515	6,301	6,244	6,215
Market (1,000 head)[1]	49,546	54,200	55,523	56,612	55,523	53,663	54,380	54,474	53,264	51,933
Farrowings (1,000 head)	11,479	12,061	11,666	2,993	2,891	2,986	2,920	2,869	2,819	2,868
Pig crop (1,000 head)	99,584	105,004	102,569	25,902	25,247	26,270	25,860	25,192	24,777	--
Cattle on Feed, 7 states (1,000 head)[4]										
Steers and steer calves	5,410	5,803	5,432	5,086	5,432	5,341	4,849	5,286	5,768	5,736
Heifers and heifer calves	3,455	3,615	3,552	3,268	3,552	3,527	3,302	3,479	3,942	3,800
Cows and bulls	78	59	37	32	37	31	44	28	42	37

-- = 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											
	Set-aside[3]	Planted	Harvested	Yield	Production	Total supply[4]	Feed & residual	Other domestic use	Exports	Total use	Ending stocks	Farm price[5]
	Mil. Acres			Bu./acre	Mil. bu.							$/bu.
Wheat												
1996/97	--	75.1	62.8	36.3	2,277	2,746	308	993	1,002	2,302	444	4.30
1997/98	--	70.4	62.8	39.5	2,481	3,020	251	1,007	1,040	2,298	722	3.38
1998/99	--	65.8	59.0	43.2	2,547	3,373	397	988	1,042	2,427	946	2.65
1999/00*	--	62.8	53.9	42.7	2,302	3,338	325	1,000	1,075	2,400	938	2.50
2000/01*	--	61.7	52.5	42.6	2,239	3,272	300	1,010	1,125	2,435	837	2.40-2.90
		Mil. acres		Lb./acre			Mil. cwt (rough equiv)					$/cwt
Rice[6]												
1996/97	--	2.8	2.8	6,120.0	171.6	207.1	--	6/ 102.7	77.2	179.9	27.2	9.96
1997/98	--	3.1	3.1	5,897.0	183.0	219.4	--	6/ 104.6	86.9	191.5	27.9	9.70
1998/99	--	3.3	3.3	5,669.0	188.1	226.5	--	6/ 119.1	85.3	204.4	22.1	8.89
1999/00*	--	3.6	3.6	5,908.0	210.5	243.3	--	6/ 116.8	87.0	203.8	39.5	6.05-6.15
2000/01*	--	3.4	3.4	5,935.0	200.0	250.5	--	6/ 119.6	87.0	206.6	43.9	4.75-5.75
		Mil. acres		Bu./acre				Mil. bu.				$/bu.
Corn												
1996/97	--	79.2	72.6	127.1	9,233	9,672	5,277	1,714	1,797	8,789	883	2.71
1997/98	--	79.5	72.7	126.7	9,207	10,099	5,482	1,805	1,504	8,791	1,308	2.43
1998/99	--	80.2	72.6	134.4	9,759	11,085	5,472	1,846	1,981	9,298	1,787	1.94
1999/00*	--	77.4	70.5	133.8	9,437	11,239	5,650	1,930	1,875	9,455	1,784	1.85-1.95
2000/01*	--	77.9	71.1	137.0	9,740	11,534	5,675	1,975	1,900	9,550	1,984	1.60-2.00
		Mil. acres		Bu./acre				Mil bu.				$/bu.
Sorghum												
1996/97	--	13.1	11.8	67.3	795	814	516	45	205	766	47	2.34
1997/98	--	10.1	9.2	69.2	634	681	365	55	212	632	49	2.21
1998/99	--	9.6	7.7	67.3	520	569	262	45	197	504	65	1.66
1999/00*	--	9.3	8.5	69.7	595	660	325	55	235	615	45	1.55-1.65
2000/01*	--	9.0	8.0	69.5	556	601	275	55	225	555	46	1.30-1.70
		Mil. acres		Bu./acre				Mil. bu.				$/bu.
Barley												
1996/97	--	7.1	6.7	58.5	392	529	217	172	31	419	109	2.74
1997/98	--	6.7	6.2	58.1	360	510	144	172	74	390	119	2.38
1998/99	--	6.3	5.9	60.0	352	501	161	170	28	360	142	1.98
1999/00*	--	5.2	4.8	59.2	282	449	135	172	30	337	112	2.15
2000/01*	--	5.7	5.3	61.0	320	462	130	172	25	327	135	1.75-2.15
		Mil. acres		Bu./acre				Mil. bu.				$/bu.
Oats												
1996/97	--	4.6	2.7	57.7	153	317	172	76	3	250	67	1.96
1997/98	--	5.1	2.8	59.5	167	332	185	72	2	258	74	1.60
1998/99	--	4.9	2.8	60.2	166	348	196	69	2	266	81	1.10
1999/00*	--	4.7	2.5	59.6	146	328	180	68	2	250	78	1.10
2000/01*	--	4.4	2.5	59.8	148	326	180	68	2	250	76	0.90-1.30
		Mil. acres		Bu./acre				Mil. bu.				$/bu.
Soybeans[7]												
1996/97	--	62.6	61.6	35.3	2,177	2,516	112	1,370	851	2,333	183	6.72
1997/98	--	70.0	69.1	38.9	2,689	2,826	156	1,597	873	2,626	200	6.47
1998/99	--	72.0	70.4	38.9	2,741	2,944	204	1,590	801	2,595	348	4.93
1999/00*	--	73.8	72.5	36.5	2,643	2,994	169	1,585	940	2,694	300	4.65
2000/01*	--	74.9	73.9	40.0	2,955	3,258	173	1,620	970	2,763	495	4.00-5.00
								Mil. lbs.				¢/lb.
Soybean oil												
1996/97	--	--	--	--	15,752	17,821	--	14,263	2,037	16,300	1,520	22.50
1997/98	--	--	--	--	18,143	19,723	--	15,262	3,079	18,341	1,382	25.84
1998/99	--	--	--	--	18,081	19,546	--	15,655	2,372	18,027	1,520	19.90
1999/00*	--	--	--	--	17,935	19,550	--	16,250	1,400	17,650	1,900	16.25
2000/01*	--	--	--	--	18,385	20,375	--	16,700	1,800	18,500	1,875	15.00-18.00
								1,000 tons				$/ton[8]
Soybean meal												
1996/97	--	--	--	--	34,210	34,524	--	27,320	6,994	34,314	210	270.9
1997/98	--	--	--	--	38,176	38,443	--	28,895	9,329	38,225	218	185.5
1998/99	--	--	--	--	37,792	38,109	--	30,662	7,117	37,779	330	138.5
1999/00*	--	--	--	--	37,620	38,000	--	30,900	6,800	37,700	300	165.0
2000/01*	--	--	--	--	38,485	38,850	--	31,600	7,000	38,600	250	145-170

See footnotes at end of table, next page

Table 17—Supply & Utilization (continued)

	Area Set-aside[3]	Area Planted	Area Harvested	Yield	Production	Total supply[4]	Feed & residual	Other domestic use	Exports	Total use	Ending stocks	Farm price[5]
	Mil. Acres			Lb./acre	Mil. Bales							¢/lb.
Cotton[9]												
1996/97	1.7	14.7	12.9	705	18.9	22.0	--	11.1	6.9	18.0	4.0	69.3
1997/98	0.3	13.9	13.4	673	18.8	22.8	--	11.3	7.5	18.8	3.9	65.2
1998/99	--	13.4	10.7	625	13.9	18.2	--	10.4	4.3	14.7	3.9	60.2
1999/00*	--	14.9	13.4	607	17.0	21.0	--	10.1	6.6	16.7	4.3	44.8
2000/01*	--	15.6	14.4	635	19.0	23.4	--	10.2	8.0	18.2	5.1	--

-- = Not available or not applicable. *May 12, 2000 Supply and Demand Estimates. 1. Marketing year beginning June 1 for wheat, barley, and oats; August 1 for cotton and rice; September 1 for soybeans, corn, and sorghum; October 1 for soymeal 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. *Information contacts: Wheat, rice, feed grains, Jenny Gonzales (202) 694-5296; soybeans, soybean products, and cotton, Mae Dean Johnson (202) 694-5299*

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

	Marketing year[1] 1997/98	1998/99	1999/00	1999 Mar	Oct	Nov	Dec	2000 Jan	Feb	Mar
Wheat, no. 1 HRW, Kansas City ($/bu.)[2]	3.71	3.08	--	3.02	2.80	2.89	2.81	2.90	2.94	2.91
Wheat, DNS, Minneapolis ($/bu.)[3]	4.31	3.83	--	3.79	3.70	3.78	3.64	3.37	3.59	3.65
Rice, S.W. La. ($/cwt)[4]	18.92	16.79	--	16.52	14.00	13.85	13.58	13.25	12.88	12.25
Corn, no. 2 yellow, 30-day, Chicago ($/bu.)[5]	2.56	2.06	--	2.20	1.90	1.90	1.93	2.06	2.12	2.17
Sorghum, no. 2 yellow, Kansas City ($/cwt)[5]	4.11	3.29	--	3.48	2.71	2.71	2.87	3.20	3.28	3.51
Barley, feed, Duluth ($/bu.)	1.90	--	--	--	--	--	--	--	--	--
Barley, malting Minneapolis ($/bu.)	2.50	--	--	--	--	--	--	--	--	--
U.S. cotton price, SLM, 1-1/16 in. (¢/lb.)[6]	67.79	60.12	--	58.17	49.46	48.12	46.65	51.92	54.29	57.67
Northern Europe prices cotton index (¢/lb.)[7]	72.11	58.97	--	56.74	47.36	46.13	44.24	47.80	53.63	57.45
U.S. M 1-3/32 in. (¢/lb.)[8]	77.98	74.08	--	--	56.88	54.31	52.75	58.69	60.94	64.70
Soybeans, no. 1 yellow, 30-day Chicago ($/bu)	6.51	5.13	--	4.69	4.60	4.50	4.55	4.84	4.96	5.05
Soybean oil, crude, Decatur (¢/lb.)	25.84	19.90	--	19.54	16.08	15.63	15.56	15.63	15.63	16.21
Soybean meal, 48% protein, Decatur ($/ton)	185.54	138.50	--	133.00	153.57	154.70	154.00	163.41	170.85	175.50

-- = No quotes. 1. Beginning June 1 for wheat and barley; Aug. 1 for rice and cotton; September 1 for corn, sorghum, and soybeans; October 1 for soymeal and oil. 2. Ordinary protein. 3. 14 percent protein. 4. Long grain, milled basis. 5. Marketing year 1997/98 data are preliminary. 6. Average spot market. 7. Liverpool Cotlook "A" Index; average of 5 lowest prices of 13 selected growths. 8. Cotton, Memphis territory growths. *Information contacts: Wheat, rice, and feed, Jenny Gonzales (202) 694-5296; soybeans, soybean products, and cotton, Mae Dean Johnson (202) 694-5299*

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

	Target price	Basic loan rate	Findley or announced loan rate[1]	Total deficiency payment rate	Effective base acres[2]	Program[3]	Flexibility contract payment rate	Acres under contract	Contract payment yields	Participation rate[4]
		$/bu.			*Mil. acres*	*Percent of base*	*$/bu.*	*Mil. acres*	*Bu./cwt*	*Percent*
Wheat										
1995/96	4.00	2.69	2.58	0.00	77.70	0/0/0	--	--	--	85
1996/97	--	--	2.58	--	--	--	0.874	76.7	34.70	99
1997/98	--	--	2.58	--	--	--	0.631	76.7	34.70	--
1998/99	--	--	2.58	--	--	--	0.663	78.9	34.50	--
1999/2000[5]	--	--	2.58	--	--	--	0.637	79.0	34.50	--
		$/cwt					*$/cwt*			
Rice										
1995/96	10.71	6.50	6.50 [6]	3.22 [7]	4.20	5/0/0	--	--	--	95
1996/97	--	6.50	--	--	--	--	2.766	4.2	48.27	99
1997/98	--	6.50	--	--	--	--	2.710	4.2	48.17	--
1998/99	--	6.50	--	--	--	--	2.921	4.2	48.17	--
1999/2000[5]	--	6.50	--	--	--	--	2.820	4.2	48.15	--
		$/bu.					*$/bu.*			
Corn										
1995/96	2.75	1.94	1.89	0.00	81.80	7.5/0/0	--	--	--	82
1996/97	--	--	1.89	--	--	--	0.251	80.7	102.90	98
1997/98	--	--	1.89	--	--	--	0.486	80.9	102.80	--
1998/99	--	--	1.89	--	--	--	0.377	82.0	102.60	--
1999/2000[5]	--	--	1.89	--	--	--	0.363	81.9	102.60	--
		$/bu.					*$/bu.*			
Sorghum										
1995/96	2.61	1.84	1.80	0.00	13.30	0/0/0	--	--	--	77
1996/97	--	--	1.81	--	--	--	0.323	13.1	57.30	99
1997/98	--	--	1.76	--	--	--	0.544	13.1	57.30	--
1998/99	--	--	1.74	--	--	--	0.452	13.6	56.90	--
1999/2000[5]	--	--	1.74	--	--	--	0.435	13.7	56.90	--
		$/bu.					*$/bu.*			
Barley										
1995/96	2.36	1.58	1.54	0.00	10.70	0/0/0	--	--	--	82
1996/97	--	--	1.55	--	--	--	0.332	10.5	47.30	99
1997/98	--	--	1.57	--	--	--	0.277	10.5	47.20	--
1998/99	--	--	1.56	--	--	--	0.284	11.2	46.70	--
1999/2000[5]	--	--	1.59	--	--	--	0.271	11.2	46.60	--
		$/bu.					*$/bu.*			
Oats										
1995/96	1.45	1.00	0.97	0.00	6.50	0/0/0	--	--	--	44
1996/97	--	--	1.03	--	--	--	0.033	6.2	50.80	97
1997/98	--	--	1.11	--	--	--	0.031	6.2	50.80	--
1998/99	--	--	1.11	--	--	--	0.031	6.5	50.70	--
1999/2000[5]	--	--	1.13	--	--	--	0.030	6.5	50.60	--
		$/bu.					*$/bu.*			
Soybeans[8]										
1995/96	--	--	4.92	--	--	--	--	--	--	--
1996/97	--	--	4.97	--	--	--	--	--	--	--
1997/98	--	--	5.26	--	--	--	--	--	--	--
1998/99	--	--	5.26	--	--	--	--	--	--	--
1999/2000	--	--	5.26	--	--	--	--	--	--	--
		¢/lb.					*¢/lb.*			
Upland cotton										
1995/96	72.90	51.92	51.92 [9]	0.00 [7]	15.50	0/0/0	--	--	--	79
1996/97	--	51.92	--	--	--	--	8.882	16.2	610.00	99
1997/98	--	51.92	--	--	--	--	7.625	16.2	608.00	--
1998/99	--	51.92	--	--	--	--	8.173	16.4	604.00	--
1999/2000[5]	--	51.92	--	--	--	--	7.880	16.4	604.00	--

-- = Not available. 1. There are no Findley loan rates for rice or cotton. See footnotes 5 and 7. 2. Prior to 1996, national effective crop acreage base as determined by FSA. Net of CRP. 3. Program requirements for participating producers (mandatory acreage reduction program/mandatory paid land diversion/optional paid land diversion). Acres idled must be devoted to a conserving use to receive program benefits. 4. Percentage of effective base enrolled in acreage reduction programs. Starting in 1996, participation rate is the percent of eligible acres that entered production flexibility contracts. 5. Estimated payment rates and acres under contract. 6. A marketing loan program has been in effect for rice since 1985/86. Loans may be repaid at the lower of: a) the loan rate or b) the adjusted world market price (announced weekly). Loans cannot be repaid at less than a specified fraction of the loan rate. Data refer to marketing-year average loan repayment rates. Beginning with the 1996 crop, loans are repaid at the lower of the loan rate plus accumulated interest or the adjusted world price. 7. Guaranteed payment rates for producers in the 50/85/92 program were $0.034/lb. for upland cotton and $4.21/cwt. for rice. 8. There are no target prices, base acres, acreage reduction programs or deficiency payment rates for soybeans. 9. A marketing loan program has been in effect for cotton since 1986/87. In 1987/88 and after, loans may be repaid at the lower of: a) the loan rate or b) the adjusted world market price (announced weekly; Plan B). Starting in 1991/92, loans cannot be repaid at less than 70 percent of the loan rate. Data refer to annual average loan repayment rates. Beginning with the 1996 crop, loans are repaid at the lower of the loan rate plus accumulated interest or the adjusted world price.
Note: The 1996 Farm Act replaced target prices and deficiency payments with fixed annual payments to producers. *Information contact:Brenda Chewning, Farm Service Agency (202) 720-8838*

Table 20—Fruit

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Citrus[1]										
Production (1,000 tons)	10,860	11,285	12,452	15,274	14,561	15,799	15,712	17,271	17,770	13,702
Per capita consumpt. (lb.)[2]	21.4	19.1	24.4	26.0	25.0	24.1	24.9	27.0	27.0	--
Noncitrus[3]										
Production (1,000 tons)	15.640	15.740	17.124	16.554	17.339	16.348	16.103	18.363	16.509	17.119
Per capita consumpt. (lb.)[2]	70.4	70.6	73.8	73.9	75.6	73.7	73.9	76.3	76.2	--
	1999						2000			
	Apr	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr
Grower prices										
Apples (¢/pound)[4]	14.1	18.4	23.2	23.5	23.3	23.7	23.5	21.1	20.5	19.7
Pears (¢/pound)[4]	16.85	16.10	15.75	21.95	21.90	20.70	20.70	19.30	15.65	13.45
Oranges ($/box)[5]	5.82	11.48	7.98	10.25	4.33	3.41	3.27	3.51	3.54	4.14
Grapefruit ($/box)[5]	2.23	7.45	8.18	6.80	5.21	3.71	2.40	3.64	3.63	2.82
Stocks, ending										
Fresh apples (mil. lb.)	1,858	103	2,835	6,165	5,524	4,653	4,017	3,231	2,465	1,884
Fresh pears (mil. lb.)	69	130	552	515	400	299	241	191	133	105
Frozen fruits (mil. lb.)	789	1,183	1,136	1,631	1,583	1,455	1,338	1,244	1,107	1,022
Frozen conc.orange juice (mil. single-strength gallons)	1,015	661	589	482	450	543	644	776	769	842

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

Table 21—Vegetables

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Production[1]										
Total vegetables (1,000 cwt)	562,938	565,754	689,070	688,824	782,505	747,988	762,952	754,220	729,576	831,986
Fresh (1,000 cwt)[2,4]	254,039	242,733	389,597	387,330	412,880	393,398	409,317	427,183	416,785	448,939
Processed (tons)[3,4]	15,444,970	16,151,030	14,973,630	15,074,707	18,481,238	17,729,497	17,681,732	16,351,849	15,639,548	19,152,331
Mushrooms (1,000 lbs)[5]	749,151	746,832	776,357	750,799	782,340	777,870	776,677	808,678	848,401	--
Potatoes (1,000 cwt)	402,110	417,622	425,367	430,349	469,425	445,099	499,254	467,091	475,771	478,398
Sweet potatoes (1,000 cwt)	12,594	11,203	12,005	11,027	13,380	12,821	13,216	13,327	12,382	11,980
Dry edible beans (1,000 cwt)	32,379	33,765	22,615	21,862	28,950	30,689	27,912	29,370	30,418	33,230
	1999						2000			
	Apr	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr
Shipments (1,000 cwt)										
Fresh	26,672	19,776	18,852	18,751	20,107	21,604	19,965	25,730	28,425	24,169
Iceberg lettuce	3,263	3,477	3,450	3,624	3,226	3,223	2,889	3,776	3,904	2,859
Tomatoes, all	4,305	3,570	3,245	3,469	3,471	3,673	3,642	4,463	4,553	3,845
Dry-bulb onions	3,857	3,594	4,026	4,178	3,926	3,642	3,232	3,910	3,895	3,364
Others[6]	15,247	9,135	8,131	7,480	9,484	11,066	10,202	13,581	16,073	14,101
Potatoes, all	20,951	10,440	11,719	12,951	14,620	14,751	12,201	17,170	19,972	20,460
Sweet potatoes	244	186	250	371	679	438	205	349	311	337

-- = 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			1998		1999				2000
	1997	1998	1999	III	IV	I	II	III	IV	I
Sugar										
Production[1]	7,418	7,891	9,083	733	3,959	2,636	1,031	749	4,667	--
Deliveries[1]	9,755	9,851	10,163	2,616	2,508	2,271	2,594	2,693	2,605	1.468
Stocks, ending[1]	3,377	3,423	3,855	1,679	3,422	4,219	3,184	1,639	3,855	--
Coffee										
Composite green price[2] N.Y. (¢/lb.)	146.49	114.43	88.49	98.57	97.83	94.37	90.41	77.40	91.79	85.66
	Annual			1999				2000		
	1997	1998	1999	Mar	Oct	Nov	Dec	Jan	Feb	Mar
Tobacco										
Avg. price to grower[3]										
Flue-cured ($/lb.)	1.73	1.75	--	--	1.82	--	--	--	--	--
Burley ($/lb.)	1.91	1.91	--	1.74	--	1.90	1.91	1.90	--	--
Domestic taxable removals										
Cigarettes (bil.)	471.4	457.9	--	34.9	--	--	--	--	--	--
Large cigars (mil.)[4]	3,552	3,721	--	332.7	--	--	--	--	--	--

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

World Agriculture

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

	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00 F	2000/01 F
	Million units									
Wheat										
Area (hectares)	222.5	222.9	222.0	214.5	219.2	230.3	227.8	225.0	216.3	216.0
Production (metric tons)	542.9	562.4	558.8	524.1	538.5	582.8	609.3	589.2	587.0	580.4
Exports (metric tons[1]	111.2	113.0	101.7	101.5	99.5	103.6	103.3	100.4	104.6	107.0
Consumption (metric tons)[2]	555.5	550.3	561.6	547.5	548.9	577.1	584.5	591.8	596.9	596.9
Ending stocks (metric tons)[3]	132.5	144.5	141.7	118.2	107.8	113.5	138.4	135.8	125.9	109.4
Coarse grains										
Area (hectares)	322.7	326.0	318.8	324.1	313.8	322.7	311.2	308.2	303.1	305.1
Production (metric tons)	810.4	871.6	798.9	871.1	802.9	908.5	884.9	890.3	875.0	896.0
Exports (metric tons[1]	95.5	93.1	85.7	97.8	87.7	94.3	85.7	95.8	97.5	99.3
Consumption (metric tons)[2]	809.7	843.6	838.7	858.4	841.3	876.8	876.9	871.0	880.5	890.8
Ending stocks (metric tons)[3]	135.8	163.7	123.9	136.7	98.3	129.9	137.9	157.2	151.7	156.9
Rice, milled										
Area (hectares)	147.5	146.4	144.9	147.4	148.1	149.8	151.2	152.3	154.1	--
Production (metric tons)	354.7	355.7	355.4	364.5	371.4	380.4	386.8	394.0	402.5	400.3
Exports (metric tons[1]	14.3	14.9	16.3	20.9	19.7	18.8	27.3	25.1	22.0	--
Consumption (metric tons)[2]	356.7	357.7	358.2	366.6	371.4	379.6	383.2	389.2	399.5	403.0
Ending stocks (metric tons)[3]	57.2	55.2	52.4	50.4	50.5	51.3	54.9	59.6	62.5	59.9
Total grains										
Area (hectares)	692.7	695.3	685.7	686.0	681.1	702.8	690.2	685.5	673.5	--
Production (metric tons)	1,708.0	1,789.7	1,713.1	1,759.7	1,712.8	1,871.7	1,881.0	1,873.5	1,864.5	1,876.7
Exports (metric tons[1]	221.0	221.0	203.7	220.2	206.9	216.7	216.3	221.3	224.1	--
Consumption (metric tons)[2]	1,721.9	1,751.6	1,758.5	1,772.5	1,761.6	1,833.5	1,844.6	1,852.0	1,876.9	1,890.7
Ending stocks (metric tons)[3]	325.5	363.4	318.0	305.3	256.6	294.7	331.2	352.6	340.1	326.2
Oilseeds										
Crush (metric tons)	185.1	184.4	190.1	208.1	217.5	219.4	228.0	239.9	247.0	--
Production (metric tons)	224.3	227.5	229.4	261.9	258.9	262.7	287.8	294.7	297.6	310.0
Exports (metric tons)	37.6	38.2	38.7	44.1	44.3	49.7	54.0	54.1	59.6	--
Ending stocks (metric tons)	21.9	23.6	20.3	27.2	22.2	17.1	24.8	28.5	25.6	--
Meals										
Production (metric tons)	125.2	125.2	131.7	142.1	147.3	149.8	155.4	163.9	168.7	--
Exports (metric tons)	42.2	40.8	44.9	46.7	49.8	50.7	51.9	54.1	54.8	--
Oils										
Production (metric tons)	60.6	61.1	63.7	69.6	73.1	75.9	76.7	82.1	86.2	--
Exports (metric tons)	21.3	21.3	24.3	27.1	26.0	29.1	29.9	31.3	32.1	--
Cotton										
Area (hectares)	34.8	32.6	30.7	32.2	35.9	33.8	33.7	32.9	32.2	--
Production (bales)	95.8	82.5	77.1	86.0	93.1	89.6	91.6	84.5	87.0	86.0
Exports (bales)	28.5	25.5	26.8	28.4	27.8	26.8	26.6	23.6	26.8	27.7
Consumption (bales)	86.1	85.9	85.4	84.7	86.0	88.0	89.2	84.6	90.2	92.0
Ending stocks (bales)	37.4	34.7	26.8	29.8	36.6	40.1	43.9	45.4	42.6	36.6
	1991	1992	1993	1994	1995	1996	1997	1998	1999 F	2000 F
Red meat[4]										
Production (metric tons)	117.7	117.3	119.3	124.6	129.5	123.6	129.5	134.5	136.4	137.8
Consumption (metric tons)	116.1	115.7	118.3	123.6	127.7	120.7	126.7	131.7	134.2	135.6
Exports (metric tons)[1]	7.5	7.4	7.4	8.1	8.2	8.5	9.0	8.9	9.6	9.6
Poultry[4]										
Production (metric tons)	39.6	38.0	40.5	43.2	47.5	50.4	52.7	53.5	55.9	57.9
Consumption (metric tons)	38.4	37.0	39.4	42.0	47.0	49.7	51.9	52.5	55.0	57.1
Exports (metric tons)[1]	2.8	2.4	2.8	3.6	4.5	5.1	5.6	5.7	6.0	6.4
Dairy										
Milk production (metric tons)[5]	377.6	378.4	377.6	378.4	380.7	379.8	380.8	383.7	384.9	387.2

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

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

U.S. Agricultural Trade

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

	Annual			1999			2000			
	1997	1998	1999	Apr	Nov	Dec	Jan	Feb	Mar	Apr
Export commodities										
Wheat, f.o.b. vessel, Gulf ports ($/bu.)	4.35	3.44	3.04	3.10	2.96	2.80	2.89	2.99	2.92	2.92
Corn, f.o.b. vessel, Gulf ports ($/bu.)	2.98	2.59	2.30	2.38	2.17	2.22	2.36	2.42	2.42	2.44
Grain sorghum, f.o.b. vessel, Gulf ports ($/bu.)	2.89	2.54	2.15	2.28	2.02	2.04	2.23	2.29	2.33	2.33
Soybeans, f.o.b. vessel, Gulf ports ($/bu.)	7.94	6.37	5.02	5.00	4.90	4.92	5.21	5.36	5.40	5.51
Soybean oil, Decatur (¢/lb.)	23.33	25.78	17.51	18.78	15.63	15.33	15.56	15.09	16.22	17.52
Soybean meal, Decatur ($/ton)	266.70	162.74	141.52	134.50	154.71	154.00	163.41	170.51	175.50	177.53
Cotton, 7-market avg. spot (¢/lb.)	69.62	67.04	52.30	57.01	48.12	46.65	51.92	54.29	57.67	53.76
Tobacco, avg. price at auction (¢/lb.)	182.74	179.77	177.82	150.54	182.51	190.56	191.02	190.56	179.06	155.48
Rice, f.o.b., mill, Houston ($/cwt)	20.88	18.95	16.99	17.75	15.80	15.75	15.55	15.25	15.00	14.85
Inedible tallow, Chicago (¢/lb.)	20.75	17.67	12.99	11.38	14.50	14.00	11.94	10.28	10.25	9.50
Import commodities										
Coffee, N.Y. spot ($/lb.)	2.05	1.39	1.05	1.01	1.14	1.29	1.19	1.15	1.10	0.99
Rubber, N.Y. spot (¢/lb.)	55.40	40.57	36.66	34.98	42.63	38.88	38.16	40.36	38.16	37.80
Cocoa beans, N.Y. ($/lb.)	0.69	0.72	0.47	0.48	0.38	0.38	0.38	0.35	0.38	0.36

Information contacts: Jenny Gonzales (202) 694-5296, Mae Dean Johnson (202) 694-5299.

Table 25—Trade Balance

	Fiscal Year			1999				2000		
	1998	1999	2000 P	Mar	Oct	Nov	Dec	Jan	Feb	Mar
	$ million									
Exports										
Agricultural	53,730	49,102	49,500	4,082	4,520	4,629	4,405	4,211	4,382	4,668
Nonagricultural	585,826	586,652	--	52,092	52,813	51,725	54,397	48,013	51,251	58,200
Total [1]	639,556	635,754	--	56,174	57,333	56,354	58,802	52,224	55,633	62,868
Imports										
Agricultural	37,007	37,449	38,000	3,458	3,089	3,185	3,367	3,185	3,249	3,679
Nonagricultural	858,893	938,809	--	79,776	90,658	89,343	87,479	83,220	87,813	98,939
Total [2]	895,900	976,258	--	83,234	93,747	92,528	90,846	86,405	91,062	102,618
Trade Balance										
Agricultural	16,723	11,653	11,500	624	1,431	1,444	1,038	1,026	1,133	989
Nonagricultural	-273,067	-352,157	--	-27,684	-37,845	-37,618	-33,082	-35,207	-36,562	-40,739
Total	-256,344	-340,504	--	-27,060	-36,414	-36,174	-32,044	-34,181	-35,429	-39,750

P = Projected. -- = Not available. Fiscal year (Oct. 1-Sep. 30). 1. Domestic exports including Department of Defense shipments (f.a.s. value).
2. Imports for consumption (customs value). *Information contact: Mary Fant (202) 694-5272*

Table 26—Indexes of Real Trade-Weighted Dollar Exchange Rates[1]

	Annual			1999				2000		
	1997	1998	1999	Mar	Oct	Nov	Dec	Jan	Feb	Mar
	1995 = 100									
Total U.S. Trade	106.0	113.8	113.6	114.8	112.8	113.0	112.8	112.5	113.3	113.1
U.S. markets										
All agricultural trade	108.0	117.3	115.3	116.7	113.8	113.8	113.3	113.7	114.8	114.2
Bulk commodities	108.7	119.2	116.2	117.4	114.8	114.7	114.0	114.5	115.6	114.8
Corn	111.0	123.1	116.2	118.5	114.1	113.5	112.2	112.9	114.2	113.0
Cotton	105.1	122.7	116.2	117.7	115.6	114.5	113.4	113.6	114.2	113.6
Rice	106.4	110.0	111.1	111.9	110.1	110.6	110.4	110.6	111.7	111.5
Soybeans	112.2	122.5	119.5	120.3	118.0	118.8	118.7	119.1	120.1	119.6
Tobacco, raw	117.0	125.8	124.6	124.7	123.1	124.6	124.7	125.4	127.2	127.1
Wheat	103.0	108.7	110.1	110.1	110.1	110.1	109.3	109.5	110.4	109.8
High-value products	108.0	116.7	115.2	116.9	113.5	113.5	113.0	113.4	114.7	114.1
Processed intermediates	107.3	115.8	114.0	114.9	112.9	113.2	112.8	113.0	113.8	113.4
Soymeal	100.3	106.5	105.5	106.0	105.5	105.5	105.4	105.1	105.8	105.9
Soyoil	97.8	100.4	103.0	101.9	103.0	103.0	102.7	102.4	102.7	102.4
Produce and horticulture	109.6	117.4	116.6	118.0	115.1	115.4	115.3	115.3	116.5	116.3
Fruits	109.3	119.7	116.4	118.7	114.5	114.1	113.6	113.8	115.2	114.7
Vegetables	106.9	115.0	113.3	115.9	111.7	111.2	111.0	110.2	111.2	111.3
High-value processed	108.0	117.3	115.7	118.2	113.4	113.1	112.3	113.1	114.8	113.9
Fruit juices	112.4	121.7	119.2	121.1	117.3	117.5	117.1	117.1	118.6	118.4
Poultry	91.6	99.9	114.6	115.7	113.9	114.0	114.0	116.2	117.7	116.7
Red meats	106.2	117.6	124.7	124.8	125.8	126.5	126.5	126.4	127.5	128.1
U.S. competitors										
All agricultural trade	110.3	117.5	119.1	120.5	122.3	124.3	125.2	124.8	125.8	126.6
Bulk commodities	111.4	114.9	117.4	118.7	121.5	123.8	124.9	124.5	125.4	126.4
Corn	109.4	120.5	121.7	122.9	122.9	125.0	126.4	127.0	129.0	130.0
Cotton	108.9	124.9	119.5	118.0	122.4	122.6	122.4	122.4	123.4	124.1
Rice	102.3	105.0	113.5	132.9	136.6	135.3	132.4	130.5	130.0	128.8
Soybeans	104.7	109.9	115.1	125.5	127.3	127.6	126.2	125.1	125.0	124.4
Tobacco, raw	106.2	117.2	119.4	124.8	125.8	126.5	126.5	126.4	127.5	128.1
Wheat	110.0	115.6	118.3	120.3	120.3	122.2	123.1	121.9	123.3	124.7
High-value products	111.5	118.7	120.9	122.3	124.4	126.7	127.7	127.3	128.3	129.1
Processed intermediates	110.1	119.6	122.3	125.1	126.7	128.3	128.8	128.3	129.4	130.0
Soymeal	104.9	107.3	115.0	133.7	136.5	135.6	133.1	131.3	130.4	129.3
Soyoil	104.1	106.3	111.5	123.7	125.8	125.9	124.5	123.3	122.9	122.4
Produce and horticulture	109.8	115.6	116.9	116.7	119.0	121.1	122.3	122.0	122.8	123.4
Fruits	110.6	127.2	123.1	121.0	125.1	125.8	126.0	126.1	127.1	127.8
Vegetables	105.7	109.9	111.3	110.8	112.9	114.7	115.5	115.2	115.5	115.9
High-value processed	112.9	119.2	121.2	122.3	124.7	127.4	128.6	128.3	129.4	130.3
Fruit juices	110.7	117.0	118.1	118.7	121.1	123.2	124.1	123.6	124.6	125.3
Poultry	106.4	110.7	112.1	115.7	118.0	119.0	119.0	118.6	118.9	119.0
Red meats	111.2	117.5	120.4	122.0	123.4	125.6	126.5	125.5	127.1	128.2
U.S. suppliers										
All agricultural trade	103.4	112.7	113.3	114.2	113.7	113.8	113.8	113.2	113.8	113.9
High-value products	103.0	109.9	111.4	111.9	111.7	112.1	112.2	111.5	112.0	112.1
Processed intermediates	104.3	113.5	114.7	115.5	115.0	115.2	115.4	114.6	115.3	115.6
Grains and feeds	104.6	111.1	111.8	112.5	111.7	111.8	112.1	111.2	111.6	112.1
Vegetable oils	105.4	118.0	116.7	116.8	117.3	117.7	118.1	117.7	118.1	118.5
Produce and horticulture	96.2	100.1	99.4	100.1	99.8	99.3	98.9	98.6	98.4	97.8
Fruits	103.3	106.8	114.8	115.0	117.0	116.8	115.9	115.3	115.1	114.8
Vegetables	90.1	91.6	88.1	89.8	87.4	86.4	86.1	86.0	85.6	84.7
High-value processed	105.5	112.7	115.4	115.6	115.8	116.6	117.0	116.2	116.9	117.3
Cocoa and products	106.6	114.6	117.0	117.5	117.3	117.9	118.2	118.1	119.1	119.7
Coffee and products	99.4	104.6	110.1	111.5	111.6	110.9	109.9	109.6	109.6	109.1
Dairy products	106.0	111.1	114.1	113.0	114.8	116.2	116.9	116.6	117.7	118.1
Fruit juices	103.3	106.8	114.8	115.0	117.0	116.8	115.9	115.3	115.1	114.8
Meats	104.8	112.0	114.2	114.5	114.9	115.2	115.4	114.4	115.7	116.4

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 Statisitics. Exchange rates for the EU-11 are obtained from the Board of Governors of the Federal Reserve System.

1. With this month's table, a major revision to the weighting scheme and commoditity definitions has been undertaken.

Information contact: Mathew Shane (202) 694-5282.

Table 27—U.S. Agricultural Exports & Imports

	Fiscal Year (1,000 units)			Mar (1,000 units)		Fiscal Year ($ million)			Mar ($ million)	
	1998	1999	2000 P	1999	2000	1998	1999	2000 P	1999	2000
Exports										
Animals, live	--	--	--	--	--	538	509	--	22	36
Meats and preps., excl. poultry (mt) [1]	2,064	2,061	1,700	172	208	4,507	4,460	4,800	378	480
Dairy products	--	--	--	--	--	925	897	900	82	96
Poultry meats (mt)	2,663	2,377	2,600	179	218	2,347	1,743	1,800	128	158
Fats, oils, and greases (mt)	1,365	1,395	1,400	122	112	655	561	--	49	42
Hides and skins, incl. furskins	--	--	--	--	--	1,358	1,108	1,100	110	135
Cattle hides, whole (no.)	18,992	17,845	--	1,415	1,773	969	844	--	66	92
Mink pelts (no.)	2,990	4,172	--	1,279	1,027	83	98	--	30	28
Grains and feeds (mt) [2]	87,289	104,576	--	8,424	8,186	13,961	14,272	13,400	1,187	1,155
Wheat (mt) [3]	25,791	28,806	26,500	1,778	1,858	3,759	3,648	3,600	235	241
Wheat flour (mt)	465	958	1,000	81	50	117	177	--	18	9
Rice (mt)	3,310	3,076	3,100	245	312	1,132	1,010	900	89	88
Feed grains, incl. products (mt) [4]	44,564	58,398	54,100	5,019	4,621	5,187	5,821	5,000	520	477
Feeds and fodders (mt)	11,704	11,800	11,600	1,179	1,209	2,421	2,252	2,300	210	217
Other grain products (mt)	1,455	1,538	--	123	136	1,345	1,363	--	114	123
Fruits, nuts, and preps. (mt)	3,633	3,439	--	306	329	3,977	3,805	4,600	298	280
Fruit juices, incl. froz. (1,000 hectoliters)	10,658	12,317	--	1,050	1,305	653	735	--	65	70
Vegetables and preps.	--	--	--	--	--	4,168	4,245	2,800	382	390
Tobacco, unmanufactured (mt)	208	205	200	23	25	1,448	1,376	1,300	144	149
Cotton, excl. linters (mt) [5]	1,552	884	1,400	48	213	2,517	1,309	1,700	76	248
Seeds (mt)	816	579	--	65	95	827	800	900	86	90
Sugar, cane or beet (mt)	123	158	--	12	21	48	56	--	4	5
Oilseeds and products (mt)	36,074	33,569	34,700	2,823	4,046	10,984	8,606	8,500	668	910
Oilseeds (mt)	--	--	--	--	--	--	--	--	--	--
Soybeans (mt)	23,394	22,974	24,400	1,944	2,986	6,117	4,748	4,800	380	595
Protein meal (mt)	8,666	6,726	--	583	816	1,975	1,101	--	93	153
Vegetable oils (mt)	3,049	2,642	--	223	173	2,191	1,815	--	148	110
Essential oils (mt)	46	47	--	5	6	533	507	--	51	59
Other	--	--	--	--	--	4,284	4,112	--	352	363
Total	--	--	--	--	--	53,730	49,102	49,500	4,082	4,668
Imports										
Animals, live	--	--	--	--	--	1,670	1,439	1,500	148	168
Meats and preps., excl. poultry (mt)	1,230	1,398	1,600	122	142	2,718	3,088	3,300	263	338
Beef and veal (mt)	857	943	--	79	91	1,761	2,047	--	167	210
Pork (mt)	271	337	--	32	39	686	721	--	66	95
Dairy products	--	--	--	--	--	1,368	1,572	1,500	120	138
Poultry and products	--	--	--	--	--	207	201	--	18	20
Fats, oils, and greases (mt)	80	90	--	8	9	59	63	--	6	7
Hides and skins, incl. furskins (mt)	--	--	--	--	--	184	146	--	16	20
Wool, unmanufactured (mt)	45	29	--	2	2	151	75	--	5	5
Grains and feeds	--	--	--	--	--	2,919	2,943	2,800	238	248
Fruits, nuts, and preps., excl. juices (mt) [6]	7,581	8,171	8,200	830	894	3,982	4,619	5,600	438	480
Bananas and plantains (mt)	4,175	4,418	4,300	380	359	1,214	1,212	1,200	107	93
Fruit juices (1,000 hectoliters)	26,577	31,655	33,000	2,277	3,149	669	772	--	59	79
Vegetables and preps.	--	--	--	--	--	4,249	4,527	4,900	447	464
Tobacco, unmanufactured (mt)	241	217	200	16	23	822	742	600	66	46
Cotton, unmanufactured (mt)	10	144	--	12	4	11	150	--	14	2
Seeds (mt)	257	357	--	66	73	422	457	--	91	93
Nursery stock and cut flowers	--	--	--	--	--	1,082	1,076	1,100	93	83
Sugar, cane or beet (mt)	2,170	1,692	--	217	122	758	606	--	47	42
Oilseeds and products (mt)	4,314	3,899	3,600	381	375	2,243	2,022	1,900	190	193
Oilseeds (mt)	1,028	1,000	--	109	75	371	326	--	32	25
Protein meal (mt)	1,277	1,131	--	101	101	188	147	--	13	13
Vegetable oils (mt)	2,010	1,769	--	172	199	1,684	1,549	--	145	154
Beverages, excl. fruit juices (1,000 hectoliters)	--	--	--	--	--	3,705	4,258	--	376	394
Coffee, tea, cocoa, spices (mt)	2,369	2,520	--	251	279	6,056	5,306	--	520	524
Coffee, incl. products (mt)	1,155	1,294	1,400	141	145	3,587	2,967	2,700	318	325
Cocoa beans and products (mt)	875	865	800	81	101	1,701	1,531	1,500	141	134
Rubber and allied gums (mt)	1,162	1,148	1,200	96	121	1,027	739	700	60	88
Other	--	--	--	--	--	2,703	2,645	--	243	246
Total	--	--	--	--	--	37,007	37,449	38,000	3,458	3,679

P=Projection. -- = Not available. Projections are fiscal years (October 1 through September 30) and are from Outlook for U.S. Agricultural Exports. 1998 and 1999 data are from *Foreign Agricultural Trade of the U.S* . 1. Projection includes beef, pork, and variety meat. 2. Projection includes pulses. 3. Value projection includes wheat flour. 4. Projection excludes grain products. 5. Projection includes linters. 6. Value projection includes juice.

Information Contact: Mary Fant (202) 694-5272

Table 28—U.S. Agricultural Exports by Region

	Fiscal year			1999				2000		
	1998	1999	2000 P	Mar	Oct	Nov	Dec	Jan	Feb	Mar
					$ million					
Region & country										
Western Europe	8,859	7,531	7,400	615	657	812	689	698	624	577
European Union[1]	8,522	6,960	6,900	590	639	791	670	654	596	557
Belgium-Luxembourg	666	602	--	47	61	78	43	48	43	44
France	536	380	--	30	30	46	52	29	34	21
Germany	1,294	1,056	--	100	90	122	82	89	84	95
Italy	729	574	--	61	36	60	50	77	49	53
Netherlands	1,792	1,585	--	138	140	218	168	150	163	145
United Kingdom	1,300	1,123	--	91	106	105	98	67	92	79
Portugal	186	131	--	12	12	20	23	17	22	8
Spain, incl. Canary Islands	1,132	782	--	48	92	82	101	106	65	46
Other Western Europe	336	570	500	25	17	22	19	44	28	21
Switzerland	236	456	--	19	8	13	12	38	22	15
Eastern Europe	320	190	200	16	17	15	13	9	18	17
Poland	139	73	--	4	3	4	4	2	3	4
Former Yugoslavia	97	47	--	1	10	8	2	3	11	7
Romania	31	18	--	6	1	1	1	0	0	1
Newly Independent States	1,456	816	900	55	97	68	59	136	221	70
Russia	1,103	468	500	37	66	24	27	114	189	53
Asia[2]	21,992	20,447	18,200	1,713	1,877	1,938	1,788	1,772	1,858	2,203
West Asia (Mideast)	2,286	1,979	2,200	159	241	229	193	170	209	187
Turkey	658	448	600	21	65	47	77	74	62	55
Iraq	131	9	--	1	--	--	--	--	0	--
Israel, incl. Gaza and W. Bank	389	417	--	40	35	45	34	18	59	31
Saudi Arabia	535	468	500	39	59	46	29	33	44	30
South Asia	626	500	500	30	58	53	30	22	31	29
Bangladesh	114	165	--	6	6	17	4	3	5	9
India	163	190	--	17	10	11	18	17	18	14
Pakistan	275	89	--	4	37	19	1	1	1	4
China	1,514	1,012	900	35	98	109	104	98	110	261
Japan	9,469	8,940	9,000	820	749	824	717	802	846	906
Southeast Asia	2,288	2,213	2,100	176	248	229	241	200	205	258
Indonesia	529	498	500	39	56	66	69	41	46	69
Philippines	751	734	700	50	67	71	83	65	67	84
Other East Asia	5,808	5,803	5,700	492	482	493	504	482	456	562
Korea, Rep.	2,258	2,483	2,600	231	213	201	206	228	219	240
Hong Kong	1,568	1,264	1,200	101	112	115	126	87	92	106
Taiwan	1,975	2,046	1,900	161	157	176	168	165	144	216
Africa	2,174	2,160	2,200	184	214	172	218	162	176	178
North Africa	1,475	1,468	1,500	132	158	114	162	117	136	93
Morocco	139	162	--	16	12	16	7	9	23	10
Algeria	281	223	--	13	8	29	21	21	13	24
Egypt	939	1,001	1,000	92	130	68	125	84	95	50
Sub-Sahara	699	692	700	52	57	57	56	45	40	86
Nigeria	140	176	--	5	13	11	10	16	11	8
S. Africa	193	165	--	14	20	15	25	14	8	13
Latin America and Caribbean	11,362	10,502	10,700	869	955	955	988	800	858	916
Brazil	566	369	400	14	18	19	18	23	22	41
Caribbean Islands	1,487	1,453	--	120	146	147	146	103	120	121
Central America	1,137	1,209	--	96	97	99	113	79	85	93
Colombia	606	467	--	35	36	45	30	40	25	40
Mexico	5,956	5,675	5,900	512	566	526	599	447	501	551
Peru	314	347	--	13	19	25	18	31	10	16
Venezuela	516	458	400	52	31	43	27	25	47	31
Canada	7,022	6,957	7,100	597	657	630	606	595	593	658
Oceania	545	499	500	34	47	39	44	40	34	47
Total	53,730	49,102	49,500	4,082	4,520	4,629	4,405	4,211	4,382	4,668

P = projection. -- = 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 transhipments through Canada for 1998 and 1999 through December 1999, but transhipments are not distributed by country as previously for 2000. *Information contact: Mary Fant (202) 694-5272*

Farm Income

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

		1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
		$ billion									
	Final crop output	81.0	89.0	82.3	100.4	95.8	115.4	112.1	102.0	93.5	95.2
	Food grains	7.3	8.5	8.2	9.5	10.4	10.7	10.1	8.7	7.3	6.8
	Feed crops	19.3	20.1	20.2	20.3	24.5	27.2	27.1	22.9	19.7	20.6
	Cotton	5.2	5.2	5.2	6.7	6.9	7.0	6.3	6.0	4.7	5.5
	Oil crops	12.7	13.3	13.2	14.7	15.5	16.3	19.7	17.2	13.6	14.7
	Tobacco	2.9	3.0	2.9	2.7	2.5	2.8	2.9	3.0	2.4	1.9
	Fruits and tree nuts	9.9	10.2	10.3	10.3	11.1	11.9	13.1	11.7	12.7	11.1
	Vegetables	11.6	11.8	13.7	14.2	15.0	14.4	15.0	15.3	15.6	15.0
	All other crops	13.1	13.7	13.7	14.7	15.0	15.8	16.9	17.3	17.5	18.2
	Home consumption	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	Value of inventory adjustment [1]	-1.2	3.2	-5.3	7.2	-5.3	9.1	0.9	-0.4	-0.1	1.2
	Final animal output	87.3	87.1	92.0	89.7	87.7	92.1	96.5	94.3	94.9	100.1
	Meat animals	50.1	47.7	51.0	46.7	44.9	44.2	49.7	43.6	45.6	52.2
	Dairy products	18.0	19.7	19.3	20.0	19.9	22.8	20.9	24.3	23.2	21.3
	Poultry and eggs	15.2	15.5	17.3	18.5	19.1	22.4	22.2	22.8	22.9	23.3
	Miscellaneous livestock	2.5	2.6	2.9	3.1	3.3	3.6	3.7	3.8	3.5	3.8
	Home consumption	0.5	0.5	0.4	0.4	0.4	0.3	0.4	0.3	0.4	0.4
	Value of inventory adjustment [1]	1.0	1.0	1.1	1.1	0.2	-1.1	-0.4	-0.6	-0.7	-0.9
	Services and forestry	15.4	15.3	17.1	18.1	19.9	20.8	22.5	24.6	26.1	25.8
	Machine hire and customwork	1.8	1.8	1.9	2.1	1.9	2.1	2.6	2.3	2.4	2.4
	Forest products sold	1.8	2.2	2.5	2.7	2.8	2.6	2.9	2.8	2.9	2.9
	Other farm income	4.7	4.1	4.6	4.3	5.8	6.2	6.9	8.7	9.6	9.3
	Gross imputed rental value of farm dwellings	7.2	7.2	8.1	9.0	9.4	9.9	10.1	10.8	11.2	11.1
	Final agricultural sector output [2]	183.7	191.4	191.4	208.2	203.5	228.4	231.2	220.8	214.5	221.1
Minus	Intermediate consumption outlays:	94.6	93.4	100.7	104.9	109.7	113.2	120.9	118.7	119.8	124.6
	Farm origin	38.6	38.6	41.3	41.3	41.8	42.7	46.9	44.9	45.7	46.9
	Feed purchased	19.3	20.1	21.4	22.6	23.8	25.2	26.3	25.0	24.1	24.6
	Livestock and poultry purchased	14.1	13.6	14.7	13.3	12.5	11.3	13.8	12.7	14.4	15.0
	Seed purchased	5.1	4.9	5.2	5.4	5.5	6.2	6.7	7.2	7.2	7.3
	Manufactured inputs	23.2	22.7	23.1	24.4	26.2	28.6	29.2	28.3	28.8	31.2
	Fertilizers and lime	8.7	8.3	8.4	9.2	10.0	10.9	10.9	10.7	10.4	10.5
	Pesticides	6.3	6.5	6.7	7.2	7.7	8.5	9.0	9.1	9.1	8.9
	Petroleum fuel and oils	5.6	5.3	5.3	5.3	5.4	6.0	6.2	5.6	6.1	8.7
	Electricity	2.6	2.6	2.7	2.7	3.0	3.2	3.0	2.9	3.2	3.1
	Other intermediate expenses	32.8	32.1	36.2	39.2	41.7	41.8	44.9	45.5	45.3	46.4
	Repair and maintenance of capital items	8.6	8.5	9.2	9.1	9.5	10.3	10.4	10.4	10.4	10.3
	Machine hire and customwork	3.5	3.8	4.4	4.8	4.8	4.7	4.9	5.5	5.5	5.7
	Marketing, storage, and transportation	4.7	4.5	5.6	6.8	7.2	6.9	7.1	6.7	6.8	7.2
	Contract labor	1.6	1.7	1.8	1.8	2.0	2.1	2.6	2.4	2.5	2.6
	Miscellaneous expenses	14.3	13.6	15.2	16.7	18.3	17.8	19.8	20.5	20.2	20.6
Plus	Net government transactions:	2.1	2.7	6.9	1.1	0.2	0.2	0.2	4.6	13.1	7.8
	+ Direct government payments	8.2	9.2	13.4	7.9	7.3	7.3	7.5	12.2	20.6	15.6
	- Motor vehicle registration and licensing fees	0.3	0.4	0.4	0.4	0.5	0.4	0.5	0.5	0.5	0.5
	- Property taxes	5.8	6.1	6.2	6.3	6.6	6.7	6.9	7.2	7.0	7.4
	Gross value added	91.2	100.6	97.5	104.5	94.0	115.4	110.4	106.7	107.7	104.3
Minus	Capital consumption	18.2	18.3	18.4	18.6	18.9	19.2	19.3	19.4	19.4	19.4
	Net value added [2]	73.0	82.3	79.2	85.8	75.1	96.2	91.1	87.2	88.3	84.9
Minus	Factor payments:	34.4	34.4	34.6	36.6	37.9	41.3	42.5	43.1	44.4	44.9
	Employee compensation (total hired labor)	12.3	12.3	13.2	13.5	14.3	15.3	16.0	16.9	17.8	18.6
	Net rent received by nonoperator landlords	9.9	11.1	10.7	11.5	11.0	13.0	12.9	12.0	13.1	12.5
	Real estate and non-real estate interest	12.1	11.0	10.6	11.5	12.6	13.0	13.5	14.2	13.5	13.8
	Net farm income [2]	38.7	47.9	44.5	49.2	37.2	54.9	48.6	44.1	44.0	40.0

Values in last two columns are preliminary or forecast. 1. A positive value of inventory change represents current-year production not sold by December 1. A negative value is an offset to production from prior years included in current-year sales. 2. Final sector output is the gross value of commodities and services produced within a year. Net value added is the sector's contribution to the National economy and is the sum of income from production earned by all factors of production. Net farm income is farm operators' share of income from the sector's production activities. The concept presented is consistent with that employed by the Organization for Economic Cooperation and Development. *Information contact: Roger Strickland (202)694-5592 or rogers@ers.usda.gov*

Table 30—Farm Income Statistics

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
					$ billion					
Cash Income statement:										
1. Cash receipts	167.9	171.3	177.9	181.3	188.1	199.1	207.6	196.8	188.8	194.5
Crops[1]	82.1	85.7	87.4	93.1	101.0	106.2	111.1	102.2	93.5	93.9
Livestock	85.8	85.6	90.4	88.2	87.1	93.0	96.5	94.5	95.3	100.6
2. Direct Government payments	8.2	9.2	13.4	7.9	7.3	7.3	7.5	12.2	20.6	15.6
3. Farm-related income[2]	8.3	8.1	9.0	9.1	10.5	11.0	12.4	13.8	14.9	14.7
4. Gross cash income (1+2+3)	184.4	188.6	200.3	198.2	205.8	217.4	227.5	222.8	224.2	224.8
5. Cash expenses[3]	134.0	133.3	141.0	147.1	153.2	159.9	169.0	167.8	169.8	175.5
6. Net cash income (4-5)	50.4	55.2	59.3	51.1	52.6	57.5	58.5	54.9	54.4	49.3
Farm income statement:										
7. Gross cash income (4)	184.4	188.6	200.3	198.2	205.8	217.4	227.5	222.8	224.2	224.8
8. Noncash income[4]	7.8	7.8	8.7	9.6	9.9	10.3	10.6	11.3	11.7	11.6
9. Value of inventory adjustment	-0.2	4.2	-4.2	8.3	-5.0	8.0	0.5	-1.0	-0.9	0.3
10. Gross farm income (7+8+9)	192.0	200.5	204.8	216.1	210.7	235.7	238.7	233.1	235.0	236.7
11. Total production expenses	153.3	152.6	160.2	166.8	173.5	180.8	190.0	189.0	191.1	196.7
12. Net farm income (10-11)	38.7	47.9	44.5	49.2	37.2	54.9	48.6	44.1	44.0	40.0

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 (202) 694-5592 or rogers@ers.usda.gov*

Table 31—Average Income to Farm Operator Households[1]

	1992	1993	1994	1995	1996	1997	1998	1999	2000
					$ per farm				
Net cash farm business income[2]	11,320	11,248	11,389	11,218	13,502	12,676	14,357	--	--
Less depreciation[3]	5,187	6,219	6,466	6,795	6,906	6,578	7,409	--	--
Less wages paid to operator[4]	216	454	425	522	531	513	637	--	--
Less farmland rental income[5]	360	534	701	769	672	568	543	--	--
Less adjusted farm business income due to other household(s)[6]	961	872	815	649	1,094	1,505	1,332	--	--
					$ per farm operator household				
Equals adjusted farm business income	4,596	3,168	2,981	2,484	4,300	3,513	4,436	--	--
Plus wages paid to operator	216	454	425	522	531	513	637	--	--
Plus net income from farmland rental[7]	360	--	--	1,053	1,178	945	868	--	--
Equals farm self-employment income	5,172	3,623	3,407	4,059	6,009	4,971	5,941	--	--
Plus other farm-related earnings[8]	2,008	1,192	970	661	1,898	1,234	1,165	--	--
Equals earnings of the operator household from farming activities	7,180	4,815	4,376	4,720	7,906	6,205	7,106	6,469	2,975
Plus earnings of the operator household from off-farm sources[9]	35,731	35,408	38,092	39,671	42,455	46,358	52,628	54,443	56,375
Equals average farm operator household income	42,911	40,223	42,469	44,392	50,361	52,562	59,734	60,912	59,350
					$ per U.S. household				
U.S. average household income[10]	38,840	41,428	43,133	44,938	47,123	49,692	51,855	--	--
					Percent				
Average farm operator household income as percent of U.S. average household income	110.5	97.1	98.5	98.8	106.9	105.8	115.2	--	--
Average operator household earnings from farming activities as percent of average operator household income	16.7	12.0	10.3	10.6	15.7	11.8	11.9	--	--

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

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

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
					$ billion					
Farm assets	844.2	868.3	910.2	935.5	966.7	1,003.9	1,051.6	1,064.3	1,067.2	1,072.8
Real estate	624.8	640.8	677.6	704.1	740.5	769.5	808.4	822.8	831.1	835.2
Livestock and poultry[1]	68.1	71.0	72.8	67.9	57.8	60.3	67.1	62.0	60.8	60.7
Machinery and motor vehicles	85.9	85.4	86.5	87.5	88.5	88.9	89.0	88.6	86.9	86.3
Crops stored[2,3]	22.2	24.2	23.3	23.3	27.4	31.7	32.2	30.1	30.0	30.0
Purchased inputs	2.6	3.9	3.8	5.0	3.4	4.4	5.1	5.3	5.5	5.6
Financial assets	40.5	43.1	46.3	47.6	49.1	49.0	49.7	55.4	53.0	55.0
Total farm debt	139.2	139.1	142.0	146.8	150.8	156.1	165.4	172.9	172.8	172.5
Real estate debt[3]	74.9	75.4	76.0	77.7	79.3	81.7	85.4	89.6	90.3	90.8
Non-real estate debt[4]	64.3	63.6	65.9	69.1	71.5	74.4	80.1	83.2	82.5	81.7
Total farm equity	705.0	729.3	768.3	788.7	815.9	847.8	886.2	891.4	894.4	900.3
					Percent					
Selected ratios										
Debt to equity	19.8	19.1	18.5	18.6	18.5	18.4	18.7	19.4	19.3	19.2
Debt to assets	16.5	16.0	15.6	15.7	15.6	15.6	15.7	16.2	16.2	16.1

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@econ.ag.gov*

Table 33—Cash Receipts from Farming

	Annual			1999					2000	
	1997	1998	1999	Feb	Sep	Oct	Nov	Dec	Jan	Feb
					$ million					
Commodity sales[1]	207,611	196,761	188,767	13,039	16,822	20,718	17,663	17,506	15,188	13,290
Livestock and products	96,535	94,539	95,296	7,317	7,863	8,145	8,536	7,626	7,529	7,808
Meat animals	49,682	43,604	45,605	3,581	3,804	3,908	4,097	3,472	3,954	4,221
Dairy products	20,940	24,312	23,204	1,805	1,844	1,942	1,905	2,001	1,562	1,684
Poultry and eggs	22,234	22,806	22,942	1,711	1,900	2,063	2,053	1,926	1,738	1,681
Other	3,679	3,816	3,545	219	315	232	481	226	274	223
Crops	111,076	102,222	93,471	5,722	8,959	12,573	9,127	9,880	7,659	5,482
Food grains	10,137	8,734	7,292	349	830	686	341	493	496	284
Feed crops	27,101	22,927	19,741	1,499	1,493	2,390	1,770	2,269	2,496	1,450
Cotton (lint and seed)	6,346	6,013	4,688	306	208	856	623	1,374	245	234
Tobacco	2,874	2,989	2,355	128	320	400	149	548	312	102
Oil-bearing crops	19,673	17,198	13,583	806	1,395	3,360	1,232	1,135	1,328	756
Vegetables and melons	14,961	15,337	15,627	855	1,744	1,714	903	842	996	885
Fruits and tree nuts	13,074	11,727	12,707	714	1,391	1,528	1,741	1,382	691	710
Other	16,909	17,297	17,479	1,066	1,578	1,639	2,367	1,838	1,096	1,061
Government payments	7,495	12,209	20,594	786	527	6,203	3,312	2,149	2,609	1,150
Total	215,107	208,970	209,361	13,825	17,349	26,921	20,976	19,655	17,797	14,441

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@econ.ag.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]			
	1998	1999	Jan 1999	Feb 2000	1998	1999	Jan 1999	Feb 2000	1998	1999	Jan 1999	Feb 2000
						$ million						
North Atlantic												
Maine	282	286	24	24	224	231	18	18	506	517	42	42
New Hampshire	69	63	6	5	82	91	6	6	151	154	12	11
Vermont	472	473	36	36	84	70	3	3	557	542	39	38
Massachusetts	112	101	9	8	395	312	11	10	507	413	19	18
Rhode Island	9	8	1	1	56	39	2	2	65	48	3	3
Connecticut	228	180	17	17	281	297	14	14	509	477	30	31
New York	2,092	2,043	148	141	1,054	1,030	71	67	3,146	3,073	219	207
New Jersey	178	125	10	10	650	561	22	22	828	686	32	31
Pennsylvania	2,914	2,877	228	223	1,261	1,191	98	99	4,175	4,068	326	322
North Central												
Ohio	1,848	1,786	135	134	3,124	2,643	236	191	4,973	4,430	371	326
Indiana	1,639	1,581	109	109	3,245	2,800	328	229	4,885	4,381	437	338
Illinois	1,575	1,524	117	122	6,167	5,232	846	438	7,742	6,757	962	559
Michigan	1,323	1,331	96	96	2,158	2,160	155	109	3,480	3,491	251	205
Wisconsin	4,492	4,149	74	276	1,701	1,454	100	68	6,193	5,603	174	343
Minnesota	3,755	3,545	300	334	3,925	3,523	306	173	7,680	7,068	606	507
Iowa	4,778	4,712	463	440	6,217	5,004	576	323	10,994	9,717	1,039	763
Missouri	2,420	2,477	186	193	2,262	1,780	185	114	4,682	4,256	372	307
North Dakota	549	647	65	49	2,455	2,138	162	91	3,004	2,786	228	140
South Dakota	1,557	1,831	159	166	1,951	1,710	122	72	3,508	3,541	282	238
Nebraska	5,124	5,425	465	489	3,725	3,130	384	158	8,848	8,555	849	647
Kansas	4,537	5,009	385	459	3,247	2,609	220	140	7,784	7,618	604	599
Southern												
Delaware	609	566	48	43	164	153	6	7	774	718	54	50
Maryland	949	937	84	76	571	544	26	25	1,520	1,482	111	101
Virginia	1,561	1,520	127	121	768	689	39	28	2,328	2,208	165	149
West Virginia	336	334	24	24	69	49	3	3	405	382	27	27
North Carolina	3,917	3,850	333	306	3,247	2,783	119	102	7,164	6,633	452	408
South Carolina	763	772	60	53	748	623	29	24	1,511	1,395	89	77
Georgia	3,408	3,324	279	253	2,047	1,882	89	66	5,454	5,206	369	319
Florida	1,407	1,325	117	104	5,355	5,735	556	606	6,762	7,059	673	710
Kentucky	2,134	2,158	160	120	1,787	1,368	303	128	3,920	3,526	463	248
Tennessee	1,038	1,011	148	85	1,177	1,019	90	51	2,216	2,030	238	136
Alabama	2,587	2,777	220	212	696	665	25	30	3,283	3,442	245	243
Mississippi	2,169	2,143	174	171	1,285	1,032	27	52	3,454	3,174	201	224
Arkansas	3,250	3,397	274	264	2,172	1,865	93	83	5,422	5,261	368	347
Louisiana	645	620	56	61	1,245	1,228	126	36	1,891	1,848	182	96
Oklahoma	2,838	3,136	264	322	1,062	839	50	38	3,900	3,975	314	359
Texas	8,220	8,392	647	721	4,986	4,628	346	225	13,206	13,020	993	946
Western												
Montana	865	929	85	93	934	792	71	67	1,799	1,720	156	160
Idaho	1,585	1,604	129	127	1,735	1,901	108	88	3,320	3,504	237	215
Wyoming	681	681	53	61	170	172	10	6	850	854	63	67
Colorado	2,857	3,016	266	275	1,453	1,361	114	72	4,310	4,377	380	347
New Mexico	1,437	1,442	123	135	513	498	23	19	1,950	1,939	146	154
Arizona	943	987	38	72	1,425	1,197	173	124	2,368	2,185	210	196
Utah	736	713	60	56	245	241	17	15	981	954	77	71
Nevada	194	216	19	19	143	115	8	7	337	332	27	27
Washington	1,730	1,653	120	106	3,424	3,266	223	188	5,155	4,918	343	293
Oregon	762	784	64	68	2,330	2,259	105	99	3,092	3,043	170	166
California	6,845	6,715	514	521	17,771	18,106	978	915	24,616	24,821	1,492	1,436
Alaska	27	35	3	3	20	19	1	1	47	54	4	4
Hawaii	92	86	7	7	418	440	36	31	510	527	43	38
U.S.	94,539	95,296	7,529	7,808	102,222	93,471	7,659	5,482	196,761	188,767	15,188	13,290

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									
	1992	1993	1994	1995	1996	1997	1998	1999	2000 E	2001 E
	$ million									
Commodity/Program										
Feed grains:										
Corn	2,105	5,143	625	2,090	2,021	2,587	2,873	5,402	8,744	4,444
Grain sorghum	190	410	130	153	261	284	296	502	706	330
Barley	174	186	202	129	114	109	168	224	286	110
Oats	32	16	5	19	8	8	17	41	38	37
Corn and oat products	9	10	10	1	0	0	0	0	0	0
Total feed grains	2,510	5,765	972	2,392	2,404	2,988	3,354	6,169	9,774	4,921
Wheat and products	1,719	2,185	1,729	803	1,491	1,332	2,187	3,435	4,095	1,737
Rice	715	887	836	814	499	459	491	911	1,170	625
Upland cotton	1,443	2,239	1,539	99	685	561	1,132	1,882	2,697	1,300
Tobacco	29	235	693	-298	-496	-156	376	113	297	-314
Dairy	232	253	158	4	-98	67	291	480	356	108
Soybeans	-29	109	-183	77	-65	5	139	1,289	2,809	3,355
Peanuts	41	-13	37	120	100	6	-11	21	35	-1
Sugar	-19	-35	-24	-3	-63	-34	-30	-51	0	1
Honey	17	22	0	-9	-14	-2	0	2	1	-4
Wool and mohair	191	179	211	108	55	0	0	10	2	-13
Operating expense[1]	6	6	6	6	6	6	5	4	61	5
Interest expenditure	532	129	-17	-1	140	-111	76	210	627	704
Export programs[2]	1,459	2,193	1,950	1,361	-422	125	212	165	613	694
1988/99 Disaster/tree/ livestock assistance	1,054	944	2,566	660	95	130	3	2,241	1,552	2
Conservation Reserve Program	0	0	0	0	2	1,671	1,693	1,462	1,610	1,690
Other conservation programs	0	0	0	0	7	105	197	292	381	305
Other	-162	949	-137	-103	320	104	28	588	881	252
Total	9,738	16,047	10,336	6,030	4,646	7,256	10,143	19,223	26,961	15,367
Function										
Price support loans (net)	584	2,065	527	-119	-951	110	1,128	1,455	1,673	1,079
Cash direct payments:[3]										
Production flexibility contract	0	0	0	0	5,141	6,320	5,672	5,476	5,049	4,057
Market loss assistance	0	0	0	0	0	0	0	3,011	6,062	0
Deficiency	5,491	8,607	4,391	4,008	567	-1,118	-7	-3	0	0
Diversion	0	0	0	0	0	0	0	0	0	0
Dairy termination	2	0	0	0	0	0	0	0	0	0
Loan deficiency	214	387	495	29	0	0	478	3,360	7,222	6,374
Other	140	149	171	97	95	7	416	281	501	355
Conservation Reserve Program	0	0	0	0	2	1,671	1,693	1,435	1,574	1,690
Other conservation programs	0	0	0	0	0	85	156	247	331	252
Noninsured Assistance (NAP)	0	0	0	0	2	52	23	54	75	86
Total direct payments	5,847	9,143	5,057	4,134	5,807	7,017	8,431	13,861	20,814	12,814
1988-99 crop disaster	960	872	2,461	577	14	2	-2	1,913	1,342	0
Emergency livestock/tree/DRAP livestock indemn/forage assist.	94	72	105	83	81	128	5	328	210	2
Purchases (net)	321	525	293	-51	-249	-60	207	668	332	-107
Producer storage payments	14	9	12	23	0	0	0	0	0	0
Processing, storage, and transportation	185	136	112	72	51	33	38	62	61	54
Export donations ocean transportation	139	352	156	50	69	34	40	323	291	161
Operating expense[1]	6	6	6	6	6	6	5	4	61	5
Interest expenditure	532	129	-17	-1	140	-111	76	210	627	704
Export programs[2]	1,459	2,193	1,950	1,361	-422	125	212	165	613	694
Other	-403	545	-326	-105	100	-28	3	234	937	-39
Total	9,738	16,047	10,336	6,030	4,646	7,256	10,143	19,223	26,961	15,367

E = Estimated in FY 2001 President's Budget which was released on February 7, 2000 based on November 1999 supply and demand estimates. The CCC outlays in 1996-2002 include the impact of the Federal Agriculture Improvement and Reform Act of 1996, which was enacted April 4, 1996. Minus (-) indicates a net receipt (excess of repayments or other receipts over gross outlays of funds).
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. *Information contact: Richard Pazdalski'Farm Service Agency-Budget at (202) 720-3675 or Richard_Pazdalski@wdc.fsa.usda.gov.*
Further detail can be found at www.fsa.usda.gov/dam/BUD/bud1.htm

Food Expenditures

Table 36—Food Expenditures

	Annual			2000			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	32.3	35.3	33.7	65.2	100.5	134.2
Away from home[3]	309.5	322.1	343.7	28.6	29.9	32.3	56.4	86.3	118.7
					1998 $ billion				
Sales[1]									
At home[2]	392.4	392.3	397.8	31.3	34.1	32.6	63.2	97.3	130.0
Away from home[3]	317.4	322.1	335.3	27.5	28.7	31.0	54.3	83.0	114.0
					Percent change from year earlier ($ billion)				
Sales[1]									
At home[2]	3.8	2.2	3.8	18.0	3.5	1.3	9.1	7.1	5.6
Away from home[3]	5.9	4.1	6.7	17.1	13.2	12.0	16.4	15.2	14.3
					Percent change from year earlier (1998 $ billion)				
Sales[1]									
At home[2]	-0.2	0.0	1.4	21.4	6.2	3.9	12.5	10.2	8.5
Away from home[3]	3.0	1.5	4.1	20.8	16.8	15.6	20.0	18.9	18.0

-- = 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			1999				2000		
	1997	1998	1999	Mar	Oct	Nov R	Dec	Jan	Feb	Mar P
Rail freight rate index[1] (Dec. 1984=100)										
All products	112.1	113.4	113.0	112.6	113.3	113.3	113.3	114.0	113.8	114.0
Farm products	120.3	123.9	121.8	121.1	122.8	122.8	123.1	122.8	122.9	122.3
Grain food products	107.6	107.4	99.6	99.2	100.4	100.4	100.4	99.5	99.3	100.4
Grain shipments										
Rail carloadings (1,000 cars)[2]	23.2	22.8	24.4	23.3	28.3	24.5	23.8	23.7	25.3	25.0
Barge shipments (mil. ton)[3]	2.6	3.0	3.5	2.8	3.8	4.2	3.6	2.3	1.9	3.2
Fresh fruit and vegetable shipments[4]										
Piggy back (mil. cwt)	1.1	0.9	0.7	0.7	0.6	0.8	0.7	0.7	0.7	0.9
Rail (mil. cwt)	1.7	1.2	1.1	1.1	1.3	1.7	1.8	1.3	1.1	1.1
Truck (mil. cwt)	42.6	42.2	44.3	44.0	42.3	43.1	41.9	39.5	37.9	44.7

P= Preliminary. R = Revised. -- = Not available. 1. Department of Labor, Bureau of Labor Statistics. 2. Weekly average; from Association of American Railroads. 3. Shipments on Illinois and Mississippi waterways, U.S. Corps of Engineers. 4. Agricultural Marketing Service, USDA.
Information contact: Jenny Gonzales (202) 694-5296

Indicators of Farm Productivity

Table 38—Indexes of Farm Production, Input Use, & Productivity[1]

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

-- = Not available. Values for latest year preliminary. 1. Includes miscellaneous items not shown separately. 2. Source: Economic Research Service.
3. Source: Bureau of Labor Statistics. *Information contact: John Jones (202) 694-5614*

Food Supply & Use

Table 39—Per Capita Consumption of Major Food Commodities[1]

Commodity	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
					Lbs.					
Red meats[2,3,4]	115.9	112.3	111.9	114.1	112.2	114.7	115.1	112.8	111.0	115.6
Beef	65.4	63.9	63.1	62.8	61.5	63.6	64.4	65.0	63.8	64.9
Veal	1.0	0.9	0.8	0.8	0.8	0.8	0.8	1.0	0.9	0.7
Lamb & mutton	1.0	1.0	1.0	1.0	1.0	0.9	0.9	0.8	0.8	0.9
Pork	48.4	46.4	46.9	49.5	48.9	49.5	49.0	45.9	45.6	49.1
Poultry[2,3,4]	53.9	56.3	58.3	60.8	62.5	63.3	62.9	64.1	64.2	65.0
Chicken	40.9	42.4	44.2	46.7	48.5	49.3	48.8	49.5	50.4	50.8
Turkey	13.1	13.8	14.1	14.1	14.0	14.1	14.1	14.6	13.9	14.2
Fish and shellfish[3]	15.6	15.0	14.8	14.7	14.9	15.1	14.9	14.7	14.5	14.8
Eggs[4]	30.5	30.2	30.1	30.3	30.4	30.6	30.3	30.6	30.7	32.0
Dairy products										
Cheese (excluding cottage)[2,5]	23.8	24.6	25.0	26.0	26.2	26.8	27.3	27.7	28.0	28.4
American	11.0	11.1	11.1	11.3	11.4	11.5	11.8	12.0	12.0	12.2
Italian	8.5	9.0	9.4	10.0	9.8	10.3	10.4	10.8	11.0	11.3
Other cheeses[6]	4.3	4.5	4.6	4.7	5.0	5.0	5.0	5.0	5.0	4.8
Cottage cheese	3.6	3.4	3.3	3.1	2.9	2.8	2.7	2.6	2.7	2.7
Beverage milks[2]	224.2	221.8	221.1	218.3	213.4	213.6	209.8	210.0	206.9	204.5
Fluid whole milk[7]	97.5	90.4	87.3	84.0	80.1	78.8	75.3	74.6	72.7	71.6
Fluid lower fat milk[8]	106.5	108.5	109.9	109.3	106.6	106.0	102.6	101.7	99.9	98.5
Fluid skim milk	20.2	22.9	23.9	25.0	26.7	28.8	31.9	33.7	34.3	34.4
Fluid cream products[9]	7.8	7.6	7.7	8.0	8.0	8.1	8.4	8.7	9.0	9.2
Yogurt (excluding frozen)	4.2	4.0	4.2	4.2	4.3	4.7	5.1	4.8	5.2	5.1
Ice cream	16.1	15.8	16.3	16.3	16.1	16.1	15.7	15.9	16.4	16.6
Lowfat ice cream[10]	8.4	7.7	7.4	7.1	6.9	7.6	7.5	7.6	7.9	8.3
Frozen yogurt	2.0	2.8	3.5	3.1	3.5	3.5	3.5	2.6	2.1	1.9
All dairy products, milk equivalent, milkfat basis[11]	563.8	568.4	565.6	565.9	574.1	586.0	583.9	574.7	577.7	582.3
Fats and oils--total fat content	60.5	63.0	64.8	66.8	69.7	68.0	66.4	65.3	64.9	65.3
Butter and margarine (product weight)	14.6	15.3	15.0	15.4	15.8	14.8	13.7	13.5	12.8	12.5
Shortening	21.5	22.2	22.4	22.4	25.1	24.1	22.5	22.3	20.9	20.9
Lard and edible tallow (direct use)	1.8	2.2	1.8	3.5	3.4	4.2	4.4	4.8	4.1	5.2
Salad and cooking oils	24.4	25.3	26.4	27.2	26.9	26.2	26.9	26.2	28.6	27.9
Fruits and vegetables[12]	656.0	656.1	650.3	677.7	691.3	705.8	694.3	710.9	717.9	699.6
Fruit	278.0	272.6	255.3	283.8	283.1	291.0	284.8	290.2	296.8	281.4
Fresh fruits	122.9	116.3	113.0	123.5	124.5	126.3	124.1	128.1	131.9	131.8
Canned fruit	21.2	21.0	19.8	22.9	20.7	21.0	17.5	18.8	20.4	17.3
Dried fruit	13.2	12.1	12.3	10.8	12.6	12.8	12.8	11.3	10.8	12.8
Frozen fruit	4.1	3.8	3.8	3.9	3.7	3.8	4.2	4.0	3.7	4.2
Selected fruit juices	116.4	119.0	106.0	122.1	121.2	126.7	125.8	127.7	129.3	115.0
Vegetables	378.0	383.5	395.0	393.9	408.3	414.7	409.5	420.7	421.1	418.1
Fresh	172.2	167.1	167.4	171.1	178.2	184.6	179.1	184.1	190.4	186.5
Canning	102.4	111.6	114.4	112.2	112.9	112.4	110.8	109.5	107.8	108.0
Freezing	67.4	66.8	72.6	70.9	76.0	78.4	79.9	84.7	81.9	82.3
Dehydrated and chips	29.8	31.0	32.8	31.5	33.6	31.0	31.3	34.5	32.7	32.9
Pulses	6.3	7.1	7.8	8.1	7.7	8.4	8.4	8.0	8.3	8.4
Peanuts (shelled)	7.0	6.0	6.5	6.2	6.1	5.8	5.7	5.7	5.9	5.9
Tree nuts (shelled)	2.2	2.4	2.2	2.2	2.4	2.3	1.9	2.0	2.1	2.3
Flour and cereal products[13]	174.2	181.5	183.0	185.5	190.1	192.9	191.3	197.4	198.9	--
Wheat flour	129.8	136.0	137.0	138.9	143.3	144.4	141.9	148.7	149.5	147.8
Rice (milled basis)	14.8	15.8	16.2	16.7	16.7	18.1	18.9	17.8	18.5	18.9
Caloric sweeteners[14]	133.1	137.0	137.9	141.2	144.4	147.4	149.9	150.7	154.1	--
Coffee (green bean equiv.)	10.1	10.3	10.3	10.0	9.1	8.2	8.0	8.9	9.3	--
Cocoa (chocolate liquor equiv.)	4.0	4.3	4.6	4.6	4.3	3.9	3.6	4.2	4.1	--

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

Information contact: Jane E. Allshouse (202) 694-5414