

The U.S. wheat sector . . . Consolidation in food retailing . . . Expansion in field crop acreage . . . Genetic engineering & pesticide use

U.S. Wheat Economy Confronts Challenges

The U.S. wheat sector enters the new century facing many challenges, despite a strong domestic market for wheat products. U.S. wheat area is trending down because of declining returns relative to other crops, due partly to continued sharp competition from abroad. U.S. share of the world wheat market has eroded for more than two decades, with exports holding fairly steady while global wheat trade increased. During the past quarter century, U.S. per capita consumption of wheat as food products shows an upward trend, and the rise has benefited the U.S. wheat processing industry, although foreign producers have captured a share of the expanded domestic market.

Global wheat consumption will outpace production for a third year, causing worldwide wheat stocks to drop 10 percent in 2000/01. But exporters' stocks remain large, and U.S. prices are forecast little changed from a year earlier. The extent of an increase in world wheat trade—forecast to reach its highest level in nearly 10 years—is likely to be crucial for wheat prices in 2000/01.

U.S. Field Crop Acreage Expands

Planted area for the eight major U.S. field crops totals 254.9 million acres in 2000, up more than 3 million acres from last year when prices were lower for most crops at planting time. According to USDA's June 30 *Acreage* report, increases in soybean, corn, barley, wheat, and cotton area more than offset declines in sorghum, oats, and rice. U.S. farmers have planted a record 74.5 million acres of soybeans in 2000, 1 percent over last year's record. Corn plantings increased to an estimated 79.6 million acres, up 3 percent. Normal weather in the coming months would result in large output and stable or declining farm prices for most U.S. field crops in 2000/2001.



Slow Growth Persists for U.S. Meat Exports

Growth in overall U.S. red meat and poultry exports is expected to continue on a slow course this year and flatten in 2001, as increases in pork and broilers are offset by declines in beef and turkey. Sluggish growth in total meat exports in recent years can be traced to a healthy economy in the U.S., where strong domestic demand has bid up prices of meat products. At the same time, buying power of some major importers of red meats and poultry (e.g., in Russia and Asia) dropped as incomes fell and currencies collapsed.

U.S. Agricultural Imports Head Higher

U.S. imports of agricultural commodities and products are projected to reach \$39 billion in fiscal 2000, a 72-percent rise from 1990. This astonishing growth results in part from exceptional U.S. economic expansion during the decade. In the last half of the decade, the strong U.S. dollar and sluggish growth or recessions elsewhere in the world have also contributed to the surge in U.S. imports. Continued strong U.S. economic growth,

the dollar's high purchasing power, and relatively low global commodity prices point toward higher imports in 2001.

Consolidation in Food Retailing

The U.S. food retailing industry has undergone unprecedented consolidation and structural change in recent years. Large retailers have since 1996 purchased almost 3,500 supermarkets, representing annual grocery store sales of more than \$67 billion. The nationwide share of sales for the four largest retailers rose from nearly 16 percent in 1992 to almost 29 percent in 1998.

Widespread consolidation in the grocery industry could have implications for consumers and food market suppliers such as grower-shippers, and wholesalers. Some consumers fear that fewer food retailers will eventually mean higher grocery prices and less variety. Suppliers worry that fewer but larger buyers could force prices lower for products and services that food retailers purchase. Retailers are likely to continue consolidating in order to maintain profitability as competition for the consumer food dollar heightens.

Does Genetic Engineering Reduce Crop Pesticide Use?

Planting genetically engineered (GE) crops appeals to producers because of the potential to simplify pest management, reduce pesticide use, and help control costs. Analysis by USDA's Economic Research Service indicates that adoption of GE corn, soybeans, and cotton is associated with a decrease in the number of acre-treatments of pesticides (number of acres treated multiplied by number of pesticide treatments). Reduction in *volume* of active ingredients applied is less consistent, since adoption alters the mix of pesticides used in the cropping system, as well as the amounts used. Comparison of different mixes of pesticides involves evaluating tradeoffs between the amounts used and the environmental characteristics, primarily toxicity and persistence.

Briefs

Field Crops

U.S. Acreage Expands

Planted area for the eight major U.S. field crops (corn, soybeans, wheat, barley, sorghum, oats, cotton, and rice) totals 254.9 million acres in 2000, up more than 3 million acres from last year when prices were lower for most crops at planting time. Increases in corn, soybean, barley, wheat, and cotton area more than offset declines in sorghum, oats, and rice.

Estimates of planted and harvested acreage in USDA's *Acreage* report were based on surveys conducted during the first 2 weeks of June. Compared with USDA's March 31 *Prospective Plantings* report, which indicated farmers' crop intentions for spring plantings in 2000, planted area is 2 percent higher for corn and wheat but 0.5 percent lower for soybeans.

Actual harvested acreage and yield for spring planted crops will be influenced strongly by weather conditions through the growing season. Normal weather would result in large output and stable or declining farm prices for most U.S. field crops in 2000/2001 compared with a year earlier (see *AO* June-July 2000). However, crop potential could be reduced in the Southeast (especially from eastern Louisiana to the Southern Atlantic coast) if additional rainfall does not alleviate dry weather conditions in the region.

Planting and fieldwork were ahead of normal this spring as drier-than-normal weather occurred over large portions of the Southeast, Southwest, Great Plains, and Corn Belt. By mid-May, over 90 percent of U.S. corn acreage had been planted, and as corn planting neared completion, soybean planting accelerated. By the end of May, 85 percent of soybean acreage was planted, and progress was nearly 2 weeks ahead of normal.

U.S. farmers have planted a record 74.5 million acres of *soybeans* in 2000, a 1-percent increase over last year's record. Planted acreage has increased steadily since 1990 when the soybean planted area totaled 57.8 million acres. Farmers are expected to harvest 73.5 million acres, up 1 percent from the 1999 record harvested

acreage. Several factors are behind the rise in soybean plantings, including a soybean loan rate (under the government nonrecourse marketing assistance loan and loan deficiency payment program) that is favorable relative to other crops.

For the third consecutive year, estimated soybean acreage increased in the Great Plains and declined in most of the Midwest, South, Southeast, and mid-Atlantic states. The largest acreage increases were in North Dakota, Nebraska, and Michigan. Farmers in the largest producing states, Iowa and Illinois, decreased soybean area this spring. Other states with large reductions included Mississippi, Missouri, and Ohio.

Corn plantings also increased in 2000 to an estimated 79.6 million acres, up 3 percent from last year due to stronger futures prices at planting and favorable spring weather. Corn acreage to be harvested for grain is estimated to increase to 73.1 million acres, also up 3 percent. Total corn acreage for Corn Belt states, at 48.5 million acres, increased 2 percent from last year, due in part to reduced soybean plantings (*AO* May 2000). Illinois, Iowa, and Ohio increased planted acreage from last year. Outside the Corn Belt, in South Dakota, Missouri, North Dakota, and Kansas, corn acreage increased sharply from last year's high levels. USDA report-

ed that 75 percent of the crop was in good or excellent condition as of July 16.

Sorghum plantings dropped again in 2000 to an estimated 8.8 million acres, down 5 percent from 1999, as acreage declined in most of the major producing states due to weak feedgrain prices. This is the lowest planted acreage on record. Texas, with 2.94 million acres, reports the largest reduction, a decrease of 8 percent from 1999. Kansas, the largest sorghum producing state, decreased plantings 6 percent to 3.4 million acres. Acreage expected for grain harvest in 2000, at 8.1 million acres, is down 5 percent from the 1999 grain acreage and is the lowest level since 1953.

Barley plantings increased in 2000 to an estimated 5.7 million acres, up 9 percent from last year's record low. The largest increases were in North Dakota, South Dakota, and Minnesota. Favorable weather this spring and higher premiums for malting barley encouraged farmers to increase plantings. Most of the 1999 barley crop was planted by late May.

Total *wheat* planted acreage for harvest in 2000 is estimated at 62.9 million acres, fractionally higher than last year. Compared with intentions in the March *Prospective Plantings* report, plantings are up 2 percent for total wheat, up 12 percent for durum wheat, and up 5 percent for other spring wheat. Producers plan to harvest about 54.4 million acres, up 0.5 million from last year. (See upcoming September *AO* for outlook for U.S. durum market.)

Acreage Up for Corn, Soybeans, Wheat, and Barley

	1999 acreage			2000 acreage		
	Prospective	Planted	Harvested	Prospective	Planted	Harvested ¹
	<i>Million acres</i>					
Corn	78.2	77.4	71.0	77.9	79.6	73.1
Soybeans	73.1	73.8	72.5	74.9	74.5	73.5
Wheat	63.0	62.8	53.9	61.7	62.9	54.4
Sorghum	9.3	9.3	8.5	9	8.8	8.1
Barley	5.3	5.2	4.8	5.7	5.7	5.2
Oats	4.7	4.7	2.5	4.4	4.5	2.5
Rice	3.6	3.6	3.6	3.4	3.3	3.2
Cotton	13.9	14.9	13.4	15.6	15.6	14.6 ²
Total	251.1	251.7	230.2	252.6	254.9	234.6

1. Forecast. 2. Harvested cotton area is based on 1990-99 average acreage abandonment by state, as reported in the July 12, 2000 *World Agricultural Supply and Demand Estimates*. Harvested area for other crops is estimated in the June 30, 2000 *Acreage* report.

Biotech Plantings Update

Biotech soybeans and cotton remain popular with U.S. farmers in major producing states, accounting for more than one-half of acreage for both crops. The shares of U.S. planted acreage devoted to crops developed through biotechnology reached 54 percent for U.S. soybeans and 61 percent for U.S. upland cotton this year—up 2 percentage points for soybeans and 5 percentage points for cotton compared with the March *Prospective Plantings* report. U.S. farmers cut back the share of acreage planted to biotech corn—from about one-third in major producing states last year to 25 percent in 2000—the same as indicated for 2000 in the *Prospective Plantings* report (AO May 2000). These estimates are derived from a survey of randomly selected farmers.

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Biotech Varieties Account for More Than Half of U.S. Soybean and Cotton Acreage in 2000

	Total planted acreage	Biotech share
	1,000 acres	Percent
Soybeans	74,501	54
Iowa	10,600	59
Illinois	10,300	44
Minnesota	7,200	46
Indiana	5,700	63
Upland cotton	15,350	61
Texas	6,300	46
Georgia	1,450	82
Mississippi	1,360	78
North Carolina	940	76
Corn	79,579	25
Iowa	12,300	30
Illinois	11,200	17
Nebraska	8,400	34
Minnesota	7,100	37

U.S. total and top four states.

Source: National Agricultural Statistics Service, USDA

Economic Research Service, USDA

Cotton plantings for 2000 are estimated at 15.6 million acres, 5 percent above 1999 and unchanged from the March *Prospective Plantings* report. All major producing states except Arkansas, Florida, Georgia, and South Carolina increased area. Although planting-time prices were about the same as a year earlier, expected returns were higher for cotton than for competing crops like corn and soybeans.

Texas, the largest cotton producing state, completed most plantings by late June, although some replanting was necessary in the Texas High Plains on fields damaged by rain, wind, and hail. In mid-July, 54 percent of the Texas crop was rated in good or excellent condition, and 29 per-

cent was rated in fair condition. In California, ideal weather in early April allowed plantings to proceed ahead of normal. The hot weather California has been experiencing has been beneficial for cotton development, with the crop maturing at a very good rate. In early July, 60 percent of the California crop was noted in good or excellent condition. Prospects for a large U.S. crop led to a fall in cotton prices from May to June, but recent hot and dry weather has added uncertainty to the market

Rice plantings for 2000 are estimated at almost 3.3 million acres, down nearly 9 percent from 1999, with long grain acreage down 12 percent. Weaker prices

for long grain rice and some weather problems, primarily in Louisiana, are responsible for much of the contraction in rice acreage. In contrast, combined short and medium grain plantings are up more than 2 percent—with California accounting for the bulk of the increase—due to tight stocks and relatively robust prices in 1999. **AO**

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Upcoming Reports—USDA's Economic Research Service

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

August

- 11 *World Agricultural Supply & Demand (8:30 am)*
- 14 *Cotton & Wool Outlook (4 pm)***
*Oil Crops Outlook (4 pm)***
*Rice Outlook (4 pm)***
- 15 *Feed Outlook (9 am)***
*Wheat Outlook (9 am)***
- 21 *Agricultural Outlook**
- 23 *U.S. Agricultural Trade Update (3 pm)*
- 29 *Livestock, Dairy & Poultry (4 pm)***
- 30 *Outlook for U.S. Agricultural Trade**

*Release of summary, 3 p.m.

**Available electronically only

Briefs

Livestock, Dairy, & Poultry**Slow Growth Persists for U.S. Meat Exports**

Growth in overall U.S. red meat and poultry exports is expected to continue on a slow course this year and actually flatten in 2001, as increases in pork and broiler exports are offset by declines in beef and turkey exports. However, forecasters see a significant rise in exports this year of turkey meat and live cattle.

Since 1997, U.S. meat exports have increased at an average rate of only about 3 percent, in contrast to double-digits of the previous 10 years. During that boom period, trade agreements made several markets more accessible, leading to immediate sharp increases in exports.

Sluggish growth in total meat exports can be traced to a healthy U.S. economy combined with economic weakness in importing markets (e.g., Russia and Asia). In recent years, U.S. domestic demand has bid up prices of meat products. At the same time, buying power of some major importers of red meats and poultry dropped as incomes fell and currencies collapsed.

Beef exports are forecast up 4 percent this year to 2.5 billion pounds, a rise expected to be offset by a 3-percent drop in 2001. Contributing to the increase in 2000 are generally strong economies and reduced herds in major beef-importing countries. Behind next year's decline is an expected 5-percent drop in U.S. beef production due to declining cattle inventory since 1996, along with continuing strength in the U.S. economy, which is generating strong domestic demand. In the higher-priced fed beef segment of the world market, which serves restaurants and hotels, the U.S. has little competition and should remain the dominant supplier.

Beef imports, up 5 percent over last year, should reach at least 3 billion pounds in 2000 but increase close to 1 percent in 2001. Most of this year's anticipated rise came in the first quarter, as U.S. supplies of processing meat dropped and imports from Australia and New Zealand (major exporters of manufacturing-grade beef) rose to meet demand. Lower cow slaugh-

ter and pork production in the U.S. accounted for the decline in U.S. processing-meat supplies. Also contributing to this year's upward swing in imports was a rise in U.S. beef prices, making the U.S. beef market more attractive for world beef exporters.

In 2001, strong U.S. beef prices will continue to pull in beef. A predicted ongoing fall in U.S. cow slaughter should drive up lean beef prices and draw in manufacturing-grade beef from New Zealand, Australia, and South America. In processed meats (e.g., sausage products), however, greater availability of both pork and poultry should substitute in part for this more expensive beef.

Live cattle exports are predicted to move against the overall current this year, reaching a record high of about 360,000 head, up 9 percent. Imports are expected to drop 4 percent from 1999, to 1.875 million head, coming from Mexico and Canada. Variations in U.S. trade with

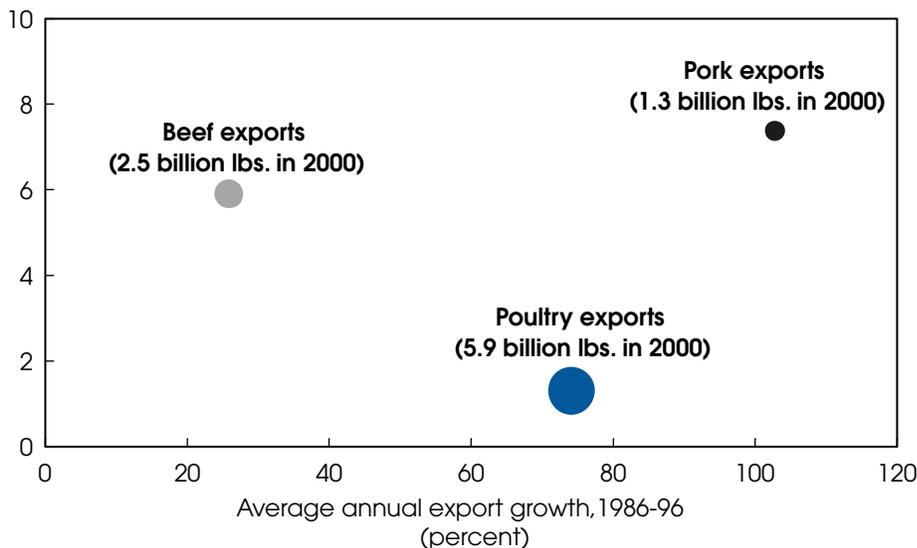
Canada account for most of the changing trade numbers. The sharp rise in exports results from the success of the Northwest Cattle Project, which simplifies the procedure for exporting cattle to Canada from certain northwestern states. Canada's demand for these cattle is due to more cattle-feeding, rising slaughter capacity, and a lower cattle inventory in that country—factors that also lie behind the forecast drop in live cattle imports from Canada.

In 2001, live cattle imports are expected to dip about 5 percent, as Canada and Mexico will have significantly smaller herds. Mexico will turn to herd rebuilding, assuming normal weather conditions. Canada will likely keep more cattle in-country to meet excess slaughtering capacity.

Turkey meat exports in 2000 should see a 14-percent rise to 434 million pounds. Higher energy prices early this year boosted the economies of both Russia and Mexico (the largest market for turkey), which should show up in higher U.S. turkey exports in 2000. (Fallout from earlier Mexican economic problems caused last year's turkey exports to drop

Growth in U.S. Meat Exports Has Slowed from Exceptionally High Levels

Average annual export growth, 1997-2000 (percent)



2000 forecast.

Economic Research Service, USDA

15 percent.) Shipments to Asian markets are also expected to continue growing, but these will face strong competition from chicken products.

Broiler exports should continue to expand, although slowly—about 3 percent in 2000 and less than 1 percent in 2001. Supporting the growth in exports is economic recovery and growth in Russia and China (including Hong Kong)—both major markets,

Pork exports are expected to continue to outweigh imports in 2000 and 2001. This year, exports are forecast at 1.275 billion pounds (down slightly from last year), rising to 1.305 billion pounds in 2001. Imports are forecast up 22 percent this year and unchanged next, reaching more than a billion pounds each year. Exports to Mexico and Asia—specifically, Hong Kong, Taiwan, and Japan—are likely to

Estimates of U.S. meat supply and use for 1999 and 2000 have been adjusted to reflect volumes of meat shipped during 1999 as part of the Russian Food Aid package. Official Census Bureau data report this meat as having been shipped in 2000. Census revisions to the official trade number will be adopted when available. Current USDA trade figures are available in the supply and utilization tables found at <http://www.ers.usda.gov/briefing/animal>

continue their gradual rise, reflecting the increasingly healthy economies in these regions.

While U.S. pork production falls (following low returns in recent years) and with the dollar relatively strong, pork exporters, particularly Canada and Denmark, will find the U.S. an attractive

market. The expanding, restructured Canadian pork industry is expected to continue to supply large quantities of pork and hogs to the U.S.

Hog imports from Canada are forecast at about 3.7 million head in 2000 (essentially the U.S. total) and 3.475 million in 2001. As long as Canada's hog and pig production goes on outstripping the country's finishing and slaughter capacity, Canadian feeder pigs are expected to continue to comprise more than half of total U.S. hog imports. **AO**

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Ag Trade

U.S. Agricultural Imports Head Higher

U.S. imports of agricultural commodities and products are projected to reach \$39 billion in fiscal 2000, a 72-percent increase from 1990. This astonishing growth results in part from exceptional U.S. economic expansion during the decade (averaging 3 percent from 1990 to 1999). Also contributing to the surge in U.S. import demand in the last half of the decade have been low commodity prices, the strong U.S. dollar, recessions in Asia and Latin America, sluggish growth in Europe, and effects of trade agreements, particularly in North America.

Continued strong U.S. economic growth, the dollar's high purchasing power, and relatively low commodity prices point toward higher imports in 2001. Growth in high-value imports is expected to continue to push up overall import value.

The forecast \$39-billion ag import tally for fiscal year 2000 is only \$11 billion lower than projected U.S. agricultural exports, resulting in the lowest agricultur-

al trade surplus since 1987. The expected share of imports in total U.S. agricultural trade (exports plus imports) is 44 percent

for 2000, compared with 35 percent just 4 years ago.

Among the fastest-growing U.S. imports are high-value products, such as red meats, dairy products (mainly cheese), fruits and juices, vegetables, and wine and malt beverages, each increasing significantly since 1995. Even imports of

U.S. Agricultural Imports Increase As Dollar Appreciates

	U.S. agricultural imports				Exchange rate (inflation-adjusted*)	
	1990	1995	1999	2000	1990	1999
	\$ billion				1995=100	
Total agricultural imports	22.7	29.9	37.4	39.0	103.0	114.7
Noncompetitive imports	5.6	8.5	8.1	7.9	108.7	123.7
Coffee, cocoa	3.0	4.4	4.5	4.4	106.8	118.6
Competitive imports	17.1	21.4	29.4	31.1	101.4	112.3
Red meats	2.8	2.3	3.1	3.6	99.0	117.1
Beef	1.8	1.5	2.0	2.5	102.2	117.9
Dairy products	0.9	1.1	1.6	1.6	105.1	119.2
Grains and feeds	1.2	2.2	2.9	3.0	91.8	114.2
Fruits and juices	3.1	3.4	4.7	4.9	113.5	109.3
Vegetables and preps.	2.3	3.1	4.5	4.6	95.7	102.4
Oilseeds and products	1.0	1.7	2.0	1.9	103.2	121.8
Sugar and products	1.2	1.3	1.6	1.6	109.2	111.9
Wine and malt beverages	1.8	2.2	4.0	4.3	103.7	113.1

Fiscal years ending September. 2000 forecast.

*Adjusted by foreign consumer price indexes (relative to U.S.) and weighted by 1997-99 average import values. A rise indicates dollar appreciation (i.e., a dollar buys more foreign currency).

Economic Research Service, USDA

Briefs

processed grain products grew substantially. Noncompetitive imports—coffee, cocoa, rubber, etc.—have risen in volume, but because of low world prices, have declined in value in 1999 (22 percent of total agricultural imports). Import values of bulk commodities—feed grains, soybeans, tobacco, and sugar—are also smaller due to lower prices, although imports have remained relatively flat in volume.

Low prices from abundant supplies, weak foreign demand, and foreign economic downturns have made foreign goods more affordable to U.S. consumers. Prices of U.S. food imports are about 12 percent lower than in 1995, based on an index of import prices calculated by the Bureau of Labor Statistics. Among imports with the steepest price declines are coffee, cocoa, sugar products, and other prepared foods. On average, prices of meat, fruits, and vegetables fell 5-10 percent between 1995 and 1999, and prices as of second quarter 2000 were below 1995 prices, except for wine and malt beverages. If the U.S. dollar maintains its high exchange value, domestic food price inflation based on high import costs is likely to be small, even if world commodity prices start to recover.

Along with low world prices, the dollar's relatively strong foreign exchange value in recent years helps explain the pattern of U.S. agricultural imports, particularly for high-value imports. For total U.S. imports from 1995 to early 2000, the dollar increased by 15 percent in real value against currencies of source countries. For noncompetitive imports, the dollar has risen by 24 percent.

The dollar's increased purchasing power, combined with strong U.S. income growth, drives the import surge of higher-value products like red meats, dairy products, fruits and vegetables, oilseed products, sugar products, and beverages. For vegetables, imports jumped 60 percent in value from 1995 to 1999 while the real

Prices of Most U.S. Food Imports Fall After Rising in Mid-1990's

	1990	1995	1999	January-June 2000
	<i>Index</i>			
All-food import index	100.0	116.1	103.2	100.4
Meat and products	100.0	85.7	79.9	82.9
Fruits and juices	100.0	104.7	95.5	99.4
Vegetables	100.0	124.5	114.7	108.8
Wine and malt beverages	100.0	113.4	123.7	124.7
Coffee, cocoa	100.0	162.3	103.9	91.2
Sugar products ¹	100.0	104.1	85.9	79.3
Other prepared foods ²	100.0	118.7	96.2	95.4

Calendar years.

1. Bakery and confectionery products 2. Other animal and vegetable preparations and nonalcoholic beverages.

Source: Bureau of Labor Statistics, U.S. Department of Labor.

Economic Research Service, USDA

exchange-rate index rose by only 2.4 percent. The index gain was modest because the Mexican peso actually *appreciated* in real terms against the dollar during that period, and Mexico is the source of more than 40 percent of U.S. vegetable imports.

Another influence on U.S. import growth is lower trade barriers, most notably under the North American Free Trade Agreement. Imports from Canada and Mexico are projected to reach \$13.2 billion in fiscal 2000, up from \$5.7 billion in 1990.

The U.S. depends on relatively few sources for its ag imports. Only 20 countries supplied an average 90 percent of total U.S. imports from 1996 to 1998, with Canada, Mexico, and the EU supplying half of U.S. imports. One-third of U.S. imports in fiscal 2000 is expected to come from Latin America (13 percent from Mexico alone), 21 percent each from Canada and the EU, and 14 percent from Asia. This pattern gives credence to the "gravity" theory, which explains high trade levels as a product of close geographic proximity. Canada, Mexico, and Chile show growing shares of the U.S. import market in the past two decades, while others such as Australia exhibit declining shares.

U.S. net imports of high-value products in fiscal 2000 are expected to be double the 1995 value. More than \$6 billion in net imports of animals, dairy products, fruits, fruit juices, vegetables, sugar and products, and beverages are projected, versus \$3 billion in 1995. While domestic producers face competition as a result of growing imports, lower prices and larger supplies benefit consumers.

The sharp growth in horticulture imports reflects an increasing dependence on imported food, although the total import share remains below 10 percent, based on estimates by USDA's Economic Research Service. In 1999, 16 percent of U.S. consumption of fruits, fruit juices, and tree nuts was imported, increasing from 13 percent in 1989. The import share of vegetable consumption was 12 percent in 1999, rising from 7 percent in 1989. Some of these gains result from expanded year-round availability when U.S. supplies are low or unavailable. The import share is 24 percent for cane and beet sugar, and 7 percent for beef. U.S. consumption of these foods continues to climb faster than domestic production, and per capita consumption also continues to rise. 

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Commodity Spotlight



Forces Shaping the U.S. Wheat Economy

The U.S. wheat sector enters the new century facing many challenges, despite a strong domestic market for wheat products. U.S. wheat area is dropping off because of declining returns relative to other crops, stemming in large part from continued sharp competition from abroad and structural changes in world markets. U.S. wheat exports have held fairly steady since the mid-1990's, even as global trade has trended up. In the wake of trade liberalization under the North America Free Trade Agreement (NAFTA), the U.S. has emerged during the 1990's as a steady importer of wheat and as a significant market for Canadian wheat exports.

The share of domestic wheat production milled for food use has grown, as the share for animal feed and exports has declined. During the past quarter century, U.S. per capita consumption of wheat as food products has risen, although foreign producers have captured a share of the expanded domestic market. In the 1998/99 crop year, domestic per capita wheat consumption dropped off. The expected rebound during 2000/01 will still fall short of the 1997 peak.

Consumption Rebound Benefits Processing Industry

The rise in U.S. per capita wheat consumption (measured as flour and the flour equivalent in food products such as bread, cookies, and pasta) is the extension of an historic turnaround that occurred in the 1970's. For nearly 100 years, per capita wheat consumption had declined in the U.S., as physical labor declined and diets diversified. Wheat consumption had dropped from over 225 pounds per person in 1879 to 180 pounds in 1925, bottoming out at 110 pounds in 1972.

By 1997, U.S. per capita wheat consumption was back up to 149.5 pounds, the highest since the 1940's. The rebound in consumption was surprising to some, because wheat products were not considered preferred foodstuffs for consumers with rising incomes. But the overall growth in per capita consumption that occurred between 1973 and 1997 reflected some changes that included the boom in away-from-home eating, the desire of consumers for greater variety and more convenience in food products, promotion of wheat flour and pasta products by industry organizations, and wider recognition of health benefits stemming from eating high-fiber grain-based foods.

Canadian wheat producers reaped part of the gains from this increased demand. Before the 1990's, the U.S. had generally imported only small amounts of wheat and wheat products, mostly from Canada. In the early 1990's, however, imports began to climb rapidly, and by 1993/94, wheat imports from Canada reached a record 2.4 million tons, although much of that was damaged grain to be used for feed. Recently, however, most imports from Canada are high-quality grain to be used in bread and pasta. Imports of durum and hard red spring (HRS) wheat from Canada are equivalent to about 20 percent of U.S. consumption of those wheat classes.

Imports are not likely to decline to pre-1990 levels in the near future. NAFTA has ended tariffs and eliminated quotas for wheat trade between the U.S. and Canada. The 1995 elimination of transportation subsidies to Canadian growers for moving grain to ocean export terminals in Vancouver and Thunder Bay has rendered shipping to the U.S. relatively less costly than to overseas markets.

The rise in per capita consumption has benefited the U.S. wheat processing industry. Over the last 25 years, the industry has been able to operate near full capacity while expanding and modernizing. Existing mills at traditional milling centers such as Kansas City, Minneapolis, and Buffalo have been enlarged, while new mills have been built near major population centers in California and other states.

Prior to the 1960's, mills were typically built near major wheat producing regions because rail rates for shipping wheat (an easily storable item) and wheat flour (a more perishable product) were equalized under a rail transit rate structure, regardless of where the mill was located between the grain origination point and destination of the flour. When use of this rate structure ended and railroad companies began to adopt cost-saving hopper-car technology and multi-car discount rates—suitable for shipping large quantities of bulk grain headed for mills but not for smaller quantities of flour on the way to bakers—costs for transporting wheat fell relative to flour. As a result, mills producing bulk flour were often built closer to population centers that supported

Commodity Spotlight

production of highly perishable products such as bread. Siting their facilities near purchasers, bulk-flour millers could directly supply bakers and avoid the need for a local flour storage facility or a local distributor.

In contrast, wheat products that are less perishable need not be manufactured in close proximity to purchasers. For example, bagged flour and pasta products are produced and distributed over a very wide market area because they can easily be transported a considerable distance to customers. Millers supplying bagged wheat flour or semolina for pasta (milled from durum wheat) may choose to locate mills at sites with access to national transportation facilities central to several urban centers.

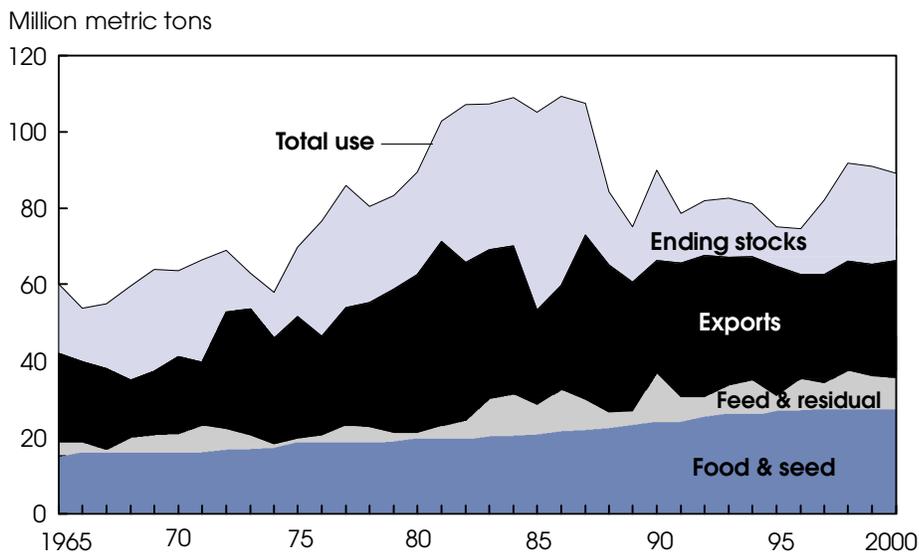
Total growth in the domestic market is not just a function of food use. Wheat is also fed to livestock, but this component is volatile, with year-to-year changes stemming mainly from the availability of substantial quantities of low-quality wheat. Demand for wheat as feed depends largely on the price of wheat relative to corn and other feed grains. However, in general, the price of feed wheat is not high enough to provide an incentive for producers to grow wheat just for feeding.

U.S. Export Lead Narrows

In the 1990's, world wheat production and consumption have continued to expand in response to rising population and incomes, and the volume of world wheat trade has gained slightly. Distribution of global wheat trade has broadened as smaller purchases by a larger number of importing countries—in Southeast Asia, North Africa, and the Middle East—have become more important than the very large purchases by the former Soviet Union and China.

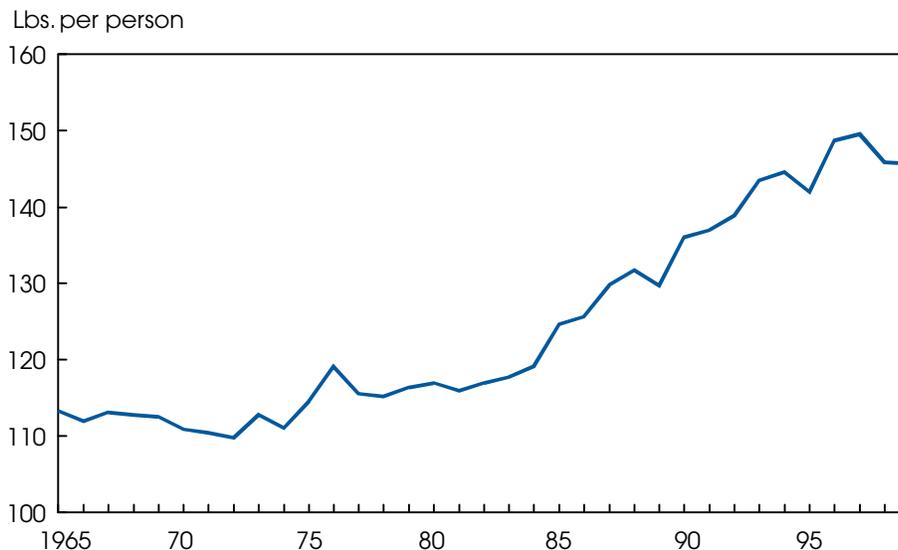
The breakup of the Soviet Union led to a reduction of wheat imports into the region. Initially, it appeared that import growth elsewhere would outweigh this loss. Later, however, China, another major importer, also cut wheat imports, because of large domestic production and a flattening in per capita wheat consumption. Aggregate world trade has continued growing, albeit slowly in recent years, but

Food Use of U.S. Wheat Continues to Grow . . .



Marketing year beginning June 1.
1999 estimated. 2000 projected.

. . . While Per Capita Consumption of Wheat and Wheat Products Drops Off Slightly



Wheat consumption as food.
Consumption = Wheat flour plus wheat-flour equivalent in manufactured food products.
Economic Research Service, USDA

the U.S. has lost market share, narrowing its lead over other exporting countries.

Loss of U.S. market share during the 1990's was attributable partially to an agricultural boom in Argentina that began in the mid-1990's following the country's agricultural reforms. Australia and Canada

also gained on U.S. market share. Erosion of U.S. share continues a trend from losses incurred in the 1970's and 1980's due to rapidly rising exports from the European Union (EU). Protected trade among EU member countries soared in the 1970's and 1980's, remaining competitive with outside suppliers in the 1990's.

EU exports to nonmember countries also jumped during the 1980's. But reforms have helped curtail EU wheat exports in the 1990's.

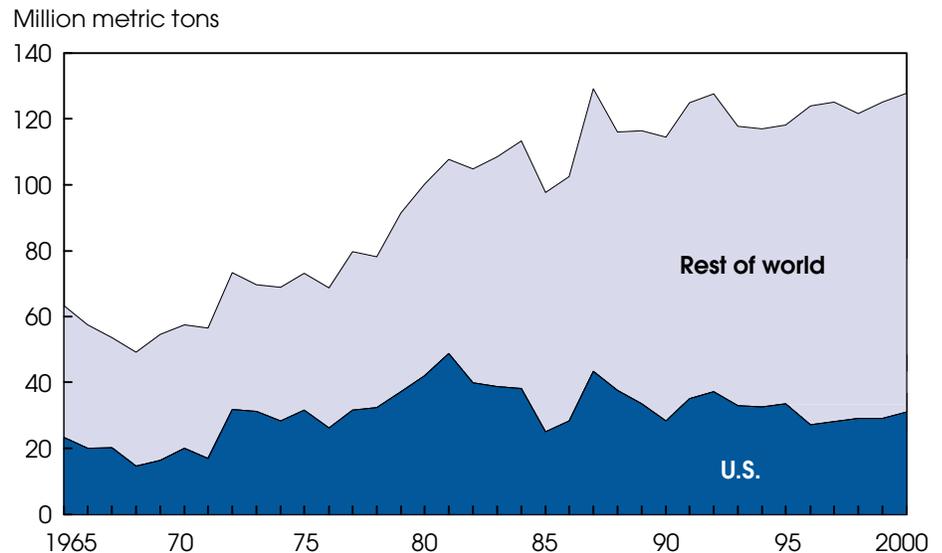
Emerging structural changes in buying patterns and in quality preferences could pose a further threat to the U.S. share of world wheat trade. The importance of quality (characteristics related to end use) varies among markets, with high-income, nonsubsidized markets generally more sensitive to quality in making wheat import decisions. In high-income countries, end-use characteristics are often more important than price.

In many countries where purchasing decisions are made largely by government entities, the goal is generally to buy the cheapest wheat available. Soft red wheat (SRW) varieties grown in the U.S. were developed for making flour for cookies, cakes, biscuits, and crackers. However, because of the abundant supply of SRW worldwide and its relatively low price, governments of lower income foreign countries often purchase SRW to be used in other products, such as breads. Movement toward privatization in recent years has elevated the role of smaller, non-government buyers, such as millers, whose wheat purchases tend to reflect the most desirable characteristics for the intended end use rather than primarily price.

Increased attention to various qualities of wheat could put some U.S. wheat, such as SRW, at a disadvantage relative to other wheat types. SRW fits nicely into some U.S. farm operations, particularly in much of the South and Midwest, because it can be doublecropped with soybeans or other crops.

Export competition will not abate in the foreseeable future, and low real prices (prices adjusted for inflation) will continue to pressure U.S. wheat producers. Agricultural policy reforms included in the EU's Agenda 2000 (AO May 1999 and October 1999) are expected to promote wheat production over other crops. EU wheat exports have become more price-competitive because of declining support prices and a weak currency, and the EU recently exported some wheat without subsidies.

U.S. Wheat Exports Fairly Steady, While Share of World Wheat Trade Declines



International marketing year beginning July 1.
1999 estimated. 2000 projected.

Economic Research Service, USDA

In addition, traditional exporters (Argentina, Australia, and Canada) are expected to continue to be very competitive. Other suppliers such as Eastern Europe and parts of the former Soviet Union (now the New Independent States) may also provide more export competition, especially if their infrastructure improves and they can upgrade the quality of wheat output while holding down costs.

Production Gains & Stocks Pressure Prices

The historical long-term downward trend in real grain prices reflects the successful development and dissemination of high-yielding varieties, as well as use of yield-enhancing agricultural chemicals and mechanical technology. In the early 1980's, the trend in U.S. wheat yields flattened out after steady gains since mid-century, but at the end of the 1990's, U.S. wheat yields spiked up. Nevertheless, over the past 25 years, gains in wheat yields, on average, trail gains for corn and soybeans.

Harvested wheat area in the U.S. has trended down since its peak in the early 1980's, in part because of declining

returns relative to other crops. Implementation of the Conservation Reserve Program in 1986 also took wheat acreage out of production.

The 1996 Farm Act further contributed to the fall-off in wheat acreage by eliminating the requirement to maintain base acreage of program crops in order to qualify for deficiency payments. Increased planting flexibility facilitated expansion of soybeans and corn into more traditional wheat areas, with little or no corresponding push of wheat into nontraditional growing areas. And more wheat land went into minor oilseeds such as canola. Loss of wheat acreage to row crops also reflects strong genetic improvements in corn and soybeans varieties that could be planted further west and north—areas with drier conditions or shorter growing seasons.

In the 1990's, some farmers in the dryland Plains areas switched to multicrop rotations that have decreased the frequency of wheat planting. For example, in Kansas, a typical wheat-fallow rotation is most commonly replaced by a rotation of wheat-grain sorghum-fallow, so that wheat is planted 1 year out of 3 instead of 1 out of 2. Studies from Kansas State University

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indicate that multicrop rotations produce markedly higher net returns, primarily because of the inclusion of higher-value but riskier crops in the enterprise mix.

Also influencing planting decisions in the 1990's was concern about widespread wheat disease problems, which may stem in part from switches to the more profitable activities of corn plantings and minimum tillage in traditional wheat areas in the Northern Plains. Both activities provide hosts for disease organisms.

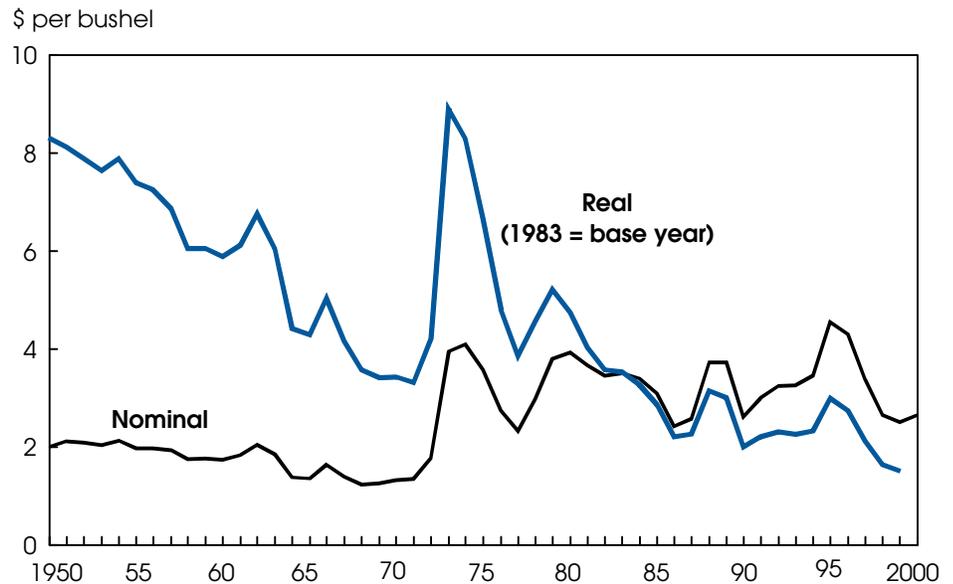
Although low prices have affected most agricultural commodities, higher productivity gains for crops like corn and soybeans, and cost reductions for soybeans and cotton, have partly offset sagging prices. Moreover, under the 1996 Farm Act, soybeans emerged with some additional program incentives—i.e., loan rates that afforded more revenue protection for soybeans than other crops when commodity prices went down in the late 1990's.

The pace of genetic improvement has been slower for wheat than for many other field crops, not only because of technical reasons and genetic complexity, but also because lower potential returns to commercial seed companies discourage investment in research. In the corn sector, for example, where hybrids are used, farmers generally buy seed from dealers every year. However, many wheat farmers—particularly in the Plains states—plant “bin run” or saved seed instead of buying from dealers.

Since potential returns from development and sale of new wheat varieties are relatively small, private firms limit their involvement in wheat breeding research. Therefore, the wheat sector is largely dependent on public research.

Innovation in cultural practices, moreover, may be less aggressive for wheat. For example, growth in soybean yields started to advance above trend in the late 1980's and early 1990's as farmers adopted narrow-row and drilled-planting methods to increase the number of plants per acre. In contrast, practices used in growing wheat have remained largely unchanged, although wheat planting equipment has improved.

U.S. Wheat Prices Trend Downward Since 1995



Season-average farm price. 1999 estimated. 2000 projected.
Economic Research Service, USDA

Domestic wheat prices respond not only to production levels, but also to holdings of U.S. and world stocks. When stocks are ample and prices start to rise, stocks may enter the marketplace, keeping prices from rising further. While government stockholding is aimed at supporting farm prices by withdrawing wheat from the market, private stockholding is motivated by the prospect of profiting from price fluctuations—i.e., withholding wheat from the market when prices are low and selling later when prices rise.

Farm legislation plays a role in U.S. stockholding patterns. For example, U.S. wheat stocks declined dramatically during the late 1980's following passage of the 1985 Farm Act which included provisions for generic certificates—to distribute government-held commodities in lieu of cash payments—and the Export Enhancement Program (EEP)—to subsidize sales of commodities abroad. A lower loan rate provided to farmers also helped slow the accumulation of government-held stocks. Drawdown of government-held stocks accelerated as droughts in 1988 (affecting spring wheat) and in 1989 (winter wheat) reduced production.

Commercially held stocks accounted for a relatively small share of total U.S. stock-

holdings, so when government stockholdings dropped substantially from the 1980's, total stocks declined sharply. By the early 1990's, the U.S. stocks-to-use ratio had fallen to near the world level.

Recently, however, U.S. wheat stocks held by the commercial sector have sharply expanded, and now make up an increasing share of U.S. stocks. The world stocks-to-use ratio has remained relatively stable, while the U.S. ratio rose at the end of the 1990's as wheat stockholders awaited a price rise.

World wheat stocks are forecast for the 2000/01 crop year at their lowest level since the mid-1990's. Yet with sizeable U.S. and EU wheat stocks, U.S. real wheat prices remain very low relative to that period. If global trade strengthens, domestic prices can rise as U.S. stocks are exported to meet the demand.

Longer-term price movement depends on balancing global demand with supply growth. For example, when the global stocks-to-use ratio reached a low during the 1994/95 crop year and prices spiked, wheat producers around the world responded strongly by increasing production. Then global demand weakened in

Commodity Spotlight

some important markets as consumption growth slowed from the deepening Asian financial crisis. The result was low prices.

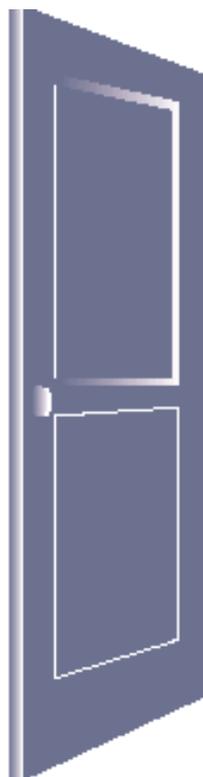
Challenges for the U.S. wheat sector will not abate in the foreseeable future. Other crops will continue competing with wheat for production resources, including land. Although wheat products have proven to be competitive with other foodstuffs for consumer dollars in recent years, low real prices due to foreign competition will continue to pressure U.S. wheat produc-

ers. Prices will also remain weak if global supply response outpaces development of broad-based global demand growth.

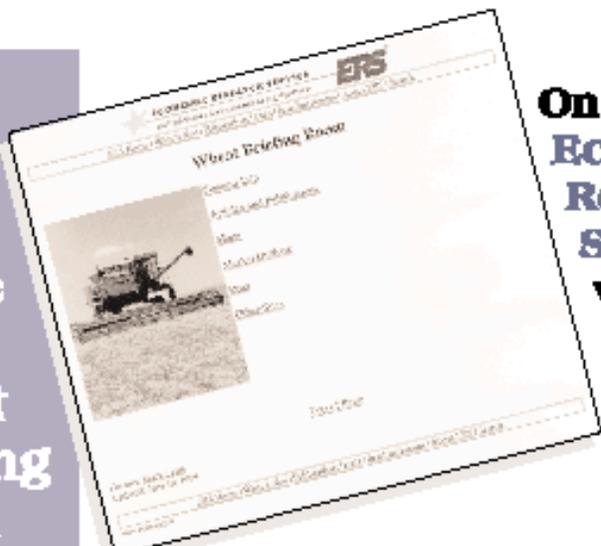
Research to develop new varieties and new growing methods may improve market competitiveness and increase the cost efficiency of wheat production. Improved varieties of U.S. hard white winter wheat, for example, were developed using traditional methods, and these hard whites may open new market prospects to U.S. producers by allowing them to challenge

the dominance of Australian white wheat in world trade. Development of wheat with a herbicide-tolerant trait promises significant benefits to spring wheat growers, but may also introduce some uncertainty in marketing. However, introduction of genetically modified varieties of wheat is still 2-3 years away, and the pace of seed supply expansion will limit the adoption rate. **AO**

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Commodity Spotlight

Exporters' Wheat Stocks Remain Large

Global wheat consumption will outpace production for a third year, causing worldwide wheat stocks to fall, according to USDA forecasts. Foreign wheat stocks in 2000/01 are projected down more than 12 million tons from the previous year, and are the smallest since 1981/82. Exporters' stocks nevertheless remain large, keeping a lid on prices. The extent of an expected increase in world wheat trade is likely to be crucial for wheat prices in 2000/01.

World wheat production in 2000/01 is predicted to fall 4 million tons from 1999/2000, mainly the result of low prices and drought, while wheat consumption is forecast down 3 million tons. An expected drop of 12 million tons in China, the world's largest wheat producer, accounts for most of the projected 1 percent downturn in global production. Reduced government support and declining wheat prices caused a reduction in area. Drought in crucial wheat-producing areas of the North China Plain during the spring growing season accelerated the growth cycle and led to an early-maturing crop, but heavy rains in the southern part of the Plain during the first days of June delayed harvest and reduced quality. China's production is forecast at 102 million tons, the lowest in 6 years.

Further, drought in Eastern Europe and across North Africa (e.g., Morocco and Tunisia) and parts of the Middle East (e.g., Iran) is lowering production. These declines more than offset record highs in the European Union (EU) and South Asia, and increased production in Russia and Turkey. In addition, neither Canada nor Australia is expected to match last year's exceptional yields, and U.S. output is forecast lower as average yield declines.

In Eastern Europe a year ago, it was flooding that cut production. This year's crop was reduced by drought in April and May, a crucial time for wheat growth in Central and Eastern Europe. Reductions are forecast for Austria, Poland, the Czech Republic, Slovakia, Hungary, the former Yugoslavia, Bulgaria, and Romania, as well as Moldova.

Partly offsetting these forecast reductions, Pakistan and India are reporting record wheat crops. A serious lack of rainfall across key South Asia growing areas, particularly in Pakistan and western India, had little effect, because most of the crop is irrigated. In addition, Pakistan increased its wheat area, boosting production to a record 21 million tons. Although India reduced its wheat area slightly, favorable weather in the eastern growing areas is expected to contribute to a record crop of 74 million tons.

Worldwide wheat consumption is still outstripping production by almost 13 million tons, but consumption in 2000/01 is projected at almost 3 million tons below that forecast for the previous year. Most of the decline is in feed use, with

reduced wheat feeding in China and the U.S. more than offsetting greater feed use in Europe.

Lower production or tight wheat supplies are expected to reduce nonfeed consumption (mostly food use) in a number of regions, including Eastern Europe, the former Soviet Union, the Middle East, and Sub-Saharan Africa. Nonfeed wheat consumption is also expected to decline slightly or to stagnate in China, Japan, South Korea, Thailand, and Taiwan. Sluggish wheat demand in 2000/01 is coinciding with improved economic conditions—in many countries incomes are high enough that consumption of a staple food like wheat is influenced more by population growth and tastes and preferences than by fluctuations in price or income.

Global stocks are expected to decline for the third straight year in 2000/01. China's stocks are expected to decline most, projected to be down over 35 percent. Reportedly, however, the country's stocks of wheat are still quite large, albeit of questionable quality. (Because China does not publish any direct estimates of its wheat stocks, the amount of wheat being stored by the millions of wheat producers in that country is not known.) Large stocks of wheat, corn, and rice are straining grain storage capacity.

Levels of wheat imports by major purchasers and levels of stocks in major exporting countries, are key to market prospects this year. The largest importers—Iran, Brazil, and Egypt—are expected to boost imports, largely because of their own tight supplies. Lower wheat supplies in China are expected to lead to higher imports—projected at 3.5 million tons, up from 1 million in 1999/2000—mainly for quality-conscious markets in the south. Largely offsetting these increases is a drop in Pakistan's imports from 2.5 million tons to only 50,000.

Major exporters' wheat stocks are forecast to decline in 2000/01, including forecast drops of 2 million tons in Canada and Australia combined and a slight decline in the U.S. But total production by the five major exporters should reach 233 million tons, up 7 million tons. Record production is expected to boost stocks almost 2 million tons in the EU, largely offsetting the declines in other exporting countries,

Although world wheat stocks in 2000/01 are forecast to drop 10 percent to 114 million tons, U.S. prices are forecast little changed from a year earlier. Exporters' supplies, despite some tightening, appear adequate to meet import demand at prevailing prices. However, world wheat trade in 2000/01 is expected to reach its highest level in nearly 10 years, and further increases would likely reduce exporters' stocks, with a resultant price rise. 

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Resources & Environment



Monsanto

Genetically Engineered Crops: Has Adoption Reduced Pesticide Use?

Development of new crop varieties through genetic engineering offers a broad spectrum of potential benefits, including reduced production costs, enhanced yields, and enhanced nutritional or other characteristics that add to value. Among the first developments on the market were changes in the genetic makeup of common field crops that made them tolerant to commonly used glyphosate herbicides, or that incorporated genes of the natural pesticide *Bacillus thuringiensis* (Bt), so that plants produce a protein toxic to specific insect pests.

These varieties appealed to producers because they promised to simplify pest management and reduce pesticide use, while helping to control costs, enhance effectiveness of pesticides (both herbicides and insecticides), and increase flexibility in field operations. Evidence of that appeal lies in the rapid adoption of genetically engineered crops, beginning with very little U.S. acreage in 1996 and reaching 41 percent of major crop acreage in 2000, down from 49 percent in 1999.

The potential to reduce pesticide use through genetic engineering, or biotech-

nology, could also appeal to consumers. A Farm Bureau/Phillip Morris poll of farmers and consumers in August 1999, for example, indicates that 73 percent of consumers were willing to accept genetic engineering as a means of reducing chemical pesticides used in food production. The poll also found that 68 percent considered farm chemicals entering ground and surface water to be a major problem.

The question remains: does adopting genetically engineered (GE) crops for pest management reduce use of chemical pesticides? As with most simple questions, the answer is far from simple.

Estimating Effects On Pesticide Use

Data exist on pesticide use by producers who did and did not adopt genetically engineered crops. But characteristics that affect the adoption decision may influence pesticide use decisions as well, making simple comparisons suspect. In addition, the changing mix of pesticides that accompanies adoption complicates the analysis, because characteristics like

toxicity and persistence in the environment vary across pesticides.

To offer several perspectives on estimating changes in pesticide use associated with adoption of GE crops, this analysis uses three statistical methods.

- *Same-year differences.* Compares mean pesticide use between adopters and nonadopters within 1997 and within 1998 for a given technology, crop, and region, and applies that average to total acres producing each crop in each year.
- *Year-to-year differences.* Estimates aggregate differences in pesticide use between 1997 and 1998, based on increased adoption of GE crops between those 2 years and average total pesticide use by both adopters and nonadopters.
- *Regression analysis.* Estimates differences in pesticide use between 1997 and 1998, with an econometric model controlling for factors other than GE crop adoption that may affect pesticide use.

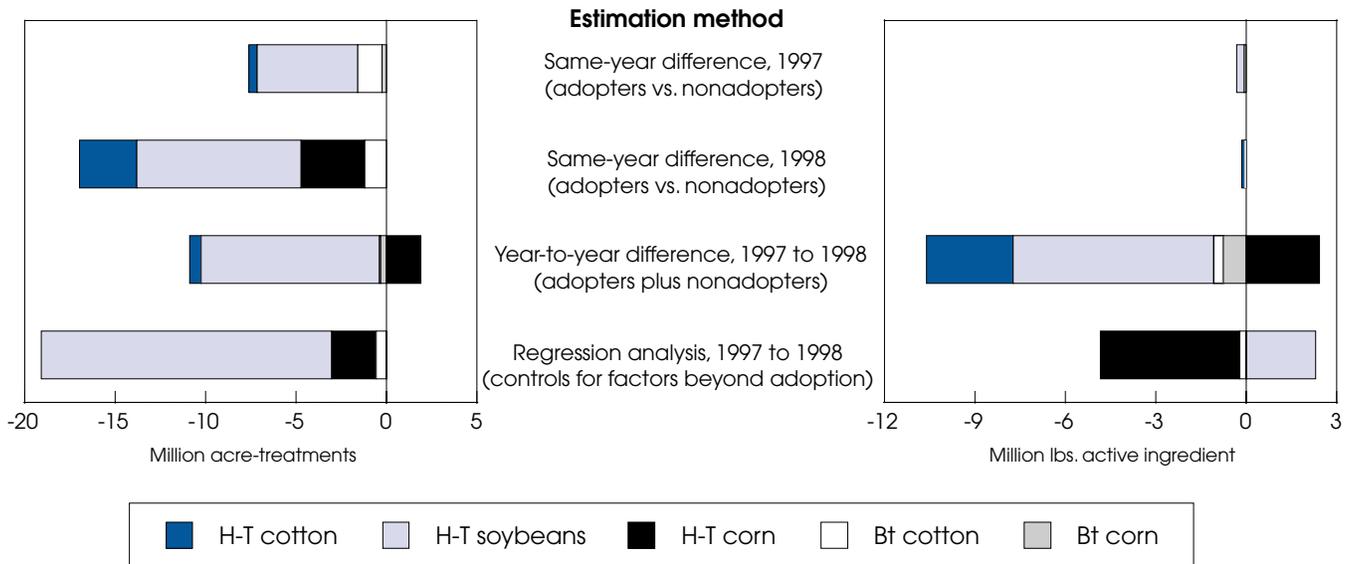
Data for the study are from the national Agricultural Resource Management Study (ARMS) for 1996-98, conducted by USDA's National Agricultural Statistics Service and Economic Research Service. The dataset includes information on adoption of GE varieties of corn, soybeans, and cotton, as well as number of applications and amounts of specific conventional pesticide applied. Only statistically significant differences in pesticide use were included in the estimates of change, so results are conservative. For insecticides, only those used to control the target pests of GE crops—i.e., those that could substitute for the Bt trait—were analyzed.

Same-year differences between average pesticide use of adopters and nonadopters revealed that adopters of GE corn, soybeans, and cotton combined used 7.6 million fewer acre-treatments (2.5 percent) of pesticides than nonadopters in 1997. (An acre-treatment is the number of acres treated multiplied by the number of pesticide treatments.) The difference rose to nearly 17 million fewer acre-treatments (4.4 percent) by adopters in 1998.

In 1998, adopters of herbicide-tolerant soybeans accounted for the largest share

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Reduction in Pesticide Use Accompanies Adoption of Genetically Engineered Crops



H-T = Herbicide-tolerant. Regression analysis controls for factors in pesticide use (acre-treatments and volume) beyond adoption of genetically engineered crops.

Source: Agricultural Resource Management Study, 1997 and 1998.

Economic Research Service, USDA

of the difference in acre-treatments (54 percent), with most of the reduction occurring in the Heartland region. Seven percent of the difference in acre-treatments for target pests occurred with adoption of Bt cotton, with most of the reduction in the Southern Seaboard.

In terms of active ingredients applied, however, adopters used only 331,000 pounds fewer than nonadopters (less than 0.1 percent of total pounds applied) in 1997. The difference narrowed to 153,000 fewer pounds in 1998. Reductions in active ingredients applied in 1997 were related to Bt cotton and herbicide-tolerant soybeans in the Southern Seaboard, while in 1998 herbicide-tolerant cotton and Bt corn accounted for most of the decreases nationally.

Year-to-year differences in total pesticide use between 1997 and 1998, adjusted for change in acres planted but including both adopters and nonadopters, amounted to 9 million fewer pesticide acre-treatments (a 2.9-percent reduction). Although GE

adoption leads to less pesticide use, acre-treatments by GE adopters as a group increased by 49 million between 1997 and 1998, while acre-treatments by the shrinking number of nonadopters dropped by 58 million. This resulted in 8.2 million fewer pounds of active ingredients applied (3.5 percent)—the growing number of GE adopters used 39.3 million more pounds in 1998 than in 1997, but the declining number of nonadopters used 47.5 million fewer pounds.

Most of the decrease was in soybeans in the Heartland region, and in cotton. For corn, acre-treatments and pounds of active ingredient increased because GE adopters used 13.6 million more acre-treatments, while nonadopters decreased acre-treatments by only 11.8 million. The increasing number of producers who planted herbicide-tolerant corn used 17.5 million more pounds of active ingredients as they switched from other herbicides to glyphosate, but the fewer nonadopters reduced pesticide use by only 15.1 million pounds.

Year-to-year changes in total pesticide use result from sometimes dramatic increases in GE acreage. These increases lead to increases in total pesticide use by adopters, despite lower average per-acre rates. Corresponding decreases in non-adopter acreage lead to decreases in total pesticide use by nonadopters, but, except for corn, GE adopter increases are less than nonadopter decreases, resulting in a net decline in total pesticide use.

These comparisons do not account for year-to-year changes in weather conditions, pest pressures, and other factors that may affect pesticide use, so it is inappropriate to attribute the results solely to adoption of GE crops. Still, the overall downward trend in pesticide application rates on major U.S. crops from 1996 to 1998 appears to confirm the pesticide-reducing effect of GE crops.

For example, as adoption of herbicide-tolerant soybean varieties increased from 7 to 45 percent, the average annual rate of glyphosate application increased from 0.17 pounds per acre in 1996 to 0.43 pounds per acre in 1998, while all other herbicides combined dropped from about

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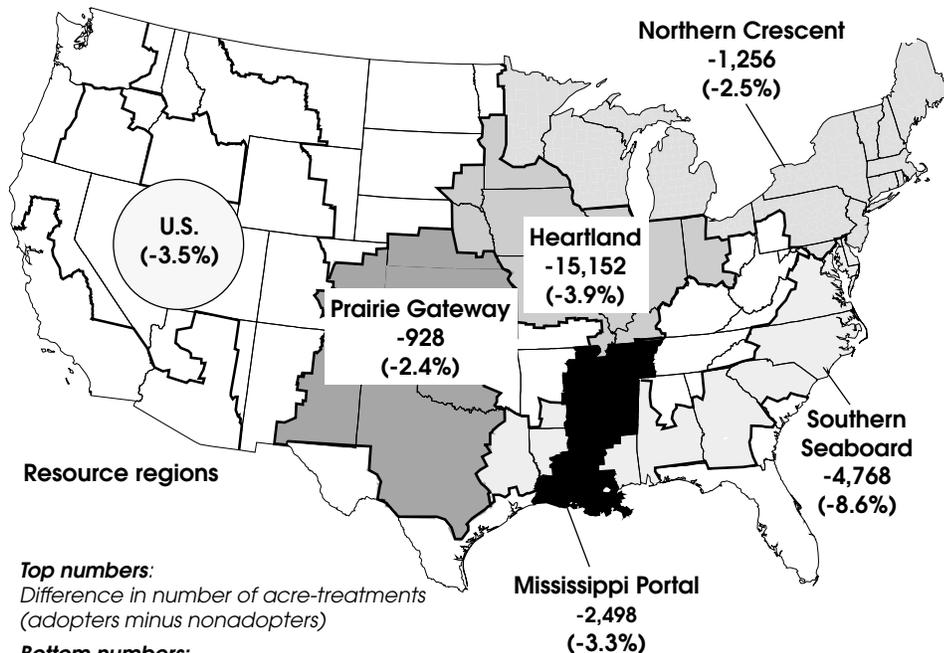
1 pound per acre to 0.57 pounds per acre. That translates into a decline of nearly 10 percent in the overall rate of herbicide use on soybeans during the period.

The *regression analysis approach* controlled for differences between adopters and nonadopters, allowing estimation of changes in pesticide use associated with increases in GE adoption between 1997 and 1998. Regression models are usually used to estimate small adjustments from small changes in conditions. Normally, changes in use of a technology would be small over a single year. However, between 1997 and 1998, spectacular growth in genetically engineered crop use led to adoption rate increases of 160 percent for herbicide-tolerant soybeans, 150 percent for herbicide-tolerant cotton, 12 percent for herbicide-tolerant corn, and 43 percent for herbicide-tolerant corn. These large changes may be beyond the model's predictive scope.

The analysis estimated that pesticide reductions related to increased GE adoption between 1997 and 1998 were 19.1 million acre-treatments (6.2 percent of total 1997 treatments), excluding Bt corn. These estimates reflect reductions in other insecticides used on cotton, acetamide herbicides used on corn, other synthetic herbicides used on soybeans, and offsetting increases in glyphosate herbicides used on soybeans

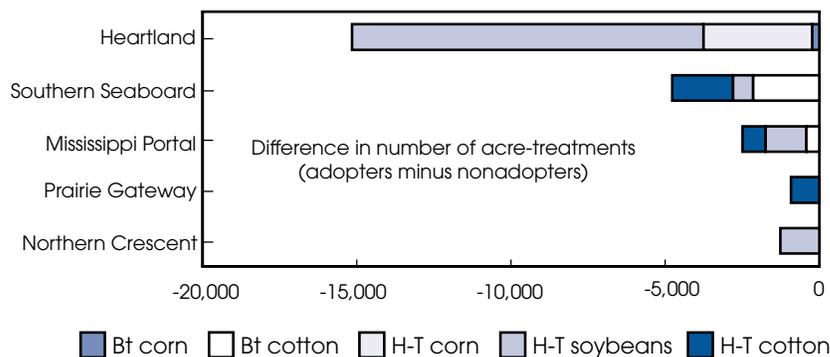
Assuming application rates of each active ingredient (pounds per acre-treatment) are the same for adopters and nonadopters, changes in the number of acre-treatments would imply proportional changes in pounds of active ingredients used. However, since average application rates vary across pesticide active ingredients, the net effect of substituting one for another may be an increase or a decrease in total pounds used. Thus, changing the mix of products used while decreasing acre-treatments may actually increase total pounds of active ingredients applied. Estimating the change in total pounds of active ingredients under the assumption of average application rates for each active ingredient indicates that total pesticide use on corn, soybeans, and cotton decreased 2.5 million pounds (1 percent) in 1998 compared with 1997.

Adopters of Genetically Engineered Crops Used Fewer Acre-Treatments of Pesticides Than Nonadopters



Top numbers:
Difference in number of acre-treatments (adopters minus nonadopters)

Bottom numbers:
Percent difference in regional acre-treatments (adopters minus nonadopters)



H-T = Herbicide-tolerant.
Difference in acre-treatments = Average of same-year differences in 1997 and 1998 between adopters and nonadopters.
Source: Agricultural Resource Management Study, 1997-98

Economic Research Service, USDA

Using average application rates gives conservative results. For example, using average application rates, the net effect of adopting herbicide-tolerant soybeans is a reduction in acre-treatments but a slight increase in pesticide use (pounds of active ingredients). However, direct econometric estimation shows a 1.76-million-pound

reduction in herbicide use associated with increased adoption of herbicide-tolerant soybeans in 1998 relative to 1997, the net result of a 7.2-million-pound decrease from use of "other" herbicides and a 5.44-million-pound increase from use of glyphosate. When producers adopt GE crops, they shift the mix of pesticides they

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use and can use them at lower-than-average application rates. Thus, the actual reduction in pounds of active ingredients may be larger than that estimated by multiplying average rates by the reduction in acre-treatments.

Changing Pesticide Use: Impact Also Matters

Changes in pesticide acre-treatments resulting from the adoption decision range from -6.8 million acre-treatments to -19 million across the three estimation methods. Reductions in pounds of active ingredients vary more widely, from a net drop of just 0.3 million pounds in 1997 (using the same-year method to compare adopters and nonadopters) to a net 8.2-million-pound decrease (using the year-to-year method to compare changes in total pesticide use between 1997 and 1998). Because the results include only statistically significant differences in pesticide use by adopters and nonadopters, many relatively small differences in particular regions were not included, thus underestimating overall differences.

Assessing the impact of the herbicide-tolerance trait (which enables use of glyphosate herbicides) requires more than simply calculating whether more or less pesticide will be used. Adoption of this technology changes the mix of pesticides used in the cropping system, as well as the amounts used. In addition, effectiveness of the insect-resistant trait is limited—i.e., Bt-enhanced seed only targets certain pests—and some amount of conventional pesticide will still be used to control those not affected by the Bt toxin.

When pesticide mixes are changing, comparing the total *number* of acre-treatments or *pounds* of active ingredients of different pesticide compounds is like adding the proverbial apples and oranges. Measuring pesticide use in pounds of active ingredient implicitly assumes that a pound of any two ingredients has equal impact on human health and/or the environment. However, the more than 350 active ingredients in use in pesticides over the last 40 years vary widely in toxicity

Regression Model Controls for Differences Between Adopters & Nonadopters

Comparison of means is sometimes used to analyze results from experiments in which factors other than the item of interest are “controlled” by making them as similar as possible. For example, to compare mean yield or pesticide use for two groups of soybean plots—one group that receives a “treatment” such as genetically engineered crops, and another that does not—the groups would ideally be equal in soil type, rainfall, sunlight, and all other respects. An alternative to a controlled experiment would be randomly selecting subjects that receive treatment and those that don’t.

In “uncontrolled experiments” such as the analysis which compares means from observations in farm survey data, interpretation of the results requires caution. Conditions other than the “treatment” are not equal in farm surveys. Factors that affect estimation results but cannot be controlled may include, for example, irrigation, weather, soils, nutrient and pest management practices, other cropping practices, operator characteristics, and pest pressures. Therefore, estimated differences cannot necessarily be attributed solely to use of the “treatment,” i.e., genetic engineering technology.

Moreover, farmers are not assigned randomly to the two groups (adopters and nonadopters), but make the adoption choices themselves. Therefore, adopters and nonadopters may be systematically different, and these differences may manifest themselves in farm performance that could be confounded with differences due purely to adoption. This situation, called self-selection, would bias the statistical results unless it is corrected.

The impacts of adopting genetically engineered (GE) crops are assessed by using an econometric model that statistically controls for other factors that affect pesticide use. Variables (factors) controlled for include output and input prices, infestation levels, farm size, and management practices such as rotation and tillage.

In addition, the econometric model corrects for self-selection to prevent biasing the results, and takes into consideration that farmers’ adoption and pesticide use decisions may be simultaneous, due to unmeasured variables correlated with both adoption and pesticide demand, such as the size of the pest population, pest resistance, farm location, and grower perceptions. Finally, the model ensures that pesticide demand functions (mathematical representations of pesticide use) are consistent with farmers’ optimization (e.g., profit-maximizing) behavior.

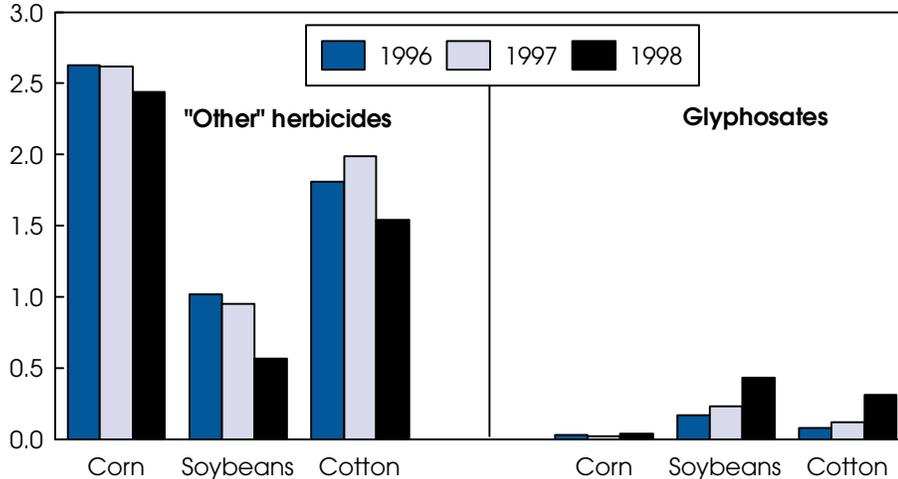
A two-stage model was developed to account for simultaneity and self-selectivity. The first stage consists of the adoption decision model, to examine the adoption of GE crops as well as other pest management practices that might affect pesticide use. The adoption decision model allows estimation of predicted probabilities of adoption, to be used as in the second stage to account for simultaneity, as well as for correction factors for self-selection. The second stage estimates the impact of using GE crops on yields, farm net returns, and pesticide use.

per unit of weight and in persistence in the environment. Scaling (weighting) pounds of pesticides applied by measures of their “toxicity/persistence” characteris-

tics can provide an indication or index of pesticide impact or potential risk.

As Use of Glyphosate Herbicides on Major Crops Rose in 1998, Other Herbicides Showed Decline

Lbs. per planted acre*



* Active ingredients
 "Other" indicates herbicides other than glyphosates.
 Source: Agricultural Resource Management Study, 1996-98.

Economic Research Service, USDA

Data indicate that adoption of herbicide-tolerant crops leads to substitution of glyphosate herbicides for previously used herbicides. Based on regression results for soybeans, an estimated 5.4 million pounds of glyphosate is substituted for 7.2 million pounds of other synthetic herbicides, such

as imazethapyr, pendimethalin, and trifluralin.

Glyphosate has a half-life in the environment of 47 days, compared with 60-90 days for the herbicides it commonly replaces. The herbicides that glyphosate

replaces are 3.4 to 16.8 times more toxic, according to a chronic risk indicator based on the EPA reference dose for humans. Thus, the substitution enabled by genetic modifications conferring herbicide tolerance on soybeans results in glyphosate replacing other synthetic herbicides that are at least 3 times as toxic and that persist in the environment nearly twice as long as glyphosate.

Assessing change in pesticide use associated with adoption of GE crops is confounded by the same difficulties associated with pesticide use generally. Comparison of different mixes of pesticides involves evaluating tradeoffs between the amounts used and the environmental characteristics, primarily toxicity and persistence. The answer to the simple question, "Does adopting genetically engineered crops for pest management reduce pesticide use?" lies not just in more or less but in more or less of what. **AO**

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www.ers.usda.gov/epubs/pdf/aer786/

Special Article

Consolidation in Food Retailing: Prospects for Consumers & Grocery Suppliers

In recent years, the U.S. food retailing industry has undergone unprecedented consolidation and structural change through mergers, acquisitions, divestitures, internal growth, and new competitors. Since 1996, almost 3,500 supermarkets have been purchased, representing annual grocery store sales of more than \$67 billion (including food and non-food sales by supermarkets, superettes, and convenience stores). Two of the largest food retailing combinations in history were announced in 1998: the merger of Albertson's (the nation's fourth-largest food retailer) with American Stores (the second-largest), and the acquisition of sixth-largest Fred Meyer by first-ranked Kroger Company.

The recent consolidation wave has brought together food retailers operating within and across regions. While many food retailers operate in multiple regions, none is considered truly nationwide in scope. Of the consolidations, the Albertson's-American Stores merger, which resulted in common ownership of supermarkets reaching coast to coast (but not all regions), comes closest to creating a nationwide food retailer.

Widespread consolidation in the grocery industry—driven by expected efficiency gains from economies of size—has had a significant effect on the share of total grocery store sales accounted for by the largest food retailers. It also raises questions about long-term trends driving these changes and the implications for consumers and for food market suppliers such as grower-shippers, food processors, and wholesalers. Some consumers fear that fewer food retailers will eventually mean higher grocery prices and less variety. Grocery suppliers worry that fewer but larger buyers could force prices lower for products and services that food retailers purchase. Retailers are likely to continue consolidating in order to maintain profitability as competition for the consumer food dollar heightens. Whether or not the current pace of consolidation continues depends, in part, on resulting efficiency gains for large food retailers.

Long-Term Trends Drive Consolidation

A number of long-term trends are prompting food retailers to consolidate: changing patterns in overall grocery sales, increased spending for prepared foods and meals away from home, and growth of food sales by nontraditional retailers. These trends make for a very competitive food retailing industry, and with low inflation rates in the general economy, retailers' ability to raise grocery store prices is limited.

Food retailing is a relatively slow-growth industry, as measured by sales. Grocery store sales, after adjusting for inflation, grew about 1 percent annually over the 1988–98 decade—about equivalent to population growth. Over the 6-year period 1992–98, nominal supermarket sales growth averaged 2.2 percent annually, based on research by USDA's Economic Research Service (ERS).



Jack Harrison

The share of consumers' income spent for food-at-home, purchased from foodstores and other retail outlets, continued to fall. From 1992 to 1998, the share of disposable income devoted to food-at-home fell from 7.8 percent to 7.6 percent, continuing a long-term trend. With rising incomes, consumers exercised their preference for convenience and time savings by purchasing more prepared foods and meals away-from-home. Of total spending for all food, almost 47 percent was in the away-from-home food service/restaurant sector in 1998 compared with 44.8 percent in 1992 and 40.5 percent in 1982. Growth in food-service is somewhat underestimated in recent years because sales of similar prepared foods sold in food stores are excluded from the tally.

Expansion of retail food sales by discount mass-merchandise and warehouse club stores has provided additional sources of competition in the traditional food retailing business. Mass merchandisers such as Wal-Mart, Kmart, and Target, and warehouse club store operators such as Costco, Sam's (a division of Wal-Mart), and BJ's have increased their share of retail food sales from 4.8 percent in 1992 to 7.7 percent in 1998. At the same time, traditional food stores' share of retail food sales fell—from 84.6 to 80.1 percent of sales. The remainder of retail food sales was accounted for by other retail stores, mail-order outlets, and direct sales by farmers and processors.

The effect of slow growth in real grocery store sales (net sales growth after adjusting for inflation) and competition from non-traditional retailer rivals motivated grocery retailers to seek a larger share of consumers' food dollars. In the 1980's, retailers developed new store formats to better address the needs of specific consumer segments, ranging from warehouse stores serving economy-minded shoppers, to organic and natural foods supermarkets aimed at less price-conscious but more health-oriented

Recent Acquisitions in Grocery Retailing

Retail firm		Year	Grocery stores acquired	Sales value of acquired stores
Acquiring	Acquired			
			No.	\$ million
U.S. total			3,492	67,103
Pacific region			1,284	22,269
Safeway	Vons	1997	325	5,400
Yucaipa	Fred Meyer	1997	101	3,124
Quality Foods Centers	Hughes	1997	57	1,250
Yucaipa	Smiths Food & Drug	1997	150	3,000
Yucaipa	Quality Foods Centers	1997	203	1,200
Albertson's	Lucky (American Stores ¹)	1998	448	8,295
Midwestern region			238	7,231
Giant Eagle	Riser Foods	1997	56	4,000 ²
Lund's	Byerly's	1997	11	65
Albertson's	Jewel/Osco (American Stores ¹)	1998	171	3,166
Northeastern region			698	15,388
Ahold	Stop & Shop	1996	189	4,400
Ahold	Giant Food, Inc.	1998	176	4,200
Albertson's	Acme (American Stores ¹)	1998	183	3,388
Food Lion	Hannaford	1999	150	3,400
Southeastern region			244	2,415
Food Lion	Kash & Karry (Florida)	1997	100	1,000
Jitney Jungle	Delchamps	1997	118	1,300
Kohlberg & Co.	Schwegmann's	1997	26	115
Inter-regional			1,028	19,800
Safeway	Dominicks	1998	112	2,300
Kroger	Yucaipa/Fred Meyer	1999	800	15,000
Safeway	Randalls	1999	116	2,500

1. Sales of American Stores (Lucky, Jewel-Osco, and Acme) totaled \$19.9 billion in 1998, including sales of 773 pharmacy/drugstores. 2. Sales include wholesale sales to 586 independent grocery retailers.

Sources: Company annual reports, *Wall Street Journal*, *Supermarket News*, and *Food Institute Weekly Digest*.

Economic Research Service, USDA

consumers. To address time-pressured shoppers' need for convenience, grocery retailers introduced salad bars and prepared foods. Although many supermarkets contained a service meat counter in the 1980's offering sliced-to-order items, there were few prepared hot or heat-and-serve offerings. By 1997, fully 83.6 percent of supermarkets sold prepared foods, such as sandwiches, pizza, and pasta dishes, accounting for 4 percent of store sales, on average.

Retailers have added new products (food and nonfood) as well as services, and have built larger stores in order to offer consumers "one-stop shopping" convenience. At the same time, though, they have incurred increased procurement, labor, and capital investment costs.

Retailers Seek Lower Costs

Large grocery retailers, strongly motivated to offset the higher costs of serving consumers, are seeking efficiency gains and lower capital investment costs. Many of them, counting on the economies of size that come with consolidation, have apparently opted to pursue mergers and acquisitions.

Consolidating food retailers often cite the potential for lower costs as an incentive for becoming larger. These retailers believe they can decrease costs through supply-chain management practices—coordinated activities that generate operating, procurement, marketing, and distribution efficiencies. Expected efficiency gains and lower investment requirements will allow them to maintain profitability while keeping prices competitive with mass-merchandisers, warehouse club stores, and other emerging and potential rivals.

To reduce operating costs, large retailers are centralizing management and control at corporate headquarters. New information technologies such as companywide satellite and Internet communication systems, and store checkout scanner data, allow for centralization of many management activities that previously were the responsibility of store managers. The availability of timely and detailed information at headquarters also allows for effective control of operations over relatively large geographic areas.

Consolidation of retail grocers also allows for greater efficiencies in purchasing retail products from suppliers. When retailers can buy higher volume from individual suppliers and distributors, they can negotiate lower wholesale prices and in turn lower per-unit prices at the retail level while maintaining store

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margins. In return, retailers are able to offer exclusive procurement agreements, with potential benefits to suppliers and distributors such as partnering, long-term agreements, and other strategic alliances. Retailers also gain a more reliable source of supply and, over time, can work to develop a higher quality and more uniform product, especially for perishable products such as fresh meat and produce.

Merging retailers also credit exclusive partnerships with suppliers for reducing costs associated with the marketing and selling functions of retail goods. Suppliers and distributors, as a condition of the partnership, provide additional marketing services that formerly were the responsibility of retailers. These include in-store promotion and point-of-purchase materials, sales-event planning and advertising, and special packaging. Some retailers then share checkout scanner sales data with suppliers and distributors in order to better evaluate promotions, seasonal sales differences, price responses, and other factors of consumer demand.

Consolidating retailers can also enjoy cost savings by streamlining product distribution functions. Large retailers typically are self-distributing, i.e., they perform wholesaling activities such as purchasing goods from suppliers, arranging for shipment to distribution warehouses, and replenishing store-level inventory. These large retailers can operate fewer distribution centers and use remaining warehouses more intensively. To reduce costs, large retailers use supply-chain management practices such as:

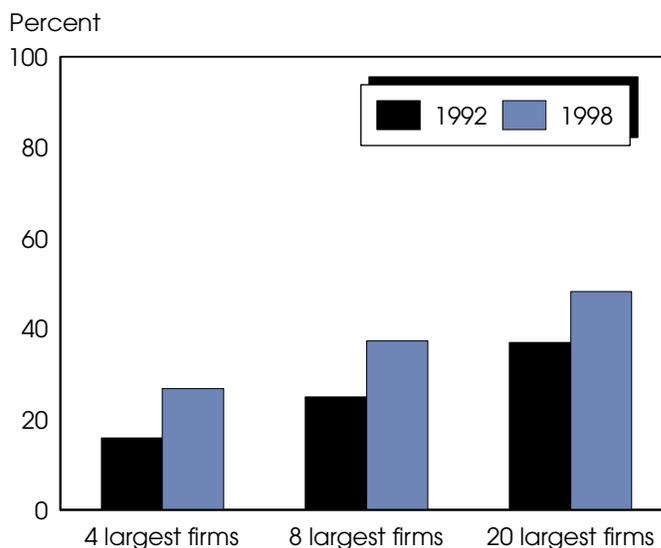
- continuous inventory replenishment, with more frequent deliveries from suppliers reducing retailers' storage and inventory costs;
- use of cross-docking facilities (where suppliers' single-load truck shipments transfer directly to mixed-load trucks for shipment to stores, bypassing warehousing);
- direct store delivery to supermarkets by suppliers; and
- selective use of specialized wholesalers.

Another factor in the growth of mergers and acquisitions is the higher capital investment costs of building new stores and establishing a customer base, compared with purchasing existing ones through merger and acquisition. Today's larger supermarkets and supercenters call for much higher sales volume in order to achieve profitability. As long as 2 years may be required to develop sales volume sufficient to achieve profitability. But most existing stores have already reached minimum sales requirements for profitability, while unprofitable stores can be sold.

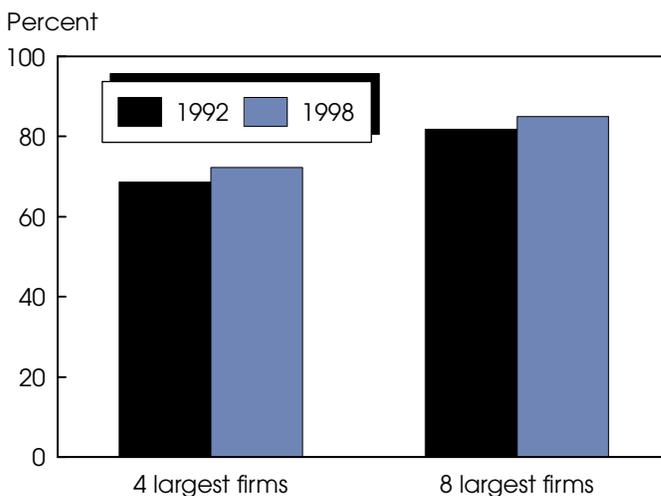
Market Share of Key Players Increases

A sharp increase in the number of mergers and acquisitions, particularly since 1996, brings increasing national concentration levels, as measured by the share of grocery store sales accounted for by the largest 4, 8, and 20 retailers ranked nationally. Between 1992 and 1998 the share of sales for the four largest retailers rose from 15.9 percent in 1992, to 28.8 percent in 1998. Similarly, the eight-largest retailers' share increased to 39.4 percent in 1998, up from 24.9 percent in 1992. The largest 20 retail-

While Largest Food Retailers Have Seen Strong Growth in Nationwide Market Share. . .



. . . Concentration in Local Markets Has Increased Only Slightly



Simple average of shares in largest 100 Metropolitan Statistical Areas—geographic areas that contain a population center of 50,000 or more and typically consist of a city and its adjacent counties.

Economic Research Service, USDA

ers' sales share reached 48.2 percent of total grocery store sales in 1998, compared with 37 percent in 1992.

Internal growth may also have contributed to increased national concentration, most likely among the 9th- through 20th-ranked retailers that have increased sales by opening new stores. Despite the gains in national market shares, to date, none of the largest 20 retailers operates in all regions of the U.S.

The degree of concentration in food retailing is low when compared with other categories of retailers and manufacturers. A

number of food processing industries are far more concentrated at the national level, with the leading four firms accounting for higher shares of sales—e.g., 85 percent of breakfast cereal sales, 75 percent of chocolate and cocoa product sales, 66 percent of roasted coffee product sales, and 56 percent of cookie and cracker product sales in 1992. The leading food processors sell in national markets, while retailers serve customers in local markets, making national market shares less relevant. Nevertheless, year-to-year changes in national concentration provide a measure of the net effect of internal growth, firm consolidation, and divestitures among the largest food retailers over time.

Local Markets Matter to Consumers

While many recent consolidations shared one or more market regions, food retailers actually compete directly within smaller geographic markets, such as a city or town. As a result, the effect of consolidation on consumers is related primarily to increases in local market concentration—the combined sales of the largest firms expressed as a share of the total local market sales. With a merger of two large supermarket firms operating in the same local market, local sales concentrate, creating concerns about the potential for higher prices and reduced variety. Empirical evidence relating increased concentration to rising grocery prices is inconsistent. But in the extreme, a single retailer in a local market would constitute a monopoly and could set prices above a competitive norm.

To study the effects of recent consolidation on consumers, ERS analyzed changes in local market concentration for the 100 largest cities, defined by the Census Bureau as Metropolitan Statistical Areas (MSA's). An MSA geographic area contains a population center of 50,000 or more and typically consists of a city and its adjacent counties. These MSA's accounted for 166.7 million people, almost 62 percent of the U.S. population in 1998. Individual market-share data in each MSA were used to calculate the share of total supermarket sales accounted for by the combined sales of the largest four and eight food retailers. The study compared MSA sales concentration in 1992 and in 1998 to capture changes in market concentration during widespread mergers and acquisitions among large food retailers. Both four- and eight-firm concentration shares were calculated.

Four-firm concentration in 1992 ranged from 29.8 percent in Allentown-Bethlehem-Easton, Pennsylvania, to 92.5 percent in West Palm Beach-Boca Raton, Florida. Similarly, in 1998, least and most concentrated MSA's were New York City (30.6 percent) and West Palm Beach-Boca Raton (95 percent). Overall, the 100 largest cities had an average four-firm concentration of 68.6 percent in 1992, while in 1998, the four-firm share had increased to an average 72.3 percent of MSA supermarket sales. In comparison, the eight largest supermarket retailers held a share of sales averaging 80.8 percent in 1992, increasing to 85 percent in 1998.

These results indicate only modest increases in local market concentration compared with the sharp rise in national concentration—3.7 percentage points in the average four-firm MSA concentration over the 6-year period, and 4.2 percentage points

among the eight-firm share average between 1992 and 1998. Most recent mergers have had little impact on local consumer markets because there were relatively few instances of overlapping markets among the merging or acquired firms.

Among safeguards protecting consumers is public policy designed to preserve competition. Following merger guidelines and other criteria, antitrust agencies (the Federal Trade Commission or the Department of Justice) have required divestiture of stores in overlapping markets that would otherwise have the effect of raising market concentration or substantially eroding competition.

The FTC consent agreement in the Albertson's-American Stores merger required the divestiture of 104 Albertson's supermarkets and 40 American Stores supermarkets operating in 57 cities and towns located in California, Nevada, and New Mexico. Sale of these stores provided opportunities for smaller competitors to purchase the divested supermarkets and compete in those markets.

Such extensive government intervention is not always needed, however. The merger of Kroger and Yucaipa/Fred Meyer, for example, resulted in very few divestitures, because of the minimal number of overlapping regions and local markets involved.

Product Suppliers Adjust to Consolidation

Large, self-distributing retailers accounted for about half of the \$458 billion in retail sales by food stores and mass-merchandise supercenters in 1998. These large firms operate their own warehouses, trucking fleets, and buying offices, enabling them to negotiate directly with grocery suppliers. Consolidation among these retailers, as they become fewer but make higher-volume purchases, has concentrated direct procurement of food and non-food products.

As more retailers adopt supply-chain management practices for product procurement and distribution, concerns arise that competition may diminish substantially. Grocery product suppliers may face fewer but larger volume buyers of their products and commodities as consolidated food retailers reduce the number of buying offices and combine orders in order to obtain price concessions and other procurement efficiencies. Grocery suppliers have cited new marketing and trade promotion practices, such as slotting allowances (lump sum payments to a retailer as a precondition for sale) and performance requirements and fees such as charges for special advertising and promotions, as evidence that suppliers may be disadvantaged in bargaining with large retailers. Suppliers of branded products may justify such fees and allowances as necessary to compete with similar brands for retailers' valuable shelf space.

Grocery suppliers will be challenged to meet the needs of retailers that adopt supply-chain management practices. Many smaller grocery suppliers may conclude that by forming joint ventures and cooperatives of their own, they are better able to meet the procurement and marketing demands of large retailers. Other small supplier firms are seeking niche markets for a limited

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range of product offerings, such as specialty fruits and vegetables, or organically grown products, in order to meet the procurement needs of all sizes of retailers.

Through growth of the Internet and proliferation of online services, smaller suppliers are now able to locate buyers through a growing number of virtual marketplaces. These online marketplaces offer access to buyers that previously were difficult and costly to identify. Virtual sites such as Buyproduce.com are open

to all buyers and sellers, while producer groups such as Farmconnect.com, a Minnesota-based farm cooperative, offer value-added commodities to all types of buyers. In the future, Internet-based marketplaces will provide more alternatives to grocery products suppliers that are too small or otherwise unable to meet the requirements of large retail buyers. **AO**

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IN UPCOMING ISSUES OF AGRICULTURAL OUTLOOK

- * Food prices in 2001
- * Transportation bottlenecks in U.S.-Mexico trade
- * U.S. ag export prospects in 2001
- * Environmental regulation and location of livestock operations
- * Impact of ag subsidies on the U.S. ag and rural economy

Statistical Indicators

Summary Data

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

				1999		2000				2001
	1998	1999	2000	III	IV	I	II	III	IV	I
Prices received by farmers (1990-92=100)	101	96	--	97	92	--	--	--	--	--
Livestock & products	97	95	--	97	96	--	--	--	--	--
Crops	106	96	--	96	98	--	--	--	--	--
Prices paid by farmers (1990-92=100)										
Production items	113	112	--	111	113	--	--	--	--	--
Commodities and services, interest, taxes, and wage rates (PPITW)	115	115	--	115	116	--	--	--	--	--
Cash receipts (\$ bil.) ¹	197	189	195	47	56	46	44	47	57	--
Livestock	94	95	100	24	24	25	25	25	25	--
Crops	102	93	94	23	32	21	19	22	32	--
Market basket (1982-84=100)										
Retail cost	163	167	--	167	169	169	--	--	--	--
Farm value	103	98	--	98	97	95	--	--	--	--
Spread	195	205	--	204	207	209	--	--	--	--
Farm value/retail cost (%)	22	21	--	21	20	20	--	--	--	--
Retail prices (1982-84=100)										
All food	161	164	167	164	165	166	167	167	168	170
At home	161	164	167	164	165	166	167	167	168	169
Away from home	161	165	169	166	167	168	168	169	170	172
Agricultural exports (\$ bil.) ²	53.6	49.0	49.5	11.6	13.6	13.1	11.6	11.2	13.2	--
Agricultural imports (\$ bil.) ²	37.0	37.4	38.0	8.8	9.6	9.1	9.3	10.0	9.2	--
Commercial production										
Red meat (mil. lb.)	45,134	46,134	45,855	11,624	11,756	11,595	11,275	11,652	11,333	11,261
Poultry (mil. lb.)	33,667	35,590	36,658	8,986	8,894	9,018	9,240	9,190	9,210	9,415
Eggs (mil. doz.)	6,658	6,912	7,079	1,728	1,786	1,754	1,750	1,760	1,815	1,770
Milk (bil. lb.)	157.3	162.7	167.4	39.8	40.4	42.6	43.3	40.8	40.7	42.3
Consumption, per capita										
Red meat and poultry (lb.)	213.5	220.4	220.6	55.4	55.9	53.9	54.7	55.7	56.2	54.6
Corn beginning stocks (mil. bu.) ³	883.2	1,307.8	1,787.0	5,698.4	3,616.2	1,787.0	8,024.7	5,602.0	3,586.9	--
Corn use (mil. bu.) ³	8,791.0	9,298.3	9,420.0	2,089.4	1,831.1	3,203.2	2,426.1	2,020.0	--	--
Prices ⁴										
Choice steers--Neb. Direct (\$/cwt)	61.48	65.56	68-70	65.12	69.65	69.32	71.50	66-68	68-72	69-75
Barrows and gilts--IA, So. MN (\$/cwt)	34.72	34.00	45-46	35.70	36.29	41.14	50.43	48-50	40-42	42-46
Broilers--12-city (cents/lb.)	63.10	58.10	55-57	58.10	57.60	54.60	55.70	57-59	54-58	51-55
Eggs--NY gr. A large (cents/doz.)	75.80	65.60	63-65	66.20	63.20	63.30	62.10	63-65	65-69	60-66
Milk--all at plant (\$/cwt)	15.42	14.36	12.55-12.85	14.87	13.83	11.90	12.03	12.70-13.10	13.65-14.35	12.05-13.05
Wheat--KC HRW ordinary (\$/bu.)	3.27	2.92	--	2.82	2.83	2.92	2.95	--	--	--
Corn--Chicago (\$/bu.)	2.41	2.01	--	1.83	1.91	2.12	2.16	--	--	--
Soybeans--Chicago (\$/bu.)	6.01	4.61	--	4.40	4.53	4.95	5.20	--	--	--
Cotton--avg. spot 41-34 (cents/lb)	67.02	52.31	--	49.11	48.08	54.63	55.68	--	--	--
	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	--	--

-- = Not available. 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

	1998				1999				2000	
	1997	1998	1999	III	IV	I	II	III	IV	I
<i>Billions of current dollars (quarterly data seasonally adjusted at annual rates)</i>										
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	9,707.0
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	9,677.0
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	6,612.0
Durable goods	642.9	698.2	758.8	696.9	722.8	739.0	751.6	761.8	782.1	821.8
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	1,958.4
Food	817.0	853.4	904.1	857.6	875.6	885.4	893.4	903.9	933.8	946.7
Clothing and shoes	271.2	286.3	306.3	286.6	289.2	301.8	306.7	308.1	308.6	319.1
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	3,831.8
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	1,715.1
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	1,683.6
Change in private inventories	68.3	71.2	44.6	73.7	71.4	51.0	17.6	40.8	69.1	31.5
Net exports of goods and services	-88.3	-149.6	-253.9	-165.7	-161.2	-201.6	-245.8	-278.2	-290.1	-326.1
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	1,706.1
<i>Billions of 1996 dollars (quarterly data seasonally adjusted at annual rates)¹</i>										
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	9,158.2
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	9,132.4
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	6,217.8
Durable goods	657.4	731.5	815.7	731.2	766.0	788.8	806.1	821.2	846.7	894.1
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	1,837.9
Food	799.1	820.6	851.8	823.0	835.4	839.5	844.6	850.0	873.1	879.9
Clothing and shoes	271.1	292.2	317.8	292.2	295.6	314.7	316.8	321.6	318.1	332.9
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	3,501.2
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	1,725.6
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	1,688.7
Change in private inventories	69.1	74.3	42.2	76.1	70.7	50.1	14.0	38.0	66.7	28.0
Net exports of goods and services	-109.8	-215.1	-323.0	-237.9	-234.4	-286.6	-321.1	-340.4	-344.1	-367.5
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	1,563.8
GDP implicit price deflator (% change)	1.9	1.2	1.5	1.5	1.0	2.0	1.4	1.1	1.9	3.0
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	6,872.9
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	6,463.1
Per capita disposable pers. income (\$)	22,320	23,231	24,307	23,345	23,628	23,904	24,171	24,389	24,759	25,018
Per capita disp. pers. income (1996 \$)	21,887	22,569	23,244	22,650	22,859	23,043	23,172	23,275	23,485	23,527
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
<i>Monthly data seasonally adjusted</i>										
	Annual	Annual	Annual	1999		2000				
	1997	1998	1999	May	Dec	Jan	Feb	Mar	Apr	May
<i>Monthly data seasonally adjusted</i>										
Total industrial production (1992=100)	130.1	136.4	142.3	141.0	145.6	146.7	147.2	148.3	149.3	149.7
Leading economic indicators (1992=100)	103.9	105.5	105.2	105.0	106.1	106.3	106.0	106.1	106.1	106.0
Civilian employment (mil. persons) ³	129.6	131.5	133.5	133.2	134.4	135.2	135.4	135.2	135.7	134.7
Civilian unemployment rate (%) ³	4.9	4.5	4.2	4.2	4.1	4.0	4.1	4.1	3.9	4.1
Personal income (\$ bil. annual rate)	6,951.1	7,358.9	7,791.8	7,721.8	7,998.6	8,051.7	8,094.9	8,154.8	8,202.5	8,233.8
Money stock-M2 (daily avg.) (\$ bil.) ⁴	4,041.9	4,396.8	4,655.4	4,513.0	4,655.4	4,679.3	4,691.3	4,728.3	4,768.8	4,764.8
Three-month Treasury bill rate (%)	5.07	4.81	4.66	4.51	5.23	5.34	5.57	5.72	5.67	5.92
AAA corporate bond yield (Moody's) (%)	7.26	6.53	7.04	6.93	7.55	7.78	7.68	7.68	7.64	7.99
Total housing starts (1,000) ⁵	1,474.0	1,616.9	1,666.5	1,649	1,769	1,744	1,822	1,630	1,656	1,592
Business inventory/sales ratio ⁶	1.38	1.39	1.35	1.35	1.32	1.32	1.32	1.31	1.32	--
Sales of all retail stores (\$ bil.) ⁷	2,546.3	2,696.5	--	247.3	261.8	263.5	265.1	268.4	267.1	267.9
Nondurable goods stores (\$ bil.)	1,505.4	1,563.8	--	143.5	151.8	151.0	153.0	155.8	155.9	156.6
Food stores (\$ bil.)	432.1	443.0	--	38.0	40.6	38.8	39.1	39.6	40.2	40.2
Apparel and accessory stores (\$ bil.)	116.8	124.2	--	11.4	11.2	11.3	11.7	11.8	11.7	11.9
Eating and drinking places (\$ bil.)	244.1	247.1	--	23.7	24.8	25.2	24.7	25.4	25.4	25.3

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

Table 3—World Economic Growth

	Calendar year									
	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
	<i>Real GDP, annual percent change</i>									
World	1.8	1.5	3.0	2.7	3.5	3.3	1.8	2.7	3.9	3.3
less U.S.	1.5	1.1	2.7	2.7	3.5	3.0	0.9	2.2	3.6	3.5
Developed economies	1.7	0.8	2.7	2.2	3.1	2.9	2.0	2.5	3.5	2.7
less U.S.	1.1	0.0	2.1	2.0	2.9	2.3	0.9	1.7	2.8	2.7
United States	3.1	2.7	4.0	2.7	3.6	4.2	4.3	4.1	4.9	2.9
Canada	0.9	2.3	4.7	2.8	1.5	4.4	3.3	4.5	4.5	2.6
Japan	1.0	0.3	0.7	1.4	5.2	1.6	-2.5	0.3	1.4	1.9
Australia	2.4	3.8	5.2	3.8	4.4	4.1	5.0	4.4	3.8	3.4
European Union	1.1	-0.5	2.7	2.3	1.6	2.5	2.7	2.3	3.4	3.1
Transition economies	-10.2	-6.0	-7.9	-1.1	-0.7	1.7	-1.3	2.7	4.3	2.7
Eastern Europe	-1.3	1.6	3.9	5.7	3.9	3.2	2.5	2.5	4.2	4.3
Poland	3.1	4.3	5.1	7.0	6.0	6.8	4.8	4.0	5.1	5.3
Former Soviet Union	-13.8	-9.6	-14.1	-5.4	-4.0	0.5	-4.2	2.8	4.4	1.3
Russia	-14.5	-8.7	-12.6	-4.1	-3.4	0.9	-4.6	3.3	4.8	1.0
Developing economies	5.3	5.8	6.3	5.2	5.8	5.4	1.2	3.3	5.7	5.7
Asia	7.7	8.0	8.8	8.3	7.5	6.0	0.4	6.2	7.0	6.6
East Asia	9.4	9.2	9.7	8.8	7.8	7.0	2.0	7.5	7.8	7.0
China	14.2	13.5	12.6	10.5	9.6	8.8	7.8	7.1	8.0	8.6
Taiwan	7.5	7.0	7.1	6.4	6.1	6.7	4.6	5.7	6.5	5.7
Korea	5.4	5.5	8.2	8.9	6.7	5.0	-6.7	10.7	8.0	5.2
Southeast Asia	5.6	7.7	7.9	8.1	7.1	4.7	-6.1	3.5	5.4	5.8
Indonesia	7.2	7.3	7.5	8.2	7.8	4.7	-13.2	0.7	3.7	6.5
Malaysia	7.8	8.3	9.2	9.5	8.6	7.8	-7.4	5.5	8.3	6.1
Philippines	0.3	2.1	4.4	4.7	5.8	5.2	-0.5	3.2	3.6	4.2
Thailand	8.1	8.4	8.9	8.8	5.5	-0.4	-10.2	4.2	6.5	6.6
South Asia	5.7	4.5	7.1	6.9	7.0	4.9	5.3	5.6	6.4	6.5
India	5.4	5.0	8.1	7.4	7.7	5.7	5.6	6.2	7.0	7.0
Pakistan	7.8	1.9	3.9	5.1	4.7	-0.4	3.7	3.0	4.0	4.5
Latin America	3.4	4.3	5.3	1.3	3.6	5.1	1.9	0.0	4.1	4.5
Mexico	3.6	1.9	4.5	-6.2	5.1	6.8	4.8	3.7	5.5	4.3
Caribbean/Central	8.0	4.7	4.0	3.2	3.6	5.8	6.1	3.3	4.0	4.7
South America	3.3	4.9	5.6	3.1	3.3	4.8	1.2	-0.9	3.7	4.6
Argentina	11.9	5.9	5.8	-2.8	5.5	8.1	3.9	-3.1	3.0	4.9
Brazil	-0.5	4.9	5.9	4.2	2.8	3.2	0.1	0.8	4.2	4.6
Colombia	3.9	5.4	5.8	5.2	2.0	2.8	0.6	-4.5	2.7	4.4
Venezuela	6.1	0.3	-2.3	3.7	-0.5	6.5	-0.7	-6.3	1.1	1.5
Middle East	4.7	3.9	-0.2	3.7	4.3	4.7	2.2	-1.4	4.3	4.8
Israel	5.6	5.6	6.9	7.0	4.6	2.2	1.9	2.1	5.8	4.4
Saudi Arabia	2.8	-0.6	0.5	0.5	1.4	1.9	2.3	-1.5	1.6	3.0
Turkey	6.4	8.7	-5.2	7.8	7.0	7.5	2.8	-4.8	6.8	7.7
Africa	0.2	1.0	3.2	2.9	5.2	2.8	3.1	2.6	4.5	4.3
North Africa	2.0	0.5	3.9	1.5	6.5	2.6	5.6	3.3	5.5	4.8
Egypt	4.4	2.9	3.9	4.7	5.0	5.5	5.6	3.4	5.6	5.6
Sub-Saharan	-1.1	1.4	2.6	3.9	4.3	2.9	1.3	2.1	3.6	3.8
South Africa	-2.1	1.2	3.2	3.1	4.2	2.5	0.5	1.2	3.4	3.8
	<i>Consumer Prices, annual percent change</i>									
Developed Economies	3.5	3.1	2.6	2.6	2.4	2.1	1.5	1.4	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.

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Farm Prices

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

	Annual		1999		2000					
	1997	1998	1999	Jun	Jan	Feb	Mar	Apr	May	Jun
	1990-92=100									
Prices received										
All farm products	107	101	96	97	90	92	95	100	101	99
All crops	115	106	96	100	87	90	94	101	104	99
Food grains	128	103	91	87	85	85	86	86	86	85
Feed grains and hay	117	100	86	91	84	88	90	91	97	87
Cotton	112	107	85	90	71	76	79	76	78	79
Tobacco	104	104	103	--	110	109	103	90	--	--
Oil-bearing crops	131	107	83	80	82	86	88	89	92	87
Fruit and nuts, all	109	111	114	128	78	82	82	88	91	114
Commercial vegetables	118	121	108	110	97	87	106	140	135	120
Potatoes and dry beans	90	99	101	110	98	99	104	105	110	104
Livestock and products	98	97	95	95	94	94	96	100	99	99
Meat animals	92	79	83	84	90	92	95	99	98	96
Dairy products	102	119	110	100	92	90	91	91	92	93
Poultry and eggs	113	117	111	114	104	104	104	111	108	112
Prices paid										
Commodities and services,										
interest, taxes, and wage rates (PPITW)	118	115	115	115	118	119	119	119	120	120
Production items	119	113	112	111	115	116	115	116	116	117
Feed	125	110	100	100	102	105	102	102	105	104
Livestock and poultry	94	88	95	93	111	109	108	112	106	108
Seeds	119	122	121	121	121	121	121	124	124	124
Fertilizer	121	112	105	105	107	108	107	106	108	110
Agricultural chemicals	121	122	121	121	121	122	119	119	124	129
Fuels	106	84	93	89	125	138	129	125	124	126
Supplies and repairs	118	119	121	121	122	122	123	123	124	124
Autos and trucks	119	119	119	119	119	119	119	120	120	119
Farm machinery	128	132	136	136	133	133	138	138	139	139
Building material	118	118	120	120	121	121	122	122	122	121
Farm services	116	115	115	116	115	115	116	116	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	108	108	110	110	110	110
Taxes payable per acre on farm real estate	115	119	120	120	123	123	123	123	123	123
Wage rates (seasonally adjusted)	123	129	135	135	140	140	140	140	140	140
Prod. items, interest, taxes & wage rates (PITW)	118	114	113	113	117	118	117	118	118	118
Ratio, prices received to prices paid (%)*	91	81	75	84	76	78	80	84	84	83
Prices received (1910-14=100)	678	643	607	619	572	586	604	638	644	630
Prices paid, etc. (parity index) (1910-14=100)	1,574	1,532	1,535	1,532	1,577	1,589	1,584	1,589	1,593	1,598
Parity ratio (1910-14=100) (%)*	43	38	36	40	37	37	38	40	40	39

-- = 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	Jun	Jan	Feb	Mar	Apr	May	Jun
Crops										
All wheat (\$/bu.)	4.30	3.38	2.70	2.50	2.50	2.54	2.59	2.57	2.59	2.52
Rice, rough (\$/cwt)	9.96	9.70	8.50	8.25	6.03	5.98	5.82	5.86	5.56	5.61
Corn (\$/bu.)	2.71	2.43	1.95	1.97	1.90	1.98	2.03	2.03	2.10	1.81
Sorghum (\$/cwt)	4.17	3.95	3.10	2.85	2.86	3.08	3.21	3.24	3.38	3.12
All hay, baled (\$/ton)	95.80	100.00	87.00	81.70	71.80	72.60	74.80	80.70	89.40	82.50
Soybeans (\$/bu.)	7.35	6.47	5.35	4.44	4.62	4.79	4.91	5.00	5.19	4.91
Cotton, upland (¢/lb.)	69.30	65.20	64.20	54.60	43.10	45.90	47.90	46.00	47.30	48.10
Potatoes (\$/cwt)	4.93	5.62	5.24	6.51	5.91	5.96	6.33	6.29	6.62	6.32
Lettuce (\$/cwt) ²	14.70	17.60	15.20	11.40	14.60	9.28	14.00	22.90	23.50	15.20
Tomatoes, fresh (\$/cwt) ²	28.10	31.70	35.00	32.20	22.50	23.50	30.00	40.50	27.40	26.30
Onions (\$/cwt)	10.50	12.60	13.80	14.40	6.79	5.63	6.67	16.60	16.60	13.60
Beans, dry edible (\$/cwt)	23.50	19.30	19.80	18.90	16.70	16.00	15.20	16.60	17.00	15.30
Apples for fresh use (¢/lb.)	20.80	22.10	17.10	12.70	23.50	21.10	20.50	19.70	18.20	16.30
Pears for fresh use (\$/ton)	376.00	276.00	291.00	356.00	414.00	386.00	313.00	269.00	204.00	220.00
Oranges, all uses (\$/box) ³	4.79	4.22	4.29	9.90	3.27	3.51	3.54	4.14	4.60	4.43
Grapefruit, all uses (\$/box) ³	2.30	1.91	1.41	11.16	2.40	3.64	3.63	2.82	2.51	1.29
Livestock										
Cattle, all beef (\$/cwt)	58.70	63.10	59.60	63.70	67.80	67.60	69.80	71.30	69.40	67.90
Calves (\$/cwt)	58.40	78.90	78.80	89.00	102.00	105.00	109.00	111.00	107.00	103.00
Hogs, all (\$/cwt)	51.90	52.90	34.40	34.10	36.80	39.90	41.80	47.30	48.50	47.90
Lambs (\$/cwt)	88.20	90.30	72.30	81.30	70.90	72.00	80.20	82.60	96.40	--
All milk, sold to plants (\$/cwt)	14.75	13.36	15.41	13.10	12.00	11.80	11.90	11.90	12.00	12.20
Milk, manuf. grade (\$/cwt)	13.43	12.17	14.33	12.00	10.70	10.20	10.10	10.20	10.10	10.40
Broilers, live (¢/lb.)	38.10	37.70	39.30	38.70	35.00	33.50	34.90	36.50	37.00	37.00
Eggs, all (¢/doz.) ⁴	74.90	70.30	65.50	57.10	58.00	68.60	57.40	65.50	52.00	62.90
Turkeys (¢/lb.)	43.30	39.90	38.00	41.30	36.40	35.70	38.20	39.80	40.40	41.60

-- = 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	Jun	Jan	Feb	Mar	Apr	May	Jun
	<i>1982-84=100</i>									
Consumer Price Index, all items	160.5	163.0	166.6	166.2	168.7	169.7	171.1	171.2	171.3	172.3
CPI, all items less food	161.1	163.6	167.0	166.7	169.2	170.3	171.9	172.0	172.1	173.2
All food	157.3	160.7	164.1	163.6	166.1	166.3	166.5	166.6	167.3	167.3
Food away from home	157.0	161.1	165.1	164.6	167.2	167.6	167.9	168.1	168.3	168.6
Food at home	158.1	161.1	164.2	163.7	166.3	166.3	166.4	166.5	167.5	167.3
Meats ¹	144.4	141.6	142.3	141.8	144.7	146.4	148.3	148.8	150.1	151.7
Beef and veal	136.8	136.5	139.2	139.4	143.2	144.3	145.7	147.0	148.0	149.4
Pork	155.9	148.5	145.9	145.4	147.8	150.7	153.8	153.5	155.5	157.5
Poultry	156.6	157.1	157.9	156.8	159.9	157.9	158.6	158.5	159.6	159.3
Fish and seafood	177.1	181.7	185.3	184.6	186.0	190.0	189.9	189.8	192.4	191.9
Eggs	140.0	135.4	128.1	125.1	133.9	131.7	127.1	129.5	124.1	125.9
Dairy and related products ²	145.5	150.8	159.6	156.1	160.4	160.9	159.1	160.6	159.6	159.5
Fats and oils ³	141.7	146.9	148.3	147.5	147.0	145.6	145.9	144.8	147.0	146.6
Fresh fruits	236.3	246.5	266.3	273.4	266.6	263.0	257.9	257.0	257.3	244.6
Fresh vegetables	194.6	215.8	209.3	203.1	223.0	211.0	212.1	213.6	219.1	217.7
Potatoes	174.2	185.2	193.1	194.7	196.6	198.1	197.9	194.9	200.4	201.7
Cereals and bakery products	177.6	181.1	185.0	185.7	185.6	186.0	186.1	187.2	188.6	187.7
Sugar and sweets	147.8	150.2	152.3	152.4	154.8	154.4	154.6	152.4	153.7	154.0
Nonalcoholic beverages ⁴	133.4	133.0	134.3	134.3	137.1	138.4	138.5	137.6	137.3	137.5
Apparel										
Footwear	127.6	128.0	125.7	125.4	121.6	122.1	124.7	126.7	126.1	123.9
Tobacco and smoking products	243.7	274.8	355.8	343.2	375.1	383.0	387.3	404.4	393.5	388.5
Alcoholic beverages	162.8	165.7	169.7	169.5	172.4	173.0	173.5	173.6	173.8	174.4

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

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

	Annual		1999		2000					
	1997	1998	1999	Jun	Jan	Feb	Mar	Apr	May	Jun
	<i>1982=100</i>									
All commodities	127.6	124.4	125.5	125.2	128.3	129.8	131.0	130.7	131.6	133.3
Finished goods ¹	131.8	130.6	133.0	132.7	134.7	136.0	137.0	137.0	137.5	138.4
All foods ²	132.8	132.4	132.2	132.3	131.0	131.9	131.8	133.3	134.1	133.3
Consumer foods	134.5	134.3	135.1	135.1	135.0	136.0	135.9	137.1	138.0	137.3
Fresh fruits and melons	99.4	90.0	103.6	104.5	93.5	100.0	94.1	91.4	94.3	83.2
Fresh and dry vegetables	123.1	139.5	118.0	127.7	115.3	107.6	122.4	125.4	140.6	119.9
Dried and dehydrated fruits	124.9	124.4	121.2	120.6	122.5	122.4	122.5	122.7	122.6	122.6
Canned fruits and juices	137.6	134.4	137.8	137.5	140.2	140.2	140.2	140.0	140.3	140.4
Frozen fruits, juices and ades	117.2	116.1	123.0	121.6	124.6	123.9	123.8	123.6	123.0	122.9
Fresh veg. except potatoes	121.3	137.9	117.7	125.8	111.3	100.5	122.3	126.8	152.0	127.1
Canned vegetables and juices	120.1	121.5	120.9	121.0	121.3	120.8	121.9	120.9	121.2	120.8
Frozen vegetables	125.8	125.4	126.1	126.0	125.4	126.2	127.4	127.0	126.4	125.1
Potatoes	106.1	122.5	126.9	146.8	109.0	111.0	99.2	97.1	91.8	91.1
Eggs for fresh use (1991=100)	97.1	90.1	77.9	70.1	81.1	95.3	70.0	87.1	64.2	81.9
Bakery products	173.9	175.8	178.0	177.6	180.0	180.2	180.6	181.2	181.4	181.6
Meats	111.6	101.4	104.6	106.5	108.6	111.2	112.9	115.1	119.1	118.7
Beef and veal	102.8	99.5	106.3	108.4	107.3	110.1	111.8	114.3	118.6	117.6
Pork	123.1	96.6	96.0	98.0	106.0	110.2	111.1	115.4	120.5	120.5
Processed poultry	117.4	120.7	114.0	115.6	111.1	109.2	109.9	111.5	110.3	111.6
Unprocessed and packaged fish	178.1	183.0	190.9	186.9	196.1	207.8	197.5	211.3	201.8	195.0
Dairy products	128.1	138.1	139.2	135.3	131.4	130.7	130.5	131.7	133.1	134.4
Processed fruits and vegetables	126.4	125.8	128.1	127.8	129.1	129.1	129.4	129.0	128.8	128.5
Shortening and cooking oil	137.8	143.4	--	--	--	--	--	--	--	--
Soft drinks	133.2	134.8	137.9	136.9	141.6	143.2	143.4	144.0	145.0	145.0
Finished consumer goods less foods	128.2	126.4	130.5	130.0	133.3	135.4	137.3	136.6	137.2	139.2
Alcoholic beverages	135.1	135.2	136.7	136.1	137.4	138.2	137.9	138.6	138.4	137.6
Apparel	125.7	126.6	127.1	127.0	127.3	127.4	127.2	127.0	127.1	127.0
Footwear	143.7	144.7	144.5	144.5	144.8	144.8	144.9	145.0	145.1	145.0
Tobacco products	248.9	283.4	374.0	363.6	378.5	400.0	399.0	398.9	398.8	393.2
Intermediate materials ³	125.6	123.0	123.2	123.0	125.9	126.9	127.9	128.0	128.3	129.7
Materials for food manufacturing	123.2	123.1	120.8	120.0	117.6	117.5	118.1	119.6	120.6	120.7
Flour	118.7	109.2	104.3	105.2	102.4	102.3	102.6	102.3	101.9	104.0
Refined sugar ⁴	123.6	119.8	121.0	122.6	117.2	113.9	114.7	110.2	110.6	111.3
Crude vegetable oils	116.6	131.1	90.2	85.5	76.8	75.6	77.6	84.2	83.1	78.3
Crude materials ⁵	111.1	96.7	98.2	97.4	105.8	110.3	113.3	110.6	115.4	121.9
Foodstuffs and feedstuffs	112.2	103.8	98.7	99.5	96.5	97.6	101.3	103.5	104.6	101.8
Fruits and vegetables and nuts ⁶	115.5	117.2	117.4	122.4	107.9	108.4	110.8	110.4	118.1	103.4
Grains	111.2	93.4	80.1	82.2	77.8	82.4	85.9	82.6	85.8	78.6
Slaughter livestock	96.3	82.3	86.4	88.6	91.6	92.4	98.3	102.4	102.5	100.4
Slaughter poultry, live	131.0	141.4	129.9	135.6	122.2	113.4	117.8	121.0	123.0	124.2
Plant and animal fibers	117.0	110.4	86.5	89.6	83.9	88.1	97.6	86.2	94.5	90.8
Fluid milk	97.5	112.6	106.3	97.3	89.5	88.6	88.6	89.2	89.3	90.8
Oilseeds	140.8	114.4	90.8	91.5	89.7	94.7	98.3	98.4	102.4	97.0
Leaf tobacco	105.1	104.6	101.6	--	112.3	112.0	110.5	91.4	--	--
Raw cane sugar	116.8	117.2	113.7	119.4	97.5	93.6	100.2	101.6	102.0	105.1

-- = 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	Jun	Jan	Feb	Mar	Apr	May	Jun
Market basket¹										
Retail cost (1982-84=100)	159.7	163.1	167.3	166.7	169.2	168.6	168.0	168.5	170.1	169.7
Farm value (1982-84=100)	106.2	103.3	98.3	98.6	95.0	94.0	94.7	96.7	95.9	96.3
Farm-retail spread (1982-84=100)	188.6	195.4	204.5	203.5	209.1	208.8	207.5	207.2	210.0	209.3
Farm value-retail cost (%)	23.3	22.2	20.6	20.7	19.7	19.5	19.7	20.1	19.7	20.0
Meat products										
Retail cost (1982-84=100)	144.4	141.6	142.3	141.8	144.7	146.4	145.7	147.0	150.1	151.7
Farm value (1982-84=100)	101.2	84.8	81.6	82.4	86.4	86.6	86.9	86.1	87.4	87.5
Farm-retail spread (1982-84=100)	188.6	200.0	204.7	202.7	204.6	207.8	206.1	209.5	214.4	217.6
Farm value-retail cost (%)	35.5	30.3	29.0	29.4	30.2	30.0	30.2	29.7	29.5	29.2
Dairy products										
Retail cost (1982-84=100)	145.5	150.8	159.6	156.1	160.4	160.9	159.1	160.6	159.6	159.5
Farm value (1982-84=100)	98.0	113.0	107.9	100.9	93.6	93.8	95.0	95.3	96.0	96.2
Farm-retail spread (1982-84=100)	189.3	185.6	207.2	207.0	222.0	222.8	218.2	220.8	218.3	217.8
Farm value-retail cost (%)	32.3	36.0	32.4	31.0	28.0	28.0	28.7	28.5	28.9	28.9
Poultry										
Retail cost (1982-84=100)	156.6	157.1	157.9	156.8	159.9	157.9	158.6	158.5	159.6	159.3
Farm value (1982-84=100)	120.6	126.1	119.0	124.4	112.5	108.1	113.1	118.2	119.8	120.4
Farm-retail spread (1982-84=100)	198.1	192.9	202.7	194.1	214.5	215.3	211	204.9	205.4	204.1
Farm value-retail cost (%)	41.2	42.9	40.3	42.5	37.6	36.6	38.2	39.9	40.2	40.5
Eggs										
Retail cost (1982-84=100)	140.0	137.1	128.1	125.1	133.9	131.7	127.1	129.5	124.1	125.9
Farm value (1982-84=100)	99.3	89.6	74.9	64.6	68.2	89.9	65.6	82.0	54.0	75.8
Farm-retail spread (1982-84=100)	213.0	222.5	223.7	233.8	251.9	206.8	237.5	214.9	250.1	215.9
Farm value-retail cost (%)	45.6	42.0	37.6	33.2	32.7	43.9	33.2	40.7	27.9	38.7
Cereal and bakery products										
Retail cost (1982-84=100)	177.6	181.1	185.0	185.7	185.6	186.0	186.1	187.2	188.6	187.7
Farm value (1982-84=100)	107.7	94.4	82.5	81.8	75.0	75.1	75.6	76.2	75.5	74.2
Farm-retail spread (1982-84=100)	187.4	193.2	199.2	200.2	201.0	201.5	201.5	202.7	204.4	203.5
Farm value-retail cost (%)	7.4	6.4	5.5	5.4	4.9	4.9	5.0	5.0	4.9	4.8
Fresh fruit										
Retail cost (1982-84=100)	245.1	258.2	294.3	302.7	294.7	288.4	283.0	282.2	282.7	267.8
Farm value (1982-84=100)	137.0	141.3	153.7	157.2	151.7	149.8	149.9	150.1	132.8	132.5
Farm-retail spread (1982-84=100)	295.0	312.2	359.3	369.9	360.7	352.4	344.5	343.2	351.9	330.3
Farm value-retail cost (%)	17.7	17.3	16.5	16.4	16.3	16.4	16.7	16.8	14.8	15.6
Fresh vegetables										
Retail cost (1982-84=100)	194.6	215.8	209.3	203.1	223.0	211.0	212.1	213.6	219.1	217.7
Farm value (1982-84=100)	118.7	124.5	118.1	133.2	120.8	95.8	109.4	126.0	136.0	127.6
Farm-retail spread (1982-84=100)	233.6	262.7	256.2	239.0	275.6	270.2	264.9	258.6	261.8	264.0
Farm value-retail cost (%)	20.7	19.6	19.2	22.3	18.4	15.4	17.5	20.0	21.1	19.9
Processed fruits and vegetables										
Retail cost (1982-84=100)	147.9	150.6	154.8	154.8	152.8	152.6	152.4	151.7	153.7	154.0
Farm value (1982-84=100)	115.9	115.1	113.5	115.1	113.7	113.6	113.2	113.9	113.5	113.3
Farm-retail spread (1982-84=100)	157.9	161.7	167.7	167.2	165	164.8	164.6	163.5	166.2	166.7
Farm value-retail cost (%)	18.6	18.2	17.4	17.7	17.7	17.7	17.7	17.8	17.6	17.5
Fats and oils										
Retail cost (1982-84=100)	141.7	146.9	148.3	147.5	147.0	145.6	145.9	144.8	147.0	146.6
Farm value (1982-84=100)	109.4	118.9	89.0	89.2	81.0	80.3	86.5	88.4	85.8	83.8
Farm-retail spread (1982-84=100)	153.6	157.2	170.0	168.9	171.3	169.6	167.8	165.5	169.5	169.7
Farm value-retail cost (%)	20.8	21.8	16.2	16.3	14.8	14.8	15.9	16.4	15.7	15.4

See footnotes at end of table, next page.

Table 8—Farm-Retail Price Spreads (continued)

	Annual		1999		2000					
	1997	1998	1999	Jun	Jan	Feb	Mar	Apr	May	Jun
Beef, all fresh retail value (cents/lb.)	253.8	253.3	260.5	260.0	265.7	270.1	270.8	272.5	274.3	278.6
Beef, Choice										
Retail value (cents/lb.) ²	279.5	277.1	287.8	287.2	294.7	293.6	297.9	305.4	308.8	311.5
Wholesale value (cents/lb.) ³	158.2	153.8	171.6	178.1	177.5	174.5	183.3	191.0	193.8	190.7
Net farm value (cents/lb.) ⁴	137.2	130.8	141.1	142.1	146.0	146.5	154.2	158.9	153.2	149.2
Farm-retail spread (cents/lb.)	142.3	146.3	146.7	145.1	148.7	147.1	143.7	146.5	155.6	162.3
Wholesale-retail (cents/lb.) ⁵	121.3	123.3	116.2	109.1	117.2	119.1	114.6	114.4	115.0	120.8
Farm-wholesale (cents/lb.) ⁶	21.0	23.0	30.5	36.0	31.5	28.0	29.1	32.1	40.6	41.5
Farm value-retail value (%)	49.1	47.2	49.0	49.5	49.5	49.9	51.8	52.0	49.6	47.9
Pork										
Retail value (cents/lb.) ²	245.0	242.7	241.5	241.2	245.7	251.0	252.8	255.5	256.2	260.3
Wholesale value (cents/lb.) ³	123.1	97.3	99.0	100.5	104.6	110.1	112.6	118.6	119.7	122.1
Net farm value (cents/lb.) ⁴	95.3	61.2	60.4	63.0	68.0	74.1	77.4	88.4	89.4	91.7
Farm-retail spread (cents/lb.)	149.7	181.5	181.1	178.2	177.7	176.9	175.4	167.1	166.8	168.6
Wholesale-retail (cents/lb.) ⁵	121.9	145.4	142.5	140.7	141.1	140.9	140.2	136.9	136.5	138.2
Farm-wholesale (cents/lb.) ⁶	27.8	36.1	38.6	37.5	36.6	36.0	35.2	30.2	30.3	30.4
Farm value-retail value (%)	38.9	25.2	25.0	26.1	27.7	29.5	30.6	34.6	34.9	35.2

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				2000	
	1997	1998	1999	IV	I	II	III	IV	I	II
	1987=100*									
Labor—hourly earnings and benefits	474.3	490.4	503.3	494.6	498.6	503.5	504.2	506.7	508.2	513.7
Processing	486.0	499.3	511.4	504.9	504.2	512.1	513.4	515.6	518.1	523.6
Wholesaling	536.2	552.5	564.6	555.1	565.3	572.8	575.2	580.0	578.9	593.8
Retailing	435.2	454.1	465.8	459.4	463.6	464.2	463.8	465.4	467.1	468.5
Packaging and containers	390.3	395.5	399.4	391.9	390.3	396.4	403.0	407.7	410.3	410.6
Paperboard boxes and containers	341.9	365.2	373.0	359.8	355.7	368.3	380.2	387.8	391.9	413.0
Metal cans	491.0	487.9	486.6	486.6	486.6	486.6	486.6	486.6	489.5	440.1
Paper bags and related products	441.9	432.9	440.9	428.5	425.6	435.7	446.3	455.8	457.3	472.4
Plastic films and bottles	326.6	322.8	324.2	318.5	319.7	321.4	325.9	329.6	329.4	330.6
Glass containers	447.4	446.8	447.1	447.3	447.8	447.8	447.0	445.8	450.1	451.1
Metal foil	233.4	232.0	227.3	230.9	228.2	226.1	226.7	228.0	229.8	231.3
Transportation services	430.0	428.3	394.0	425.0	393.5	394.2	394.2	394.2	392.3	393.2
Advertising	609.4	624.5	623.7	626.2	622.2	622.9	623.9	625.6	633.6	635.0
Fuel and power	668.5	619.7	651.5	601.6	586.6	627.3	681.1	711.9	816.5	822.2
Electric	499.2	492.1	489.4	485.0	479.0	484.0	505.9	488.5	477.2	487.0
Petroleum	616.7	457.0	565.9	423.3	388.4	504.0	613.2	758.1	1,114.0	1,102.2
Natural gas	1,214.0	1,239.4	1,235.6	1,217.7	1,206.3	1,222.8	1,272.7	1,240.4	1,235.3	1,259.8
Communications, water and sewage	302.8	307.6	309.3	308.5	309.3	308.5	308.9	310.6	310.3	307.8
Rent	265.6	260.5	256.9	258.8	257.5	257.3	256.4	256.4	256.8	256.8
Maintenance and repair	514.9	529.3	541.6	535.1	537.9	540.7	542.5	545.3	552.2	558.3
Business services	512.3	522.9	531.9	530.3	528.1	530.2	533.3	536.1	540.3	541.2
Supplies	337.8	332.3	327.7	329.5	326.1	325.9	327.1	331.7	365.6	338.2
Property taxes and insurance	580.1	598.3	619.7	606.1	609.6	615.2	622.8	631.3	639.8	647.4
Interest, short-term	108.9	103.7	103.7	96.0	93.2	96.7	109.7	115.2	119.5	129.3
Total marketing cost index	459.9	467.2	472.2	468.0	465.1	470.7	475.2	479.1	486.8	489.5

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		Conversion factor ³	Primary market price ⁴
							Total	Per capita ²		
							Lbs.			\$/cwt
							Million lbs. ⁵			
Beef										
1997	377	25,490	2,344	28,211	2,136	465	25,611	67	0.700	66.32
1998	465	25,760	2,643	28,868	2,171	393	26,305	68	0.700	61.48
1999	393	26,493	2,874	29,760	2,411	411	26,938	69	0.700	65.56
2000	411	26,624	3,029	30,064	2,515	390	27,159	69	0.700	68-70
2001	390	25,206	3,050	28,646	2,435	365	25,846	65	0.700	72-77
Pork										
1997	366	17,274	634	18,274	1,044	408	16,823	49	0.776	54.30
1998	408	19,011	705	20,124	1,230	584	18,309	53	0.776	34.72
1999	584	19,308	827	20,720	1,285	489	18,945	54	0.776	34.00
2000	489	18,929	1,005	20,423	1,275	500	18,648	53	0.776	45-46
2001	500	19,080	1,005	20,585	1,305	500	18,780	52	0.776	42-46
Veal⁶										
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	225	0	230	0	4	226	1	0.83	102
2001	4	208	0	212	0	4	208	1	0.83	105
Lamb and mutton										
1997	9	260	83	352	6	14	332	1	0.89	88
1998	14	251	112	377	6	12	360	1	0.89	74
1999	12	248	113	372	5	9	358	1	0.89	76
2000	9	226	114	349	6	10	333	1	0.89	79
2001	10	220	114	344	4	10	330	1	0.89	79
Total red meat										
1997	759	43,358	3,061	47,178	3,185	894	43,099	118	--	--
1998	894	45,284	3,461	49,639	3,407	994	45,239	123	--	--
1999	994	46,284	3,813	51,092	3,701	914	46,476	125	--	--
2000	914	46,004	4,148	51,066	3,796	904	46,366	123	--	--
2001	904	44,714	4,169	49,787	3,744	879	45,164	119	--	--
<i>¢/lb</i>										
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	4,866	796	24,521	77	0.859	58
2000	796	30,463	4	31,263	5,030	850	25,383	79	0.859	56
2001	850	31,967	4	32,821	5,050	880	26,891	83	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	549	0	559	379	5	173	1	1.0	--
2001	5	564	0	571	400	10	161	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	5,291	0	5,546	434	250	4,862	18	1.0	71
2001	250	5,380	1	5,631	420	275	4,935	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	5,638	1,058	29,585	96	--	--
2000	1,058	36,303	6	37,367	5,843	1,105	30,418	97	--	--
2001	1,105	37,911	7	39,023	5,870	1,165	31,987	101	--	--
Red meat and poultry										
1997	1,734	76,321	3,067	81,123	8,839	1,923	70,360	208	--	--
1998	1,923	78,637	3,467	84,027	8,951	2,016	73,060	214	--	--
1999	2,016	81,537	3,820	87,372	9,340	1,972	76,061	220	--	--
2000	1,972	82,307	4,154	88,433	9,638	2,009	76,784	221	--	--
2001	2,000	82,625	4,176	88,810	9,614	2,044	77,151	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		Primary market price*
								Total	Per capita	
	Million doz.							No.	¢/doz.	
1994	10.7	6,177.6	3.7	6,192.0	187.6	805.4	14.9	5,184.1	238.7	67.3
1995	14.9	6,215.6	4.1	6,234.6	208.9	847.2	11.2	5,167.3	235.6	72.9
1996	11.2	6,350.7	5.4	6,367.3	253.1	863.8	8.5	5,241.8	236.8	88.2
1997	8.5	6,473.1	6.9	6,488.5	227.8	894.7	7.4	5,358.6	240.1	81.2
1998	7.4	6,657.9	5.8	6,671.2	218.8	921.8	8.4	5,522.2	244.9	75.8
1999	8.4	6,912.0	7.4	6,927.8	161.7	941.7	7.6	5,816.8	255.5	65.6
2000	7.6	7,079.1	5.5	7,092.2	163.0	967.4	5.0	5,956.8	259.3	64.1
2001	5.0	7,170.0	5.0	7,180.0	170.0	1,015.0	5.0	5,990.0	258.6	61.0

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 & Use¹

	Production	Commercial			Total commercial supply	CCC net removals	Commercial			CCC net removals		
		Farm use	Farm marketings	Beg. stocks			Ending stocks	Disappearance	All milk price ¹	Skim solids basis	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	176.3	0.8	5.5	170.0	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	12.80	1.8	1.2

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

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

Table 13—Poultry & Eggs

	Annual			1999		2000					
	1997	1998	1999	May	Dec	Jan	Feb	Mar	Apr	May	
Broilers											
Federally inspected slaughter certified (mil. lb.)	27,270.7	27,862.7	29,741.4	2,476.0	2,466.0	2,426.2	2,486.0	2,689.9	2,333.7	2,714.3	
Wholesale price, 12-city (cents/lb.)	58.8	63.1	58.1	60.2	58.4	55.4	53.8	54.5	55.4	55.7	
Price of grower feed (\$/ton) ¹	157.7	128.8	102.8	107.3	99.5	104.5	108.1	110.8	112.3	115.6	
Broiler-feed price ratio ²	4.7	6.3	7.2	7.3	7.4	6.7	6.2	6.3	6.5	6.4	
Stocks beginning of period (mil. lb.)	641.3	606.8	711.1	809.1	787.1	795.6	796.4	786.7	804.9	842.6	
Broiler-type chicks hatched (mil.)	8,321.6	8,495.1	8,708.7	766.4	747.9	749.4	701	756.4	743.5	775.2	
Turkeys											
Federally inspected slaughter certified (mil. lb.)	5,477.9	5,280.6	5,296.5	440.8	430.0	399.9	413.2	471.4	416.5	491.8	
Wholesale price, Eastern U.S. 8-16 lb. young hens (cents/lb.)	64.9	62.2	69.0	65.6	72.4	61.6	61.9	65.4	67.4	69.2	
Price of turkey grower feed (\$/ton) ¹	142.7	115.9	94.9	96.1	91.7	95.8	99.2	100.1	102.1	104.9	
Turkey-feed price ratio ²	5.6	6.7	8.7	8.2	9.2	7.6	7.2	7.6	7.8	7.7	
Stocks beginning of period (mil. lb.)	328.0	415.1	304.3	455.4	252.3	254.3	312.4	347.3	387.5	413.3	
Poults placed in U.S. (mil.)	321.5	297.8	297.3	26.1	25.5	24.7	24.2	25.7	24.9	26	
Eggs											
Farm production (mil.)	77,677	79,941	82,939	6,941	7,279	7,155	6,659	7,235	7,013	7,107	
Average number of layers (mil.)	304	313	323	320	329	329	330	331	329	327	
Rate of lay (eggs per layer on farms)	255.3	255.4	256.8	21.7	22.1	21.8	20.2	21.9	21.3	21.8	
Cartoned price, New York, grade A large (cents/doz.) ³	81.2	75.8	65.6	59.3	65.4	62.2	67.1	60.7	68.5	53.4	
Price of laying feed (\$/ton) ¹	160.0	137.7	123.2	142.1	121.4	130.3	121.4	143.5	139.4	165.1	
Egg-feed price ratio ²	8.8	9.8	9.8	7.8	10.1	8.9	11.3	8.0	9.4	6.3	
Stocks, first of month Frozen (mil. doz.)	7.7	7.4	8.4	7.1	6.4	7.6	9.2	7.0	6.1	5.4	
Replacement chicks hatched (mil.)	424.5	438.4	448.8	40.7	32.7	34.1	35.5	39.6	36.6	40.9	

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

Table 14—Dairy

	Annual			1999				2000		
	1997	1998	1999	May	Dec	Jan	Feb	Mar	Apr	May
Class III (BFP before 2000) 3.5% fat (\$/cwt.)	12.05	14.20	12.43	11.26	9.63	10.05	9.54	9.54	9.41	9.37
Wholesale prices										
Butter, Central States (cents/lb.) ¹	116.2	177.6	125.2	111.0	94.2	91.6	92.9	99.7	108.7	122.2
Am. cheese, Wis. assembly pt. (cents/lb.)	132.4	158.1	142.2	124.8	115.7	114.6	111.6	112.2	110.7	110.6
Nonfat dry milk (cents/lb.) ²	110.0	106.9	103.5	102.2	101.7	100.9	100.2	100.1	100.0	100.1
USDA net removals										
Total (mil. lb.) ³	1,090.3	365.6	343.5	20.5	55.1	88.4	99.3	86.3	77.7	89.9
Butter (mil. lb.)	38.4	6.3	3.7	0.0	1.0	2.0	2.6	1.6	0.9	0.8
Am. cheese (mil. lb.)	11.3	8.2	4.6	0.3	0.4	0.4	0.7	1.8	2.2	4.0
Nonfat dry milk (mil. lb.)	298.0	326.4	540.6	53.8	68.8	60.3	63.5	76.5	75	81.8
Milk										
Milk prod. 20 states (mil. lb.)	133,314	134,900	140,029	12,447	11,928	12,256	11,691	12,679	12,399	12,743
Milk per cow (lb.)	17,180	17,501	18,103	1,610	1,538	1,578	1,505	1,631	1,592	1,635
Number of milk cows (1,000)	7,760	7,708	7,735	7,733	7,757	7,765	7,766	7,774	7,787	7,795
U.S. milk production (mil. lb.) ⁴	156,091	157,348	162,711	14,458	13,847	14,258	13,596	14,739	14,378	14,772
Stocks, beginning ³										
Total (mil. lb.)	4,714	4,907	5,301	8,966	6,036	6,179	7,623	8,357	8,702	9,614
Commercial (mil. lb.)	4,704	4,889	5,274	8,939	5,992	6,135	7,576	8,300	8,638	9,520
Government (mil. lb.)	10	18	28	27	44	44	47	57	64	94
Imports, total (mil. lb.) ³	2,698	4,588	4,772	323	431	265	316	371	358	--
Commercial disappearance (mil. lb.) ³	156,118	159,779	164,911	13,914	13,964	12,881	12,984	14,573	13,667	--
Butter										
Production (mil. lb.)	1,151.2	1,168.0	1,275.0	110.9	119.8	142.3	130.3	122.5	115.4	112.0
Stocks, beginning (mil. lb.)	13.4	20.5	25.9	125.5	29.9	24.9	72.6	88.5	97.4	126.6
Commercial disappearance (mil. lb.)	1,108.7	1,222.5	1,308.4	102.1	124.4	93.2	113.8	113.7	86.7	--
American cheese										
Production (mil. lb.)	3,285.6	3,314.7	3,576.5	312.5	309.7	316.7	302.3	320.5	312.5	323.2
Stocks, beginning (mil. lb.)	379.6	410.3	407.6	514.4	448.2	458.0	480.1	515.3	524.9	547.9
Commercial disappearance (mil. lb.)	3,269.0	3,338.6	3,586.1	272.3	307.2	296.5	268.4	313.7	292.9	--
Other cheese										
Production (mil. lb.)	4,044.9	4,177.5	4,367.5	362.5	396.1	370.2	343.2	397.7	381	405.8
Stocks, beginning (mil. lb.)	107.3	70.0	109.5	174.2	143.5	163.3	187.9	193	201.7	200.7
Commercial disappearance (mil. lb.)	4,366.6	4,452.0	4,678.2	381.5	416.9	367.4	362.1	418.4	408.5	--
Nonfat dry milk										
Production (mil. lb.)	1,271.6	1,135.4	1,378.2	136.7	126.1	133.6	133.1	139.5	147	138
Stocks, beginning (mil. lb.)	71.1	103.3	56.9	141.2	102.2	115.5	146.2	173.4	167.9	197.4
Commercial disappearance (mil. lb.)	894.1	866.9	791.1	62.9	44.9	43.1	43.1	70.2	42.8	--
Frozen dessert										
Production (mil. gal.) ⁵	1,290.0	1,324.3	1,311.8	120.6	84.8	83.8	98.6	120.4	117.2	124.6

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

Information contact: LaVerne Williams (202) 694-5190

Table 15—Wool

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

-- = 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	Jun	Jan	Feb	Mar	Apr	May	Jun
Cattle on feed (7 states, 1000+ head capacity)										
Number on feed (1,000 head) ¹	8,943	9,455	9,021	8,289	9,752	9,885	9,695	9,573	9,361	9,411
Placed on feed (1,000 head)	20,765	19,697	21,446	1,314	1,931	1,606	1,716	1,450	1,998	1,413
Marketings (1,000 head)	19,552	19,440	20,124	1,727	1,747	1,749	1,764	1,591	1,863	1,828
Other disappearance (1,000 head)	701	691	676	51	51	47	74	71	85	37
Market prices (\$/cwt)										
Slaughter cattle										
Choice steers, 1,100-1,300 lb.										
Texas	65.99	61.75	65.89	66.15	69.07	68.88	71.74	73.13	71.28	69.41
Neb. direct	66.32	61.48	65.65	63.20	67.97	68.24	71.74	73.52	71.66	69.59
Boning utility cows, Sioux Falls	34.27	36.20	38.40	40.00	39.19	38.80	41.58	43.81	43.50	45.38
Feeder steers										
Medium no. 1, Oklahoma City										
600-650 lb.	81.34	77.70	82.64	82.15	93.13	94.55	98.96	95.47	95.03	95.23
750-800 lb.	76.19	71.80	76.39	76.01	87.50	84.03	83.84	84.28	83.42	86.71
Slaughter hogs										
Barrows and gilts, 51-52 percent lean										
National Base converted to live equal.	54.30	34.72	34.02	35.39	38.32	41.58	43.52	49.59	50.21	51.48
Sows, Iowa, S.MN 1-2 300-400 lb.	40.24	20.29	19.26	24.29	24.60	25.35	26.86	30.33	33.17	33.70
Slaughter sheep and lambs										
Lambs, Choice, San Angelo										
Ewes, Good, San Angelo	49.33	40.90	42.32	41.70	45.67	51.92	49.92	47.08	--	44.86
Feeder lambs										
Choice, San Angelo										
	104.43	79.59	81.05	80.60	84.63	99.54	99.58	99.33	100.45	91.14
Wholesale meat prices, Midwest										
Boxed beef cut-out value										
Choice, 700-800 lb.										
	102.75	98.60	111.55	116.01	113.74	112.18	118.25	123.97	126.00	123.85
Select, 700-800 lb.	96.15	92.19	101.99	110.16	106.09	106.88	112.56	115.40	111.19	110.16
Canner and cutter cow beef	64.50	61.49	66.66	68.20	69.86	72.38	72.67	74.38	73.60	74.20
Pork cutout	--	53.07	53.45	60.75	57.65	62.18	63.62	68.92	68.59	70.07
Pork loins, bone-in, 1/4 " trim, 14-19 lb.	128.75	102.04	100.25	97.62	99.29	110.66	110.06	127.48	115.38	132.53
Pork bellies, 12-14 lb.	73.91	52.38	57.43	53.41	80.45	82.40	85.00	93.70	97.85	91.99
Hams, bone-in, trimmed, 20-23 lb.	--	--	47.90	43.54	47.41	46.50	49.31	48.84	53.36	54.43
All fresh beef retail price	253.77	253.28	260.50	260.00	265.70	270.10	270.80	272.50	274.30	278.60
Commercial slaughter (1,000 head) ²										
Cattle										
Steers	17,529	17,428	17,936	1,657	1,432	1,396	1,526	1,409	1,647	1,678
Heifers	11,528	11,448	11,866	1,046	980	1,046	1,077	923	1,006	1,040
Cows	6,564	5,983	5,708	448	474	445	472	402	467	463
Bull and stags	696	606	639	56	51	50	56	48	56	56
Calves	1,575	1,458	1,484	105	93	95	103	81	92	95
Sheep and lambs	3,911	3,911	3,698	270	282	293	344	345	259	260
Hogs										
Barrows and gilts	88,409	97,030	97,738	7,998	7,881	7,807	8,516	6,963	7,664	7,652
Commercial production (mil. lb.)										
Beef	25,384	25,653	25,656	2,321	2,178	2,175	2,300	2,026	2,302	2,369
Veal	324	252	250	19	17	18	20	17	19	19
Lamb and mutton	257	248	247	17	19	20	24	23	17	17
Pork	17,244	18,981	18,981	1,584	1,570	1,554	1,700	1,394	1,540	1,536
Hogs and pigs (U.S.) ³										
Inventory (1,000 head) ¹										
Breeding (1,000 head) ¹	6,578	6,957	6,682	6,682	6,527	6,515	6,301	6,244	6,205	6,234
Market (1,000 head) ¹	49,546	54,200	55,523	55,523	53,663	54,380	54,474	53,094	51,933	53,164
Farrowings (1,000 head)	11,479	12,061	11,666	2,891	2,986	2,920	2,844	2,819	2,905	2,854
Pig crop (1,000 head)	99,584	105,004	102,569	25,247	26,270	25,860	24,972	24,777	25,831	--
Cattle on Feed, 7 states (1,000 head) ⁴										
Steers and steer calves										
	5,410	5,803	5,432	5,432	5,341	4,849	5,286	5,768	5,736	5,326
Heifers and heifer calves	3,455	3,615	3,552	3,552	3,527	3,302	3,479	3,942	3,800	3,602
Cows and bulls	78	59	37	37	31	44	28	42	37	31

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

Crops & Products

Table 17—Supply & Utilization^{1,2}

	Area		Yield	Production	Total supply ⁴	Feed & residual	Other domestic use	Exports	Total use	Ending stocks	Farm price ⁵	
	Set-aside ³	Planted										Harvested
		Mil. Acres										Bu./acre
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	396	989	1,042	2,427	946	2.65
1999/00*	--	62.8	53.9	42.7	2,302	3,342	290	1,012	1,090	2,392	950	2.50
2000/01*	--	62.9	54.4	41.2	2,243	3,293	225	1,021	1,100	2,346	947	2.25-2.75
		Mil. acres	Bu./acre					Mil. cwt (rough equiv)				\$/cwt
Rice⁶												
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/ 116.6	89.0	205.6	37.7	6.10-6.20
2000/01*	--	3.3	3.2	5,963.0	193.5	242.2	--	6/ 119.4	88.0	207.4	34.8	5.25-6.25
		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	5,471	1,846	1,981	9,298	1,787	1.94
1999/00*	--	77.4	70.5	133.8	9,437	11,239	5,625	1,920	1,875	9,220	1,819	1.80
2000/01*	--	79.6	73.1	137.0	10,013	11,842	5,650	1,960	2,050	9,660	2,182	1.50-1.90
		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	290	55	250	595	65	1.55
2000/01*	--	8.8	8.1	69.5	564	629	260	55	240	555	74	1.25-1.65
		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	451	137	172	30	339	112	2.15
2000/01*	--	5.7	5.2	58.7	307	449	145	172	25	342	107	1.65-2.05
		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	181	68	2	252	76	1.10
2000/01*	--	4.5	2.5	61.2	151	327	180	68	2	250	77	0.85-1.25
		Mil. acres	Bu./acre					Mil. bu.				\$/bu.
Soybeans⁷												
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	170	1,570	965	2,705	290	4.65
2000/01*	--	74.5	73.5	40.0	2,940	3,233	172	1,610	970	2,752	480	3.90-4.90
								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*	--	--	--	--	17,725	19,335	--	16,300	1,250	17,550	1,785	15.70
2000/01*	--	--	--	--	18,275	20,150	--	16,650	1,750	18,400	1,750	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*	--	--	--	--	37,335	37,725	--	30,400	7,000	37,400	325	167.0
2000/01*	--	--	--	--	38,235	38,625	--	31,200	7,150	38,350	275	140-170

See footnotes at end of table, next page

Table 17—Supply & Utilization (continued)

	Area			Yield	Production	Total supply ⁴	Feed & residual	Other domestic use	Exports	Total use	Ending stocks	Farm price ⁵
	Set-aside ³	Planted	Harvested									
	Mil. Acres		Lb./acre									
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	6.8	16.9	4.1	44.9
2000/01*	--	15.6	14.6	635	19.3	23.5	--	10.2	8.2	18.4	5.0	--

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

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

	Marketing year ¹			1999		2000				
	1997/98	1998/99	1999/00	May	Dec	Jan	Feb	Mar	Apr	May
Wheat, no. 1 HRW, Kansas City (\$/bu.) ²	3.71	3.08	--	2.89	2.81	2.90	2.94	2.91	2.84	2.95
Wheat, DNS, Minneapolis (\$/bu.) ³	4.31	3.83	--	3.61	3.64	3.37	3.59	3.65	3.69	3.80
Rice, S.W. La. (\$/cwt) ⁴	18.92	16.79	--	15.56	13.58	13.00	12.69	12.63	12.28	11.88
Corn, no. 2 yellow, 30-day, Chicago (\$/bu.) ⁵	2.56	2.06	--	2.16	1.93	2.06	2.12	2.17	2.21	2.25
Sorghum, no. 2 yellow, Kansas City (\$/cwt) ⁵	4.11	3.29	--	3.35	2.87	3.20	3.28	3.51	3.53	3.75
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	--	55.54	46.65	51.92	54.29	57.67	53.76	58.31
Northern Europe prices cotton index (¢/lb.) ⁷	72.11	58.97	--	59.85	44.24	47.80	53.63	57.45	58.90	60.53
U.S. M 1-3/32 in. (¢/lb.) ⁸	77.98	74.08	--	NQ	52.75	58.69	60.94	64.70	64.31	68.88
Soybeans, no. 1 yellow, 30-day Chicago (\$/bu)	6.51	5.13	--	4.59	4.55	4.84	4.96	5.05	5.22	5.34
Soybean oil, crude, Decatur (¢/lb.)	25.84	19.90	--	17.85	15.56	15.63	15.63	16.21	15.63	16.74
Soybean meal, 48% protein, Decatur (\$/ton)	185.54	138.50	--	140.75	154.00	163.41	170.85	175.50	176.45	187.90

-- = 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 soybean meal 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./acre	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	--
Rice										
		\$/cwt					\$/cwt		Cwt/acre	
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	--
Corn										
		\$/bu.					\$/bu.		Bu./acre	
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	--
Sorghum										
		\$/bu.					\$/bu.		Bu./acre	
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	--
Barley										
		\$/bu.					\$/bu.		Bu./acre	
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	--
Oats										
		\$/bu.					\$/bu.		Bu./acre	
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	--
Soybeans⁸										
		\$/bu.					\$/bu.		Bu./acre	
1995/96	--	--	4.92	--	--	--	--	--	--	--
1996/97	--	--	4.97	--	--	--	--	--	--	--
1997/98	--	--	5.26	--	--	--	--	--	--	--
1998/99	--	--	5.26	--	--	--	--	--	--	--
1999/2000	--	--	5.26	--	--	--	--	--	--	--
Upland cotton										
		¢/lb.					¢/lb.		Lb./acre	
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				
	May	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
Grower prices										
Apples (¢/pound) ⁴	13.3	23.2	23.5	23.3	23.7	23.5	21.1	20.5	19.7	18.2
Pears (¢/pound) ⁴	17.00	15.75	21.95	21.90	20.70	20.70	19.30	15.65	13.45	10.20
Oranges (\$/box) ⁵	6.46	7.98	10.25	4.33	3.41	3.27	3.51	3.54	4.14	--
Grapefruit (\$/box) ⁵	3.66	8.18	6.80	5.21	3.71	2.40	3.64	3.63	2.82	--
Stocks, ending										
Fresh apples (mil. lb.)	1,252	2,835	6,165	5,524	4,653	4,017	3,231	2,465	1,891	1,293
Fresh pears (mil. lb.)	39	552	515	400	299	241	191	133	105	69
Frozen fruits (mil. lb.)	801	1,136	1,631	1,583	1,455	1,338	1,244	1,107	1,017	1,013
Frozen conc. orange juice (mil. single-strength gallons)	863	589	482	450	543	644	776	769	742	801

-- = 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	478,109
Sweet potatoes (1,000 cwt)	12,594	11,203	12,005	11,027	13,380	12,821	13,216	13,327	12,382	12,234
Dry edible beans (1,000 cwt)	32,379	33,765	22,615	21,862	28,950	30,689	27,912	29,370	30,418	33,230
	1999					2000				
	Jun	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Shipments (1,000 cwt)										
Fresh	36,054	18,751	20,107	21,604	19,965	25,730	28,425	24,169	32,102	37,167
Iceberg lettuce	3,933	3,624	3,226	3,223	2,889	3,776	3,904	2,859	3,388	4,380
Tomatoes, all	4,035	3,469	3,471	3,673	3,642	4,463	4,553	3,845	4,020	4,272
Dry-bulb onions	3,437	4,178	3,926	3,642	3,232	3,910	3,895	3,364	3,707	3,809
Others ⁶	24,649	7,480	9,484	11,066	10,202	13,581	16,073	14,101	20,987	24,706
Potatoes, all	13,737	12,951	14,620	14,751	12,201	17,170	19,972	20,460	16,892	15,085
Sweet potatoes	178	371	679	438	205	349	311	337	183	228

-- = 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	2,681.1		
Deliveries ¹	9,755	9,851	10,163	2,616	2,508	2,271	2,594	2,693	2,605	2,348		
Stocks, ending ¹	3,377	3,423	3,855	1,679	3,422	4,219	3,184	1,639	3,855	4,551.0		
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	May	Dec	Jan	Feb	Mar	Apr	May		
Tobacco												
Avg. price to grower ³												
Flue-cured (\$/lb.)	1.73	1.75	--	--	--	--	--	--	--	--		
Burley (\$/lb.)	1.91	1.91	--	--	1.9	1.90	1.89	1.77	--	--		
Domestic taxable removals												
Cigarettes (bil.)	471.4	457.9	--	34.8	--	--	--	--	--	--		
Large cigars (mil.) ⁴	3,552	3,721	--	320.2	--	--	--	--	--	--		

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

World Agriculture

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

	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00 F	2000/01 F
	<i>Million units</i>									
Wheat										
Area (hectares)	222.5	222.9	222.0	214.5	219.2	230.3	227.8	224.8	216.2	215.6
Production (metric tons)	542.9	562.4	558.8	524.1	538.5	582.8	609.3	588.6	585.7	581.3
Exports (metric tons) ¹	111.2	113.0	101.7	101.5	99.5	103.6	103.4	101.4	104.9	105.8
Consumption (metric tons) ²	555.5	550.3	561.6	547.5	548.9	577.1	584.1	589.5	596.8	593.8
Ending stocks (metric tons) ³	132.5	144.5	141.7	118.2	107.8	113.5	138.7	137.8	126.7	114.1
Coarse grains										
Area (hectares)	322.7	326.0	318.8	324.1	313.8	322.7	311.2	308.2	303.1	302.1
Production (metric tons)	810.4	871.6	798.9	871.1	802.9	908.5	884.9	890.2	876.0	888.3
Exports (metric tons) ¹	95.9	92.8	85.8	98.0	87.8	94.1	85.7	96.7	99.1	100.3
Consumption (metric tons) ²	809.8	843.2	838.8	858.4	841.3	876.7	876.9	869.8	881.6	887.4
Ending stocks (metric tons) ³	135.8	164.1	124.3	137.0	98.6	130.4	138.4	158.8	153.2	154.1
Rice, milled										
Area (hectares)	147.5	146.4	144.9	147.4	148.1	149.8	151.2	152.4	154.2	152.5
Production (metric tons)	354.7	355.7	355.4	364.5	371.4	380.4	386.8	394.0	402.8	399.2
Exports (metric tons) ¹	14.3	14.9	16.3	20.9	19.7	18.8	27.3	25.1	22.3	24.4
Consumption (metric tons) ²	356.7	357.7	358.2	366.6	371.4	379.6	383.3	388.7	399.9	401.5
Ending stocks (metric tons) ³	57.2	55.2	52.4	50.4	50.5	51.3	54.9	60.1	63.1	60.8
Total grains										
Area (hectares)	692.7	695.3	685.7	686.0	681.1	702.8	690.2	685.4	673.5	670.2
Production (metric tons)	1,708.0	1,789.7	1,713.1	1,759.7	1,712.8	1,871.7	1,881.0	1,872.8	1,864.5	1,868.8
Exports (metric tons) ¹	221.4	220.7	203.8	220.4	207.0	216.5	216.4	223.2	226.3	230.5
Consumption (metric tons) ²	1,722.0	1,751.2	1,758.6	1,772.5	1,761.6	1,833.4	1,844.3	1,848.0	1,878.3	1,882.7
Ending stocks (metric tons) ³	325.5	363.8	318.4	305.6	256.9	295.2	332.0	356.7	343.0	329.0
Oilseeds										
Crush (metric tons)	185.1	184.4	190.1	208.1	217.5	218.9	228.3	239.8	248.2	249.1
Production (metric tons)	224.3	227.5	229.4	261.9	258.9	261.4	286.5	293.5	297.9	308.4
Exports (metric tons)	37.6	38.2	38.7	44.1	44.3	49.6	54.0	54.5	62.9	59.4
Ending stocks (metric tons)	21.9	23.6	20.3	27.2	22.2	17.0	24.8	28.6	25.1	29.4
Meals										
Production (metric tons)	125.2	125.2	131.7	142.1	147.3	149.4	155.5	163.9	169.6	170.7
Exports (metric tons)	42.2	40.8	44.9	46.7	49.8	50.7	51.9	54.1	54.7	55.1
Oils										
Production (metric tons)	60.6	61.1	63.7	69.6	73.1	74.2	75.4	80.5	84.9	86.1
Exports (metric tons)	21.3	21.3	24.3	27.1	26.0	28.2	29.7	31.6	32.0	32.8
Cotton										
Area (hectares)	34.8	32.6	30.7	32.2	35.9	33.8	33.7	32.9	32.3	32.6
Production (bales)	95.8	82.5	77.1	86.0	93.1	89.6	91.6	84.7	86.6	87.4
Exports (bales)	28.5	25.5	26.8	28.4	27.8	26.8	26.6	24.0	27.0	28.1
Consumption (bales)	86.1	85.9	85.4	84.7	86.0	88.0	87.2	84.9	90.8	92.3
Ending stocks (bales)	37.4	34.7	26.8	29.8	36.6	40.1	43.9	45.0	40.8	36.1
	1991	1992	1993	1994	1995	1996	1997	1998	1999 F	2000 F
Red meat⁴										
Production (metric tons)	117.7	117.3	119.3	124.6	129.5	124.2	127.9	131.4	132.8	133.1
Consumption (metric tons)	116.1	115.7	118.3	123.6	127.8	121.4	125.1	128.6	130.6	131.3
Exports (metric tons) ¹	7.5	7.4	7.4	8.1	8.2	8.4	9.0	8.9	9.0	9.3
Poultry⁴										
Production (metric tons)	39.6	38.0	40.5	43.2	47.5	50.4	52.7	53.5	55.6	57.4
Consumption (metric tons)	38.4	37.0	39.4	42.0	47.0	49.7	51.9	52.4	54.1	56.0
Exports (metric tons) ¹	2.8	2.4	2.8	3.6	4.5	5.2	5.6	5.7	5.9	6.2
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	Jun	Jan	Feb	Mar	Apr	May	Jun
Export commodities										
Wheat, f.o.b. vessel, Gulf ports (\$/bu.)	4.35	3.44	3.04	3.01	2.89	2.99	2.92	2.92	3.03	3.15
Corn, f.o.b. vessel, Gulf ports (\$/bu.)	2.98	2.59	2.30	2.36	2.36	2.42	2.42	2.44	2.45	2.12
Grain sorghum, f.o.b. vessel, Gulf ports (\$/bu.)	2.89	2.54	2.15	2.22	2.23	2.29	2.33	2.33	2.36	2.01
Soybeans, f.o.b. vessel, Gulf ports (\$/bu.)	7.94	6.37	5.02	4.87	5.21	5.36	5.40	5.51	5.65	5.37
Soybean oil, Decatur (¢/lb.)	23.33	25.78	17.51	16.50	15.56	15.09	16.22	17.52	16.75	15.65
Soybean meal, Decatur (\$/ton)	266.70	162.74	141.52	139.07	163.41	170.51	175.50	177.53	189.34	177.45
Cotton, 7-market avg. spot (¢/lb.)	69.62	67.04	52.30	53.74	51.92	54.29	57.67	53.76	58.31	54.97
Tobacco, avg. price at auction (¢/lb.)	182.74	179.77	177.82	--	191.02	190.56	179.06	156.98	--	--
Rice, f.o.b., mill, Houston (\$/cwt)	20.88	18.95	16.99	17.05	15.55	15.25	15.00	14.85	14.48	14.38
Inedible tallow, Chicago (¢/lb.)	20.75	17.67	12.99	11.49	11.94	10.28	10.25	9.50	10.00	10.00
Import commodities										
Coffee, N.Y. spot (\$/lb.)	2.05	1.39	1.05	1.09	1.19	1.15	1.10	0.99	0.99	0.90
Rubber, N.Y. spot (¢/lb.)	55.40	40.57	36.66	34.64	38.16	40.36	38.16	37.80	37.76	37.07
Cocoa beans, N.Y. (\$/lb.)	0.69	0.72	0.47	0.48	0.38	0.35	0.38	0.36	0.37	0.38

-- = Not available. 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	May	Dec	Jan	Feb	Mar	Apr	May
\$ million										
Exports										
Agricultural	53,730	49,102	50,000	3,649	4,405	4,211	4,382	4,668	3,917	4,022
Nonagricultural	585,826	586,652	--	48,401	54,397	48,013	51,251	58,200	53,683	54,235
Total ¹	639,556	635,754	--	52,050	58,802	52,224	55,633	62,868	57,600	58,257
Imports										
Agricultural	37,007	37,449	39,000	3,226	3,367	3,185	3,249	3,679	3,376	3,517
Nonagricultural	858,893	938,809	--	76,926	87,479	83,220	87,813	98,939	90,401	96,429
Total ²	895,900	976,258	--	80,152	90,846	86,405	91,062	102,618	93,777	99,946
Trade Balance										
Agricultural	16,723	11,653	11,000	423	1,038	1,026	1,133	989	541	505
Nonagricultural	-273,067	-352,157	--	-28,525	-33,082	-35,207	-36,562	-40,739	-36,718	-42,194
Total	-256,344	-340,504	--	-28,102	-32,044	-34,181	-35,429	-39,750	-36,177	-41,689

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

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

Table 26—Indexes of Real Trade-Weighted Dollar Exchange Rates¹

	Annual			1999		2000				
	1997	1998	1999	Nov	Dec	Jan	Feb	Mar	Apr	May
	1995 = 100									
Total U.S. Trade	105.5	112.4	110.9	114.3	112.4	113.3	114.7	112.6	112.3	112.0
U.S. markets										
All agricultural trade	103.7	111.4	109.2	117.1	113.4	114.8	116.4	112.0	109.8	107.5
Bulk commodities	107.1	115.9	112.7	117.3	114.3	115.4	117.0	110.0	105.3	100.8
Corn	110.8	121.9	115.8	118.6	112.7	114.0	115.5	111.0	108.9	106.4
Cotton	99.3	112.6	110.1	112.8	112.2	113.1	114.0	91.4	74.3	60.9
Rice	106.2	109.4	108.6	113.3	111.5	112.6	113.8	113.9	116.9	117.1
Soybeans	111.9	121.2	118.1	121.0	118.9	119.6	121.7	118.8	117.7	117.0
Tobacco, raw	117.4	125.5	124.2	126.4	124.3	125.8	129.0	128.8	130.4	133.5
Wheat	102.0	107.1	110.7	113.2	113.1	114.0	115.0	107.6	101.8	95.9
High-value products	106.6	113.0	108.0	116.9	112.8	114.4	116.0	113.7	113.5	113.4
Processed intermediates	106.3	113.2	110.5	114.8	112.7	113.6	115.1	111.9	110.0	108.6
Soymeal	99.1	104.3	103.5	105.7	106.0	107.0	107.6	104.6	102.2	100.4
Soyoil	88.1	87.9	96.2	96.6	101.2	101.9	102.1	70.1	48.5	33.4
Produce and horticulture	109.6	116.8	114.5	118.1	114.8	116.3	117.9	117.3	119.1	120.7
Fruits	109.2	118.9	114.3	118.1	112.8	114.6	116.1	115.1	116.6	117.8
Vegetables	107.3	115.1	112.5	114.4	109.6	111.3	112.1	111.1	113.3	114.1
High-value processed	105.8	111.5	103.8	118.2	112.1	114.3	116.0	113.9	114.6	115.0
Fruit juices	112.6	121.0	117.3	121.0	116.4	118.3	120.2	119.1	121.1	122.5
Poultry	79.6	74.0	61.9	116.7	115.5	117.8	118.5	115.0	113.1	110.8
Red meats	120.5	131.6	118.9	127.7	114.7	118.5	121.4	118.0	119.0	119.8
U.S. competitors										
All agricultural trade	108.3	114.2	115.5	120.5	124.2	124.7	127.1	124.9	122.7	121.4
Bulk commodities	101.5	110.1	109.7	124.2	126.4	127.3	128.7	126.4	125.1	123.5
Corn	108.7	111.3	113.9	120.1	124.3	124.5	126.7	118.8	111.8	106.0
Cotton	105.0	116.0	115.8	125.8	125.0	126.2	129.2	124.1	121.0	118.8
Rice	108.9	123.6	119.3	119.7	121.8	122.0	123.8	129.1	125.2	123.7
Soybeans	93.6	91.7	93.2	127.0	132.9	131.4	131.7	124.7	119.9	116.5
Tobacco, raw	100.3	105.1	104.6	127.1	121.6	120.2	119.6	116.1	113.6	111.7
Wheat	109.5	114.2	116.4	118.8	120.4	121.3	123.8	125.2	127.7	131.0
High-value products	109.6	115.3	116.5	122.5	126.7	127.3	129.8	128.6	127.1	126.4
Processed intermediates	107.2	114.5	115.6	124.1	127.5	128.2	130.4	127.6	124.4	122.4
Soymeal	97.1	95.1	96.1	128.3	133.3	131.8	132.1	128.6	126.8	127.0
Soyoil	99.0	98.3	99.4	120.8	124.8	124.0	124.9	122.5	121.5	122.1
Produce and horticulture	108.3	113.3	115.0	118.2	123.9	124.4	126.5	124.5	124.7	123.2
Fruits	110.0	125.1	122.3	122.1	126.3	126.8	128.9	124.8	121.2	119.5
Vegetables	100.6	102.2	105.0	108.8	113.8	114.0	116.0	97.6	83.2	70.5
High-value processed	111.4	116.4	117.5	122.7	127.1	127.6	130.4	131.0	129.9	130.4
Fruit juices	111.4	117.1	118.1	120.7	124.7	125.0	127.1	125.9	125.7	126.5
Poultry	104.0	106.9	107.7	119.5	125.2	125.1	127.2	116.5	107.1	99.8
Red meats	109.7	114.5	116.2	119.7	122.1	122.8	125.5	134.8	136.7	140.4
U.S. suppliers										
All agricultural trade	101.2	109.6	109.3	112.4	113.6	114.3	114.8	113.5	114.8	114.1
High-value products	101.3	107.2	107.9	110.3	111.7	112.4	113.0	111.5	112.5	111.3
Processed intermediates	102.5	110.3	110.3	113.2	113.6	114.4	115.2	113.2	111.9	110.5
Grains and feeds	105.1	112.5	112.9	112.9	111.9	112.6	113.4	112.6	113.9	114.7
Vegetable oils	106.4	122.4	119.3	120.5	121.6	122.2	123.7	124.2	125.9	128.8
Produce and horticulture	93.7	97.6	99.1	99.7	102.7	103.1	101.9	100.2	104.9	101.0
Fruits	91.7	95.7	96.0	96.0	96.3	95.3	94.3	93.5	98.0	96.2
Vegetables	86.3	88.7	84.0	85.5	81.9	81.4	80.6	78.9	80.2	79.6
High-value processed	104.3	110.0	110.9	113.8	115.1	115.7	117.1	116.1	116.7	117.0
Cocoa and products	105.5	117.8	119.7	124.2	130.1	132.2	132.9	130.4	130.3	129.3
Coffee and products	93.1	97.0	100.0	109.1	113.7	114.7	113.4	111.8	114.1	114.3
Dairy products	106.5	111.7	112.0	115.1	116.9	118.4	120.3	125.9	128.4	132.5
Fruit juices	99.1	100.9	101.5	119.6	122.8	121.9	122.0	121.2	123.1	124.1
Meats	95.9	102.1	105.4	104.3	107.4	107.3	107.8	114.8	87.5	67.4

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 Statistics. Exchange rates for the EU-11 are obtained from the Board of Governors of the Federal Reserve System. Full historical series are available back to January 1970.

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

1. Beginning with the May 2000 table, a major revision to the weighting scheme and commodity definitions has been undertaken.

Table 27—U.S. Agricultural Exports & Imports

	Fiscal Year			May		Fiscal Year			May	
	1998	1999	2000 P	1999	2000	1998	1999	2000 P	1999	2000
	1,000 units					\$ million				
Exports										
Animals, live	--	--	--	--	--	538	509	--	30	37
Meats and preps., excl. poultry (mt) ¹	2,064	2,061	1,700	167	211	4,507	4,460	4,800	352	471
Dairy products	--	--	--	--	--	925	897	1,000	77	79
Poultry meats (mt)	2,663	2,377	2,700	179	210	2,347	1,743	1,900	127	142
Fats, oils, and greases (mt)	1,365	1,395	1,200	111	106	655	561	--	43	36
Hides and skins, incl. furskins	--	--	--	--	--	1,358	1,108	1,300	87	150
Cattle hides, whole (no.)	18,992	17,845	--	1,503	2,239	969	844	--	69	124
Mink pelts (no.)	2,990	4,172	--	251	315	83	98	--	6	6
Grains and feeds (mt) ²	87,289	104,576	--	7,980	8,003	13,961	14,272	13,600	1,074	1,104
Wheat (mt) ³	25,791	28,806	27,000	2,304	2,389	3,759	3,648	3,600	294	289
Wheat flour (mt)	465	958	1,100	37	24	117	177	--	7	5
Rice (mt)	3,310	3,076	3,100	156	174	1,132	1,010	900	51	46
Feed grains, incl. products (mt) ⁴	44,564	58,398	52,300	4,317	4,214	5,187	5,821	5,000	436	446
Feeds and fodders (mt)	11,704	11,800	12,100	1,078	1,074	2,421	2,252	2,400	189	205
Other grain products (mt)	1,455	1,538	--	88	128	1,345	1,363	--	98	113
Fruits, nuts, and preps. (mt)	3,633	3,439	--	256	298	3,977	3,805	4,300	290	322
Fruit juices, incl. froz. (1,000 hectoliters)	10,658	12,317	--	1,333	1,239	653	735	--	76	68
Vegetables and preps.	--	--	--	--	--	4,168	4,245	2,900	364	384
Tobacco, unmanufactured (mt)	208	205	200	22	16	1,448	1,376	1,300	166	114
Cotton, excl. linters (mt) ⁵	1,552	884	1,500	56	143	2,517	1,309	1,800	78	184
Seeds (mt)	816	579	--	46	50	827	800	800	42	37
Sugar, cane or beet (mt)	123	158	--	12	7	48	56	--	4	3
Oilseeds and products (mt)	36,074	33,569	35,400	1,674	1,829	10,984	8,606	8,500	443	476
Oilseeds (mt)	--	--	--	--	--	--	--	--	--	--
Soybeans (mt)	23,394	22,974	25,700	1,032	1,240	6,117	4,748	5,000	205	261
Protein meal (mt)	8,666	6,726	--	376	396	1,975	1,101	--	61	74
Vegetable oils (mt)	3,049	2,642	--	167	129	2,191	1,815	--	122	91
Essential oils (mt)	46	47	--	4	4	533	507	--	47	49
Other	--	--	--	--	--	4,284	4,112	--	347	365
Total	--	--	--	--	--	53,730	49,102	50,000	3,649	4,022
Imports										
Animals, live	--	--	--	--	--	1,670	1,439	1,600	101	146
Meats and preps., excl. poultry (mt)	1,230	1,398	1,600	123	139	2,718	3,088	3,600	274	338
Beef and veal (mt)	857	943	--	85	93	1,761	2,047	--	183	221
Pork (mt)	271	337	--	28	35	686	721	--	63	86
Dairy products	--	--	--	--	--	1,368	1,572	1,600	130	132
Poultry and products	--	--	--	--	--	207	201	--	16	29
Fats, oils, and greases (mt)	80	90	--	5	12	59	63	--	4	7
Hides and skins, incl. furskins (mt)	--	--	--	--	--	184	146	--	14	14
Wool, unmanufactured (mt)	45	29	--	2	3	151	75	--	5	7
Grains and feeds	--	--	--	--	--	2,919	2,943	3,000	230	240
Fruits, nuts, and preps., excl. juices (mt) ⁶	7,581	8,171	8,900	877	800	3,982	4,619	5,800	530	450
Bananas and plantains (mt)	4,175	4,418	4,700	434	399	1,214	1,212	1,200	125	112
Fruit juices (1,000 hectoliters)	26,577	31,655	35,800	2,913	2,524	669	772	--	72	69
Vegetables and preps.	--	--	--	--	--	4,249	4,527	4,600	379	406
Tobacco, unmanufactured (mt)	241	217	200	8	20	822	742	600	25	56
Cotton, unmanufactured (mt)	10	144	--	20	4	11	150	--	22	4
Seeds (mt)	257	357	--	61	20	422	457	--	40	36
Nursery stock and cut flowers	--	--	--	--	--	1,082	1,076	1,200	109	132
Sugar, cane or beet (mt)	2,170	1,692	--	148	130	758	606	--	58	48
Oilseeds and products (mt)	4,314	3,899	3,700	317	428	2,243	2,022	1,900	162	200
Oilseeds (mt)	1,028	1,000	--	84	127	371	326	--	22	35
Protein meal (mt)	1,277	1,131	--	79	103	188	147	--	11	14
Vegetable oils (mt)	2,010	1,769	--	154	198	1,684	1,549	--	129	151
Beverages, excl. fruit juices (1,000 hectoliters)	--	--	--	--	--	3,705	4,258	--	374	428
Coffee, tea, cocoa, spices (mt)	2,369	2,520	--	188	241	6,056	5,306	--	400	445
Coffee, incl. products (mt)	1,155	1,294	1,400	103	131	3,587	2,967	2,900	239	269
Cocoa beans and products (mt)	875	865	1,100	51	70	1,701	1,531	1,500	92	101
Rubber and allied gums (mt)	1,162	1,148	1,300	87	117	1,027	739	800	55	87
Other	--	--	--	--	--	2,703	2,645	--	227	242
Total	--	--	--	--	--	37,007	37,449	39,000	3,226	3,517

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.

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Table 28—U.S. Agricultural Exports by Region

Region & country	Fiscal year			1999		2000				
	1998	1999	2000 P	May	Dec	Jan	Feb	Mar	Apr	May
	\$ million									
Western Europe	8,859	7,531	6,700	532	689	698	624	577	481	438
European Union ¹	8,522	6,960	6,200	504	670	654	596	557	430	413
Belgium-Luxembourg	666	602	--	62	43	48	43	44	32	41
France	536	380	--	22	52	29	34	21	23	24
Germany	1,294	1,056	--	80	82	89	84	95	94	56
Italy	729	574	--	43	50	77	49	53	48	37
Netherlands	1,792	1,585	--	121	168	150	163	145	83	78
United Kingdom	1,300	1,123	--	88	98	67	92	79	72	87
Portugal	186	131	--	11	23	17	22	8	6	11
Spain, incl. Canary Islands	1,132	782	--	37	101	106	65	46	28	28
Other Western Europe	336	570	500	29	19	44	28	21	51	25
Switzerland	236	456	--	23	12	38	22	15	46	16
Eastern Europe	320	190	200	13	13	9	18	17	10	12
Poland	139	73	--	6	4	2	3	4	3	3
Former Yugoslavia	97	47	--	1	2	3	11	7	3	5
Romania	31	18	--	2	1	0	0	1	1	1
Newly Independent States	1,456	816	1,000	86	59	136	221	70	56	71
Russia	1,103	468	600	68	27	114	189	53	45	59
Asia²	21,992	20,447	19,100	1,451	1,788	1,772	1,858	2,203	1,762	1,832
West Asia (Mideast)	2,286	1,979	2,300	130	193	170	209	187	175	171
Turkey	658	448	700	36	77	74	62	55	80	48
Iraq	131	9	--	--	--	--	0	--	--	--
Israel, incl. Gaza and W. Bank	389	417	--	26	34	18	59	31	29	45
Saudi Arabia	535	468	500	26	29	33	44	30	32	35
South Asia	626	500	400	11	30	22	31	29	27	36
Bangladesh	114	165	--	2	4	3	5	9	6	6
India	163	190	--	5	18	17	18	14	17	11
Pakistan	275	89	--	4	1	1	1	4	3	9
China	1,514	1,012	1,300	42	104	98	110	261	97	80
Japan	9,469	8,940	9,200	700	717	802	846	906	754	879
Southeast Asia	2,288	2,213	2,400	169	241	200	205	258	209	169
Indonesia	529	498	600	40	69	41	46	69	61	28
Philippines	751	734	800	59	83	65	67	84	78	73
Other East Asia	5,808	5,803	5,800	398	504	482	456	562	500	499
Korea, Rep.	2,258	2,483	2,600	161	206	228	219	240	209	216
Hong Kong	1,568	1,264	1,200	87	126	87	92	106	96	96
Taiwan	1,975	2,046	2,000	150	168	165	144	216	195	187
Africa	2,174	2,160	2,200	159	218	162	176	178	115	126
North Africa	1,475	1,468	1,500	111	162	117	136	93	66	82
Morocco	139	162	--	10	7	9	23	10	6	11
Algeria	281	223	--	11	21	21	13	24	5	22
Egypt	939	1,001	1,000	82	125	84	95	50	48	40
Sub-Saharan	699	692	700	48	56	45	40	86	49	44
Nigeria	140	176	--	21	10	16	11	8	13	12
S. Africa	193	165	--	11	25	14	8	13	6	11
Latin America and Caribbean	11,362	10,502	10,400	753	988	800	858	916	829	836
Brazil	566	369	300	17	18	23	22	41	22	21
Caribbean Islands	1,487	1,453	--	115	146	103	120	121	112	108
Central America	1,137	1,209	--	79	113	79	85	93	92	86
Colombia	606	467	--	37	30	40	25	40	32	38
Mexico	5,956	5,675	6,000	421	599	447	501	551	481	517
Peru	314	347	--	25	18	31	10	16	19	5
Venezuela	516	458	400	28	27	25	47	31	37	32
Canada	7,022	6,957	7,500	616	606	595	593	658	614	655
Oceania	545	499	500	39	44	40	34	47	36	32
Total	53,730	49,102	50,000	3,649	4,405	4,211	4,382	4,668	3,917	4,022

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

Farm Income

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

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
	<i>\$ billion</i>									
Final crop output	81.0	89.0	82.3	100.4	95.8	115.4	112.1	102.0	93.2	95.6
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	19.8	20.1
Cotton	5.2	5.2	5.2	6.7	6.9	7.0	6.3	6.0	4.7	5.4
Oil crops	12.7	13.3	13.2	14.7	15.5	16.3	19.7	17.2	13.6	14.4
Tobacco	2.9	3.0	2.9	2.7	2.5	2.8	2.9	3.0	2.3	1.8
Fruits and tree nuts	9.9	10.2	10.3	10.3	11.1	11.9	13.1	11.7	12.9	11.3
Vegetables	11.6	11.8	13.7	14.2	15.0	14.4	15.0	15.3	15.3	16.0
All other crops	13.1	13.7	13.7	14.7	15.0	15.8	16.9	17.3	17.5	18.6
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	-0.2	1.0
Final animal output	87.3	87.1	92.0	89.7	87.7	92.1	96.5	94.3	95.0	99.6
Meat animals	50.1	47.7	51.0	46.7	44.9	44.2	49.7	43.6	45.6	51.6
Dairy products	18.0	19.7	19.3	20.0	19.9	22.8	20.9	24.3	23.2	21.4
Poultry and eggs	15.2	15.5	17.3	18.5	19.1	22.4	22.2	22.8	22.9	23.5
Miscellaneous livestock	2.5	2.6	2.9	3.1	3.3	3.6	3.7	3.8	3.6	3.6
Home consumption	0.5	0.5	0.4	0.4	0.4	0.3	0.4	0.3	0.4	0.4
Value of inventory adjustment ¹	1.0	1.0	1.1	1.1	0.2	-1.1	-0.4	-0.6	-0.7	-1.0
Services and forestry	15.4	15.3	17.1	18.1	19.9	20.8	22.5	24.6	27.1	27.0
Machine hire and customwork	1.8	1.8	1.9	2.1	1.9	2.1	2.6	2.3	2.0	2.2
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	11.3	11.0
Gross imputed rental value of farm dwellings	7.2	7.2	8.1	9.0	9.4	9.9	10.1	10.8	10.9	11.0
Final agricultural sector output²	183.7	191.4	191.4	208.2	203.5	228.4	231.2	220.8	215.3	222.2
<i>Minus</i> Intermediate consumption outlays:	94.6	93.4	100.7	104.9	109.7	113.2	120.9	118.7	121.0	125.6
Farm origin	38.6	38.6	41.3	41.3	41.8	42.7	46.9	44.9	45.7	46.3
Feed purchased	19.3	20.1	21.4	22.6	23.8	25.2	26.3	25.0	24.5	24.1
Livestock and poultry purchased	14.1	13.6	14.7	13.3	12.5	11.3	13.8	12.7	13.9	14.8
Seed purchased	5.1	4.9	5.2	5.4	5.5	6.2	6.7	7.2	7.2	7.4
Manufactured inputs	23.2	22.7	23.1	24.4	26.2	28.6	29.2	28.3	27.3	29.9
Fertilizers and lime	8.7	8.3	8.4	9.2	10.0	10.9	10.9	10.7	9.9	10.2
Pesticides	6.3	6.5	6.7	7.2	7.7	8.5	9.0	9.1	8.6	8.7
Petroleum fuel and oils	5.6	5.3	5.3	5.3	5.4	6.0	6.2	5.6	5.8	8.1
Electricity	2.6	2.6	2.7	2.7	3.0	3.2	3.0	2.9	3.0	2.9
Other intermediate expenses	32.8	32.1	36.2	39.2	41.7	41.8	44.9	45.5	48.0	49.4
Repair and maintenance of capital items	8.6	8.5	9.2	9.1	9.5	10.3	10.4	10.4	10.5	10.6
Machine hire and customwork	3.5	3.8	4.4	4.8	4.8	4.7	4.9	5.5	5.1	5.3
Marketing, storage, and transportation	4.7	4.5	5.6	6.8	7.2	6.9	7.1	6.7	7.3	7.8
Contract labor	1.6	1.7	1.8	1.8	2.0	2.1	2.6	2.4	2.6	2.7
Miscellaneous expenses	14.3	13.6	15.2	16.7	18.3	17.8	19.8	20.5	22.6	23.0
<i>Plus</i> Net government transactions:	2.1	2.7	6.9	1.1	0.2	0.2	0.2	4.6	13.1	15.1
+ Direct government payments	8.2	9.2	13.4	7.9	7.3	7.3	7.5	12.2	20.6	22.7
- Motor vehicle registration and licensing fees	0.3	0.4	0.4	0.4	0.5	0.4	0.5	0.5	0.4	0.4
- Property taxes	5.8	6.1	6.2	6.3	6.6	6.7	6.9	7.2	7.1	7.2
Gross value added	91.2	100.6	97.5	104.5	94.0	115.4	110.4	106.7	107.4	111.7
<i>Minus</i> Capital consumption	18.2	18.3	18.4	18.6	18.9	19.2	19.3	19.4	19.9	19.8
Net value added²	73.0	82.3	79.2	85.8	75.1	96.2	91.1	87.2	87.6	91.9
<i>Minus</i> Factor payments:	34.4	34.4	34.6	36.6	37.9	41.3	42.5	43.1	44.0	45.8
Employee compensation (total hired labor)	12.3	12.3	13.2	13.5	14.3	15.3	16.0	16.9	17.5	18.4
Net rent received by nonoperator landlords	9.9	11.1	10.7	11.5	11.0	13.0	12.9	12.0	13.0	13.3
Real estate and non-real estate interest	12.1	11.0	10.6	11.5	12.6	13.0	13.5	14.2	13.6	14.1
Net farm income²	38.7	47.9	44.5	49.2	37.2	54.9	48.6	44.1	43.5	46.1

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

Table 30—Farm Income Statistics

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
	<i>\$ billion</i>									
Cash income statement:										
1. Cash receipts	167.9	171.3	177.9	181.3	188.1	199.1	207.6	196.8	188.6	194.6
Crops ¹	82.1	85.7	87.4	93.1	101.0	106.2	111.1	102.2	93.2	94.4
Livestock	85.8	85.6	90.4	88.2	87.1	93.0	96.5	94.5	95.4	100.2
2. Direct Government payments	8.2	9.2	13.4	7.9	7.3	7.3	7.5	12.2	20.6	22.7
3. Farm-related income ²	8.3	8.1	9.0	9.1	10.5	11.0	12.4	13.8	16.2	16.0
4. Gross cash income (1+2+3)	184.4	188.6	200.3	198.2	205.8	217.4	227.5	222.8	225.4	233.4
5. Cash expenses ³	134.0	133.3	141.0	147.1	153.2	159.9	169.0	167.8	170.7	177.2
6. Net cash income (4-5)	50.4	55.2	59.3	51.1	52.6	57.5	58.5	54.9	54.7	56.2
Farm income statement:										
7. Gross cash income (4)	184.4	188.6	200.3	198.2	205.8	217.4	227.5	222.8	225.4	233.4
8. Noncash income ⁴	7.8	7.8	8.7	9.6	9.9	10.3	10.6	11.3	11.4	11.5
9. Value of inventory adjustment	-0.2	4.2	-4.2	8.3	-5.0	8.0	0.5	-1.0	-0.9	0.0
10. Gross farm income (7+8+9)	192.0	200.5	204.8	216.1	210.7	235.7	238.7	233.1	235.9	244.9
11. Total production expenses	153.3	152.6	160.2	166.8	173.5	180.8	190.0	189.0	192.4	198.8
12. Net farm income (10-11)	38.7	47.9	44.5	49.2	37.2	54.9	48.6	44.1	43.5	46.1

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

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

Table 31—Average Income to Farm Operator Households¹

	1992	1993	1994	1995	1996	1997	1998	1999	2000
	<i>\$ per farm</i>								
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	--	--
	<i>\$ per farm operator household</i>								
Equals adjusted farm business income	4,596	3,168	2,981	2,484	4,300	3,513	4,436	--	--
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	6,359	4,589
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	57,988	60,058
Equals average farm operator household income	42,911	40,223	42,469	44,392	50,361	52,562	59,734	64,347	64,645
	<i>\$ per U.S. household</i>								
U.S. average household income ¹⁰	38,840	41,428	43,133	44,938	47,123	49,692	51,855	--	--
	<i>Percent</i>								
Average farm operator household income as percent of U.S. average household income	110.5	97.1	98.5	98.8	106.9	105.8	115.2	--	--
Average operator household earnings from farming activities as percent of average operator household income	16.7	12.0	10.3	10.6	15.7	11.8	11.9	--	--

-- = 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
	<i>\$ billion</i>									
Farm assets	844.2	868.3	910.2	935.5	966.7	1,003.9	1,051.3	1,084.6	1,118.5	1,134.8
Real estate	624.8	640.8	677.6	704.1	740.5	769.5	808.2	841.8	866.2	887.0
Livestock and poultry ¹	68.1	71.0	72.8	67.9	57.8	60.3	67.1	63.4	73.1	67.0
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	49.1	49.7	55.4	53.0	55.0
Total farm debt	139.2	139.1	142.0	146.8	150.8	156.1	165.4	172.7	176.4	176.4
Real estate debt ³	74.9	75.4	76.0	77.7	79.3	81.7	85.4	89.6	94.2	95.5
Non-real estate debt ⁴	64.3	63.6	65.9	69.1	71.5	74.4	80.1	83.1	82.2	81.0
Total farm equity	705.0	729.3	768.3	788.7	815.9	847.8	886.2	891.4	942.1	958.4
	<i>Percent</i>									
Selected ratios										
Debt to equity	19.8	19.1	18.5	18.6	18.5	18.4	18.7	19.4	18.7	18.4
Debt to assets	16.5	16.0	15.6	15.7	15.6	15.5	15.7	15.9	15.8	15.5

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

Table 33—Cash Receipts from Farming

	Annual			1999			2000			
	1997	1998	1999P	Apr	Nov	Dec	Jan	Feb	Mar	Apr
	<i>\$ million</i>									
Commodity sales ¹	207,611	196,597	188,583	13,421	17,663	17,506	15,214	13,350	15,221	13,561
Livestock and products	96,535	94,157	95,371	7,499	8,536	7,626	7,559	7,947	8,717	7,670
Meat animals	49,682	43,336	45,600	3,407	4,097	3,472	3,983	4,368	4,906	3,919
Dairy products	20,940	24,114	23,204	1,978	1,905	2,001	1,563	1,685	1,805	1,724
Poultry and eggs	22,234	22,943	22,942	1,897	2,053	1,926	1,729	1,668	1,762	1,803
Other	3,679	3,764	3,625	217	481	226	284	226	244	223
Crops	111,076	102,440	93,212	5,922	9,127	9,880	7,656	5,403	6,504	5,892
Food grains	10,137	8,892	7,292	364	341	493	518	284	463	271
Feed crops	27,101	22,666	19,752	897	1,770	2,269	2,497	1,450	1,655	912
Cotton (lint and seed)	6,346	6,101	4,692	114	623	1,374	246	235	155	61
Tobacco	2,874	2,802	2,272	16	149	548	290	106	40	9
Oil-bearing crops	19,673	17,473	13,555	578	1,232	1,135	1,324	755	965	627
Vegetables and melons	14,961	15,145	15,276	1,195	903	842	972	773	1,113	1,248
Fruits and tree nuts	13,074	12,218	12,892	768	1,741	1,382	716	742	581	786
Other	16,909	17,143	17,482	1,991	2,367	1,838	1,093	1,058	1,532	1,979
Government payments	7,495	12,209	20,594	545	3,303	2,143	2,607	1,150	946	1,056
Total	215,107	208,805	209,177	13,966	20,967	19,649	17,822	14,500	16,167	14,617

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

Table 34—Cash Receipts from Farm Marketings, by State

Region and State	Livestock and products				Crops ¹				Total ¹			
	1998	1999	Mar 1999	Apr 2000	1998	1999	Mar 1999	Apr 2000	1998	1999	Mar 1999	Apr 2000
	<i>\$ million</i>											
North Atlantic												
Maine	282	286	23	22	224	231	24	27	506	517	48	49
New Hampshire	69	63	5	5	82	91	8	10	151	154	14	16
Vermont	472	473	37	36	84	70	6	9	557	542	43	45
Massachusetts	112	101	9	9	395	312	12	13	507	413	20	22
Rhode Island	9	8	1	1	56	39	3	5	65	48	4	5
Connecticut	228	180	14	14	281	297	21	27	509	477	35	40
New York	2,092	2,043	154	152	1,054	1,030	79	73	3,146	3,073	233	225
New Jersey	178	125	12	11	650	561	34	48	828	686	46	60
Pennsylvania	2,914	2,877	232	215	1,261	1,191	110	101	4,175	4,068	341	316
North Central												
Ohio	1,848	1,786	161	154	3,124	2,643	229	171	4,973	4,430	390	325
Indiana	1,639	1,581	142	146	3,245	2,800	189	132	4,885	4,381	330	278
Illinois	1,575	1,524	142	153	6,167	5,232	528	284	7,742	6,757	670	437
Michigan	1,323	1,331	108	106	2,158	2,160	151	188	3,480	3,491	259	294
Wisconsin	4,492	4,149	302	303	1,701	1,454	110	71	6,193	5,603	412	375
Minnesota	3,755	3,545	329	294	3,925	3,523	232	173	7,680	7,068	561	467
Iowa	4,650	4,738	612	433	6,289	4,918	480	305	10,939	9,655	1,092	739
Missouri	2,420	2,477	208	196	2,262	1,780	145	82	4,682	4,256	354	279
North Dakota	549	647	73	58	2,455	2,138	127	98	3,004	2,786	200	155
South Dakota	1,557	1,831	198	154	1,951	1,710	97	75	3,508	3,541	295	229
Nebraska	5,124	5,425	620	484	3,725	3,130	268	148	8,848	8,555	888	632
Kansas	4,537	5,009	588	398	3,247	2,609	193	88	7,784	7,618	781	486
Southern												
Delaware	609	566	48	47	164	153	5	8	774	718	53	55
Maryland	949	937	81	78	571	544	45	53	1,520	1,482	126	132
Virginia	1,561	1,520	152	130	768	689	31	33	2,328	2,208	182	163
West Virginia	336	334	28	29	69	49	3	2	405	382	31	31
North Carolina	3,917	3,850	354	346	3,247	2,783	148	179	7,164	6,633	502	525
South Carolina	763	772	60	63	748	623	34	39	1,511	1,395	95	102
Georgia	3,408	3,324	282	269	2,047	1,882	90	95	5,454	5,206	372	363
Florida	1,407	1,325	97	87	5,355	5,735	554	729	6,762	7,059	651	816
Kentucky	2,134	2,158	117	96	1,787	1,368	53	23	3,920	3,526	170	119
Tennessee	1,038	1,011	99	82	1,177	1,019	51	39	2,216	2,030	150	121
Alabama	2,587	2,777	242	210	696	665	39	42	3,283	3,442	280	252
Mississippi	2,169	2,143	183	172	1,285	1,032	48	35	3,454	3,174	231	206
Arkansas	3,250	3,397	301	285	2,172	1,865	58	39	5,422	5,261	359	324
Louisiana	645	620	72	52	1,245	1,228	42	30	1,891	1,848	114	83
Oklahoma	2,838	3,136	318	245	1,062	839	76	41	3,900	3,975	394	287
Texas	8,093	8,417	648	692	5,058	4,542	266	257	13,151	12,959	914	949
Western												
Montana	865	929	95	64	934	792	62	53	1,799	1,720	157	118
Idaho	1,585	1,604	141	122	1,735	1,901	115	139	3,320	3,504	256	261
Wyoming	681	681	65	51	170	172	5	3	850	854	70	55
Colorado	2,857	3,016	298	217	1,453	1,361	108	95	4,310	4,377	406	312
New Mexico	1,437	1,442	156	124	513	498	23	24	1,950	1,939	179	147
Arizona	943	987	91	76	1,425	1,197	147	68	2,368	2,185	238	145
Utah	736	713	58	54	245	241	18	24	981	954	76	78
Nevada	194	216	19	19	143	115	10	9	337	332	29	28
Washington	1,730	1,653	133	130	3,424	3,266	215	212	5,155	4,918	348	342
Oregon	762	784	76	63	2,330	2,259	118	133	3,092	3,043	194	196
California	6,718	6,740	522	512	17,844	18,020	1,055	1,319	24,561	24,759	1,577	1,831
Alaska	27	35	2	2	20	19	1	1	47	54	4	3
Hawaii	92	86	7	7	418	440	37	35	510	527	45	42
U.S.	94,157	95,371	8,717	7,670	102,440	93,212	6,504	5,892	196,597	188,583	15,221	13,561

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

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

Food Expenditures

Table 36—Food Expenditures

	Annual			2000			Year-to-date cumulative		
	1997	1998	1999	Apr	May	Jun	Apr	May	Jun
	<i>\$ billion</i>								
Sales ¹									
At home ²	383.8	392.3	407.3	35.4	35.3	35.0	136.2	171.5	206.5
Away from home ³	309.5	322.1	343.7	31.2	32.0	33.0	119.3	151.4	184.4
	<i>1998 \$ billion</i>								
Sales ¹									
At home ²	392.4	392.3	397.8	34.2	34.0	33.7	131.9	165.9	199.6
Away from home ³	317.4	322.1	335.3	29.9	30.7	31.5	114.6	145.3	176.8
	<i>Percent change from year earlier (\$ billion)</i>								
Sales ¹									
At home ²	3.8	2.2	3.8	6.4	-1.2	3.9	7.2	5.3	5.1
Away from home ³	5.9	4.1	6.7	8.1	4.2	11.8	15.0	12.5	12.4
	<i>Percent change from year earlier (1998 \$ billion)</i>								
Sales ¹									
At home ²	-0.2	0.0	1.4	9.1	1.0	1.7	10.1	8.1	7.0
Away from home ³	3.0	1.5	4.1	11.6	7.6	9.2	18.7	16.1	14.8

-- = 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	May	Dec	Jan R	Feb R	Mar R	Apr R	May P
Rail freight rate index ¹ (Dec. 1984=100)										
All products	112.1	113.4	113.0	113.2	113.3	113.9	113.8	114.0	114.2	114.6
Farm products	120.3	123.9	121.8	121.1	123.1	122.8	122.9	122.3	121.5	121.7
Grain food products	107.6	107.4	99.6	99.3	100.4	99.7	99.3	100.4	99.5	100.5
Grain shipments										
Rail carloadings (1,000 cars) ²	23.2	22.8	24.4	22.6	23.8	23.7	25.5	25.0	22.4	20.1
Barge shipments (mil. ton) ³	2.6	3.0	3.5	4.1	3.6	2.3	1.9	3.2	3.6	3.5
Fresh fruit and vegetable shipments ⁴										
Piggy back (mil. cwt)	1.1	0.9	0.7	0.9	0.7	0.7	0.7	0.9	0.9	1.1
Rail (mil. cwt)	1.7	1.2	1.1	1.0	1.8	1.3	1.1	1.1	1.0	1.4
Truck (mil. cwt)	42.6	42.2	44.3	55.1	41.9	39.2	37.9	44.4	51.7	59.3

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, & Productivity¹

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
	<i>1992 = 100</i>									
Farm output	88	83	89	94	94	100	94	107	101	106
All livestock products	92	93	94	95	98	100	100	108	110	109
Meat animals	95	97	97	96	99	100	100	102	103	100
Dairy products	94	96	95	98	98	100	99	114	115	115
Poultry and eggs	81	83	86	92	96	100	104	110	114	119
All crops	86	75	86	92	92	100	90	106	96	103
Feed crops	84	62	85	88	86	100	76	102	83	98
Food crops	84	76	83	107	82	100	96	97	90	93
Oil crops	88	72	88	87	94	100	85	115	99	107
Sugar	95	91	91	92	96	100	95	106	98	94
Cotton and cottonseed	92	96	75	96	109	100	100	122	110	117
Vegetables and melons	90	81	85	93	97	100	97	113	108	112
Fruit and nuts	95	102	98	97	96	100	107	111	102	102
Farm input 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*

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Food Supply & Use

Table 39—Per Capita Consumption of Major Food Commodities¹

Commodity	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
	<i>Lbs.</i>									
Red meats ^{2,3,4}	115.6	112.3	111.9	114.0	112.1	114.7	115.1	112.8	111.0	115.6
Beef	65.4	63.9	63.1	62.8	61.5	63.6	64.4	65.0	63.8	64.9
Veal	1.0	0.9	0.8	0.8	0.8	0.8	0.8	1.0	0.9	0.7
Lamb & mutton	1.0	1.0	1.0	1.0	1.0	0.9	0.9	0.8	0.8	0.9
Pork	48.4	46.4	46.9	49.5	48.9	49.5	49.0	45.9	45.5	49.2
Poultry ^{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	50.3	50.8
Turkey	13.1	13.8	14.1	14.1	14.0	14.1	14.1	14.6	13.9	14.2
Fish and shellfish 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	30.2	30.4	30.7	31.8
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	181.6	183.0	185.6	189.7	192.4	190.3	196.3	197.6	195.0
Wheat flour	129.7	136.0	137.0	138.9	143.3	144.5	141.8	148.7	149.5	145.9
Rice (milled basis)	14.8	15.8	16.2	16.7	16.7	18.1	18.9	17.8	18.4	18.9
Caloric sweeteners ¹⁴	133.1	136.9	137.9	141.2	144.4	147.3	149.8	150.7	154.0	155.1
Coffee (green bean equiv.)	10.1	10.3	10.3	10.0	9.1	8.2	8.0	8.9	9.3	9.5
Cocoa (chocolate liquor equiv.)	4.0	4.3	4.6	4.6	4.3	3.9	3.6	4.2	4.1	4.4

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

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