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

Associate Economics Editor
Judith E. Sommer
(202) 694-5322

Managing Editor
Mary Reardon
(202) 694-5136

Assistant Managing Editor
Lindsay Mann
(202) 694-5127

Art Director
Cynthia Ray

Statistics Coordinator
David Johnson
(202) 694-5324

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Cover photo: Watsonville Coast Produce/Ed Young Photography

Supplier-retailer business arrangements . . . Conservation tillage . . . Agriculture in Europe . . . Reform prospects in Russia

Changing Dynamics in Produce Marketing

A large share of today's fresh produce is sold directly by shippers to retailers, bypassing intermediaries and terminal wholesale markets. Price may be just one component of a more complex shipper/retailer sales arrangement that could include off-invoice fees to retailers such as promotional fees or rebates, as well as services such as automatic inventory replenishment. In addition, while the fresh produce industry has traditionally marketed primarily through daily sales arrangements, the volume requirements of very large produce buyers and the demand for reliable, year-round availability and quality of produce is making longer term arrangements—i.e., contracts—more desirable for both shippers and retailers.

Marketing Fees Reflect Supplier-Supermarket Relationship

In supplier-supermarket arrangements for marketing a variety of products, the use of marketing fees to retailers—e.g., rebates, shelf-placement fees, and advertising allowances—is becoming more common. Specialized fee agreements between suppliers and food retailers may be fixed payments or may vary with the quantity exchanged in the transaction or with volume of sales of a particular product. Most controversial is the “slotting” fee, a lump sum paid by suppliers to retailers for introducing new products to supermarket shelves. From the anticompetitive perspective, marketing fees are the result of changing balances in supplier vs. retailer market power, but the procompetitive view argues that fees help to enhance market efficiency.

Hog Producers' Returns To Moderate in 2001

Pork production in 2001 is forecast up 2 percent from 2000, based on market hog inventory, pig crops, and farrowing intentions reported in December. As a result, hog prices in 2001 are expected to average in the low \$40's per cwt, compared with nearly \$45 in 2000 and the mid-\$30's in 1998 and 1999. With low feed



prices expected to continue, producer returns should remain above breakeven for most of the year.

Cutbacks in Potato Acreage Likely in 2001

Record-high U.S. potato stocks and a corresponding drop in grower prices are prompting growers to plant fewer acres this year. To what extent growers will cut back remains in question as they evaluate market potential for alternative crops such as dry beans, wheat, sugar beets, and soybeans. A record harvest last fall (471 million cwt of potatoes) accounts for the current abundance of spuds and lower grower prices, which for October-December 2000 averaged 15 to 20 percent below year-earlier prices.

Crop Production Capacity in Europe

From Spain to Ukraine, agricultural production is pursued under a vast array of agronomic and political conditions. In Western Europe, policies in recent decades have maintained high farm prices and provided income payments to farmers, often leading to surplus production. The region has been a large grain exporter for over two decades. In the countries of the former Soviet Union (FSU) and in Eastern Europe

where countries had been under Soviet influence, withdrawal of consumer and producer subsidies following political independence in the early 1990's resulted in lower crop yields and production. In the decade ahead, Europe as a whole will continue to be a net exporter of grain, although the magnitude of exports will depend partly on the ability of the FSU, particularly Russia and Ukraine, to develop institutions and policies to accommodate the new market conditions, encourage investment in the agricultural sector, and increase production capacity.

Institutional Reform in Russia: What Are the Prospects?

Russia is a key customer for U.S. agricultural exports, especially meats. But the institutions inherited from the Soviet Union make it a relatively high-cost and risky country in which to do business. Western exporters operating in Russia face substantial costs in transporting meat between ports and provincial regions, in obtaining information about agricultural markets, and in enforcing contracts. Unreformed institutions not only function poorly in a market environment but have withstood most attempts to alter them. A recent Economic Research Service study shows that most of the Russian livestock market, for example, is isolated from world markets—in great part a result of the high costs of doing business within the country.

Conservation Tillage Firmly Planted In U.S. Agriculture

Farmers across the nation used conservation tillage (no-till, ridge-till, and mulch-till) on more than 109 million acres of farmland in 2000, amounting to over 36 percent of U.S. planted cropland area and up from 26 percent in 1990. Use of no-till expanded threefold during the decade to reach more than 52 million acres, due partly to implementation of conservation compliance plans required to remain eligible for farm program benefits. Conservation tillage together with other crop residue management practices helps reduce soil erosion, slow nutrient and pesticide runoff, and cut farmers' fuel costs.

Briefs

Specialty Crops**Cutbacks in Potato Acreage Likely in 2001**

Record-high U.S. potato stocks and a corresponding drop in grower prices are prompting growers to plant fewer acres this year. To what extent growers will cut back remains in question, as they evaluate market potential for alternative crops such as dry beans, wheat, sugar beets, and soybeans. While some potato industry groups and representatives are urging growers to cut acreage by as much as 10-15 percent, growers will shift significant acreage away from potatoes only if alternative crops show a clear economic advantage. Based on expected relative returns as of early February, growers may decrease potato acreage by as little as 2 to 5 percent.

A record harvest last fall (471 million cwt of potatoes) accounts for the current abundance of spuds. A combination of increased acres harvested (up 3 percent from fall 1999) and record yields (up 7 percent) pushed U.S. potato production for the year to nearly 516 million cwt (up 8 percent from 1999 and 3 percent above the 1996 record). Adding pressure to oversupply is a record Canadian potato crop of 101 million cwt.

From October through December, grower prices averaged about 15 to 20 percent below those of the same period a year ago. While prices contracted with french fry manufacturers prior to the growing season limited the decline for processing potatoes to less than 10 percent, fresh potato prices fell an average of 31 percent. Average retail prices for fresh potatoes were down 9 percent in October-December from a year earlier, responding to grower prices in the typical pattern. (Retail prices typically do not change as much as grower prices from year to year because some key components of retail prices, such as marketing and transport cost, are independent of grower costs.)

Retail prices for processed potato products such as french fries have not reflected the significant decrease in grower

prices. Although the cost of raw potatoes to processors fell, average retail prices for frozen french fries for the October-December period actually increased by 2 percent over the same period in 1999. A significant increase in the cost of energy to run processing facilities in the winter of 2000/01 accounts for the rise. In fact, spiraling energy costs led at least two potato dehydrating facilities to suspend operations temporarily.

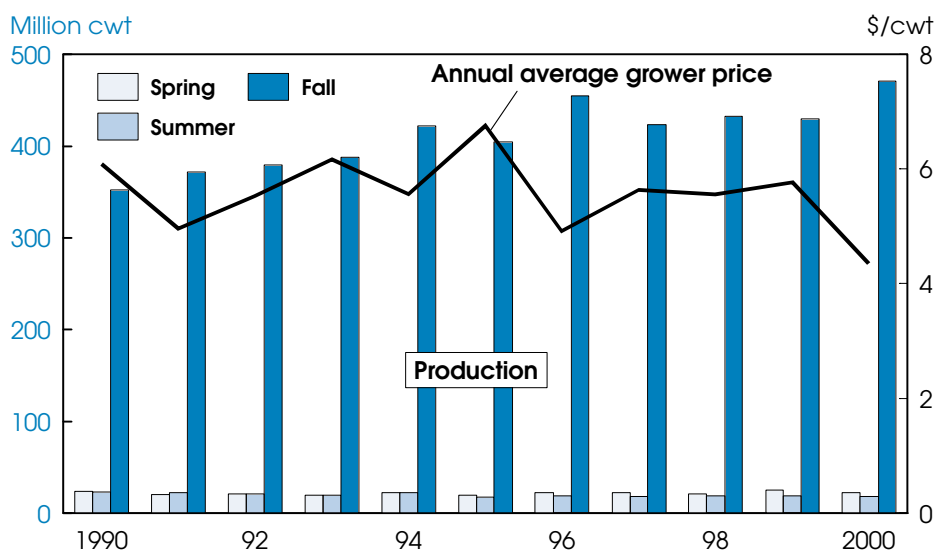
Despite rising energy costs, most frozen potato processors have used the abundant supply of low-cost raw potatoes to boost inventories of frozen potato products. Their stocks on February 1 were 1.1 million lbs, up 2 percent from last year. Potatoes used for processing this season through February 1 hit a record-high 113 million cwt, up 4 percent from last year and 1 percent above the 1996 record.

Despite heavy use by processors, stocks of fresh potatoes from last fall's crop

remained record-high on February 1, an abundance that has growers worried. If energy costs remain high, processing use may slow, and last year's supply could carry over into this fall's harvest. At that point, another large fall crop would probably push grower prices even lower next year.

Hoping to nip that possibility in the bud, the Potato Growers of Idaho created the Potato Management Company (PMC), a marketing cooperative that intends to remove some of the fall 2000 potatoes from the supply chain to raise grower prices. The company is buying potatoes from member growers for a nominal fee and disposing of them (primarily by dumping on fields and donating to charity). Participation in the plan is voluntary and is not limited to Idaho growers. The hope is that market prices for the remaining potatoes rise enough to more than offset the revenue lost from the dumped potatoes. PMC's success in pushing up prices for growers depends entirely on how many potatoes it is able to remove from the market. Participating growers will pay a membership fee to PMC to administer the program.

Outside the U.S., rising demand for U.S. potatoes and potato products is expected

U.S. Potato Prices Down in 2000 as Crop Reaches Record

2000 forecast. Excludes small production in winter (January through March). Production seasons: spring (April-June), summer (July through mid-September), fall (September through mid-November).

Economic Research Service, USDA

Imports of Canadian Fries Continue to Rise

Demand for frozen french fries has increased steadily over the past three decades. U.S. per capita consumption of frozen potato products (primarily french fries) has increased by 30 percent since 1990 (by over 70 percent since 1980 and 113 percent since 1970).

While the U.S. potato processing industry has expanded tremendously during this time, the Canadian industry has also experienced rapid growth, particularly in the past decade. Canadian fries are destined mainly for U.S. fast-food restaurants, with fry imports from Canada increasing an average of 25 percent per year since 1989. Canadian-produced fries currently account for about 13 percent of all fries consumed in the U.S., up from about 2 percent in 1989. In 2000, total fry imports from Canada are forecast at 1.1 billion pounds, 16 percent higher than 1999.

The Canadian/U.S. exchange rate has been a significant factor in the rapid increase in Canadian production capacity and exports to the U.S. over the past decade. The value of the Canadian dollar has fallen 20 percent relative to the U.S. dollar since 1989, enhancing the price competitiveness of Canadian products. And although the value of the Canadian dollar is expected to increase somewhat over the next several years, Canadian processing capacity is still expanding and will likely result in increasing exports of fries to the U.S.

to continue. In the first 2 months of the 2000/01 marketing year (October and November), fresh potato exports were up

9 percent from a year earlier, and exports of frozen french fries were up 14 percent. Reduced potato output in Europe last fall

should mean the U.S. can maintain a competitive edge in foreign markets for frozen french fries this year, particularly in Asia and the Pacific Rim. A drop in U.S. interest rates could weaken the dollar relative to many foreign currencies, which would boost these exports even further.

Despite strong foreign demand, the production and price outlook for potatoes in 2001 remains uncertain. A 3-percent cut in potato acreage, combined with average acreage abandonment and trend yields, would bring total production for the year to about 476 million cwt, near the 5-year average and down 8 percent from 2000. But another exceptional growing season like last year's could easily push production well over 500 million cwt again.

USDA's first official estimate of planted acreage for spring potatoes will be released in April, and the summer and fall acreage estimates will be released in July.



Charles Plummer (202) 694-5256
cplummer@ers.usda.gov

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on the **Economic Research Service**
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Briefs

Livestock, Dairy, & Poultry***Hog Producers' Returns to Moderate In 2001***

Higher farrowing intentions signal increased pork production in 2001, resulting in lower hog prices that will reduce producers' returns. But with low feed prices expected to continue, returns should remain above breakeven (returns equal cash costs) for most of the year.

In 2000, hog prices averaged in the mid-\$40's per cwt, compared with the mid-\$30's in 1998 and 1999. Higher hog prices, along with relatively low feed prices, drastically improved producers' returns, which were above breakeven in early 2000 for the first time since late 1997. Responding to the improved returns, in the fourth quarter producers reversed the decline in the number of sows farrowing that had persisted for seven quarters. The number of sows farrowing during September-November rose 1 percent compared with the same period a year earlier, and producers in December indicated intentions to increase the number by 2 percent during December-May.

Farrowing intentions in December-February are up 4 percent from actual farrowings a year earlier and slightly higher than reported in September. March-May farrowing intentions are up just 1 percent from actual farrowings a year earlier—lower than expected by many analysts. The cautious increase could be attributed to concerns about a possible squeeze on slaughter capacity in late 2001 when most of the March-May pig crop comes to slaughter, or may reflect that the capacity of existing farrowing facilities has been reached. The lead-time to build new facilities today has been lengthened compared with several years ago due to the need to raise large amounts of capital for the larger farrowing facilities and environmental regulations (which increase the time needed to obtain operation permits).

Based on the market hog inventory, pig crops, and farrowing intentions reported in December, commercial pork production in 2001 is forecast at 19.25 billion

pounds, up 2 percent from 2000. If this level of production is realized, it would be just 28 million pounds short of the record set in 1999.

Pork production in first-quarter 2001 will likely be down less than 1 percent from a year ago. The June-August 2000 pig crop implies a first-quarter 2001 slaughter of about 24.7 million head, down from 25 million a year earlier. Given the heavy dressed weights in January and the upward trend in weights, the average dressed weight is expected to rise about 2 pounds.

Most of the September-November pig crop will be slaughtered in second-quarter 2001. Dressed weights are expected to decline from the first quarter but still be about a pound above a year ago. The larger pig crop and dressed weights are expected to boost pork production in the second quarter about 2 percent above a year ago.

With pigs per litter expected to be up slightly, the December-February pig crop, which will be slaughtered mostly in the third quarter, is expected to be up 4-5 percent. The average dressed weight for the quarter jumped 4 pounds in 2000 and is expected to climb another pound this year. Third-quarter pork production is expected to total about 4.8 billion pounds, up 5 percent from last year.

December farrowing intentions for March-May imply a pig crop of about 26 million head. If these intentions are realized, fourth-quarter slaughter would also total 26 million head, and production would total nearly 5.1 billion pounds, up just 1 percent from a year earlier.

Although the economy is slowing, per capita consumption of pork is expected to change little year-over-year. In the first half of the year, the slowing economy and sharply higher energy costs this heating season, which will tighten household

budgets, may temper the strong demand experienced last year. In addition, the outlook is for increased year-over-year pork supplies beginning in the second quarter. As a result, prices are expected to average about the same in the first quarter as a year earlier (low \$40's per cwt) and in the mid-\$40's in the second and third quarters. In 2000, hog prices averaged \$50 in the second quarter and \$46 in the third quarter.

In fourth-quarter 2001, seasonal influences, along with rising pork and poultry production, are expected to pressure hog prices into the mid-\$30's per cwt. Beef production, however, is expected to be down sharply, which will reduce the overall level of competition at the meat counter. Weekly federally inspected hog slaughter is expected to exceed 2 million head per week except for holiday weeks. When slaughter rates exceed 2 million head per week for an extended period, slaughter capacity is strained and hog prices are bid down.

Overall, hog prices in 2001 are expected to average in the low \$40's per cwt, compared with nearly \$45 in 2000. However, given the expected continuing low feed prices, producers' returns should support a year-over-year increase in the number of sows farrowing this year. This suggests a further rise in pork production in 2002.

Retail pork prices (as measured by the Bureau of Labor Statistics price index) are expected to average about the same in 2001 as in 2000. In 2000, prices rose a sharp 7 percent. The farm-to-retail price spread is expected to widen as farm value declines. In 2000, the farm-to-retail spread narrowed 2 cents per pound after 2 years of stable spreads.

U.S. pork exports are expected to rise 2 percent in 2001, after a 1-percent rise in 2000. Pork exports continue to face stiff competition in the slow-growing world meat markets. Pork imports rose 17 percent in 1999 and in 2000, due largely to increased imports from Canada. In 2001, pork imports are expected to slow dramatically as U.S. production rises and pork prices decline. **AO**

Leland Southard (202) 694-5187
southard@ers.usda.gov

Resources & Environment**Conservation Tillage Firmly Planted in U.S. Agriculture**

Farmers across the nation used conservation tillage (no-till, ridge-till, and mulch-till) on more than 109 million acres of farmland in 2000, over 36 percent of U.S. planted cropland area and up from 26 percent in 1990. Expansion of no-till accounts for most of the growth in conservation tillage in the last decade. In 2000, no-till was used on over 52 million acres of 297 million cropland acres planted — 17.5 percent—a threefold increase in no-till acreage since 1990.

Some of the rise in no-till use since 1990 occurred as farmers implemented conservation compliance plans required to remain eligible for farm program benefits under the 1985 Food Security Act and subsequent farm legislation. As use of conservation tillage increased, acreage in no-till rose while use of ridge-till and mulch-till remained fairly stable through 1998.

With implementation of new and improved data collection procedures in 2000, acreage identified as mulch-till dropped substantially from 1998 (data were not collected in 1999). Whereas some of the expansion in no-till usage since 1998 likely came from farmers switching from mulch-till, the decline in reduced-tillage acreage is most likely a result of the new procedures that determined residue levels were below the 15-percent threshold, moving that acreage to the conventional/intensive-till category.

Conservation tillage is one component of conservation through crop residue management (CRM). CRM includes preserving residue from the previous crop and reducing the number of times equipment passes over a field. A cover of crop residue helps cut soil losses from wind and water erosion. Crop residue management practices, when applied appropriately, can improve soil quality, decrease emissions that contribute to global warming, enhance water and air quality, and provide higher economic returns to farmers.

CRM helps *improve soil quality* by reducing soil erosion, building soil organic matter, improving soil tilth (to aid root penetration), increasing soil moisture (through reduced water runoff, enhanced water infiltration, and suppressed evaporation), and minimizing soil compaction. These benefits can protect soil productivity to maintain or increase future crop yields.

Elimination or reduction of tillage activity through CRM slows the breakdown of soil organic matter into carbon dioxide, *reducing emissions* of one of the gases associated with global warming. Recent research indicates that continuous no-till has the potential to increase organic matter in the top 2 inches of soil by about 0.1 percent each year, on average, and to sequester up to 10 tons of atmospheric carbon per acre over 25-30 years. In addition, CRM requires fewer trips across the field and generally less horsepower for field operations, which in turn reduces fossil fuel emissions.

A major *water quality benefit* of CRM is to help keep nutrients and pesticides on the field where they can be used by crops, and reduce their movement into surface water (nearby lakes and streams) or groundwater. Crop residues left on the

soil surface *improve air quality* by reducing wind erosion and the generation of dust that contributes to air pollution.

Economic benefits to farmers from CRM derive primarily from higher returns due to an overall reduction in input costs of \$20-\$40 per acre. Yield response to CRM is usually positive or neutral. Crop yields vary with site-specific soil characteristics, local climate, cropping patterns, and level of management skills. In general, decreasing the intensity of tillage and/or reducing the number of field operations results in lower machinery, fuel, and labor costs, as well as time requirements for the farm operator.

Cost savings of conservation or reduced tillage may be offset somewhat by increases in chemical costs for controlling weeds and insects and in starter fertilizer costs to attain optimal yields. But reducing labor and time requirements through use of conservation or reduced tillage may also cut the “opportunity costs” of time spent on farming—e.g., freeing time to add income by farming more acres, expanding other farm operations, or working at an off-farm job.

Expanded use of no-till, which can leave as much as 80 percent of the soil surface covered with crop residues, has been significant on all major crops over the last decade, but no-till continues to be more widely used for row crops such as corn and soybeans than for small grains or sorghum. Fields planted to row crops tend

Crop Residue Management for Systematic Conservation

Crop residue management (CRM) systems use fewer and/or less intensive tillage operations, including the elimination of plowing (inversion of the surface layer of soil). CRM systems are often combined with cover crops and other conservation practices to provide sufficient residue cover to protect soil from wind and water erosion. Tillage systems associated with CRM practices are:

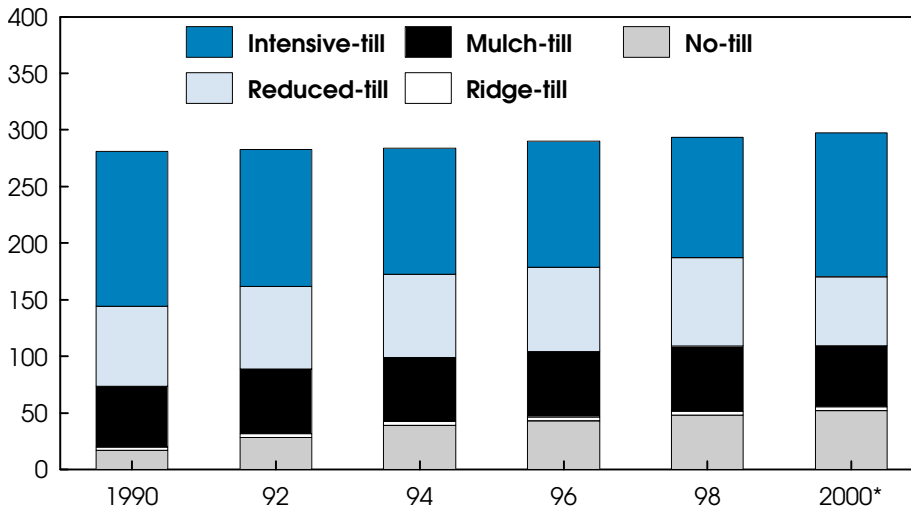
- **reduced tillage** (15-30 percent residue), and
- **conservation tillage** (more than 30 percent residue), which includes *mulch-till* (soil is disturbed prior to planting), *ridge-till* (residue left on the surface between tilled ridges), and *no-till* (no tillage performed).

CRM is generally a cost-effective method of erosion control that requires fewer resources than intensive structural measures such as terraces, and can be implemented in a timely manner to meet conservation requirements and environmental goals.

Briefs

Use of No-Till Planting Showed Gains Throughout the 1990's

Million acres



* Change in data collection procedures in 2000 accounts for increased share of intensive-till.

Economic Research Service, USDA

to be more susceptible to erosion because these crops provide less vegetative cover, especially early in the growing season.

Use of no-till is especially important for double-cropping because it facilitates planting the second crop quickly and limits potential moisture losses in the seedbed, allowing greater flexibility in cropping sequence or rotation. No-till was used on more than 60 percent of acreage double-cropped to soybeans in 2000.

Most of the increase in no-till acreage since 1998 occurred in Illinois, Indiana, Iowa, and Ohio, where no-till soybean acreage was up by a total of 1.8 million acres. Ohio and Indiana used no-till on 60 percent of planted soybean acreage. Illinois, Indiana, and Iowa increased no-till corn acres by 1.4 million in the past 2 years.

In 2000, the Midwest region planted almost 27 million cropland acres using no-till—25 percent of total cropland acres. Kansas increased no-till acres by

almost 830,000 acres between 1998 and 2000, but still trailed Nebraska in overall use of no-till among Northern Plains states. Tennessee and Kentucky both planted 55 percent of their corn acres with no-till in 2000, and Tennessee used no-till in planting 45 percent of its cotton acres. Improvements in weed control options, including genetically engineered (biotech) cotton, contributed to the no-till increase in the Southeast region.

Given the conservation and potential economic advantages of conservation tillage systems and efforts to promote conservation, why aren't conservation systems used more widely on U.S. cropland? First, adoption is the final step in a complex process, so the one-fifth of cropland acres already in reduced tillage may be in a transitional stage to conservation tillage. Second, for some soil, climatic, or cropping situations, use of conservation tillage systems has not yet been demonstrated to consistently produce the healthy plant population required for favorable economic results. Third, the additional management skill requirements and potential eco-

USDA's Crop Residue Management Survey

The Crop Residue Management Survey, conducted by USDA's Natural Resources Conservation Service (NRCS), collects information on crops planted, residue level for various tillage systems, and other field data from each agricultural county in the U.S. To derive 2000 tillage/residue estimates, NRCS and other conservation partners adopted new data collection procedures to provide more accurate information and to include more crops in the assessment of tillage system usage by crop. Findings of the 2000 Crop Residue Management Survey are reported by the Conservation Technology Information Center (CTIC) in West Lafayette, Indiana (see www.ctic.purdue.edu).

nomic risk involved in changing systems are further deterrents to adoption of conservation tillage practices. Additional limiting factors include attitudes and perceptions against new practices and, in some cases, institutional constraints such as lenders or landlords that are reluctant to encourage adoption of new technology because it has the potential to increase variability of yields and net returns.

Agricultural researchers and farm equipment manufacturers have improved conservation tillage equipment designs over the last decade to produce a range of CRM equipment suitable for use under a variety of field conditions. The outlook for CRM adoption for the 2001 growing season will likely be positively influenced by a combination of low commodity prices and higher input costs, especially for diesel fuel, that encourage farmers to seek potential cost-savings from CRM without sacrificing yield. **AO**

Carmen Sandretto (202) 694-5622
carmens@ers.usda.gov

World Agriculture & Trade



Christian Foster

Institutional Reform in Russia: What Are the Prospects?

Russia is a key customer for U.S. agricultural exports. But due to the inadequacies of institutions inherited from the Soviet Union, it is a relatively high-cost and risky country in which to do business. Nearly a decade of attempts to produce genuine institutional change has rendered small results. The financial crisis of 1998 amply demonstrated Russia's inability to meaningfully reform budget planning, tax collection, and myriad other areas. Perhaps most significant for Western exporters, Russia's barriers to trade have impeded the growth of trade.

Trade barriers can be deliberate policy measures, such as tariffs and quotas, or they can be unusually high transaction costs that stem from institutional shortcomings. Most Western economies have been able to eliminate institutional inadequacies over time, so transaction costs are relatively unimportant.

In contrast, Russia and the other countries of the former Soviet Union inherited institutions from the Soviet era that function poorly in a market environment and have withstood most attempts at change. Unreformed institutions have engendered considerable trade transaction costs, which in turn have cut off large portions

of the country from the benefits of domestic and international trade.

Major Costs of Doing Business in Russia

Impediments to trade in Russia are of particular concern for U.S. meat exporters. Since the breakup of the Soviet Union, Russia has become an increasingly important market for U.S. meat and poultry exports. As trade grew, from 1995 to 1998, exports to Russia averaged 43 percent of the value of all U.S. poultry exports and 12 percent of the value of U.S. frozen pork exports. The U.S. supplied Russia with more than half of the poultry consumed there. In 1998, the financial crisis in Russia severely disrupted this robust trade relationship. Meat exports to Russia collapsed after a combination of low oil prices and meager tax revenues led the country to default on its own debt issues.

In the ensuing years, the U.S. has continued to be a major supplier of Russia's livestock needs, and U.S. poultry exports have recovered to more than half of their pre-crisis levels. But the high costs and risks of conducting business in Russia continue to present challenges to U.S. exporters. U.S. pork exports to Russia

have remained stagnant, but this is due more to subsidized competition from the European Union than to Russia's institutional barriers to trade.

A recent Economic Research Service (ERS) study shows that most of the Russian livestock market is isolated from world markets—in great part as a result of the large costs of doing business within the country (see *box*). In particular, transporting meat and other goods between ports and provincial regions, obtaining information about agricultural market opportunities, and enforcing existing contracts involve substantial costs for Western exporters operating in Russia.

Under communism, Russia's transportation infrastructure favored delivery of imported goods to urban centers; it provided only rudimentary links between most rural areas and cities. As Russia has had little money to update the system, it is still less expensive to import agricultural goods from the West than from the country's provincial regions. As a result, Western importers enjoy an advantage in Russia's urban markets, particularly in Moscow and St. Petersburg. They cannot, however, expand their export base into other parts of Russia, where trade opportunities are largely untapped.

While the lack of modern transportation infrastructure provides some advantages to Western livestock producers who export to major Russian cities, the lack of freely available market information puts them at a disadvantage. Again, the problem has its roots in Russia's communist past. Because Soviet central planners determined output targets and prices administratively, there was no need for farmers to gather market information—nor for a national-level institution that would gather and disseminate information to them. To this day, Russia has no counterparts to the public and private institutions in the U.S. that provide farmers with price information and analysis on a daily basis throughout the country, such as USDA's Market News or the Chicago Mercantile Exchange.

U.S. farmers can choose from a vast array of available information to make production decisions for the future and to find profitable sales opportunities in different

World Agriculture & Trade

Linkages of Russian Pork & Beef Markets to the World

How well has Russian agriculture integrated into world markets? ERS researchers examined the extent to which changes in world prices for pork and beef were eventually transmitted to, and reflected in, Russian consumer prices for those goods. Poultry prices in Russia were unavailable for analysis because the Russian statistical agency Goskomstat has never collected them.

For purposes of the study, “price transmission” refers to the percentage by which the Russian domestic price of beef or pork changed in response to a percent change in beef or pork import prices from Russian customs statistics. A “price transmission” of 100 percent means that domestic prices rose by the same percentage as import prices. A “price transmission” of 0 percent means that domestic prices did not respond at all to changes in import prices. A number between zero and 100 indicates domestic and international prices are partially linked.

ERS staff measured average price transmissions for pork and beef in Russia’s 30 largest cities. The cities fell into four categories based on their geographic accessibility: cities with seaports (6), cities on the Volga (7), cities on the Trans-Siberian railroad (6), and landlocked cities with no significant trade access (11).

According to ERS’ findings, no cities except Moscow and St. Petersburg had price transmissions statistically greater than zero. This result confirmed that even in large cities such as Ekaterinburg and Nizhnij Novgorod, agricultural markets are not significantly integrated into world markets. The behavior

In Russia, Average Price Transmission for Meat Is Low

	Beef	Pork
	Percent	
Moscow	34	--*
St. Petersburg	51	48
Other cities	--*	--*

Price transmission is the percent change in a domestic price in response to a 100-percent change in import prices. 1994-99 data.

*Calculated value was not statistically different from zero. Study included 28 other cities.

Economic Research Service, USDA

of the markets in Moscow and St. Petersburg is markedly different and is consistent with previous research showing that Moscow and St. Petersburg rely on imported food much more than the rest of the country.

Many Western observers sent to Russia do not often travel outside of Moscow and St. Petersburg. This can lead to confusion when the observers extrapolate the experience of the two capitals to the entire country. For example, there is a misconception that, before the economic crisis that hit in August 1998, Russia imported more than half of the food it consumed. While that is true for the two capitals, it is not true for Russia as a whole.

For more details on U.S. meat and poultry exports to Russia, see the February issue of *Livestock, Dairy, and Poultry Situation and Outlook* at <http://usda.mannlib.cornell.edu/reports/erssor/livestock/ldp-mbb/2001/ldp-m80.pdf>.

regions of the U.S. Lack of publicly available information in Russia means that domestic and foreign sellers of agricultural products must each invest considerable time and effort researching marketing opportunities. This wasteful duplication of effort would not be necessary if a national information gathering system existed. The lack of information puts foreign sellers at a disadvantage, because domestic sellers have access to at least local information. Not surprisingly, research done by ERS and other organizations indicates that prices in domestic Russian markets currently move independently of one another, so that farmers in different regions are not sharing information or taking full advantage of marketing opportunities.

In addition to coping with the dilemma of scant market information, Western exporters in Russia face two major diffi-

culties in enforcing contracts. First, local government officials often interfere with transactions by intervening at crucial and unanticipated junctures. In countries governed by the rule of law (the idea that laws will be enforced consistently), exporters can predict when governments will intervene in a transaction simply by keeping abreast of legislative developments. In Russia, however, legislation is often contradictory, and local officials’ on-the-spot decisionmaking authority can in practice supersede it.

Second, injured parties find it difficult to obtain legal relief when a contract is breached, because Russia’s commercial legal system does not resolve contract disputes in a timely and predictable manner. The Soviet judicial system was geared toward forcing state-owned firms to comply with rules, not toward hearing complaints about private contract disputes. In

the early 1990’s, Russia created an entirely new judicial system to adjudicate contract disputes between privately-owned companies, called the “arbitration court” system. The new system does not rely on precedent—that is, rulings made in previous cases—to reach decisions. The legislative environment in Russia is too fluid and the case history too short for precedent to provide useful guidance to judges in lower courts. Instead, higher arbitration courts in Russia review all decisions of the lower courts to ensure that proper procedures were followed. Decisions are sometimes overturned even when no appeals have been filed—which means that all arbitration cases are in effect automatically appealed, drawing out the legal process.

Further, it is not clear whether the political interests of local authorities influence judges’ decisions. To the extent that judges’ decisions are subject to political

World Agriculture & Trade

manipulation, the outcome of the legal process is unpredictable. The inability of injured parties to find timely and predictable resolutions to contract disputes introduces an unwelcome element of uncertainty into all large-scale commercial transactions.

Prospects for Institutional Reform

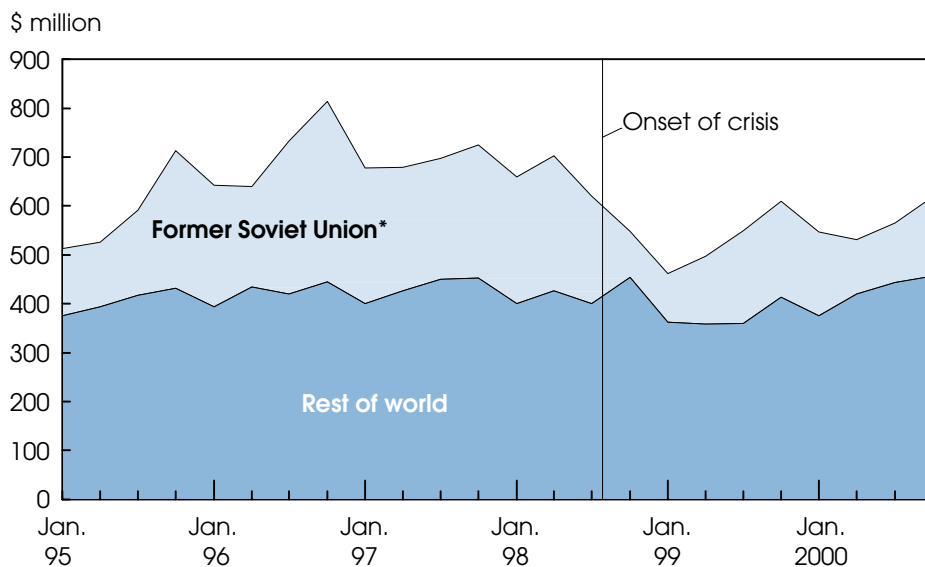
Clearly, successful institutional reform could reduce the cost of doing business in Russia and so expand domestic and foreign trade in meat and other goods. But if, for example, Russia's livestock markets were fully integrated with world markets, would Russia increase or decrease its imports of meat? As indicated earlier, imported Western livestock products currently dominate the urban markets of Moscow and St. Petersburg because of the relatively high cost of transporting goods from the provinces to urban areas. If institutional reforms were to lower the overall cost of trading in Russia, U.S. exports in their traditional Russian markets would face increased competition from the country's provinces—even as lower trading costs would allow U.S. exports to penetrate more deeply into provincial markets.

The primary issue is whether Russia enjoys a comparative advantage in livestock production—that is, whether the “opportunity cost” of producing livestock in Russia is lower than in other countries. (The opportunity cost of producing a good is the sacrifice of producing alternative goods.) If opportunity costs of livestock production were lower for Russia than for its trading partners, it would benefit from exporting meat.

ERS research has shown that Russia does not have a comparative advantage in the production of meat or even grain (in contrast to fuel, metals, and many industrial goods, such as fertilizer). For example, Russia's domestic livestock production is costly relative to domestic petroleum production, while the opposite is true of the U.S. Therefore, Russia could pursue its comparative advantage and gain from trade by importing livestock products from the West and exporting oil products.

While institutional reform in Russia would bring numerous benefits to domes-

U.S. Poultry Exports Dropped Following Onset of Russian Economic Crisis



*Includes Baltics. Quarterly data.

Source: *Foreign Agricultural Trade of the United States*.

Economic Research Service, USDA

tic and foreign traders alike, prospects for meaningful change are not encouraging. The reforms suggested to Russia by Western experts in 1992, particularly reform of the judicial system, are largely incomplete.

Performance of the arbitration courts will improve if the legislative environment becomes more stable. A stable legislative environment means the upper courts will have time to clarify gray areas of the law, which will make arbitration court decisions more timely and predictable. Tax law is one of the main sources of legislative uncertainty, because the President and the Duma (the Russian legislative body) are often at odds and issue conflicting legislation. Approval of the tax code that the Duma is currently considering would help stabilize tax legislation.

Prospects for developing a national market-information system are poor. While the creation of an institution that distributes market information would have a stabilizing effect on commodity markets—a key policy goal—the Russian Ministry of Agriculture is not seriously considering it. According to the Ministry's recently published 10-year strategy for agricultural policy, commodity market stabilization is

best achieved through government intervention in the market.

However, there is potential for formation of major private commodity exchanges, including the eventual expansion of some existing regional commodity markets in Russia to cover the entire nation. A number of web sites already bring together Russian grain buyers and sellers and have the potential to grow into on-line commodity markets. Rebuilding the transportation infrastructure will be the most expensive of all the reforms, and the Russian government currently has more pressing priorities for its scarce funds. Not surprisingly, the press contains little on any plans for renewing Russia's transportation infrastructure.

For the above reasons, little progress is expected in these potential areas of reform in the near future. U.S. exporters of meat and other products will likely face significant difficulties expanding their share of the Russian market, at least in the near term. **AO**

Stefan Osborne (202) 694-5154
sosborne@ers.usda.gov

Food & Marketing



Watsonville Coast Produce/Ed Young Photography

Changing Dynamics in Produce Marketing

The business relationship between produce shippers and retailers has recently gained national attention as retail consolidation increased. A large share of today's fresh produce is sold directly by shippers (often grower/shippers) to retailers, bypassing intermediaries and terminal wholesale markets. In the direct shipper-retailer transaction, price may be just one component of a more complicated sales arrangement. The shipper-retailer arrangement might also specify off-invoice fees to retailers in the form of promotional fees, rebates, or other discounts. And it might involve provision of various services such as use of plastic returnable cartons, automatic inventory replenishment programs, or third-party food safety certification.

Hearings conducted by the Federal Trade Commission and the U.S. Senate Committee on Small Business during the past year provided a forum for industry leaders, government officials, and academics to present their perspectives on how the recent wave of supermarket mergers (AO August 2000) and growth of new trade practices have affected various industries, including the produce industry. While shippers expressed concern that recent retail consolidation has led to greater market power for some retailers and the growing incidence of retailer-

requested fees and services, retailers argued that the new trade practices reflect their costs of doing business and the demands of consumers.

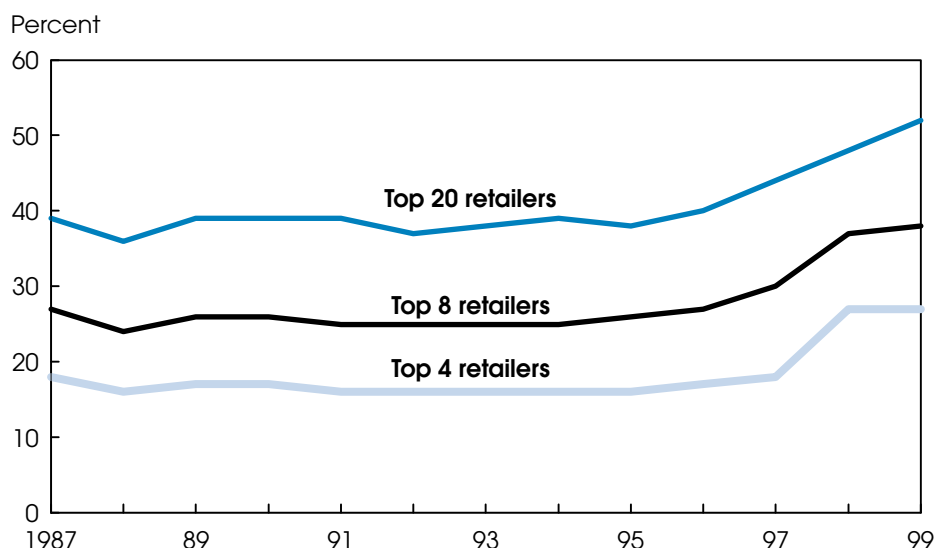
USDA's Economic Research Service (ERS) has examined the forces behind the

changing dynamics of produce marketing and the evolving shipper-retailer relationship. Because public data on transactions between shippers and retailers are scarce, ERS conducted interviews of shippers, retailers, and wholesalers for information on marketing of grapes, oranges, grapefruit, tomatoes, lettuce, and bagged salads. While the small number of interviews demands caution in interpreting the findings, the research provides an important first step in understanding recent changes in produce marketing.

Factors in Shipper-Retailer Relationships

Some of the factors that underlie recent changes in the shipper-retailer relationship are shifts in consumer demand, technological innovation, and consolidation in retailing and produce shipping. Americans are annually consuming 49 pounds more fresh fruits and vegetables per capita in 1999 than in 1986, an 18-percent increase. They are also eating more food away from home, increasing the foodservice share of produce shipments (e.g., to restaurants and schools). In 1999, food away from home accounted for 48 percent of total spending on food, up from 44 percent in 1992 and 40 percent in 1982. Many retailers, faced with a declining

Top 20 Food Retailers Captured More than Half of Grocery Store Sales in 1999



Source: Monthly Retail Trade Survey, Bureau of the Census; company annual reports.
Economic Research Service, USDA

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Marketing Channels for Produce Shipments Have Shifted

	Shippers reporting	Year	Market channel							Value of sales
			Grocery retailers	Mass merchandisers	Wholesalers and distributors	Brokers	Food-service	Exports	Other	
	Number		Percent of total value of sales							\$ million
Grapes	9	1994	58	2	15	8	2	10	5	210.5
		1999	55	8	17	7	2	9	2	255.3
Oranges	9	1994	45	3	16	10	1	25	0	183.1
		1998 ¹	44	9	14	6	2	25	0	228.9
Grapefruit ²	8	1994	41	0	12	6	2	39	0	215.9
		1999	37	8	11	4	2	38	0	199.5
California tomatoes	10 ³	1994	26	2	40	21	6	3	2	222.3
		1999	25	2	37	17	15	2	2	235.9
Florida tomatoes	6	1994	23	0	57	3	4	13	0	103.6
		1999	3	3	67	4	13	10	0	121.4
Lettuce/bagged salads	10	1994	60	1	16	4	17	2	0	N.a.
		1999	61	3	8	3	23	2	0	N.a.

N.a. = Not available.

Results are based on a limited number of observations and must be interpreted with caution.

1. Because of a severe freeze in 1999, the analysis uses 1998 crop year. 2. Grapefruit exports reported by shippers differ from the industry report by the Florida Department of Citrus--i.e., 54 percent of fresh Florida grapefruit exported in 1994/95 and 59 percent in 1998/99. 3. Information on two repackers is included to provide a more accurate view of how tomatoes are marketed.

Source: USDA/ERS Produce Marketing Study, 1999-2000.

Economic Research Service, USDA

share of consumer food spending, are introducing more ready-to-eat meals, commonly referred to as retail Home-Meal-Replacement or Meal Solutions.

As produce consumption has increased, so has demand for variety and convenience. The typical grocery store carried 345 produce items in 1998 compared with 173 in 1987. New produce items include exotic imports as well as variations on standard products. For example, in addition to traditional mature green and vine-ripe tomatoes, consumers may choose from a wide array of new tomato products: extended-shelf-life, grape, yellow and red baby pear tomatoes, as well as cluster, greenhouse, organic, and heirloom varieties. Variety is also evident in the year-round availability of items once considered seasonal as U.S. consumers indicate their willingness to pay higher prices for imported out-of-season fresh products.

As Americans spend less time preparing meals they eat at home, the convenience

of fresh-cut produce has become more important. Fresh-cut produce is lightly processed (cut and/or packaged) perishable fresh produce such as broccoli florets, in comparison with unprocessed bulk produce commodities such as potatoes. Bagged salads (washed, cut, and ready-to-eat) are now a major sector of the produce industry. New developments in packaging technologies have spurred the growth of a wide array of fresh-cut products, which are usually either branded or private-label products and need dedicated shelf space year-round.

New technology is transforming the shipper-retailer relationship as well. Information technologies have dramatically changed the amount and timeliness of information available. The advent of standardized price look-up (PLU) codes on unpackaged fruit and vegetable products (universal product codes on packaged grocery items were introduced earlier) makes retail sales data readily available, allowing for implementation of category (product) management programs in the produce

department. With more accurate tracking of sales and profit margins, shippers and retailers can work together to improve category profitability by designing effective sales, product mix, and pricing strategies, potentially benefiting preferred suppliers as well as the retailer.

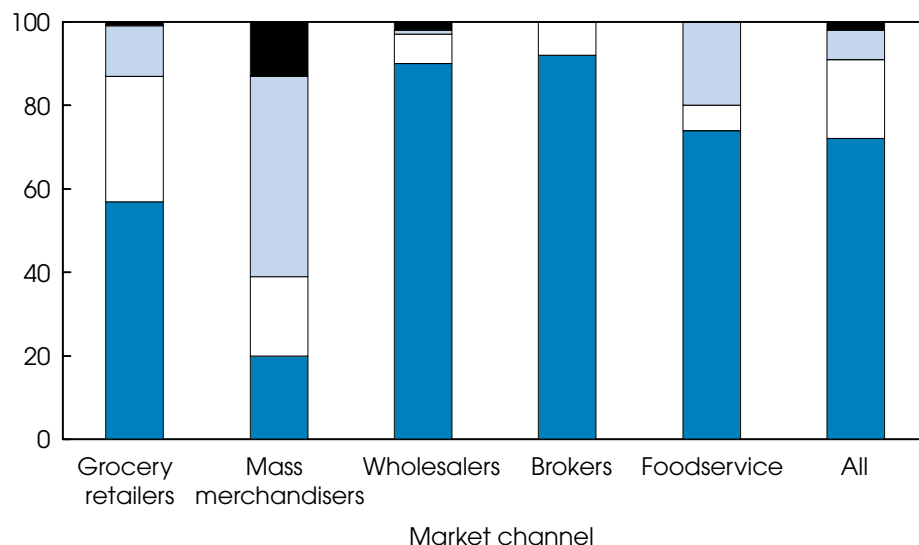
Investment in the human resources and technology necessary to analyze category information, however, may be difficult for smaller shippers to finance. As a result, shipper trade associations or mandated marketing programs, such as the California Tomato Commission, are developing category management programs with selected retailers, enabling shippers of all sizes to share in the benefits.

Retail consolidation at the national level has sharply increased the sales shares of the largest 4, 8, and 20 U.S. retailers to 27 percent, 38 percent, and 52 percent, respectively. While food retailers have been consolidating, so have other produce buyers such as wholesalers that sell to

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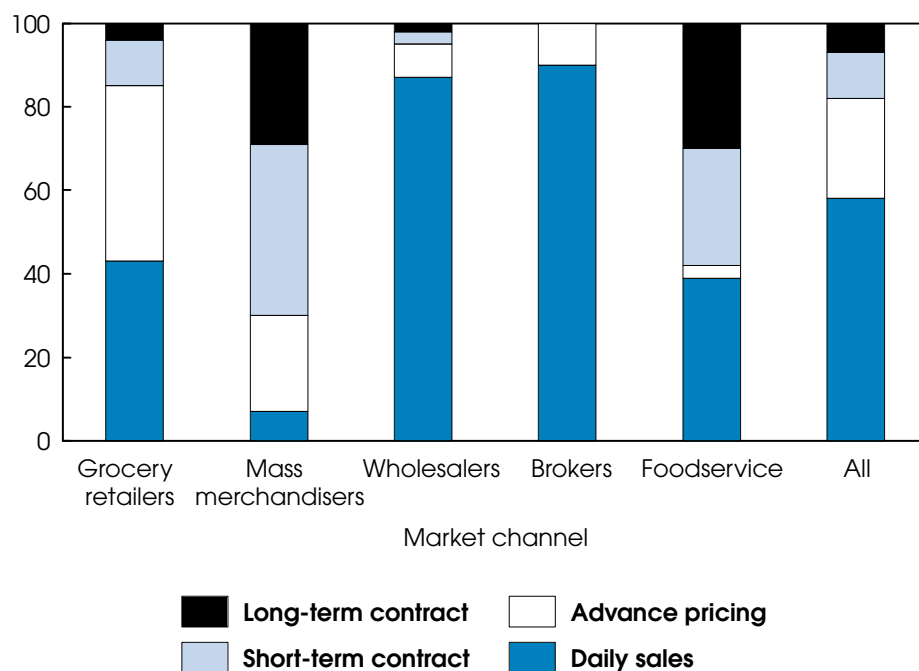
In 1994, Shippers Primarily Used Daily Sales Arrangements To Market Produce. . .

Percent of sales



. . . But Long-Term Contracts Gained Share of Sales in 1999

Percent of sales



Includes shippers of grapes, oranges, grapefruit, and tomatoes.

Source: USDA/ERS Produce Marketing Study, 1999-2000.

Economic Research Service, USDA

retail buyers. Retailers often cite the potential for lowering procurement, marketing, and distribution costs as motivating factors in mergers and acquisitions.

Along with consolidation, changes in retailers' buying practices can affect shippers. For example, some large retail firms reduce distribution costs by establishing

automatic inventory replenishment programs with their suppliers. Using retailers' sales data, shippers are made responsible for providing the correct amount of produce to each distribution center served, on a just-in-time basis, potentially reducing the size and cost of retail distribution centers.

Along with retailers, shippers are also consolidating. Large retailers require shippers large enough to meet their needs. Given the product diversity and seasonality of some crops, retailers have increasingly sought to reduce costs by dealing with suppliers that can provide broader product lines year-round or over extended seasons. This trend pressures U.S. shippers to coordinate with each other and with shippers in other countries to meet retailers' more complex needs. However, providing a broader product line on a year-round basis can be risky and costly, given the high capital requirements involved in production and distribution of many fresh produce items.

Large supplier firms may be able to secure funds for these activities more easily than small firms, which favors consolidation and greater vertical and horizontal coordination in the produce shipping industry. They may also develop some countervailing negotiating strength in their relationships with retailers.

Consolidation and concentration in produce shipping is increasing but shows considerable variation among sectors. For example, not one of 149 California fresh grape shippers is estimated to have accounted for more than 6 percent of total industry sales in 1999. In contrast, the largest 4 of 23 California tomato shippers in 1999 accounted for an estimated 43 percent of sales. Although 54 bagged-salad firms nationwide sold to mainstream supermarkets in 1999, the top two accounted for 76 percent of total fresh-cut salad sales. Hence, for a few fresh produce items, consolidation at the shipper level has surpassed retail consolidation, even though the sales volume of these firms may still be small relative to sales of the large retail chains.

Sales & Marketing Arrangements

Direct grocery retail sales (shipper to retailer) is the most important marketing channel for domestic sales of grapes, oranges, grapefruit, lettuce, and bagged salads, but not for sales of tomatoes. Marketing of tomatoes differs from the other produce in the study because they continue to ripen after they leave the shipper. Shippers generally sell tomatoes to repackers near final consumers, who then generate a uniform pack and sell to retailers, mass merchandisers, foodservice, or other intermediaries. The interview data indicate that the 1999 share of direct sales to retailers and mass merchandisers ranges from 6 percent for Florida tomatoes to 64 percent for lettuce/bagged salads.

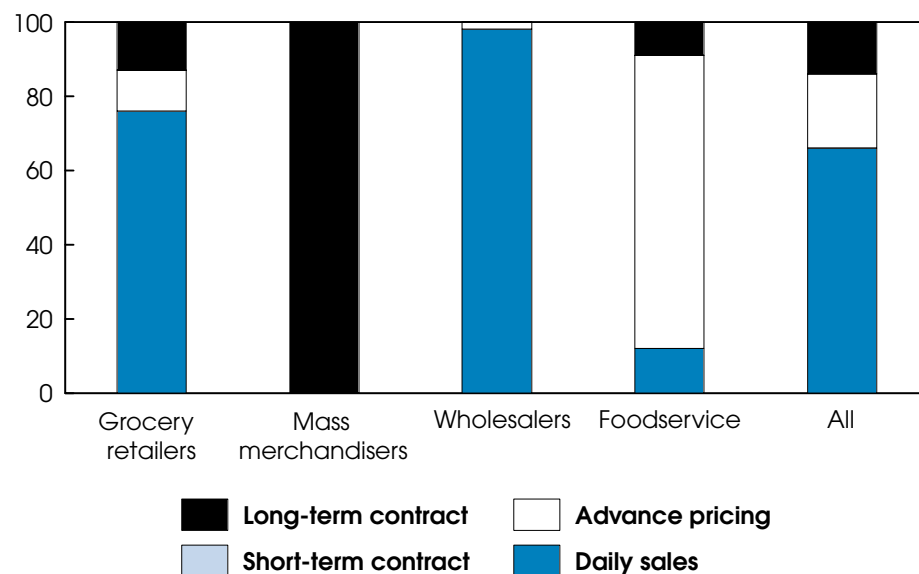
Traditionally, the fresh produce industry has marketed primarily through daily sales arrangements—i.e., individual sales at the daily market price with no volume commitments over time. Variations in demand and supply (quantity and quality), both in season and out, generate price volatility for perishable products. Given constantly changing conditions, the flexibility of daily sales arrangements made sense. The challenge of managing price risk discouraged longer term arrangements, with sellers and buyers unwilling to go much beyond advance pricing.

In the fresh produce industry, advance pricing means establishing price ceilings a few weeks in advance for produce featured in advertisements. Advance pricing arrangements are not forward retail purchases, which entail a commitment to purchase. If the market price declines below the negotiated price ceiling, shippers generally have to lower prices to the current f.o.b. price because retailers usually have the option to buy elsewhere. Shippers commonly consider advance prices to be an unequal arrangement, reducing their ability to capture gains from potential market highs.

Based on ERS interviews, daily sales remain the leading, but declining, sales and marketing arrangement across all products in the study except bagged salads. In 1999, daily sales accounted for an average 58 percent of total sales of grapes, oranges, grapefruit, and tomatoes,

Long-Term Contracts Dominated Lettuce Sales from Shippers to Mass Merchandisers in 1999

Percent of sales



Source: USDA/ERS Produce Marketing Study, 1999-2000.
Economic Research Service, USDA

down from 72 percent in 1994. Daily sales of lettuce accounted for 66 percent of total sales in 1999, with comparable 1994 data unavailable. Use of advance pricing arrangements for promotions has been growing, and it appears that the number of weeks for which maximum prices are fixed in advance has grown as well. Advance pricing increased from 19 to 24 percent of the total value of sales during 1994-99.

The volume requirements of very large produce buyers have created growing interest in more sophisticated coordination mechanisms than daily sales or advance pricing. For example, fresh produce sales of each of the top five U.S. retailers and mass merchandisers are in the multi-billion-dollar range, so relying on daily sales runs the risk of being unable to procure the volumes, sizes, varieties, quality, and consistency levels necessary. Furthermore, branded, fresh-cut products, such as bagged salads, require consistent, reliable, year-round availability and quality, making longer term arrangements—i.e., contracts—more desirable for both shippers and retailers.

The movement toward contracts appears to be led by mass merchandisers rather than by conventional retailers, although foodservice users are also becoming more involved. Shippers reported three main factors influencing their decision to enter into retail contracts: to ensure the market or sale, to maintain future relationships with buyers, and to achieve stable prices. While some shippers indicated they actively seek contract business with their customers, most engaged in contracting in response to buyer requests.

Between 1994 and 1999, use of short-term contracts (less than 1 year) for grapes, oranges, grapefruit, and tomatoes increased from 7 percent of total sales to 11 percent, while use of annual or multi-year contracts increased from 2 percent of total sales to 7 percent. Lettuce sales moving via long-term contracts were even higher at 14 percent in 1999.

Contracts—usually annual or multiyear—have become standard for the bagged salad industry. These written contracts specify price, quantity, advertisement periods, fees, and services.

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Emergence of Slotting Fees in the Bagged-Salad Industry

The changed relationship between shippers and retailers is due only partly to retail consolidation. Growth of the bagged-salad industry and the emergence of slotting fees in this industry illustrate the complex economic forces at work.

In the early 1990's, three separate trends converged to produce the new bagged salad industry: the continuing interest of consumers in more convenient product forms, the evolution of breathable films that preserve fresh-cut produce, and the desire of shippers to add value to and differentiate their products. Unlike bulk fresh produce commodities such as lettuce or tomatoes, bagged salads are produced and marketed much like other manufactured grocery products, available every week of the year and requiring dedicated year-round shelf space.

According to Information Resources, Inc. (IRI), bagged-salad sales grew rapidly in the early and mid-1990's and new firms entered the industry. In 1994 and 1995, year-to-year sales rose 49 and 32 percent. Sales growth continued into the late 1990's, although the rate of growth slowed to between 5 and 12 percent, and competition among shippers intensified. Slotting fees (upfront fees paid by suppliers to retailers to guarantee shelf space for new products) were adopted in the mid-1990's within this highly competitive environment as part of a market share battle between competitors eager to protect their investment in costly salad processing plants.

Retailers typically sell two or three brands of bagged salads, including retailers' private-label products. Many shippers strive not only to capture the business of retailers, but also to

place specific products in stores. IRI data show that the number of lettuce-based bagged salad items in mainstream supermarkets increased from 202 in 1993 to 464 in 1999. As the new industry launched many new bagged salad products, retailers were also coping with a large increase in products in the rest of the produce department.

Retailers had used slotting fees in other areas of the grocery store since about 1984, even before the recent increase in retail consolidation. As bagged salads developed characteristics of manufactured food products, it would not have been surprising for retailers to request slotting fees for bagged salads. However, most shippers reported that it was bagged-salad shippers who first offered slotting fees as a means to garner market share from their competitors.

IRI data indicate that the number of bagged-salad shippers selling to mainstream supermarkets has declined from a high of 63 in 1995 to 54 in 1999. The share of bagged salads sold under private label, where no slotting fees are used, has increased from 2 percent in 1993 to 10 percent in 1999.

Now fees are sometimes offered by shippers and sometimes requested by retailers. Since retailers had already requested slotting fees for other products before the recent retail consolidation, these fees for stocking bagged salads may not necessarily be a function of retailers' market power alone, but rather a combination of product characteristics, interfirm rivalry in a capital-intensive sector, and the relative negotiating strength of buyers and sellers.

Fees & Services Tax Shippers

Almost all of the interviewed shipping firms reported that fee and service requests from buyers had increased. The exceptions were some tomato shippers, who indicated that buyers' requests were unchanged. The shares of fees as a percent of sales for shippers' top five retail and mass merchandiser accounts varied across product category. California and Florida tomato shippers had few retail and mass merchandiser sales and no fees at all in their top five accounts. Orange and grapefruit fees as a share of sales averaged 1.13 percent and 1.77 percent. Bagged salad firms reported that fees as a share of all sales (not just the top five retail and mass merchandiser accounts) ranged from 1 to 8 percent of shipper sales.

Of those paying fees, grape shippers had the lowest share of fees paid per sales on an account basis, 0.66 percent. The fragmented nature of the California grape industry may provide shippers with some protection from retailer requests for fees. Given an implicit need for retailers to spread purchases among more grape suppliers than among suppliers of commodities with more consolidated supply structures, retailers may be less inclined to charge certain fees.

While overall the ratio of fees to produce sales might appear low, it is important to remember that market prices are sometimes at or below total costs of providing the product, and may cover only variable costs. Consequently, these fees could be sufficient to eliminate profits or increase losses in periods of low prices, particularly for commodity shippers who act as price takers (i.e., they cannot raise prices

without losing customers) and cannot pass along costs to customers.

The most frequently paid type of fee is the volume discount, a trade practice that has been used for years, but recently with greater incidence and magnitude. (For more on marketing fees, see article on page 16.) Shippers generally viewed this fee as negative or neutral in its impact on their business. Nevertheless, volume incentives have the potential to promote more stable relationships between suppliers and retailers; as a retailer buys more units from a supplier, costs per unit decline, providing an incentive for the retailer to buy larger quantities (over the season) from a particular supplier. Shippers may also gain efficiencies in marketing by increasing the size of individual accounts.

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Fresh produce shippers are particularly concerned about pay-to-stay and slotting fees. Slotting fees are fixed, upfront fees to retailers to guarantee shelf space for new products. Pay-to-stay fees are similar to slotting fees but apply to existing products. In the following discussion, pay-to-stay and slotting fees are considered together and referred to as slotting fees.

The recent emergence of slotting fees for certain kinds of fresh-cut produce—e.g., bagged salads and baby carrots—has led to shipper concern that they will soon become standard for other produce commodities as well. However, a key finding of this study is that this does not appear to be the case, at least so far. Thirteen commodity produce shippers reported receiving requests for slotting fees, but none of them paid the fees in 1999, although a few lost accounts for not complying. Despite the current high profile of slotting fees in the produce trade press, retailers agreed with shippers that such fees are not prevalent beyond the fresh-cut category.

Slotting fees are common for bagged salads and other fresh-cut branded products. While most lettuce/bagged salad shippers indicated that shippers initiated slotting fees in the mid-1990's in an effort to win new retail accounts and gain market share, a few reported that retailers initiated slotting fees. Now, slotting fees are both offered by shippers and requested by retailers. Retailers reported that slotting fees are associated primarily with branded categories such as bagged salads, baby

carrots, and dried fruits and nuts. Retailers agreed that competition among bagged-salad suppliers for market share is intense and that payment of upfront fees is a way for shippers to obtain or expand shelf space.

None of the bagged salad shippers would reveal the exact size of slotting fees requested of or paid by their firms, but several discussed in general the use of slotting fees in the sector. For instance, shippers reported that annual slotting fees could range from \$10,000 to \$20,000 for small retail accounts to \$500,000 for a division of a multiregional chain, and up to \$2 million to acquire the entire business of a large multiregional chain.

Shippers of bagged salads pay slotting fees to retailers who guarantee to carry their product. In interviews, these shippers did not elaborate on any other commitments they might receive in exchange for fees paid. No firm mentioned slotting fees as a guarantee of a specified number of linear feet in refrigerated displays. A few mentioned using third-party or retailer scanner data to track sales in stores, but it is not clear if shippers have any recourse should volume of sales not meet expectations. In a few cases, when one retail chain acquired another, previous slotting fee agreements were not honored.

Not all retailers request slotting fees or accept them, even for branded, fresh-cut products. Instead, some retailers focus on gaining the efficiencies of handling rela-

tively high-volume products by negotiating long-term agreements with suppliers and then requiring these preferred suppliers to provide services such as automatic inventory replenishment, use of returnable containers, or other special packaging.

Services requested by retailers, or offered by produce shippers, are also on the rise. New services such as third-party food safety certification are quickly becoming the norm as shippers respond to changing consumer preferences.

Several services, such as electronic data interchange and category management programs, derive from new scanner technology that provides both shipper and retailer with more timely market intelligence, which could reduce costs and increase profits. Some of these new technologies impose high fixed costs and so may pose a competitive disadvantage to smaller shippers, and some fees and services may raise shippers' costs without providing benefits of equal value.

Linda Calvin (202) 694-5244, Roberta Cook (University of California, Davis), Mark Denbaly, Carolyn Dimitri, Lewrene Glaser, Charles Handy, Mark Jekanowski (formerly with USDA/ERS, now with Sparks Companies, Inc.), Phil Kaufman, Barry Krissoff, Gary Thompson (University of Arizona), and Suzanne Thornsby (University of Florida)
lcalvin@ers.usda.gov **AO**

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Marketing Fees Reflect Relationship Between Suppliers & Supermarkets

Since the time of the first national supermarket chain (A&P) in the 1920's, supermarket retailers and their suppliers (distributors or manufacturers) have conducted business creatively. For instance, the longstanding tradition of manufacturers presenting retailers with samples of new products can be traced to the early 1920's. During the last two decades, provisions incorporated into supplier-retailer arrangements have moved well beyond free samples to include provisions for adjustments such as rebates, shelf-placement fees, and advertising allowances.

Such adjustments—referred to as marketing fees—can affect consumer prices, profitability of the firms, and structure of the industry. Most of the adjustments can be categorized as lump-sum payments from suppliers to retailers or per-unit allowances granted to retailers by suppliers.

The use of fees is controversial, particularly because growth in their usage appears to coincide with a wave of supermarket mergers. Some comments that reflect differences of opinion about the growing use of fees and the potential results include:

- mergers have given retailers market power over suppliers, and fees are the result of this market power;
- fees undercut competition and reduce consumer welfare by reducing output, increasing prices, or slowing product innovation;
- growth of new product offerings exerts enormous pressure on a limited amount of shelf space, and fees serve to allocate shelf space; and
- fees reflect the increasing costs of retailing.

This article presents an economic rationale for marketing fees and explores possible impacts on consumers. It describes three types of fees commonly used in supplier-retailer transactions, examines the effects of pricing strategies or fees on competition, and assesses the potential economic impacts of fees.

Fees Serve Many Purposes

Specialized fee agreements between suppliers and retailers have been developed to accomplish a wide variety of purposes. Some fees are fixed payments, while oth-

ers vary with the quantity exchanged in the transaction or with some aspect of retailer performance—e.g., volume of sales of a particular product. The most controversial fee is the “slotting” fee, a lump sum paid by suppliers to retailers for introducing new products to supermarket shelves. Although slotting fees were first introduced to supermarket retailing in 1984, tracking their history is nearly impossible since fees are negotiated privately and terms of transactions between retailers and suppliers are confidential.

The limited information that is available on slotting fees comes from the trade press, which presents conflicting reports on how frequently slotting fees are used. One source, market researcher ACNielsen, suggests that about \$930 million—or 4.2 percent—of the \$22.2 billion spent on trade promotions for products in 1987 was paid as slotting allowances. In contrast, another source, Freeman and Meyers, estimates that slotting fees in 1987 totaled \$6-\$9 billion.

“Pay-to-stay” fees are similar to slotting fees in that they are lump-sum payments made to retailers, but suppliers use pay-to-stay fees to keep existing products on the shelf. Other examples of fees are “hello” or “street” money, paid to grant a supplier an audience with a retailer to pitch a new product; advertising or promotional allowances—either lump-sum or per-unit payments—to advertise the suppliers’ products; and supplier-paid volume discounts or rebates that may increase with the volume sold.

Fees can have both short- and longrun impacts on the grocery industry. Shortrun effects stem from changes in prices and product variety. In the long run, fees potentially affect entry of new firms into the industry and the pace of new product innovation.

Increasing use of fees may enhance consumer welfare in the short term if prices fall or product variety increases, and in the long term if the fees do not restrict entry of new firms into the industry and if innovation is not stifled. However, consumer welfare may decline if the reverse holds. The outcome for consumer welfare depends largely on the balance of negotiating power between retailers and suppliers.

Economic Impact of Fees

Slotting fees, pay-to-stay fees, and per-unit rebate with volume incentives differ in purpose and impacts on firms and consumers. These fees may also be associated with different types of products.

Slotting fees. To analyze the effects of slotting fees, researchers typically assume that supermarkets have a limited supply of shelf space with many new products vying for display. They want to sell only successful products, but consumers' acceptance of any new product is uncertain, making the risk of new product failure unknown. Product innovators, through extensive market research and product testing, generally have information about consumer acceptance of the new product, but retailers are assumed to be less informed about product desirability and potential consumer acceptance.

A positive aspect of slotting fees is that they may sort out products most likely to gain consumer acceptance from those that are less likely to succeed in the marketplace. Manufacturers may offer to pay retailers a slotting fee for a new product to indicate their confidence that consumers will buy it. Retailers for their part may solicit slotting fees from manufacturers based on their assumption that only manufacturers of products deemed likely to sell would be willing to invest in a product by paying slotting fees. Slotting fees also help to spread the risk of new product failure across many new products, diminishing the potential impact of loss from any one product.

Slotting fees have potential impact on both supplier-retailer and retailer-consumer relationships. Turning first to the supplier-retailer relationship, the procompetitive perspective is that slotting fees appear to make it possible for new products to enter the market, thus benefiting consumers through increased variety or quality of products. In contrast, the anti-competitive perspective is that slotting fees are the result of retailers wielding their power to extract lump-sum payments from suppliers.

Regardless of whether slotting fees are pro- or anticompetitive, the fees may affect wholesale (supplier-to-retailer)

prices or supplier solvency. If the supplying industry is competitive, prices that retailers pay to suppliers tend to balance revenues with suppliers' costs. When competitive suppliers begin paying a fixed slotting fee, costs and thus wholesale prices could rise, so that, in effect, retailers may pay higher prices to compensate suppliers for paying the fixed fee. On the other hand, if suppliers operate in a market that is not competitive, it will be possible for supplying firms to remain profitable without increasing the wholesale price paid by the retailer. In either case, the higher costs prompted by the slotting fee may cause some suppliers to exit the industry.

The net effect of fees on consumers (the retailer-consumer relationship) is complex and difficult to assess because of variations in structure and behavior along the food marketing chain. Wholesale prices partially determine consumer prices, which depend on retailers' costs of purchasing, transporting, warehousing, and selling grocery items. Another factor in consumer prices is degree of competition among local supermarkets. Consumer prices would rise if retailers could pass the higher wholesale price along to consumers. Alternatively, competition among local supermarkets might prevent retailers from raising consumer prices.

The actual effect of slotting fees on consumer prices is uncertain. A study conducted at the University of Chicago indirectly explored slotting fees using publicly available aggregate data on industry sales, number of products, and price indexes. The study suggests that use of slotting fees can lead to a fall in consumer prices and a rise in product variety. A Marketing Science Institute survey, however, indicates that both manufacturers and retailers believe that consumer prices increased as a result of slotting fees. Research efforts have been hampered by the unavailability of proprietary information—i.e., detailed transaction-level data that include quantities sold, prices, and fees paid.

Pay-to-stay fees. Like slotting fees, pay-to-stay fees may cause consumer prices to rise or fall. Unlike slotting fees, pay-to-stay fees are not used to transmit information on consumer acceptance from suppli-

er to retailer, since the product is already known in the marketplace from retail sales data. Procompetitive arguments for pay-to-stay fees point out that they help to allocate costs of shelf space between supplier and retailer, and that they serve to place products in prime locations such as at eye-level space on the shelf. An anti-competitive argument states that such fees exclude competitors from the market either by making entry more difficult or by cutting profitability. For example, a manufacturer might be paying the retailer a pay-to-stay fee to in effect "not carry" a new substitute product, another brand of a substitute product, or a private label product. The supplier might also offer to pay the fee in order to raise rivals' costs, with the intent of reducing the competition it faces and thus increasing market share and profits. If manufacturers of existing products succeed and wield their market power to outbid suppliers of new products, consumer variety will ultimately be reduced.

The argument in favor of cost-sharing through pay-to-stay fees stems from the notion that as retailing costs are increasing, some costs are more easily borne by retailers and others by suppliers. An efficient allocation would spread the costs to the party that could most easily bear them, and is most likely when the parties have equal bargaining power. If one party has a strategic advantage, however, the other might ultimately bear more than its appropriate share of costs.

Volume incentives and rebates. One frequently used fee is the volume incentive, a per-unit rebate directly linked to quantity sold. For example, a sales agreement might specify that a supplier will pay a rebate of 10 cents per carton for the first 1,000 cartons that the retailer buys, 20 cents for the next 1,000, and so on. From the procompetitive perspective, volume incentives serve to build long-term relationships between suppliers and retailers. Retailers' costs per unit decline as more units are purchased from the supplier, providing an incentive for the retailer to buy larger quantities from a particular supplier. Consumers benefit, however, if the decline in retailers' per-unit costs (wholesale prices) are passed on through reduced retail prices. At the same time, the larger volume may reduce the supplier's per-unit

Food & Marketing


marketing costs, thus increasing their profitability.

An anticompetitive viewpoint is that the retailer may be demanding an unjustified per-unit discount from suppliers, potentially reducing suppliers' revenue below costs, and, in the long run, leading to an unsustainable situation that supports fewer suppliers. Another point of the anticompetitive argument is that even when per-unit discounts do not eliminate profits, discounts may reduce supplier profits and may drive some firms out of business.

Fees & Competition

Regardless of whether fees are considered the result of market power or of movement toward enhanced efficiency—i.e., whether they are anti- or procompetitive—the growing use of fees, especially in light of the record number of retail mergers over the past few years, has captured policymakers' attention. As early as the mid-1990's, the Bureau of Alcohol, Tobacco, and Firearms prohibited the use of certain fees for marketing alcoholic beverages. In 2000, the Senate Committee on Small Business held a hearing on fees, the Congressional Budget Office scrutinized fees, and the Federal Trade Commission held a workshop examining fees. Also last year, USDA's Economic Research Service conducted an in-depth study of fees in fresh produce marketing (see article on page 10).

Ultimately it is the Federal Trade Commission (FTC) or the Department of Justice that determines whether a pricing strategy is anticompetitive or violates antitrust legislation. According to FTC regulations, "a practice is illegal if it restricts competition in some significant way and has no overriding business justification. Practices that meet both characteristics are likely to harm consumers—by increasing prices, reducing availability of goods or services, lowering quality or service, or significantly stifling innovation." In some cases, a pricing strategy that appears at the outset to damage competition might be allowable if any detriment to consumers is outweighed by an efficiency gain, such as a better product or reduced costs.

Fees are becoming more common provisions in supplier-retailer transactions for many products and can have positive as well as negative effects on firms and consumers. Fees may raise supplier costs and wholesale prices, and lead to higher retail prices or reduced product variety. But fees may also increase competition among firms, and bring lower retail prices, a proliferation of new products, greater product variety, or higher quality products. The net effect of fees on consumers depends largely on the balance of benefits and costs in each specific case. 

Carolyn Dimitri (202) 694-5252
cdimitri@ers.usda.gov

March Releases—USDA's Agricultural Statistics Board

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

March

- 2 Dairy Products Prices (8:30 a.m.)
Dairy Products
Egg Products
Livestock Slaughter - Annual
Poultry Slaughter
- 6 Weather - Crop Summary
- 7 Broiler Hatchery
- 8 Crop Production
- 9 Dairy Products Prices (8:30 a.m.)
- 13 Weather - Crop Summary
- 14 Ag. Chemical Usage -
Postharvest Applications
Broiler Hatchery
Fruit and Vegetable Ag.
Practices
Potato Stocks
Turkey Hatchery
- 16 Dairy Products Prices (8:30 a.m.)
Cattle on Feed
Milk Production
- 20 Weather - Crop Summary
Cold Storage
- 21 Broiler Hatchery
- 22 Cotton Ginnings (8:30 a.m.)
Dairy Products Prices (8:30 a.m.)
Catfish Processing
Chickens and Eggs
Hop Stocks
Livestock Slaughter
Monthly Agnews
- 27 Weather - Crop Summary
- 28 Broiler Hatchery
- 29 Agricultural Prices
Peanut Stocks and Processing
- 30 Dairy Products Prices (8:30 a.m.)
Grain Stocks (8:30 a.m.)
Prospective Plantings (8:30 a.m.)
Rice Stocks (8:30 a.m.)
Quarterly Hogs and Pigs

Special Article

Crop Production Capacity in Europe

From Spain to Ukraine, agricultural production is pursued under a vast array of agronomic and political conditions. In Western Europe, policies in recent decades have maintained high farm prices and provided income payments to farmers, leading to surplus production. High food prices in Western Europe, maintained through high import barriers, dampened domestic demand, although high incomes allowed adequate diets. The region has been a large grain exporter for over two decades but mainly through subsidies. Agricultural policies have ensured a higher return to farmers than would prevail under market conditions, and Eastern European countries planning on joining the European Union (EU) could be in the same position in a few years.

In the former Soviet Union (FSU) and in Eastern Europe, where countries had been under Soviet influence, expanding area and yields prior to the 1990's led to greater production. Food subsidies encouraged high consumption in Eastern Europe and in the former Soviet Union, which prevented the regions from being major exporters.

Europe as a whole will continue to be a net exporter of grain in the next decade, although the magnitude of exports will depend on the ability of the FSU, particularly Russia and Ukraine, to implement reforms that would increase production capacity.

Europe in the Aggregate

Area harvested has generally declined across all three regions of Europe. Western Europe cropland use dropped by 10 percent from 1961 to 2000 because of urban growth and land set-aside measures. Eastern European crop area fell by 17 percent during the same period, due mostly to movement out of marginal land during the reforms of the early 1990's when crop subsidies were discontinued. In the FSU, large amounts of land were taken out of production during the last decade (about 15 million hectares or a drop of nearly 19 percent) because of low prices for crops and the removal of input subsidies.

Despite a declining area, Western European grain production has been climbing steadily throughout the last 40 years, from 92 million to 217 million metric tons in 2000, as yields increased from 2.14 to 5.63 tons per hectare. U.S. yields moved from 2.51 to 5.93 tons per hectare for the same time period. (Data are from the Food and Agriculture Organization.) The yield increase has been largely a combination of the application of technology and the high prices and income support provided by the Common Agricultural Policy (CAP) of the European Union.

Eastern European production nearly doubled from 1961 to 1989 because of rising yields. But production has fallen considerably in the last decade as yields declined. The recent fall in yields in Eastern Europe—from 3.74 tons per hectare in 1991 to 2.8 tons per hectare in 2000—resulted from policy changes that accom-



ACD/VOCA

panied political turmoil in the early 1990's. These policy changes were comprised largely of the withdrawal of subsidies both for inputs such as fertilizer, pesticides, and subsidized loans to farms.

In the FSU, average yields fell from 1.96 tons per hectare in 1992 to 1.58 tons per hectare in 2000, for similar reasons. With less area in grain and with falling yields, production in the FSU dropped 35 percent from 1992 to 2000.

The critical issue for crop production in Europe is whether grain yields in Eastern Europe and in the FSU will return to previous levels and eventually begin to approach yields in Western Europe.

Agricultural Gains Reflect Policy in Western Europe

Before World War II, most countries in Western Europe were net grain importers, and during WWII and immediately thereafter the populations of many of these countries suffered malnutrition. In an attempt to prevent future wars, to advance their economies, and to guard against future food crises, six countries formed the European Economic Community in 1957 (predecessor to the European Union) and in 1967 implemented the Common Agricultural Policy (CAP), which has been the principal engine of agricultural growth in Western Europe ever since. The CAP now applies to 15 countries (the current EU members) and will likely expand to over 20 EU members in the next few years with additions from Eastern Europe and the Baltics. The agricultural policy goals of the original member countries (Belgium, Luxembourg, France, Italy, the Netherlands, and West Germany) were, among other things, to equalize farm and nonfarm income, provide abundant food at reasonable prices, and increase food

Special Article

self-sufficiency. Policies used to accomplish these goals included guaranteed farm prices set at relatively high levels, prohibitively high tariffs, and export subsidies as an outlet for any possible excess production (and conversely, export taxes when world prices rise above EU prices.)

The policy goals have generally been accomplished—the EU has one of the highest grain yields in the world, with a large grain surplus exported. Self-sufficiency in total grains increased from 86 percent in 1968/69 to 118 percent in 1990/91. Per capita farm income in the EU has also stayed relatively close to nonfarm per capita income because of the CAP. However, the EU also has the world's largest agricultural budget.

The success of the CAP (albeit at high cost to consumers and taxpayers) and of the EU is evidenced by successive enlargements: 1973 (Denmark, United Kingdom, and Ireland), 1981 (Greece), 1986 (Spain and Portugal), and 1995 (Austria, Finland, and Sweden.) Numerous other European countries have applied for membership and are likely to become members soon, including countries in Eastern Europe (Hungary, the Czech Republic, Poland, and Slovenia). These countries have already begun to align their policies with the CAP. Countries in the Baltic region have also applied for EU membership and will likely join in the next decade—Estonia is already in final negotiations with the EU over details of membership, and Latvia and Lithuania are likely to follow soon.

Agricultural production has exceeded expectations of the original founders of the CAP and led to large surpluses of grain, butter, wine, and beef. Successive reforms of the CAP in 1992 and 1998 that led to lower policy prices have not slowed the growth in production, as yields and total production continue to rise despite less intensive fertilizer use and declines in area harvested. Large stocks of grains and their associated costs continue to plague EU agricultural policy.

Other countries in Western Europe, such as Switzerland and Norway, have agricultural policy regimes similar to the CAP, and their standards and legislation are equivalent to the EU's legislation for trading purposes. Thus, yields are high throughout Western Europe as technology continues to push up yields, increasing total production in spite of a small decline in area harvested. With consumption levels relatively stable and yields increasing, pressure on the European Union budget due to the CAP will mount as storage costs and/or export subsidies climb. However, trade agreement constraints on export quantities under the World Trade Organization limit subsidized exports.

Western European countries have rapidly adopted new technology since the end of WWII and have reaped the benefits of early adoption. Farmers in the EU have been able to increase yields in the face of lower prices and less fertilizer use. Improved seeds, cultivation techniques, and pest control methods (not higher pesticide usage) have been largely responsible for higher yields, although other factors such as added irrigation capacity and better machinery have also helped. Continued research and development in these areas will likely push yields further upward in spite of lower policy prices.

Western Europe—the European Union-15 (Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden, and the United Kingdom) plus Switzerland and Norway.

Eastern Europe—Albania, Bosnia-Herzegovina, Bulgaria, Croatia, *Czech Republic*, Hungary, Macedonia, Poland, Romania, Slovakia, Slovenia, and Yugoslavia.

Former Soviet Union (FSU)—Russian Federation, Ukraine, Belarus, Uzbekistan, Kazakhstan, Georgia, Azerbaijan, Moldova, Kyrgyzstan, Tajikistan, Armenia, Turkmenistan, and the Baltics.

Baltics—Estonia, Latvia, and Lithuania.

Italics indicate countries most likely to become EU members in the next decade.

Nitrogen pollution is a particular concern, and EU legislation setting limits on groundwater levels of nitrate contamination has been in effect for a few years, although the legislation affects mostly livestock operations rather than crop producers. Western Europe is densely populated, and pollution from the agricultural sector will continue to affect crop production indirectly through impacts on livestock production.

Transition Underway in Eastern Europe . . .

Developments in agriculture in Eastern Europe differ dramatically from the West. Withdrawal of consumer and producer subsidies led to a rather chaotic economic situation in most countries when they gained political independence in the early 1990's, resulting in lower crop yields and lower food consumption. Yields fell because inputs such as fertilizer and machinery became too expensive relative to farm income, leading to a sharp decline in their use. Even water use for irrigation was adversely affected by withdrawal of subsidies. Similar developments occurred in the FSU, except that large areas of poor land in the FSU were idled, in contrast with Eastern Europe where producers were not farming as much marginal land.

Input subsidies were largely eliminated in Eastern Europe after the collapse of communism in the early 1990's, and fertilizer and pesticide prices rose rapidly. While this led to lower input use, residual fertilizer in the soil prevented yields from dropping initially. In general, farmers had been applying too much fertilizer, but yields declined when nutrient reserves were eventually exhausted.

Technological innovations were implemented less efficiently in the East than in the West, leading to lower yields for the same amount of inputs. Plant breeding research was fairly advanced, but applications of the information and methods in the field were hindered by lack of an effective extension service. Also, farmers could not obtain the credit required to make innovations. Tractor usage also declined as fuel prices rose rapidly, reflecting world market conditions and internal marketing problems. Uncertainty about land ownership was also a deterrent to investing in agriculture and hastened the decline in production in the 1990's.

Settling land ownership issues will be necessary to attract investment in agriculture and return production in the region to its previous level.

Eastern European countries that are in line to join the EU within the next few years are likely to see their agriculture rebound if farmers are granted compensation payments that EU farmers receive for cuts in support prices (AO January-February 2001). Such payments were begun in 1993 under the 1992 CAP reform. The compensation payments increased with the cuts in policy prices of the 1998 CAP reform under Agenda 2000, which ostensibly prepares the EU for enlargement to the East.

The effect on yields of joining the EU will be key to future crop production levels in Eastern European countries. With membership, adoption of technology is likely to be rapid because of access to Western European output and input markets and an increase in foreign direct investment. Higher support prices, in combination with direct payments, will allow farmers in the East to update capital equipment. Enhanced productivity and more efficient marketing channels will benefit producers after enlargement. Yields should rapidly approach pre-1990 levels and eventually approach Western European levels.

It appears that 8 of 15 countries in Eastern Europe and the Baltics may become EU members within the next decade. Although the Baltics are included in the FSU, their agricultural sectors are more similar to those in Eastern Europe. Farmers in these countries may also receive higher prices (dependent on currency rates and CAP reforms) for their crops than they currently receive, and this should increase yields. Countries that will take longer to become EU members will most likely adopt EU policies over time, increasing their yields and total crop production. The countries in Eastern Europe joining the EU will most likely be net exporters of grain within the next decade.

... & in Russia & Neighboring Countries

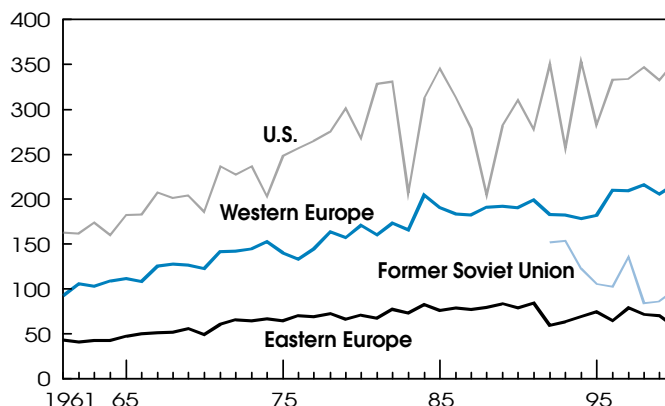
The FSU region of Europe is likely to be a significant source of volatility in future world production and trade. Russia and the Ukraine are the most important agricultural producers in the region.

The decade-long transition occurring in Russia and many of its close FSU neighbors (e.g., Belarus, Ukraine, and the Moldova Republic) is more wrenching than in Eastern Europe and has resulted in dramatically lower yields, lower input usage, smaller area harvested, and a severe decline in food consumption. The move from large state farms with centralized control to a more chaotic mixture of state farms and some private farms attempting to operate in a market environment has been difficult. Production and consumption declined largely because of the withdrawal of subsidies to state farms and to consumers. In addition, crop production is inefficient because of a lack of critical institutions to enforce the rule of law regarding land use and ownership.

Trends in European Agriculture Vary by Region

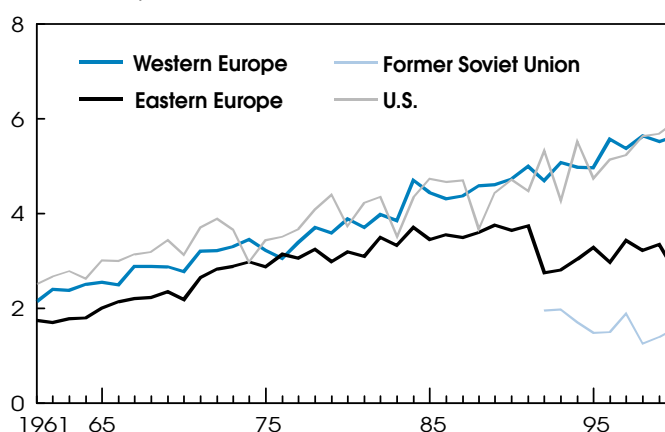
Cereal Production

Million metric tons



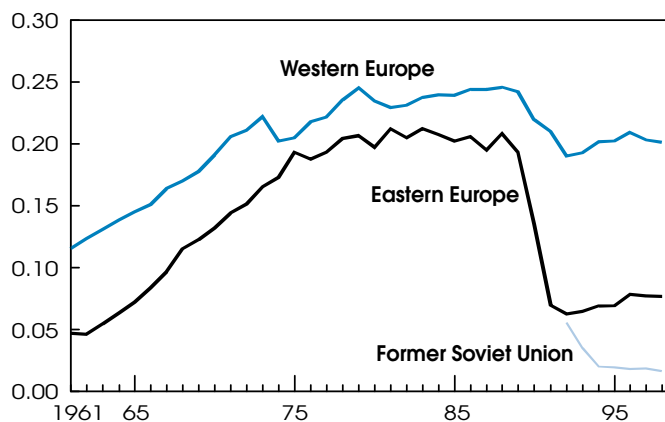
Cereal Yields

Metric tons/hectare



Total Fertilizer Use

Metric tons/hectare



Cereal crops include wheat, feedgrains, and rice. Fertilizer data not available for 1999, 2000 forecast.

Source: FAOSTAT Database.

Economic Research Service, USDA

Special Article

Reducing Costs of Producing in the FSU

Agricultural production costs in the FSU are relatively high. Crop production in the FSU would likely increase if production costs were lowered, making agricultural products more competitive with imports. Costs could be reduced by addressing farm-level reform and institutional reform.

The bulk of farm-level reform attempted so far in Russia consists of the privatization campaign of the early 1990's. The large former state and collective farms were officially reorganized, but they remained intact and essentially unreformed. Actual privately owned farming operations (as opposed to household plots associated with the large farms) accounted for only 6 percent of total sown area and 3 percent of crop production in 1997. While the legal status of the former state farms has changed, many of their economic incentives have survived. Insolvent farms cannot go bankrupt; when farms cannot repay government loans, the loans are either forgiven or rolled over indefinitely. With no significant market for agricultural land, there is no mechanism for transferring land to more skilled managers.

The goal of meaningful farm-level reform would be to create economic incentives to facilitate the movement of land, labor, and capital from farms with high costs to those with low costs. Bankrupting insolvent agricultural enterprises is one way to divorce resources from high-cost farms. Another way to redistribute land to low-cost producers is to develop a mortgage market. The most cost-efficient farmers, who stand to earn the most from agricultural land, would be those willing to bid the most for farmland. The current 10-year policy

strategy of the Russian Ministry of Agriculture cites the necessity of bankrupting chronically insolvent farms and the development of a land market.

The second approach to lowering costs in FSU agriculture is to implement institutional reforms that would complement farm-level reform. In order to develop a mortgage market, for example, legislation has to be passed to permit it, and an institutional framework is needed to regulate and enforce mortgage contracts. The Russian Ministry of Agriculture policy strategy does not state specifically whether land will be used for collateral in mortgage transactions. Currently the Russian Federation prohibits the use of land for collateral. In Ukraine, a land reform bill passed in 1995, but the parliament imposed a 6-year moratorium on agricultural land transactions.

Development of a rural finance and banking system would also help lower costs. Such a system would allow profitable farms to expand their holdings by purchasing resources released by bankrupt farms, and to invest in new technology.

The countries of the FSU have not made much progress in farm-level and institutional reform, largely because it has not been attempted. The largest obstacle to farm-level reform is the political will for land reform. The conservative agricultural establishment in Russia and Ukraine has consistently opposed the private ownership of land and in general opposes making land a commercial commodity.

Price and trade liberalization began in Russia and Ukraine in 1992. From 1990 to 1998, crop production fell substantially—35 percent in Russia and 39 percent in Ukraine. The fall in output, especially grain, is due to the effects of reform on demand and supply of crops and livestock in the two countries.

Consumption and production of livestock products in Russia and Ukraine were heavily subsidized during the 1970's and 1980's. The removal of these subsidies after 1992 led to a substantial drop in livestock inventories and, consequently, the demand for feed grain. In addition, the free fall in consumer income following the reforms led to a drop in demand for relatively expensive meat products and a rise in demand for their cheaper substitutes, bread and potatoes. A modest increase in demand for food grain has been overwhelmed by the decline in demand for feed accompanying the collapse of the livestock sector.

Before 1992, the supply of crops and livestock in the FSU was boosted artificially by three kinds of subsidies: 1) direct budget subsidies, 2) border price support, and 3) indirect input price subsidies. Direct budget subsidies are payments to farms out of the budget but have played a relatively small role in FSU agricultural support. Border price support (e.g., tariffs) kept domestic producer prices above world trade prices. Indirect input price subsidies were the most important in stimulating supply and kept

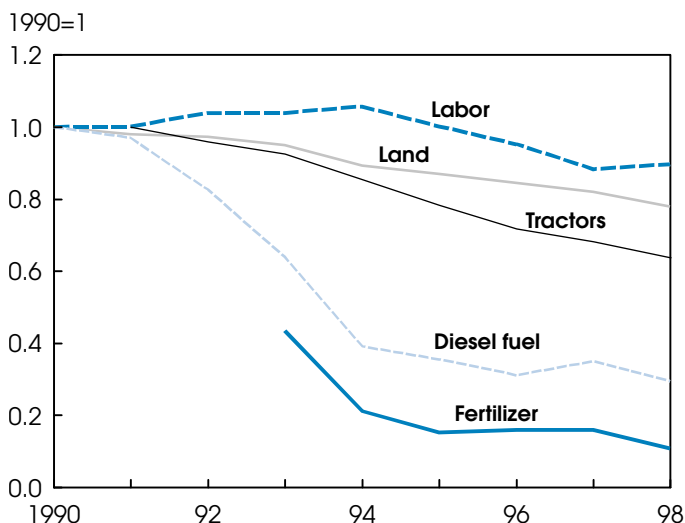
the price of agricultural inputs low relative to agricultural outputs. The input price supports were not the result of financial subsidies from the government's budget. Rather, the planned economy structured the administrative price system so that farmers' revenue from output was higher than expenditures on inputs.

The end of subsidies led to a steep decrease in the price of outputs and an increase in the prices of tradable inputs (i.e., products that can be sold for foreign exchange) such as herbicides, fuel, and especially fertilizer. The result was a dramatic decline in the use of tradable inputs. From 1990 to 1997, average fertilizer use per hectare fell from 88 kilograms to 16 kilograms. Consequently, yields—which had been catching up with yields in the U.S. and Europe in the late 1980's—fell sharply in the 1990's. Wheat yields in 1997 in the FSU were the same as those that prevailed in 1975.

Removal of the three subsidies mentioned above led to a price system that reflects the technology of production and market preferences. Much of the fall in crop production is, therefore, a natural market response to unsubsidized prices.

Nevertheless, some increase in crop production in the FSU could occur in two possible ways: 1) governments may choose to

Farm Input Use Has Dropped in Russia



Fertilizer data not available for 1991-92.

Source: Goskomstat (Russian Statistical Agency).

Economic Research Service, USDA

implement supports to boost agricultural production, and 2) production may improve under institutional reforms (see sidebar).

It is unlikely that agricultural policy will change sufficiently in the near future to have a major impact on agricultural production. Russia's Ministry of Agriculture, for example, recently acknowledged that it lacks the financial resources to implement significant support policies for agriculture. While it is possible that the government may choose to increase agricultural production through subsidies, it could do so only for a limited time.

Even if the government fails to stimulate agricultural production through direct support, it is still possible that production will recover somewhat if reforms are successfully completed. However, even if reform is successful, production will not return

immediately to pre-reform levels, since most of the drop in output is an irreversible response to the removal of Soviet-era subsidies.

Prospects for Agriculture

The tumultuous decade of the 1990's has continued to have a large impact on the agricultural sectors in Eastern Europe and the FSU. These countries continue to struggle with creating the necessary institutions and policies to develop economies that provide appropriate market signals between consumers and producers. To date, the agricultural sectors in the FSU have been set back by the chaotic conditions created by a lack of institutions to deal effectively with the new market conditions. It appears that the FSU will be a net importer for at least the next few years, and Eastern Europe could become a net exporter of grain within the next decade.

Western European agriculture continues to be dominated by the Common Agricultural Policy of the 15 member states of the European Union. Many of the nations of Eastern Europe have been adopting the mechanisms of the CAP and will likely attain higher levels of productivity, enhancing their likelihood of becoming net exporters of agricultural products. Western Europe should continue to be a major player in the export markets of most major commodities. Aging populations throughout Europe, and a low population growth rate due to low birth rates, have contributed to slow growth in domestic food demand that is likely to continue into the foreseeable future.

Growth patterns in crop yields and composition of agricultural production in these three regions are likely to change over the next decade because of 1) enlargement of the European Union to include most of Eastern Europe and 2) the direction of agricultural policy and agriculture in the FSU. In the aggregate, though, Europe will remain a net grain exporter to the world. **AO**

David R. Kelch (202) 694-5151

and Stefan Osborne (202) 694-5154

dkelch@ers.usda.gov

sosborne@ers.usda.gov

Bill Liefert, Susan Leetmaa, and Nancy Cochrane
also contributed to this article.

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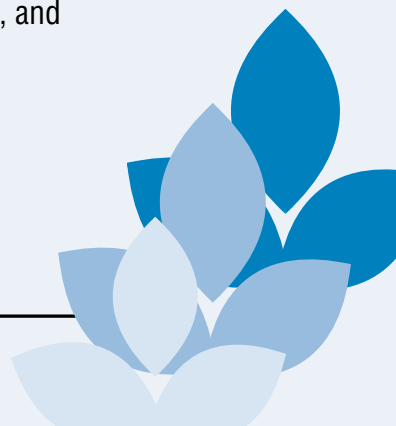
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Statistical Indicators

Summary Data

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

	2000				2001					
	1999	2000	2001	I	II	III	IV	I	II	III
Prices received by farmers (1990-92=100)	96	97	--	93	101	97	96	--	--	--
Livestock & products	95	98	--	95	100	98	99	--	--	--
Crops	97	96	--	92	102	96	95	--	--	--
Prices paid by farmers (1990-92=100)										
Production items	111	116	--	115	116	116	117	--	--	--
Commodities and services, interest,	115	120	--	119	119	119	121	--	--	--
Cash receipts (\$ bil.)	189	196	200	47	44	48	57	48	43	51
Livestock	95	99	100	25	25	25	25	25	25	25
Crops	93	97	100	22	18	24	32	23	19	26
Market basket (1982-84=100)										
Retail cost	167	--	--	169	169	172	--	--	--	--
Farm value	98	--	--	95	96	97	--	--	--	--
Spread	205	--	--	209	209	211	--	--	--	--
Farm value/retail cost (%)	21	--	--	20	20	20	--	--	--	--
Retail prices (1982-84=100)										
All food	164	168	172	166	167	169	170	171	171	172
At home	164	168	171	166	167	169	170	171	170	171
Away from home	165	169	173	168	168	170	171	172	172	174
Agricultural exports (\$ bil.) ¹	49.2	50.9	53.0	13.1	12.0	12.2	14.0	13.5	13.0	12.5
Agricultural imports (\$ bil.) ¹	37.3	38.9	40.0	10.1	10.2	9.1	9.7	10.1	10.1	10.1
Commercial production										
Red meat (mil. lb.)	46,134	46,125	45,390	11,595	11,279	11,618	11,633	11,436	11,179	11,497
Poultry (mil. lb.)	35,590	36,416	37,175	9,019	9,286	8,969	9,142	9,155	9,460	9,230
Eggs (mil. doz.)	6,912	7,035	7,085	1,754	1,744	1,751	1,786	1,760	1,745	1,760
Milk (bil. lb.)	162.7	168.0	168.5	42.6	43.2	41.3	40.9	42.7	43.6	41.2
Consumption, per capita										
Red meat and poultry (lb.)	220.3	219.6	218.0	53.9	54.9	54.8	56.0	54.0	54.3	54.5
Corn beginning stocks (mil. bu.) ²	1,307.8	1,787.0	1,717.5	1,787.0	8,039.4	5,601.9	3,585.9	1,717.5	8,517.6	--
Corn use (mil. bu.) ²	9,298.3	9,514.8	9,805.0	3,181.7	2,441.0	2,021.5	1,870.7	3,169.6	--	--
Prices ³										
Choice steers--Neb. Direct (\$/cwt)	65.56	69.65	72-77	69.32	71.59	65.43	72.26	73-75	73-77	73-79
Barrows and gilts--IA, So. MN (\$/cwt)	34.00	44.70	40-42	41.14	50.43	46.43	40.78	39-41	44-46	42-46
Broilers--12-city (cents/lb.)	58.10	56.20	55-59	54.60	55.70	56.80	57.60	55-57	55-59	56-60
Eggs--NY gr. A large (cents/doz.)	65.60	68.90	73-78	63.30	62.10	67.10	83.10	74-76	68-72	74-80
Milk--all at plant (\$/cwt)	14.36	12.34	12.60-	11.90	12.03	12.70	12.73	12.95-	11.95-	12.20-
		0.00						13.25	12.55	13.10
Wheat--KC HRW ordinary (\$/bu.)	2.92	3.08	--	2.92	2.95	3.00	3.44	--	--	--
Corn--Chicago (\$/bu.)	2.01	1.97	--	2.12	2.16	1.64	2.01	--	--	--
Soybeans--Chicago (\$/bu.)	4.61	4.86	--	4.95	5.20	4.60	4.70	--	--	--
Cotton--avg. spot 41-34 (cents/lb)	52.31	57.47	--	54.63	55.68	58.36	61.24	--	--	--
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Farm real estate values ⁴										
Nominal (\$ per acre)	703	713	740	798	844	887	926	974	1,020	1,050
Real (1982 \$)	521	507	514	540	558	572	586	606	627	636
U.S. civilian employment (mil.) ⁵	126.3	128.1	129.2	131.1	132.3	133.9	136.3	137.7	139.4	--
Food and fiber (mil.)	23.7	23.1	23.6	24.2	24.5	24.2	24.1	24.0	24.3	--
Farm sector (mil.)	2.0	1.9	1.8	1.9	2.0	2.0	1.9	1.8	1.7	--
U.S. gross domestic product (\$ bil.)	5,986.2	6,318.9	6,642.3	7,054.3	7,400.5	7,813.2	8,318.4	8,790.2	9,299.2	--
Food and fiber--net value added (\$ bil.)	877.5	924.8	965.7	1,066.2	1,126.5	1,210.4	1,317.1	1,446.4	1,521.4	--
Farm sector--net value added (\$ bil.) ⁶	71.1	75.5	73.1	78.3	75.3	86.7	83.5	74.8	69.8	--

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

U.S. & Foreign Economic Data

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

				1999			2000			
	1998	1999	2000	II	III	IV	I	II	III	IV
<i>Billions of current dollars (quarterly data seasonally adjusted at annual rates)</i>										
Gross Domestic Product	8,790.2	9,299.2	9,965.7	9,191.5	9,340.9	9,559.7	9,752.7	9,945.7	10,039.4	10,125.0
Gross National Product	8,750.0	9,236.2	--	9,181.8	9,327.3	9,546.3	9,745.0	9,937.4	10,030.5	--
Personal consumption expenditures	5,850.9	6,268.7	6,758.6	6,213.2	6,319.9	6,446.2	6,621.7	6,706.3	6,810.8	6,895.6
Durable goods	693.9	761.3	820.4	756.3	767.2	787.6	826.3	814.3	824.7	816.2
Nondurable goods	1,707.6	1,845.5	2,009.5	1,825.3	1,860.0	1,910.2	1,963.9	1,997.6	2,031.5	2,045.1
Food	845.8	897.8	953.0	886.6	900.4	926.1	938.4	948.3	959.9	965.5
Clothing and shoes	286.4	307.0	328.2	306.1	308.7	311.9	323.1	325.6	330.9	333.2
Services	3,449.3	3,661.9	3,928.7	3,631.5	3,692.7	3,748.5	3,831.6	3,894.4	3,954.6	4,034.2
Gross private domestic investment	1,549.9	1,650.1	1,834.1	1,607.9	1,659.1	1,723.7	1,755.7	1,852.6	1,869.3	1,858.9
Fixed investment	1,472.9	1,606.8	1,776.8	1,593.4	1,622.4	1,651.0	1,725.8	1,780.5	1,803.0	1,797.8
Change in private inventories	77.0	43.3	57.4	14.5	36.7	72.7	29.9	72.0	66.4	61.1
Net exports of goods and services	-151.5	-254.0	-370.4	-240.4	-280.5	-299.1	-335.2	-355.4	-389.5	-401.6
Government consumption expenditures and gross investment	1,540.9	1,634.4	1,743.4	1,610.9	1,642.4	1,688.8	1,710.4	1,742.2	1,748.8	1,772.2
<i>Billions of 1996 dollars (quarterly data seasonally adjusted at annual rates)¹</i>										
Gross Domestic Product	8,515.7	8,875.8	9,320.4	8,783.2	8,905.8	9,084.1	9,191.8	9,318.9	9,369.5	9,401.5
Gross National Product	8,515.1	8,868.3	--	8,776.7	8,895.4	9,075.0	9,187.7	9,313.7	9,362.8	--
Personal consumption expenditures	5,678.7	5,978.8	6,294.6	5,940.2	6,013.8	6,101.0	6,213.5	6,260.6	6,329.8	6,374.6
Durable goods	727.3	817.8	895.9	810.5	826.2	851.8	898.2	886.7	903.2	895.5
Nondurable goods	1,684.8	1,779.4	1,868.7	1,765.0	1,786.1	1,818.1	1,844.8	1,861.1	1,882.6	1,886.3
Food	812.8	845.9	877.1	838.0	846.7	866.0	872.2	876.5	879.1	880.6
Clothing and shoes	292.2	318.5	344.9	316.5	322.1	322.1	337.7	342.3	350.2	349.4
Services	3,269.4	3,390.8	3,544.6	3,373.4	3,411.1	3,443.0	3,487.2	3,526.7	3,559.3	3,605.3
Gross private domestic investment	1,566.8	1,669.7	1,841.7	1,623.1	1,680.8	1,751.6	1,773.6	1,863.0	1,871.1	1,858.9
Fixed investment	1,485.3	1,621.4	1,770.9	1,607.1	1,637.8	1,666.6	1,730.9	1,777.6	1,791.3	1,783.7
Change in private inventories	80.2	45.3	63.7	13.1	39.1	80.9	36.6	78.6	72.5	67.1
Net exports of goods and services	-221.0	-322.4	-412.5	-314.6	-342.6	-352.5	-376.8	-403.4	-427.7	-442.2
Government consumption expenditures and gross investment	1,486.4	1,536.1	1,579.2	1,519.9	1,537.8	1,569.5	1,565.1	1,583.7	1,578.2	1,589.6
GDP implicit price deflator (% change)	1.3	1.5	2.1	1.4	0.9	1.3	3.3	2.4	1.6	2.1
Disposable personal income (\$ bil.)	6,320.0	6,637.7	6,989.8	6,596.3	6,664.0	6,775.0	6,866.5	6,964.9	7,040.9	7,086.7
Disposable pers. income (1996 \$ bil.)	6,134.1	6,331.0	6,510.0	6,306.6	6,341.7	6,412.2	6,443.1	6,502.0	6,543.7	6,551.3
Per capita disposable pers. income (\$)	23,359	24,314	25,378	24,196	24,384	24,728	25,014	25,322	25,535	25,640
Per capita disp. pers. income (1996 \$)	22,672	23,191	23,636	23,133	23,203	23,404	23,472	23,639	23,732	23,703
U.S. resident population plus Armed Forces overseas (mil.) ²	270.5	272.9	275.4	272.5	273.2	273.9	274.4	275.0	275.6	276.3
Civilian population (mil.) ²	269.0	271.5	273.9	271.1	271.7	272.4	273.0	273.5	274.2	274.9
<i>Monthly data seasonally adjusted</i>										
	Annual			1999			2000			
	1998	1999	2000	Dec	Jul	Aug	Sep	Oct	Nov	Dec
Total industrial production (1992=100)	138.2	144.8	153.6	148.4	153.7	154.6	155.1	154.8	153.9	152.2
Leading economic indicators (1992=100)	105.4	108.8	--	110.3	109.8	109.7	109.8	109.4	109.0	108.3
Civilian employment (mil. persons) ³	131.5	133.5	135.2	134.5	134.9	134.9	135.1	135.5	135.5	135.8
Civilian unemployment rate (%) ³	4.5	4.2	4.0	4.1	4.0	4.1	3.9	3.9	4.0	4.0
Personal income (\$ bil. annual rate)	7,391.0	7,789.6	8,281.7	7,994.3	8,300.0	8,326.5	8,420.6	8,405.7	8,423.5	8,460.1
Money stock-M2 (daily avg.) (\$ bil.) ⁴	4,380.6	4,643.7	4,934.7	4,643.7	4,790.9	4,821.3	4,858.3	4,877.0	4,888.2	4,934.7
Three-month Treasury bill rate (%)	4.81	4.66	5.85	5.23	5.93	6.11	6.00	6.10	6.19	5.83
AAA corporate bond yield (Moody's) (%)	6.53	7.04	7.62	7.55	7.65	7.55	7.62	7.55	7.45	7.21
Total housing starts (1,000) ⁵	1,616.9	1,666.5	1,593.8	1,769	1,527	1,519	1,537	1,529	1,570	1,575
Business inventory/sales ratio ⁶	1.39	1.35	--	1.32	1.33	1.34	1.34	1.35	1.36	--
Sales of all retail stores (\$ bil.) ⁷	2,745.6	2,994.9	--	262.5	270.6	207.6	272.7	272.5	270.9	271.3
Nondurable goods stores (\$ bil.)	1,609.2	1,739.9	--	152.4	158.9	159.3	160.5	160.8	160.6	160.9
Food stores (\$ bil.)	435.4	458.3	--	40.3	40.4	40.4	40.6	40.8	40.8	41.1
Apparel and accessory stores (\$ bil.)	127.0	135.1	--	11.3	11.7	11.9	12.1	12.1	12.0	12.1
Eating and drinking places (\$ bil.)	266.4	285.4	--	24.8	25.7	25.5	25.8	25.7	25.8	25.9

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

Table 3—World Economic Growth

	Calendar year									
	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
	<i>Real GDP, annual percent change</i>									
World	1.5	3.0	2.7	3.1	3.4	2.1	2.8	4.1	2.7	3.5
less U.S.	1.1	2.7	2.7	3.0	3.1	1.3	2.3	3.8	3.0	3.5
Developed economies	1.0	2.8	2.3	2.7	3.1	2.4	2.7	3.6	2.0	2.9
less U.S.	0.2	2.3	2.1	2.2	2.4	1.5	2.0	2.9	2.1	2.7
United States	2.7	4.0	2.7	3.6	4.4	4.4	4.2	5.0	1.9	3.3
Canada	2.3	4.7	2.8	1.5	4.4	3.3	4.5	4.9	2.8	3.4
Japan	0.5	1.0	1.6	3.3	1.9	-1.1	0.8	2.0	1.0	2.1
Australia	3.7	5.2	3.8	4.1	4.0	5.3	4.7	4.3	2.9	3.6
European Union	-0.3	2.7	2.4	1.6	2.5	2.7	2.4	3.3	2.7	3.0
Transition economies	-6.6	-8.9	-1.5	-1.0	1.1	-1.5	2.3	5.7	3.9	4.0
Eastern Europe	1.0	2.9	5.7	4.2	2.4	1.8	2.0	3.8	4.0	4.5
Poland	3.8	5.2	7.0	6.1	6.9	4.8	4.0	4.2	4.0	4.6
Former Soviet Union	-10.0	-14.8	-5.9	-4.5	0.2	-4.0	2.5	7.2	3.8	3.6
Russia	-8.7	-12.6	-4.1	-3.5	0.8	-4.6	3.2	7.6	3.9	3.6
Developing economies	5.8	6.3	5.2	5.8	5.4	1.2	3.3	5.8	5.0	5.4
Asia	8.0	8.8	8.3	7.5	6.0	0.3	6.2	7.3	5.9	6.4
East Asia	9.2	9.7	8.8	7.8	7.0	2.0	7.5	8.3	6.4	6.8
China	13.5	12.6	10.5	9.6	8.8	7.8	7.1	8.1	7.9	8.6
Taiwan	7.0	7.1	6.4	6.1	6.7	4.6	5.4	6.4	4.6	5.0
Korea	5.5	8.2	8.9	6.7	5.0	-6.7	10.7	9.3	5.1	5.0
Southeast Asia	7.7	7.9	8.1	7.1	4.7	-6.2	3.5	5.7	4.3	5.4
Indonesia	7.3	7.5	8.2	7.8	4.7	-13.2	0.7	4.7	4.0	5.9
Malaysia	8.3	9.2	9.5	8.6	7.8	-7.2	5.6	8.6	5.9	5.8
Philippines	2.1	4.4	4.7	5.8	5.2	-0.5	3.2	4.0	2.2	3.8
Thailand	8.4	8.9	8.8	5.5	-0.4	-10.8	4.2	4.1	4.1	5.6
South Asia	4.5	7.1	6.9	7.0	4.9	5.3	5.6	6.0	6.1	6.6
India	5.0	8.1	7.4	7.7	5.7	5.6	6.3	6.4	6.4	7.1
Pakistan	1.9	3.9	5.1	4.7	-0.4	3.7	3.0	4.0	4.5	4.8
Latin America	4.3	5.3	1.3	3.6	5.1	1.9	0.0	4.0	4.2	4.2
Mexico	1.9	4.5	-6.2	5.1	6.8	4.8	3.7	7.2	4.7	4.5
Caribbean/Central	4.7	4.0	3.2	3.6	5.8	6.1	3.3	4.0	4.7	5.3
South America	4.9	5.6	3.1	3.3	4.8	1.2	-1.0	3.2	4.0	4.0
Argentina	5.9	5.8	-2.8	5.5	8.1	3.9	-3.1	0.1	1.2	1.9
Brazil	4.9	5.9	4.2	2.8	3.2	0.1	0.8	4.1	4.8	4.4
Colombia	5.4	5.8	5.2	2.0	2.8	0.6	-4.5	3.3	4.8	5.5
Venezuela	0.3	-2.3	3.7	-0.5	6.5	-0.7	-7.3	2.6	3.1	3.0
Middle East	3.9	-0.2	3.7	4.3	4.7	2.2	-1.4	4.6	3.3	4.1
Israel	5.6	6.9	7.0	4.6	2.2	1.9	2.1	5.9	3.4	3.7
Saudi Arabia	-0.6	0.5	0.5	1.4	1.9	2.3	-1.1	3.5	3.0	2.5
Turkey	8.7	-5.2	7.8	7.0	7.5	2.8	-5.1	6.1	3.5	6.5
North Africa	1.0	3.2	2.9	5.2	2.8	3.1	2.9	3.8	4.1	3.7
Egypt	0.5	3.9	1.5	6.5	2.6	5.6	3.9	4.4	4.7	4.1
Sub-Sahara	2.9	3.9	4.7	5.0	5.5	5.6	6.1	5.1	4.7	4.3
South Africa	1.4	2.6	3.9	4.3	2.9	1.3	2.2	3.3	3.6	3.3
	1.2	3.2	3.1	4.2	2.5	0.5	1.9	3.1	3.4	3.2
	<i>Consumer Prices, annual percent change</i>									
Developed Economies	3.1	2.6	2.6	2.4	2.1	1.5	1.4	2.3	2.1	---
Transition Economies	634.4	274.1	133.5	42.4	27.3	21.8	43.8	18.3	12.5	---
Developing Economies	48.7	54.7	23.2	15.3	9.7	10.1	6.6	6.2	5.2	---
Asia	10.8	16.0	13.2	8.3	4.7	7.5	2.4	2.4	3.3	---
Latin America	194.6	200.3	36.0	21.6	13.4	10.2	9.3	8.9	7.0	---
Middle East	26.6	33.2	39.2	26.9	25.4	25.3	20.4	17.4	9.5	---
Africa	39.0	54.8	35.2	30.2	13.6	9.1	11.8	12.7	8.6	---

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

Farm Prices

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

	Annual			2000						2001
	1998	1999	2000	Jan	Aug	Sep	Oct	Nov	Dec	Jan
<i>1990-92=100</i>										
Prices received										
All farm products	101	96	97	91	98	98	93	98	98	96
All crops	107	97	96	89	99	98	91	97	96	93
Food grains	103	90	86	85	81	82	88	92	94	94
Feed grains and hay	100	86	86	84	79	78	80	85	90	89
Cotton	107	85	82	71	85	83	92	96	96	89
Tobacco	104	102	106	111	97	105	104	113	113	117
Oil-bearing crops	107	83	85	82	79	84	81	84	88	82
Fruit and nuts, all	113	117	103	89	129	124	120	107	85	87
Commercial vegetables	121	109	121	97	127	142	124	143	112	119
Potatoes and dry beans	99	100	95	97	95	81	76	77	78	78
Livestock and products	97	95	98	94	97	98	96	100	101	100
Meat animals	79	83	94	90	92	90	92	92	95	97
Dairy products	119	110	94	92	96	98	96	96	100	103
Poultry and eggs	117	111	110	104	110	116	107	119	114	105
Prices paid										
Commodities and services, interest, taxes, and wage rates (PPITW)	115	115	120	118	119	120	121	121	122	122
Production items	113	111	116	114	115	116	117	117	118	119
Feed	110	100	101	98	95	98	100	102	106	109
Livestock and poultry	88	95	110	111	107	105	111	112	115	111
Seeds	122	121	123	121	124	124	124	124	124	124
Fertilizer	112	105	110	105	112	113	115	116	119	123
Agricultural chemicals	122	121	120	119	121	120	120	119	120	121
Fuels	84	93	136	113	132	153	152	155	146	143
Supplies and repairs	119	121	124	123	124	124	124	125	125	125
Autos and trucks	119	119	119	119	118	118	118	119	119	120
Farm machinery	132	135	137	137	139	137	137	137	137	137
Building material	118	120	121	121	121	121	121	121	121	121
Farm services	115	116	118	117	118	119	119	118	118	118
Rent	120	113	113	113	117	113	113	113	113	112
Interest payable per acre on farm real estate debt	104	106	110	110	110	110	110	110	110	116
Taxes payable per acre on farm real estate	119	120	123	123	123	123	123	123	123	123
Wage rates (seasonally adjusted)	129	135	140	140	136	136	143	143	143	143
Prod. items, interest, taxes & wage rates (PITW)	114	113	118	116	117	118	119	119	120	121
Ratio, prices received to prices paid (%)*	88	83	81	77	82	82	77	81	80	79
Prices received (1910-14=100)	644	608	615	576	623	623	591	624	624	613
Prices paid, etc. (parity index) (1910-14=100)	1,532	1,531	1,592	1,568	1,584	1,592	1,609	1,612	1,621	1,628
Parity ratio (1910-14=100) (%)*	42	40	39	37	39	39	37	39	38	38

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

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

	Annual ¹			2000						2001
	1997	1998	1999	Jan	Aug	Sep	Oct	Nov	Dec	Jan
Crops										
All wheat (\$/bu.)	3.38	2.65	2.55	2.51	2.41	2.44	2.68	2.83	2.87	2.88
Rice, rough (\$/cwt)	9.70	8.89	6.00	6.02	5.60	5.72	5.61	5.63	5.60	5.69
Corn (\$/bu.)	2.43	1.94	1.90	1.91	1.53	1.61	1.74	1.86	1.97	1.96
Sorghum (\$/cwt)	3.95	2.97	2.95	2.86	2.73	2.77	3.01	3.27	3.54	3.53
All hay, baled (\$/ton)	100.00	84.60	77.00	72.90	80.50	82.70	85.20	85.00	85.10	84.90
Soybeans (\$/bu.)	6.47	4.93	4.75	4.62	4.45	4.57	4.45	4.55	4.78	4.59
Cotton, upland (¢/lb.)	65.20	60.20	44.90	43.10	51.30	50.60	55.90	58.00	58.00	53.80
Potatoes (\$/cwt)	5.62	5.56	5.84	5.91	5.77	4.69	4.33	4.40	4.61	4.53
Lettuce (\$/cwt) ²	17.50	16.10	13.30	14.60	19.20	29.40	16.10	20.20	12.00	12.40
Tomatoes, fresh (\$/cwt) ²	31.70	35.20	25.90	22.50	30.70	27.80	42.60	46.10	33.00	48.80
Onions (\$/cwt)	12.60	13.80	9.78	6.79	14.60	11.70	11.00	10.60	11.60	13.50
Beans, dry edible (\$/cwt)	19.30	19.00	17.60	15.80	13.90	15.60	15.60	15.40	14.40	14.70
Apples for fresh use (¢/lb.)	22.10	17.30	21.20	21.80	19.50	23.30	21.80	18.50	18.10	16.10
Pears for fresh use (\$/ton)	276.00	291.00	294.00	435.00	280.00	317.00	377.00	378.00	301.00	340.00
Oranges, all uses (\$/box) ³	4.22	4.29	5.94	3.55	2.17	9.30	1.09	3.16	2.94	2.82
Grapefruit, all uses (\$/box) ³	1.93	2.00	3.22	5.03	4.45	6.71	5.17	3.09	2.20	1.87
Livestock										
Cattle, all beef (\$/cwt)	63.10	59.60	63.40	67.80	65.50	65.30	66.70	69.10	71.90	74.60
Calves (\$/cwt)	78.90	78.80	87.70	103.00	106.00	103.00	102.00	106.00	106.00	108.00
Hogs, all (\$/cwt)	52.90	34.40	30.30	36.80	43.80	41.50	41.40	36.40	39.80	37.10
Lambs (\$/cwt)	90.30	72.30	74.50	70.90	83.60	80.80	76.80	71.50	71.80	--
All milk, sold to plants (\$/cwt)	13.36	15.46	14.38	12.00	12.60	12.80	12.50	12.60	13.10	13.50
Milk, manuf. grade (\$/cwt)	12.17	14.24	12.86	10.70	10.70	11.20	10.80	10.40	10.80	10.90
Broilers, live (¢/lb.)	37.70	39.30	37.10	35.00	35.00	39.00	33.00	38.00	35.00	34.00
Eggs, all (¢/doz.) ⁴	70.30	66.80	62.70	58.00	68.10	60.30	68.50	74.00	83.30	67.20
Turkeys (¢/lb.)	39.90	38.00	40.80	36.40	42.90	44.50	45.90	47.00	40.50	36.60

-- = 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			2000						2001
	1998	1999	2000	Jan	Aug	Sep	Oct	Nov	Dec	Jan
	1982-84=100									
Consumer Price Index, all items	163.0	166.6	172.1	168.7	172.8	173.7	174.0	174.1	174.0	175.1
CPI, all items less food	163.6	167.0	172.9	169.2	173.5	174.6	174.9	175.0	174.7	175.9
All food	160.7	164.1	167.8	166.1	168.7	168.9	169.1	168.9	170.0	170.9
Food away from home	161.1	165.1	169.0	167.2	169.5	170.0	170.3	170.4	170.8	171.4
Food at home	161.1	164.2	167.9	166.3	168.9	169.0	169.1	168.8	170.2	171.3
Meats ¹	141.6	142.3	150.7	144.7	153.9	153.8	152.9	152.5	152.9	154.1
Beef and veal	136.5	139.2	148.1	143.2	150.4	150.2	148.9	149.3	150.9	154.8
Pork	148.5	145.9	156.5	147.8	162.1	161.4	160.7	158.0	157.2	156.7
Poultry	157.1	157.9	159.8	159.9	161.3	160.9	162.1	157.2	160.7	160.8
Fish and seafood	181.7	185.3	190.4	186.0	190.7	191.9	192.8	189.6	189.5	192.8
Eggs	135.4	128.1	131.9	133.9	130.5	132.0	136.1	140.4	145.5	150.4
Dairy and related products ²	150.8	159.6	160.7	160.4	161.0	161.6	161.9	161.4	161.5	163.6
Fats and oils ³	146.9	148.3	147.4	147.0	148.9	148.7	149.7	146.5	150.2	153.0
Fresh fruits	246.5	266.3	258.3	266.6	252.2	258.2	262.6	262.8	269.0	261.8
Fresh vegetables	215.8	209.3	219.4	223.0	217.3	218.9	218.6	224.6	240.2	235.9
Potatoes	185.2	193.1	196.3	196.6	210.7	195.4	191.5	181.2	179.4	186.6
Cereals and bakery products	181.1	185.0	188.3	185.6	189.9	188.6	190.1	189.0	190.7	191.1
Sugar and sweets	150.2	152.3	154.0	154.8	154.6	154.6	153.9	153.0	153.5	155.7
Nonalcoholic beverages ⁴	133.0	134.3	137.8	137.1	138.2	138.0	137.4	137.9	136.7	139.4
Apparel										
Footwear	128.0	125.7	123.8	121.6	120.7	124.9	125.3	125.4	123.8	121.4
Tobacco and smoking products	274.8	355.8	394.9	375.1	394.1	408.0	396.7	411.0	396.6	404.3
Alcoholic beverages	165.7	169.7	174.7	172.4	175.6	175.5	175.9	176.4	176.5	177.2

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)

See *Agricultural Outlook*, January-February 2001

Farm-Retail Price Spreads

Table 8—Farm-Retail Price Spreads

	Annual			1999		2000				
	1998	1999	2000	Dec	Jul	Aug	Sep	Oct	Nov	Dec
Market basket ¹										
Retail cost (1982-84=100)	163.1	167.3	170.6	168.7	170.8	171.7	171.9	172.3	171.9	174.0
Farm value (1982-84=100)	103.3	98.3	97.0	95.2	96.1	97.3	98.8	97.4	100.6	101.4
Farm-retail spread (1982-84=100)	195.4	204.5	210.2	208.3	211.0	211.8	211.3	212.6	210.4	213.1
Farm value-retail cost (%)	22.2	20.6	19.9	19.8	19.7	19.8	20.1	19.8	20.5	20.4
Meat products										
Retail cost (1982-84=100)	141.6	142.3	150.4	145.3	152.7	153.9	153.8	152.9	152.5	152.9
Farm value (1982-84=100)	84.8	81.6	88.4	85.7	88.9	89.4	89.8	89.9	90.7	90.7
Farm-retail spread (1982-84=100)	200.0	204.7	214.0	206.5	218.1	220.1	219.4	217.5	215.9	216.7
Farm value-retail cost (%)	30.3	29	29.8	29.9	29.5	29.4	29.6	29.8	30.1	30.1
Dairy products										
Retail cost (1982-84=100)	150.8	159.6	160.7	162.1	160.5	161.0	161.6	161.9	161.4	161.5
Farm value (1982-84=100)	113.0	107.9	98.8	92.8	101.7	101.1	102.9	101.2	102.1	106.1
Farm-retail spread (1982-84=100)	185.6	207.2	217.7	226.0	214.7	216.3	215.8	217.9	216.1	212.6
Farm value-retail cost (%)	36.0	32.4	29.5	27.5	30.4	30.1	30.5	30.0	30.3	31.5
Poultry										
Retail cost (1982-84=100)	157.1	157.9	159.8	157.5	161.8	161.3	160.9	162.1	157.2	160.7
Farm value (1982-84=100)	126.1	119	117.4	120.2	121.9	115.6	127.2	111.6	125.7	114.5
Farm-retail spread (1982-84=100)	192.9	202.7	208.7	200.5	207.7	213.9	199.7	220.2	193.4	213.9
Farm value-retail cost (%)	42.9	40.3	39.3	40.8	40.3	38.4	42.3	36.9	42.8	38.1
Eggs										
Retail cost (1982-84=100)	137.1	128.1	131.9	124.0	125.5	130.5	132.0	136.1	140.4	145.5
Farm value (1982-84=100)	89.6	74.9	80.6	74.4	64.3	87.1	71.8	88.9	100.4	119.3
Farm-retail spread (1982-84=100)	222.5	223.7	223.9	213.0	235.5	208.4	240.1	220.9	212.3	192.6
Farm value-retail cost (%)	42.0	37.6	39.3	38.6	32.9	42.9	35.0	42.0	45.9	52.7
Cereal and bakery products										
Retail cost (1982-84=100)	181.1	185.0	188.3	185.9	189.6	189.9	188.6	190.1	189.0	190.7
Farm value (1982-84=100)	94.4	82.5	75.2	75.1	70.0	71.8	72.3	76.5	79.6	77.4
Farm-retail spread (1982-84=100)	193.2	199.2	204.0	201.4	206.3	206.4	204.8	205.9	204.3	206.5
Farm value-retail cost (%)	6.4	5.5	4.9	4.9	4.5	4.6	4.7	4.9	5.2	5.0
Fresh fruit										
Retail cost (1982-84=100)	258.2	294.3	284.3	294.8	272.2	277.7	285.1	289.7	290.4	297.4
Farm value (1982-84=100)	141.3	153.7	141.3	144.2	115.8	132.8	140.4	140.4	140.5	143.7
Farm-retail spread (1982-84=100)	312.2	359.3	350.3	364.3	344.4	344.6	351.9	358.6	359.6	368.4
Farm value-retail cost (%)	17.3	16.5	15.7	15.5	13.4	15.1	15.6	14.9	15.3	15.3
Fresh vegetables										
Retail cost (1982-84=100)	215.8	209.3	219.4	214.0	216.7	217.3	218.9	218.6	224.6	240.2
Farm value (1982-84=100)	124.5	118.1	121.4	121.1	127.0	127.6	125.2	109.2	126.9	129.2
Farm-retail spread (1982-84=100)	262.7	256.2	269.8	261.8	262.8	263.4	267.1	274.9	274.8	297.3
Farm value-retail cost (%)	19.6	19.2	18.8	19.2	19.9	19.9	19.4	17.0	19.2	18.3
Processed fruits and vegetables										
Retail cost (1982-84=100)	150.6	154.8	153.6	154.7	154.5	155.3	154.2	155.7	152.6	153.8
Farm value (1982-84=100)	115.1	113.5	111.0	111.7	110.4	109.9	111.2	111.2	110.6	110.3
Farm-retail spread (1982-84=100)	161.7	167.7	166.9	168.1	168.3	169.5	167.6	169.7	165.7	167.4
Farm value-retail cost (%)	18.2	17.4	17.2	17.2	17.0	16.8	17.1	17.0	17.2	17.0
Fats and oils										
Retail cost (1982-84=100)	146.9	148.3	147.4	145.1	148.1	148.9	148.7	149.7	146.5	150.2
Farm value (1982-84=100)	118.9	89	80.9	78.2	80.6	79.1	78.6	76.6	76.2	73.8
Farm-retail spread (1982-84=100)	157.2	170	171.9	169.7	172.9	174.6	174.5	176.6	172.4	178.3
Farm value-retail cost (%)	21.8	16.2	14.8	14.5	14.6	14.3	14.2	13.8	14.0	13.2

See footnotes at end of table, next page.

Table 8—Farm-Retail Price Spreads (continued)

	1998	1999	2000	Dec	Jul	Aug	Sep	Oct	Nov	Dec
Beef, all fresh retail value (cents/lb.)	253.3	260.5	275.3	265.4	279.5	280.2	280.9	280.6	279.7	270.2
Beef, Choice										
Retail value (cents/lb.) ²	277.1	287.8	306.4	301.8	310.0	309.9	313.0	311.8	310.3	310.1
Wholesale value (cents/lb.) ³	153.8	171.6	182.3	181.8	179.6	172.6	168.6	174.4	182.8	197.6
Net farm value (cents/lb.) ⁴	130.8	141.1	149.0	147.9	144.7	138.5	136.6	143.6	152.4	163.5
Farm-retail spread (cents/lb.)	146.3	146.7	157.4	153.9	165.3	171.4	176.4	168.2	157.9	146.6
Wholesale-retail (cents/lb.) ⁵	123.3	116.2	124.1	120.0	130.4	137.3	144.4	137.4	127.5	112.5
Farm-wholesale (cents/lb.) ⁶	23.0	30.5	33.3	33.9	34.9	34.1	32.0	30.8	30.4	34.1
Farm value-retail value (%)	47.2	49.0	48.6	49.0	46.7	44.7	43.6	46.1	49.1	52.7
Pork										
Retail value (cents/lb.) ²	242.7	241.5	258.2	246.1	262.3	265.6	265.0	262.1	259.3	262.5
Wholesale value (cents/lb.) ³	97.3	99.0	114.5	103.6	123.1	117.3	111.9	114.3	108.1	111.1
Net farm value (cents/lb.) ⁴	61.2	60.4	79.4	66.8	90.0	80.8	77.2	76.3	67.0	73.5
Farm-retail spread (cents/lb.)	181.5	181.1	178.8	179.3	172.3	184.8	187.8	185.8	192.3	189.0
Wholesale-retail (cents/lb.) ⁵	145.4	142.5	143.7	142.5	139.2	148.3	153.1	147.8	151.2	151.4
Farm-wholesale (cents/lb.) ⁶	36.1	38.6	35.1	36.8	33.1	36.5	34.7	38.0	41.1	37.6
Farm value-retail value (%)	25.2	25.0	30.8	27.1	34.3	30.4	29.1	29.1	25.8	28.0

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

Table 9—Price Indexes of Food Marketing Costs

	Annual			1999			2000			
	1998	1999	2000	II	III	IV	I	II	III	IV
1987=100*										
Labor—hourly earnings and benefits	490.4	503.3	514.0	503.5	504.2	506.7	508.2	512.0	514.1	521.8
Processing	499.3	511.4	525.0	512.1	513.4	515.6	518.1	523.4	526.9	531.5
Wholesaling	552.5	564.6	589.4	572.8	575.2	580.0	578.9	586.4	587.3	601.0
Retailing	454.1	465.8	469.9	464.2	463.8	465.4	467.1	467.8	465.2	477.3
Packaging and containers	395.5	399.4	412.0	396.4	403.0	407.7	410.3	410.6	413.5	413.7
Paperboard boxes and containers	365.2	373.0	407.7	368.3	380.2	387.8	391.9	413.0	412.4	413.5
Metal cans	487.9	486.6	452.5	486.6	486.6	486.6	489.5	440.1	440.1	440.1
Paper bags and related products	432.9	440.9	470.4	435.7	446.3	455.8	457.3	472.4	477.6	474.5
Plastic films and bottles	322.8	324.2	336.7	321.4	325.9	329.6	329.4	330.6	342.4	344.3
Glass containers	446.8	447.1	450.8	447.8	447.0	445.8	450.1	451.1	451.1	450.8
Metal foil	232.0	227.3	232.4	226.1	226.7	228.0	229.8	231.3	233.8	234.8
Transportation services	428.3	394.0	394.3	394.2	394.2	394.2	392.3	393.3	394.6	396.9
Advertising	624.5	623.7	635.7	622.9	623.9	625.6	633.6	635.0	635.7	638.6
Fuel and power	619.7	651.5	841.1	627.3	681.1	711.9	816.5	822.2	866.1	859.6
Electric	492.1	489.4	498.2	484.0	505.9	488.5	477.2	487.0	523.8	504.9
Petroleum	457.0	565.9	1,135.8	504.0	613.2	758.1	1,114.0	1,102.2	1,160.6	1,166.4
Natural gas	1,239.4	1,235.6	1,275.4	1,222.8	1,272.7	1,240.4	1,235.3	1,259.8	1,300.7	1,305.7
Communications, water and sewage	307.6	309.3	309.1	308.5	308.9	310.6	310.3	307.8	308.7	309.5
Rent	260.5	256.9	258.2	257.3	256.4	256.4	256.8	258.0	259.1	259.0
Maintenance and repair	529.3	541.6	561.2	540.7	542.5	545.3	552.2	558.3	564.7	569.7
Business services	522.9	531.9	544.6	530.2	533.3	536.1	540.3	543.2	545.9	548.8
Supplies	332.3	327.7	348.5	325.9	327.1	331.7	365.6	338.2	344.5	345.8
Property taxes and insurance	598.3	619.7	654.6	615.2	622.8	631.3	639.8	647.4	658.6	672.6
Interest, short-term	103.7	103.7	115.4	96.7	109.7	115.2	111.3	116.6	117.7	116.0
Total marketing cost index	467.2	472.2	491.5	470.7	475.2	479.1	486.7	488.8	493.1	497.2

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

Livestock & Products

Table 10—U.S. Meat Supply & Use

	Beg. stocks	Produc- tion ¹	Imports	Total supply	Exports	Ending stocks	Consumption		Conversion factor ³	Primary market price ⁴
							Total	Per capita ²		
	Million lbs. ⁵						Lbs.			\$/cwt
Beef										
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	2,417	411	26,932	69	0.700	65.56
2000	411	26,882	3,076	30,369	2,510	497	27,362	70	0.700	70
2001	497	25,831	3,080	29,408	2,530	365	26,513	67	0.700	75
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	1,278	489	18,952	54	0.776	34.00
2000	489	18,935	967	20,391	1,292	491	18,608	52	0.776	45
2001	491	19,280	985	20,756	1,315	525	18,916	53	0.776	41
Veal ⁶										
1997	7	334	0	341	0	8	333	1	0.83	82
1998	8	262	0	270	0	5	265	1	0.83	82
1999	5	235	0	240	0	5	235	1	0.83	90
2000	5	225	0	230	0	5	225	1	0.83	106
2001	5	208	0	213	0	4	209	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	232	131	372	6	13	353	1	0.89	79
2001	13	220	135	368	4	10	354	1	0.89	81
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	3,700	914	46,477	125	--	--
2000	914	46,274	4,174	51,362	3,808	1,006	46,548	124	--	--
2001	1,006	45,539	4,200	50,745	3,849	904	45,992	121	--	--
¢/lb										
Broilers										
1997	641	27,041	5	27,687	4,664	607	22,416	72	0.859	59
1998	607	27,612	5	28,225	4,673	711	22,841	73	0.859	63
1999	711	29,468	4	30,183	4,920	796	24,468	77	0.859	58
2000	796	30,200	6	31,001	5,548	798	24,655	77	0.859	56
2001	798	30,730	4	31,532	5,700	855	24,977	77	0.859	57
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	531	0	540	227	9	304	1	1.0	--
2001	9	524	0	535	200	10	325	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	5,332	1	5,587	444	242	4,902	18	1.0	71
2001	242	5,528	1	5,771	460	275	5,035	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	5,692	1,058	29,531	96	--	--
2000	1,058	36,063	9	37,129	6,219	1,049	29,861	96	--	--
2001	1,049	36,782	7	37,838	6,360	1,140	30,337	97	--	--
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	9,392	1,972	76,008	220	--	--
2000	1,972	82,337	4,183	88,491	10,026	2,055	76,409	220	--	--
2001	2,055	82,321	4,207	88,583	10,209	2,044	76,329	218	--	--

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

Table 11—U.S. Egg Supply & Use

	Beg. stocks	Production	Imports	Total supply	Exports	Hatching use	Ending stocks	Consumption		Primary market price*
								Total	Per capita	
	Million doz.							No.	¢/doz.	
1994	10.7	6,177.6	3.7	6,192.0	187.6	805.4	14.9	5,184.1	238.7	67.3
1995	14.9	6,215.6	4.1	6,234.6	208.9	847.2	11.2	5,167.3	235.6	72.9
1996	11.2	6,350.7	5.4	6,367.3	253.1	863.8	8.5	5,241.8	236.8	88.2
1997	8.5	6,473.1	6.9	6,488.5	227.8	894.7	7.4	5,358.6	240.1	81.2
1998	7.4	6,657.9	5.8	6,671.2	218.8	921.8	8.4	5,522.2	244.9	75.8
1999	8.4	6,912.0	7.4	6,927.8	161.7	941.7	7.6	5,816.7	255.7	65.6
2000	7.6	7,034.6	8.9	7,051.1	167.6	940.2	11.4	5,931.9	258.5	68.9
2001	11.4	7,085.0	5.0	7,101.4	170.0	950.0	5.0	5,976.4	258.2	75.5

Values for the last year are forecasts. Values for previous year are preliminary. * Cartoned grade A large eggs, New York.

Information contact: LaVerne Williams (202) 694-5190

Table 12—U.S. Milk Supply & Use¹

Production	Farm use	Commercial		Imports	Total commercial supply	Commercial			All milk price ¹	CCC net removals		
		Farm market-ings	Beg. stocks			CCC net re-movals	Ending stocks	Disap-pear-ance		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	167.7	1.3	166.3	6.1	4.5	177.0	0.8	6.8	169.3	12.34	8.6	5.5
2001	--	--	--	--	--	--	--	--	--	--	--	--

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	Dec	Jul	Aug	Sep	Oct	Nov	Dec
Broilers										
Federally inspected slaughter certified (mil. lb.)	27,270.7	27,862.7	29,741.4	2,466.0	2,417.6	2,743.7	2,341.6	2,723.3	2,553.6	2,349.3
Wholesale price, 12-city (cents/lb.)	58.8	63.0	58.1	58.4	56.6	55.5	58.4	57.2	58.2	57.3
Price of grower feed (\$/ton) ¹	157.7	129.0	102.9	99.5	97.4	94.6	97.5	98.5	102.7	107.7
Broiler-feed price ratio ²	4.7	6.3	7.2	7.4	7.7	7.4	8	6.7	7.4	6.5
Stocks beginning of period (mil. lb.)	641.3	606.8	711.1	787.1	813.5	817.2	801.7	808.9	752.0	748.4
Broiler-type chicks hatched (mil.)	8,321.6	8,491.9	8,715.7	748.4	739.9	739.9	704.9	711.0	674.2	738.8
Turkeys										
Federally inspected slaughter certified (mil. lb.)	5,477.9	5,280.6	5,296.5	430	425.3	482.8	423.5	508.2	482.3	402.4
Wholesale price, Eastern U.S. 8-16 lb. young hens (cents/lb.)	64.9	62.2	69.0	72.4	71.6	73.6	76.5	78.7	79.6	70.3
Price of turkey grower feed (\$/ton) ¹	142.7	115.9	95	91.7	88.2	86.7	89.0	91.8	95.9	100
Turkey-feed price ratio ²	5.6	6.7	8.6	9.2	9.5	9.9	10.0	10.0	9.8	8.1
Stocks beginning of period (mil. lb.)	328.0	415.1	304.3	252.3	503.6	524.1	524.8	527.8	476.9	260.8
Poultz placed in U.S. (mil.)	321.5	297.8	296.1	24.4	27.1	24.8	23	23.7	23.4	23.2
Eggs										
Farm production (mil.)	77,677	79,927	82,943	7,279	7,061	7,104	6,854	7,130	7,027	7,275
Average number of layers (mil.)	304	313	322.9	328.8	326	326	326.2	328	331	331.9
Rate of lay (eggs per layer on farms)	255.3	255.3	256.8	22.1	21.7	21.8	21	21.7	21.3	21.9
Cartoned price, New York, grade A large (cents/doz.) ³	81.2	75.8	65.6	65.4	61.9	72.5	67.1	73.0	81.4	94.9
Price of laying feed (\$/ton) ¹	160.0	137.7	125.4	121.4	124.3	104.8	117.1	110.5	111.3	111.1
Egg-feed price ratio ²	8.8	9.8	9.8	10.1	9.2	13.0	10.3	12.4	13.3	15.0
Stocks, first of month										
Frozen (mil. doz.)	7.7	7.4	8.4	6.4	6.6	10.9	11.3	10.9	12.5	11.6
Replacement chicks hatched (mil.)	424.5	438.3	450.9	33	33.1	34.3	36.3	35.2	32.6	35

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	Dec	Jul	Aug	Sep	Oct	Nov	Dec
Class III (BFP before 2000) 3.5% fat (\$/cwt.)	12.05	14.20	12.43	9.63	10.66	10.13	10.76	10.02	8.57	9.37
Wholesale prices										
Butter, Central States (cents/lb.) ¹	116.2	177.6	125.2	94.2	120.3	120.3	119.1	116.9	151.7	150.0
Am. cheese, Wis. assembly pt. (cents/lb.)	132.4	158.1	142.3	115.7	125.2	125.5	133.4	109.4	107.5	113.0
Nonfat dry milk (cents/lb.) ²	110.0	106.9	103.5	101.7	102.2	102.3	102.4	102.3	103.1	104.3
USDA net removals										
Total (mil. lb.) ³	1,090.3	365.6	343.5	55.1	54.5	45.9	37.8	33.8	83.7	49.0
Butter (mil. lb.)	38.4	6.3	3.7	1.0	0.2	0.0	0.0	0.0	0.0	0.0
Am. cheese (mil. lb.)	11.3	8.2	4.6	0.4	2.1	1.5	0.9	1.2	6.7	4.2
Nonfat dry milk (mil. lb.)	298.0	326.4	540.6	68.8	42.1	50.5	40.1	50.4	45.5	44.8
Milk										
Milk prod. 20 states (mil. lb.)	133,314	134,900	140,062	11,935	12,205	11,928	11,451	11,813	11,385	11,855
Milk per cow (lb.)	17,180	17,501	18,110	1,539	1,561	1,525	1,464	1,511	1,459	1,519
Number of milk cows (1,000)	7,760	7,708	7,734	7,756	7,821	7,820	7,820	7,817	7,805	7,803
U.S. milk production (mil. lb.) ⁴	156,091	157,348	162,716	13,855	14,123	13,797	13,241	13,714	13,212	13,752
Stocks, beginning ³										
Total (mil. lb.)	4,714	4,907	5,301	6,036	10,376	10,676	9,581	8,736	7,549	6,863
Commercial (mil. lb.)	4,704	4,889	5,274	5,992	10,255	10,541	9,446	8,603	7,419	6,729
Government (mil. lb.)	10	18	28	44	121	135	134	133	130	134
Imports, total (mil. lb.) ³	2,698	4,588	4,772	431	448	443	300	359	383	--
Commercial disappearance (mil. lb.) ³	156,118	159,779	164,917	13,972	14,117	15,177	14,235	15,110	14,092	--
Butter										
Production (mil. lb.)	1,151.2	1,168.0	1,275.0	119.8	87.0	85.6	91.6	106.2	105.1	115.9
Stocks, beginning (mil. lb.)	13.4	20.5	25.9	29.9	144.4	136.5	100.8	84.5	57.6	27.0
Commercial disappearance (mil. lb.)	1,108.7	1,222.5	1,308.6	124.4	101.8	125.6	109.2	135.2	137.0	--
American cheese										
Production (mil. lb.)	3,285.6	3,314.7	3,576.5	309.7	321.7	301.6	287.6	295.4	283.8	299.4
Stocks, beginning (mil. lb.)	379.6	410.3	407.6	448.2	570.2	613.2	592.8	562.7	523.9	503.9
Commercial disappearance (mil. lb.)	3,269.0	3,338.6	3,586.1	307.2	279.9	329.1	318.6	333.1	300.1	--
Other cheese										
Production (mil. lb.)	4,044.9	4,177.5	4,367.5	396.1	368.3	384.9	367.5	396.2	388.1	390.6
Stocks, beginning (mil. lb.)	107.3	70.0	109.5	143.5	212.0	221.5	207.2	181.8	157.9	183.3
Commercial disappearance (mil. lb.)	4,366.6	4,452.0	4,678.1	416.9	388.0	429.6	423.3	457.7	402.9	--
Nonfat dry milk										
Production (mil. lb.)	1,271.6	1,135.4	1,378.2	126.1	121.7	104.5	96.3	100.6	98.9	119.0
Stocks, beginning (mil. lb.)	71.1	103.3	56.9	102.2	170.7	189.6	152.1	130.0	120.8	109.9
Commercial disappearance (mil. lb.)	894.1	866.9	791.1	44.9	61.5	92.2	78.8	59.6	65.0	--
Frozen dessert										
Production (mil. gal.) ⁵	1,290.0	1,324.3	1,311.8	84.8	127.4	123.1	103.3	103.0	87.1	79.6
	Annual			1999			2000			
	1998	1999	2000	II	III	IV	I	II	III	IV
Milk production (mil. lb.)	157,348	162,716	167,658	42,021	39,766	40,440	42,630	43,189	41,161	40,678
Milk per cow (lb.)	17,189	17,772	18,204	4,590	4,336	4,410	4,640	4,688	4,460	4,416
No. of milk cows (1,000)	9,154	9,156	9,210	9,155	9,171	9,171	9,188	9,213	9,229	9,211
Milk-feed price ratio	1.97	2.03	1.75	1.81	2.12	1.99	1.68	1.67	1.84	1.81
Returns over concentrate costs (\$/cwt milk)	12.15	11.40	9.40	9.90	11.90	10.95	8.95	9.05	9.85	9.80

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

Table 15—Wool

	Annual			1999			2000			
	1997	1998	1999	II	III	IV	I	II	III	IV
U.S. wool price (¢/lb.) ¹	238	162	110	116	110	98	97	120	117	96
Imported wool price (¢/lb.) ²	206	164	136	142	133	125	133	139	139	136
U.S. mill consumption, scoured										
Apparel wool (1,000 lb.)	130,386	98,373	65,468	16,815	15,793	13,633	17,142	15,655	14,184	--
Carpet wool (1,000 lb.)	13,576	16,331	15,017	3,581	3,183	2,966	3,784	3,327	3,650	--

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

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

Table 16—Meat Animals

	Annual			2000						2001
	1998	1999	2000	Jan	Aug	Sep	Oct	Nov	Dec	Jan
Cattle on feed (7 states, 1000+ head capacity)										
Number on feed (1,000 head) ¹	9,455	9,021	9,752	9,752	8,812	8,972	9,502	10,192	10,213	10,176
Placed on feed (1,000 head)	19,697	21,446	21,875	1,931	2,091	2,286	2,387	1,678	1,440	1,965
Marketings (1,000 head)	19,440	20,124	20,644	1,747	1,895	1,708	1,647	1,568	1,500	1,751
Other disappearance (1,000 head)	691	676	907	51	36	48	50	89	77	68
Market prices (\$/cwt)										
Slaughter cattle										
Choice steers, 1,100-1,300 lb.										
Texas	61.75	65.89	69.86	69.07	65.02	65.43	68.51	72.19	76.41	78.79
Neb. direct	61.47	65.56	69.65	67.97	64.69	65.14	67.93	72.16	77.01	78.46
Boning utility cows, Sioux Falls	36.20	38.40	41.71	39.19	43.00	41.88	38.25	39.38	42.19	41.75
Feeder steers										
Medium no. 1, Oklahoma City										
600-650 lb.	78.13	82.64	94.36	93.13	94.35	89.27	89.45	93.73	95.29	92.96
750-800 lb.	71.79	76.39	88.58	86.85	85.85	83.64	85.96	89.80	90.53	87.23
Slaughter hogs										
Barrows and gilts, 51-52 percent lean										
National Base converted to live equiv.	34.72	34.00	34.02	44.70	45.35	43.49	43.09	37.84	41.40	38.61
Sows, Iowa, S.MN 1-2 300-400 lb.	20.29	19.26	29.79	24.60	32.55	30.72	31.45	26.90	29.59	27.89
Slaughter sheep and lambs										
Lambs, Choice, San Angelo	74.20	75.96	79.40	73.71	82.20	82.00	77.50	76.70	75.33	81.25
Ewes, Good, San Angelo	40.86	42.45	46.23	45.67	41.40	43.43	43.18	45.85	47.17	51.88
Feeder lambs										
Choice, San Angelo	79.86	80.74	95.86	84.63	91.70	93.89	92.00	103.65	102.17	109.63
Wholesale meat prices, Midwest										
Boxed beef cut-out value										
Choice, 700-800 lb.	98.60	110.90	117.45	113.74	110.33	108.56	112.66	119.09	129.60	128.00
Select, 700-800 lb.	92.19	101.99	101.99	106.09	106.59	102.08	102.02	110.29	120.50	121.70
Canner and cutter cow beef	61.49	66.51	72.57	69.86	73.04	69.57	70.08	72.11	73.55	--
Pork cutout	53.08	53.45	64.07	57.65	65.69	63.22	62.40	56.75	60.15	58.62
Pork loins, bone-in, 1/4 " trim, 14-19 lb.	101.63	100.38	117.13	99.29	120.45	119.22	119.90	104.19	114.68	110.80
Pork bellies, 12-14 lb.	52.38	57.12	77.46	80.45	75.64	63.94	57.83	54.97	58.36	66.61
Hams, bone-in, trimmed, 20-27 lb.	45.85	45.18	52.02	45.91	59.47	59.87	55.94	51.02	47.98	45.07
All fresh beef retail price	253.28	260.50	275.30	265.70	280.20	280.90	280.60	279.60	279.70	291.40
Commercial slaughter (1,000 head) ²										
Cattle	35,465	36,150	36,247	2,937	3,260	3,035	3,142	2,931	2,719	--
Steers	17,428	17,932	18,060	1,432	1,681	1,516	1,479	1,393	1,305	--
Heifers	11,448	11,868	12,041	980	1,061	1,022	1,100	972	896	--
Cows	5,983	5,710	5,522	474	459	444	508	516	475	--
Bull and stags	606	639	624	51	59	52	54	50	43	--
Calves	1,458	1,282	1,132	93	100	93	97	92	92	--
Sheep and lambs	3,804	3,701	3,455	282	283	269	279	296	301	--
Hogs	101,029	101,544	97,955	8,141	8,622	8,118	8,881	8,757	8,094	--
Barrows and gilts	97,025	97,732	94,585	7,881	8,310	7,840	8,579	8,458	7,829	--
Commercial production (mil. lb.)										
Beef	25,653	26,386	26,776	2,178	2,437	2,275	2,345	2,169	1,998	--
Veal	252	226	216	17	17	17	18	18	18	--
Lamb and mutton	248	244	230	19	18	17	18	20	21	--
Pork	18,981	19,278	18,905	1,570	1,641	1,552	1,715	1,712	1,583	--
	Annual			1999		2000				2001
	1998	1999	2000	III	IV	I	II	III	IV	I
Hogs and pigs (U.S.) ³										
Inventory (1,000 head) ¹	61,158	62,206	59,342	60,776	60,776	59,342	57,782	59,137	60,065	59,848
Breeding (1,000 head) ¹	6,957	6,682	6,234	6,515	6,301	6,234	6,190	6,234	6,246	6,275
Market (1,000 head) ¹	54,200	55,523	53,109	54,380	54,474	53,109	51,593	52,904	53,280	53,573
Farrowings (1,000 head)	12,061	11,641	11,462	2,920	2,844	2,798	2,890	2,899	2,875	2,906
Pig crop (1,000 head)	105,004	102,354	101,354	25,862	24,973	24,522	25,610	25,686	25,536	--
Cattle on feed, 7 states (1,000 head) ⁴										
Steers and steer calves	5,803	5,432	5,432	4,849	5,286	5,768	5,736	5,326	5,584	5,936
Heifers and heifer calves	3,615	3,552	3,552	3,302	3,479	3,942	3,800	3,602	3,877	4,081
Cows and bulls	59	37	37	44	28	42	37	31	41	59

-- = 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	394	990	1,042	2,427	946	2.65
1999/00*	--	62.7	53.8	42.7	2,299	3,339	284	1,016	1,090	2,390	950	2.48
2000/01*	--	62.5	53.0	41.9	2,223	3,268	300	1,029	1,100	2,429	839	2.60-2.70
		Mil. acres		Lb./acre				Mil. cwt (rough equiv)				\$/cwt
Rice ⁶												
1996/97	--	2.8	2.8	6,120.0	171.6	207.2	--	6/ 101.6	78.3	179.9	27.2	9.96
1997/98	--	3.1	3.1	5,897.0	183.0	219.5	--	6/ 103.9	87.7	191.6	27.9	9.70
1998/99	--	3.3	3.3	5,663.0	184.4	223.0	--	6/ 114.0	86.8	200.9	22.1	8.89
1999/00*	--	3.5	3.5	5,866.0	206.0	238.2	--	6/ 121.9	88.9	210.7	27.5	5.93
2000/01*	--	3.1	3.0	6,278.0	191.1	228.6	--	6/ 123.0	81.0	204.0	24.6	5.50-5.90
		Mil. acres						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	9,431	11,232	5,664	1,913	1,937	9,515	1,718	1.82
2000/01*	--	79.6	72.7	137.1	9,968	11,696	5,775	1,980	2,050	9,805	1,891	1.70-1.90
		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	284	55	256	595	65	1.57
2000/01*	--	9.2	7.7	60.9	470	535	240	50	200	490	45	1.65-1.85
		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	4.7	59.2	280	450	136	172	30	338	111	2.13
2000/01*	--	5.8	5.2	61.1	318	454	120	172	55	347	107	2.05-2.25
		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	326	180	68	2	250	76	1.12
2000/01*	--	4.5	2.3	64.2	149	325	175	68	2	245	80	1.05-1.15
		Mil. acres		Bu./acre				Mil. bu.				\$/bu.
Soybeans ⁷												
1996/97	--	62.6	61.6	35.3	2,177	2,516	112	1,370	851	2,333	183	6.72
1997/98	--	70.0	69.1	38.9	2,689	2,826	156	1,597	873	2,626	200	6.47
1998/99	--	72.0	70.4	38.9	2,741	2,944	201	1,590	805	2,595	348	4.93
1999/00*	--	73.7	72.4	36.6	2,654	3,006	164	1,579	973	2,716	290	4.63
2000/01*	--	74.5	72.7	38.1	2,770	3,063	168	1,590	960	2,718	345	4.50-4.80
								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*	--	--	--	--	17,824	19,427	--	16,055	1,376	17,432	1,995	15.60
2000/01*	--	--	--	--	17,920	19,990	--	16,400	1,300	17,700	2,290	12.75-14.25
								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	--	30,657	7,122	37,779	330	138.5
1999/00*	--	--	--	--	37,623	38,003	--	30,378	7,331	37,710	293	167.7
2000/01*	--	--	--	--	38,132	38,475	--	31,200	7,000	38,200	275	170-185

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											
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	--	10.2	6.8	17.0	3.9	45.0
2000/01*	--	15.5	13.1	631	17.2	21.2	--	9.7	7.0	16.7	4.5	--

-- = Not available or not applicable. *February 8, 2001 Supply and Demand Estimates. 1. Marketing year beginning June 1 for wheat, barley, and oats; August 1 for cotton and rice; September 1 for soybeans, corn, and sorghum; October 1 for soybean 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, and 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	Dec	Jul	Aug	Sep	Oct	Nov	Dec
Wheat, no. 1 HRW, Kansas City (\$/bu.) ²	3.71	3.08	2.87	2.81	2.97	2.89	3.13	3.41	3.45	3.47
Wheat, DNS, Minneapolis (\$/bu.) ³	4.31	3.83	3.65	3.64	3.50	3.29	3.17	3.69	3.77	3.52
Rice, S.W. La. (\$/cwt) ⁴	18.92	16.79	12.99	13.58	11.43	11.69	11.88	12.45	12.69	12.75
Corn, no. 2 yellow, 30-day, Chicago (\$/bu.)	2.56	2.06	1.97	1.93	1.65	1.61	1.67	1.91	2.06	2.06
Sorghum, no. 2 yellow, Kansas City (\$/cwt)	4.11	3.29	3.10	2.87	2.71	2.76	2.67	3.14	3.41	3.66
Barley, feed, Duluth (\$/bu.)	1.90	--	--	--	--	--	--	1.30	1.42	1.50
Barley, malting Minneapolis (\$/bu.)	2.50	--	--	--	--	--	--	2.24	2.39	2.45
U.S. cotton price, SLM, 1-1/16 in. (¢/lb.) ⁵	67.79	60.12	60.20	46.65	55.13	59.33	60.62	60.54	62.16	61.04
Northern Europe prices cotton index (¢/lb.) ⁶	72.11	58.97	52.85	44.24	58.40	60.93	61.55	60.90	64.07	65.90
U.S. M 1-3/32 in. (¢/lb.) ⁷	77.98	74.08	59.64	52.75	--	67.95	67.38	66.69	68.95	69.44
Soybeans, no. 1 yellow, 30-day Chicago (\$/bu)	6.51	5.13	5.10	--	4.58	4.50	4.71	4.57	4.76	--
Soybean oil, crude, Decatur (¢/lb.)	25.84	19.90	20.50	15.30	16.74	16.74	16.74	13.50	13.50	13.12
Soybean meal, 48% protein, Decatur (\$/ton)	185.54	138.50	165.45	154.40	168.45	162.64	181.13	176.73	183.83	196.47

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

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

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

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

Table 20—Fruit

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Citrus ¹										
Production (1,000 tons)	11,285	12,452	15,274	14,561	15,799	15,712	17,271	17,770	13,633	--
Per capita consumpt. (lb.) ²	19.1	24.4	26.0	25.0	24.1	25.0	27.0	27.1	20.7	--
Noncitrus ³										
Production (1,000 tons)	15,740	17,124	16,554	17,339	16,348	16,103	18,363	16,560	17,331	18,217
Per capita consumpt. (lb.) ²	70.5	73.7	73.8	75.6	73.6	73.9	73.1	76.4	81.3	--
	1999	2000								
	Dec	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Grower prices										
Apples (¢/pound) ⁴	23.7	19.7	18.2	16.3	16.2	19.5	23.3	21.8	18.5	18.1
Pears (¢/pound) ⁴	22.45	15.25	11.95	11.20	11.50	12.70	16.60	18.10	16.15	15.05
Oranges (\$/box) ⁵	3.56	4.36	4.67	4.70	3.35	2.17	0.93	1.09	3.16	2.94
Grapefruit (\$/box) ⁵	4.98	3.31	2.86	2.73	6.02	4.45	6.71	5.17	3.09	2.20
Stocks, ending										
Fresh apples (mil. lb.)	4,653	1,891	1,293	832	412	129	3,299	6,348	5,633	5,003
Fresh pears (mil. lb.)	299	105	70	28	40	147	532	539	426	339
Frozen fruits (mil. lb.)	1,455	1,018	1,011	1,120	1,300	1,303	1,234	1,626	1,602	1,569
Frozen conc. orange juice (mil. single-strength gallons)	543	740	802	832	752	595	550	477	491	564

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

Table 21—Vegetables

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Production ¹										
Total vegetables (1,000 cwt)	565,754	689,070	688,824	782,505	747,988	762,952	751,739	729,537	831,976	796,011
Fresh (1,000 cwt) ^{2,4}	242,733	389,597	387,330	412,880	393,398	409,317	427,183	416,746	448,037	452,228
Processed (tons) ^{3,4}	16,151,030	14,973,630	15,074,707	18,481,238	17,729,497	17,681,732	16,227,819	15,639,548	19,196,942	17,189,152
Mushrooms (1,000 lbs) ⁵	746,832	776,357	750,799	782,340	777,870	776,677	808,678	847,760	854,394	--
Potatoes (1,000 cwt)	417,622	425,367	430,349	469,425	445,099	499,254	467,091	475,771	478,216	515,964
Sweet potatoes (1,000 cwt)	11,203	12,005	11,027	13,380	12,821	13,216	13,327	12,382	12,234	13,613
Dry edible beans (1,000 cwt)	33,765	22,615	21,862	28,950	30,689	27,912	29,370	30,418	33,085	26,440
	1999	2000								
	Dec	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Shipments (1,000 cwt)										
Fresh	21,604	24,169	32,102	37,167	19,317	21,877	15,097	16,561	22,509	18,685
Iceberg lettuce	3,223	2,859	3,388	4,380	3,228	3,930	3,072	3,216	3,710	2,918
Tomatoes, all	3,673	3,845	4,020	4,272	2,497	3,095	2,473	2,684	3,643	3,417
Dry-bulb onions	3,642	3,364	3,707	3,809	3,140	4,314	3,858	3,606	4,150	2,990
Others ⁶	11,066	14,101	20,987	24,706	10,452	10,538	5,694	7,055	11,006	9,360
Potatoes, all	14,751	20,460	16,892	15,085	9,854	12,563	11,272	10,919	15,606	12,549
Sweet potatoes	438	337	183	228	145	187	272	325	847	405

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

Information contact: Gary Lucier (202) 694-5253

Table 22—Other Commodities

	Annual			1999				2000		
	1997	1998	1999	I	II	III	IV	I	II	III
Sugar										
Production ¹	7,418	7,891	9,083	2,636	1,031	749	4,667	2,681	922	772.0
Deliveries ¹	9,755	9,851	10,167	2,271	2,594	2,693	2,609	2,348	2,513	2,641.0
Stocks, ending ¹	3,377	3,423	3,855	4,219	3,184	1,639	3,855	4,551	3,498	2,219.0
Coffee										
Composite green price ² N.Y. (¢/lb.)	146.49	114.43	88.49	94.37	90.41	77.40	91.79	85.66	75.78	66.73
	Annual			1999				2000		
	1997	1998	1999	Mar	Oct	Nov	Dec	Jan	Feb	Mar
Tobacco										
Avg. price to grower ³										
Flue-cured (\$/lb.)	1.73	1.76	1.74	--	1.8	1.8	--	--	--	--
Burley (\$/lb.)	1.91	1.90	1.90	1.63	--	1.90	1.91	1.90	1.88	1.77
Domestic taxable removals										
Cigarettes (bil.)	471.4	457.9	432.6	34.9	38.8	37.6	34.0	28.8	32.5	38.8
Large cigars (mil.) ⁴	3,552	3,721	3,844	332.7	315.6	334.7	320.0	250.7	285.5	333.9

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

World Agriculture

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

	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00 E	2000/01 F
	<i>Million units</i>									
Wheat										
Area (hectares)	222.5	222.9	222.0	214.5	219.2	230.4	227.8	224.7	216.8	215.4
Production (metric tons)	542.9	562.4	558.7	524.1	538.5	581.9	609.2	588.2	587.9	579.5
Exports (metric tons) ¹	111.2	113.0	101.6	101.4	99.5	103.7	104.0	102.0	112.4	106.8
Consumption (metric tons) ²	555.5	550.3	561.6	547.5	548.8	576.9	583.9	590.1	598.7	596.6
Ending stocks (metric tons) ³	132.5	144.5	141.6	118.2	107.9	113.4	138.7	136.8	126.0	108.9
Coarse grains										
Area (hectares)	322.8	326.0	318.7	324.1	313.8	322.8	311.2	307.9	302.5	300.6
Production (metric tons)	810.7	871.8	798.9	871.2	802.8	908.5	884.9	890.0	877.0	859.7
Exports (metric tons) ¹	95.9	92.8	85.8	98.0	87.8	94.1	85.7	106.8	120.7	115.2
Consumption (metric tons) ²	810.1	843.3	838.7	858.5	839.2	873.0	873.1	867.6	881.2	882.7
Ending stocks (metric tons) ³	135.8	164.1	124.3	137.0	100.6	136.1	147.9	169.5	165.3	142.3
Rice, milled										
Area (hectares)	147.5	146.4	144.9	147.4	148.1	149.8	151.2	152.4	154.2	151.5
Production (metric tons)	354.7	355.7	355.4	364.5	371.4	380.4	386.8	394.2	406.3	397.8
Exports (metric tons) ¹	14.3	15.0	16.3	20.8	19.7	18.8	27.5	25.2	23.3	23.4
Consumption (metric tons) ²	356.7	357.7	358.1	366.6	371.4	379.6	383.3	388.6	400.7	403.0
Ending stocks (metric tons) ³	57.2	55.2	52.5	50.4	50.4	51.2	54.7	60.2	65.9	60.7
Total grains										
Area (hectares)	692.8	695.3	685.6	686.0	681.1	703.0	690.2	685.0	673.5	667.5
Production (metric tons)	1,708.3	1,789.9	1,713.0	1,759.8	1,712.7	1,870.8	1,880.9	1,872.4	1,871.2	1,837.0
Exports (metric tons) ¹	221.4	220.8	203.7	220.2	207.0	216.6	217.2	234.0	256.4	245.4
Consumption (metric tons) ²	1,722.3	1,751.3	1,758.4	1,772.6	1,759.4	1,829.5	1,840.3	1,846.3	1,880.6	1,882.3
Ending stocks (metric tons) ³	325.5	363.8	318.4	305.6	258.9	300.7	341.3	366.5	357.2	311.9
Oilseeds										
Crush (metric tons)	185.1	184.4	190.1	208.1	217.5	216.7	226.4	240.5	247.6	251.7
Production (metric tons)	224.3	227.5	229.4	261.9	258.9	261.4	286.5	294.1	300.8	305.1
Exports (metric tons)	37.6	38.2	38.7	44.1	44.3	49.6	54.0	54.6	63.9	64.0
Ending stocks (metric tons)	21.9	23.6	20.3	27.2	22.2	19.0	28.2	31.3	32.4	30.3
Meals										
Production (metric tons)	125.2	125.2	131.7	142.1	147.3	147.8	153.9	164.4	169.3	173.8
Exports (metric tons)	42.2	40.8	44.9	46.7	49.8	50.7	51.9	53.9	54.7	55.6
Oils										
Production (metric tons)	60.6	61.1	63.7	69.6	73.1	73.7	75.1	80.5	84.6	86.9
Exports (metric tons)	21.3	21.3	24.3	27.1	26.0	28.2	29.7	31.6	32.7	33.0
Cotton										
Area (hectares)	34.8	32.6	30.7	32.2	35.9	33.8	33.7	33.0	32.3	31.9
Production (bales)	95.8	82.5	77.1	86.0	93.1	89.6	91.6	84.9	87.2	88.1
Exports (bales)	28.5	25.5	26.8	28.4	27.8	26.9	26.8	23.7	27.2	26.5
Consumption (bales)	86.1	85.9	85.4	84.7	86.0	88.0	87.2	85.3	91.8	92.1
Ending stocks (bales)	37.4	34.7	26.8	29.8	36.6	40.1	43.7	44.9	41.0	37.3
	1992	1993	1994	1995	1996	1997	1998	1999	2000 E	2001 F
Beef and Pork⁴										
Production (metric tons)	111.6	111.6	116.7	122.1	116.6	122.1	127.1	130.2	132.1	134.0
Consumption (metric tons)	109.9	110.6	115.7	120.7	114.1	119.7	124.6	128.4	130.0	132.3
Exports (metric tons) ¹	6.6	6.6	7.2	7.4	7.7	8.2	8.0	9.1	8.8	8.9
Poultry⁴										
Production (metric tons)	38.0	40.5	43.2	47.5	50.4	52.7	53.5	56.5	58.0	59.6
Consumption (metric tons)	37.0	39.4	42.0	47.0	49.6	51.8	52.6	55.8	57.4	59.0
Exports (metric tons) ¹	2.4	2.8	3.6	4.5	5.1	5.6	5.7	6.1	6.3	6.5
Dairy										
Milk production (metric tons) ⁵	--	--	--	--	364.3	365.6	368.0	371.6	375.7	378.8

-- = Not available. E = Estimated, F = forecast. 1. Excludes intra-EU trade but includes intra-FSU trade. 2. Where stocks data are not available, consumption includes stock changes. 3. Stocks data are based on differing marketing years and do not represent levels at a given date. Data not available for all countries.

4. Calendar year, selected countries. 5. Data prior to 1989 no longer comparable.

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

U.S. Agricultural Trade

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

	Annual		1999		2000					
	1997	1998	1999	Dec	Jul	Aug	Sep	Oct	Nov	Dec
Export commodities										
Wheat, f.o.b. vessel, Gulf ports (\$/bu.)	4.35	3.44	3.04	2.80	3.12	3.05	3.31	3.56	3.52	3.55
Corn, f.o.b. vessel, Gulf ports (\$/bu.)	2.98	2.59	2.30	2.22	1.91	1.91	2.05	2.16	2.26	2.43
Grain sorghum, f.o.b. vessel, Gulf ports (\$/bu.)	2.89	2.54	2.15	2.04	1.72	1.87	2.01	2.22	2.44	2.50
Soybeans, f.o.b. vessel, Gulf ports (\$/bu.)	7.94	6.37	5.02	4.92	5.02	4.93	5.19	4.94	5.06	5.42
Soybean oil, Decatur (¢/lb.)	23.33	25.78	17.51	15.33	14.70	14.34	14.24	13.51	13.37	13.12
Soybean meal, Decatur (\$/ton)	266.70	162.74	141.52	154.00	163.38	157.48	174.60	171.52	179.95	195.65
Cotton, 7-market avg. spot (¢/lb.)	69.62	67.04	52.30	46.65	55.12	59.33	60.62	60.52	62.16	61.04
Tobacco, avg. price at auction (¢/lb.)	182.74	179.77	177.82	190.56	--	169.51	182.97	181.01	117.45	197.00
Rice, f.o.b., mill, Houston (\$/cwt)	20.88	18.95	16.99	15.75	14.53	14.50	14.56	14.95	15.00	15.00
Inedible tallow, Chicago (¢/lb.)	20.75	17.67	12.99	14.00	9.00	9.00	9.35	10.00	11.00	11.88
Import commodities										
Coffee, N.Y. spot (\$/lb.)	2.05	1.39	1.05	1.29	0.93	0.80	0.82	0.81	0.72	0.67
Rubber, N.Y. spot (¢/lb.)	55.40	40.57	36.66	38.88	36.65	37.82	37.35	37.60	37.04	36.92
Cocoa beans, N.Y. (\$/lb.)	0.69	0.72	0.47	0.38	0.38	0.35	0.36	0.36	0.33	0.33

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

Table 25—Trade Balance

	Fiscal Year			1999		2000				
	1999	2000	2001 P	Dec	Jul	Aug	Sep	Oct	Nov	Dec
<i>\$ million</i>										
Exports										
Agricultural	49,148	50,908	53,000	4,422	3,832	4,259	4,085	4,987	4,764	4,613
Nonagricultural	586,606	647,387	--	54,380	50,743	57,735	56,330	59,241	56,978	55,898
Total ¹	635,754	698,295	--	58,802	54,575	61,994	60,415	64,228	61,742	60,511
Imports										
Agricultural	37,310	38,923	40,000	3,354	2,991	3,166	2,922	3,217	3,251	3,207
Nonagricultural	938,948	1,132,257	--	87,492	97,043	103,988	102,722	108,266	102,437	95,193
Total ²	976,258	1,171,180	--	90,846	100,034	107,154	105,644	111,483	105,688	98,400
Trade Balance										
Agricultural	11,838	11,985	13,000	1,068	841	1,093	1,163	1,770	1,513	1,406
Nonagricultural	-352,342	-484,870	--	-33,112	-46,300	-46,253	-46,392	-49,025	-45,459	-39,295
Total	-340,504	-472,885	--	-32,044	-45,459	-45,160	-45,229	-47,255	-43,946	-37,889

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	Dec	Jul	Aug	Sep	Oct	Nov	Dec
1995 = 100										
Total U.S. Trade	105.5	112.4	110.9	112.8	121.9	122.7	122.7	124.9	127.1	127.3
U.S. markets										
All agricultural trade	103.7	111.4	109.2	113.8	123.2	124.3	123.7	125.7	127.8	128.6
Bulk commodities	107.1	115.9	112.7	114.6	125.5	126.8	126.1	128.0	130.4	131.3
Corn	110.8	121.9	115.8	113.1	125.4	126.8	125.5	126.8	128.7	130.5
Cotton	99.3	112.6	110.1	112.3	122.2	123.1	121.5	123.3	125.9	126.9
Rice	106.2	109.4	108.6	111.4	121.4	122.7	122.5	124.6	126.3	126.1
Soybeans	111.9	121.2	118.1	119.3	129.3	130.4	130.9	133.6	136.2	136.8
Tobacco, raw	117.4	125.5	124.2	124.6	131.7	134.4	135.5	138.4	141.1	141.5
Wheat	102.0	107.1	110.7	113.2	129.8	131.2	130.8	132.3	135.2	136.0
High-value products	106.6	113.0	108.0	113.2	121.2	122.4	121.8	123.8	125.7	126.3
Processed intermediates	106.3	113.2	110.5	113.4	124.3	125.3	125.4	127.5	129.7	130.2
Soymeal	99.1	104.3	103.5	106.4	143.0	144.4	144.1	146.5	149.6	148.4
Soyoil	88.1	87.9	96.2	101.4	105.9	106.3	106.6	107.4	108.4	108.2
Produce and horticulture	109.6	116.8	114.5	115.1	121.9	123.4	123.2	125.7	127.8	128.3
Fruits	109.2	118.9	114.3	113.3	119.7	121.2	120.1	122.1	124.0	124.7
Vegetables	107.3	115.1	112.5	109.6	114.0	115.1	113.9	116.3	117.8	118.4
High-value processed	105.8	111.5	103.8	112.3	118.5	119.8	118.5	120.2	121.8	122.5
Fruit juices	112.6	121.0	117.3	116.6	122.0	123.9	123.4	125.7	127.7	128.9
Poultry	79.6	74.0	61.9	115.6	117.4	116.4	115.5	116.2	116.3	115.5
Red meats	120.5	131.6	118.9	114.7	119.9	122.9	120.2	122.0	123.6	125.9
U.S. competitors										
All agricultural trade	108.3	114.2	115.5	125.4	133.7	135.1	137.9	141.7	144.6	144.3
Bulk commodities	101.5	110.1	109.7	126.5	133.1	134.3	135.1	138.3	141.0	140.7
Corn	108.7	111.3	113.9	124.6	132.3	133.5	136.7	140.2	142.8	142.5
Cotton	105.0	116.0	115.8	125.3	131.4	132.6	135.1	138.1	140.6	139.7
Rice	108.9	123.6	119.3	122.0	130.7	134.1	134.7	137.9	142.6	142.4
Soybeans	93.6	91.7	93.2	133.0	134.7	133.7	133.6	135.4	137.2	139.4
Tobacco, raw	100.3	105.1	104.6	122.6	118.7	118.2	123.4	125.1	126.6	125.3
Wheat	109.5	114.2	116.4	119.5	127.1	128.7	130.8	134.9	138.2	137.8
High-value products	109.6	115.3	116.5	128.3	136.7	138.2	141.3	145.6	148.7	148.1
Processed intermediates	107.2	114.5	115.6	128.5	136.3	137.7	139.8	143.7	146.8	146.4
Soymeal	97.1	95.1	96.1	133.7	136.2	135.5	136.5	138.9	141.1	143.1
Soyoil	99.0	98.3	99.4	125.4	129.4	129.5	130.7	132.4	134.3	135.8
Produce and horticulture	108.3	113.3	115.0	124.5	131.4	132.6	135.2	138.9	141.5	140.5
Fruits	110.0	125.1	122.3	126.7	136.0	138.8	139.8	143.4	146.9	146.4
Vegetables	100.6	102.2	105.0	113.9	120.1	120.8	123.1	126.2	128.3	127.7
High-value processed	111.4	116.4	117.5	129.4	138.5	140.2	144.0	148.7	152.0	151.4
Fruit juices	111.4	117.1	118.1	126.2	136.5	138.3	141.2	145.4	148.9	148.0
Poultry	104.0	106.9	107.7	125.7	133.5	135.1	137.5	140.9	144.0	144.1
Red meats	109.7	114.5	116.2	125.7	134.5	136.3	139.8	144.7	148.0	147.7
U.S. suppliers										
All agricultural trade	101.2	109.6	109.3	114.3	120.8	121.1	121.2	124.1	126.4	125.6
High-value products	101.3	107.2	107.9	112.7	118.4	118.5	119.1	122.1	124.4	123.4
Processed intermediates	102.5	110.3	110.3	115.0	120.7	121.3	121.9	125.1	127.7	127.1
Grains and feeds	105.1	112.5	112.9	112.0	117.6	118.5	118.6	121.6	123.8	123.8
Vegetable oils	106.4	122.4	119.3	121.6	129.0	130.7	131.0	134.5	138.8	137.4
Produce and horticulture	93.7	97.6	99.1	102.9	106.2	104.7	104.3	105.8	106.9	105.1
Fruits	91.7	95.7	96.0	97.1	100.7	99.7	99.3	101.0	102.5	98.7
Vegetables	86.3	88.7	84.0	81.9	84.2	80.8	79.8	81.3	82.7	80.8
High-value processed	104.3	110.0	110.9	116.0	123.0	123.7	125.0	128.6	131.3	130.6
Cocoa and products	105.5	117.8	119.7	130.3	138.1	139.4	139.1	142.3	145.3	144.8
Coffee and products	93.1	97.0	100.0	113.8	123.1	122.2	121.7	123.4	124.5	124.1
Dairy products	106.5	111.7	112.0	125.1	134.6	136.7	141.1	146.3	149.2	148.3
Fruit juices	99.1	100.9	101.5	123.6	128.2	128.1	128.6	131.2	134.3	133.6
Meats	95.9	102.1	105.4	107.7	141.4	141.7	141.2	141.6	143.3	145.9

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

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

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

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

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

Table 27—U.S. Agricultural Exports & Imports

	Fiscal Year			Dec		Fiscal Year			Dec	
	1999	2000	2001 F	1999	2000	1999	2000	2001 F	1999	2000
	1,000 units					\$ million				
Exports										
Animals, live	--	--	--	--	--	476	608	--	57	86
Meats and preps., excl. poultry (mt) ¹	2,089	2,457	1,800	218	212	4,500	5,451	5,000	447	465
Dairy products	--	--	--	--	--	914	996	1,000	87	85
Poultry meats (mt)	2,402	2,845	2,900	232	216	1,750	1,961	2,000	164	159
Fats, oils, and greases (mt)	1,387	1,206	1,200	119	88	544	421	--	48	26
Hides and skins, incl. furskins	--	--	--	--	--	1,108	1,479	1,500	96	135
Cattle hides, whole (no.)	17,845	21,837	--	1,563	1,699	844	1,166	--	80	103
Mink pelts (no.)	4,172	4,352	--	94	80	98	111	--	2	3
Grains and feeds (mt) ²	104,576	104,009	--	9,018	8,531	14,272	13,788	14,500	1,176	1,186
Wheat (mt) ³	28,806	27,779	28,700	2,290	2,568	3,648	3,378	3,800	283	323
Wheat flour (mt)	958	825	800	130	54	177	132	--	14	11
Rice (mt)	3,076	3,299	3,100	284	316	1,010	903	800	83	74
Feed grains, incl. products (mt) ⁴	58,398	57,195	58,000	4,966	4,337	5,821	5,483	5,500	465	431
Feeds and fodders (mt)	11,800	13,386	14,100	1,207	1,111	2,252	2,496	2,700	216	220
Other grain products (mt)	1,538	1,525	--	142	143	1,363	1,397	--	115	126
Fruits, nuts, and preps. (mt)	3,439	3,736	--	299	337	3,805	3,871	4,800	321	337
Fruit juices, incl.										
froz. (1,000 hectoliters)	12,317	11,902	--	769	906	735	716	--	48	56
Vegetables and preps.	--	--	--	--	--	4,245	4,443	3,100	404	401
Tobacco, unmanufactured (mt)	205	180	200	9	21	1,376	1,229	1,200	62	139
Cotton, excl. linters (mt) ⁵	884	1,474	1,600	142	118	1,309	1,809	2,200	169	168
Seeds (mt)	579	730	--	78	57	800	787	800	90	81
Sugar, cane or beet (mt)	158	115	--	11	7	56	40	--	4	3
Oilseeds and products (mt)	33,597	36,055	35,900	4,063	3,745	8,638	8,386	8,400	868	861
Oilseeds (mt)	--	--	--	--	--	--	--	--	--	--
Soybeans (mt)	22,974	26,038	26,100	2,948	2,873	4,748	5,070	5,000	551	564
Protein meal (mt)	6,726	6,870	--	772	522	1,101	1,259	--	137	108
Vegetable oils (mt)	2,669	2,130	--	218	244	1,846	1,346	--	129	125
Essential oils (mt)	47	53	--	4	4	507	593	--	38	45
Other	--	--	--	--	--	4,112	4,330	--	342	380
Total	--	--	--	--	--	49,148	50,908	53,000	4,422	4,613
Imports										
Animals, live	--	--	--	--	--	1,411	1,737	2,000	222	273
Meats and preps., excl. poultry (mt)	1,403	1,555	1,600	118	116	3,108	3,722	3,900	282	291
Beef and veal (mt)	943	1,027	--	75	70	2,047	2,405	--	178	174
Pork (mt)	337	402	--	32	35	721	958	--	72	85
Dairy products	--	--	--	--	--	1,572	1,635	1,700	139	148
Poultry and products	--	--	--	--	--	201	288	--	23	17
Fats, oils, and greases (mt)	85	107	--	11	7	56	71	--	7	4
Hides and skins, incl. furskins (mt)	--	--	--	--	--	146	160	--	14	17
Wool, unmanufactured (mt)	29	25	--	1	1	75	66	--	4	3
Grains and feeds	--	--	--	--	--	2,943	3,059	3,200	264	270
Fruits, nuts, and preps.,										
excl. juices (mt) ⁶	8,171	8,366	8,300	657	688	4,619	4,546	5,600	405	435
Bananas and plantains (mt)	4,418	4,396	4,300	332	321	1,212	1,128	1,100	82	86
Fruit juices (1,000 hectoliters)	31,655	32,199	30,000	2,813	1,844	772	783	--	66	41
Vegetables and preps.	--	--	--	--	--	4,527	4,657	4,900	428	442
Tobacco, unmanufactured (mt)	217	220	200	29	18	742	651	600	96	62
Cotton, unmanufactured (mt)	144	34	--	3	2	150	28	--	3	1
Seeds (mt)	357	448	--	39	21	457	493	--	27	24
Nursery stock and cut flowers	--	--	--	--	--	1,076	1,165	1,200	84	82
Sugar, cane or beet (mt)	1,692	1,379	--	105	73	606	493	--	43	28
Oilseeds and products (mt)	3,767	4,069	4,300	316	300	1,899	1,873	1,800	157	133
Oilseeds (mt)	1,000	1,103	--	56	33	326	310	--	19	13
Protein meal (mt)	1,131	1,194	--	108	111	147	150	--	13	15
Vegetable oils (mt)	1,637	1,772	--	152	156	1,427	1,413	--	126	105
Beverages, excl. fruit										
juices (1,000 hectoliters)	--	--	--	--	--	4,258	4,702	--	323	348
Coffee, tea, cocoa, spices (mt)	2,520	2,841	--	252	189	5,306	5,218	--	481	315
Coffee, incl. products (mt)	1,294	1,411	1,300	120	92	2,967	2,905	2,800	262	147
Cocoa beans and products (mt)	865	1,046	1,000	102	69	1,531	1,466	1,400	144	102
Rubber and allied gums (mt)	1,148	1,249	1,200	88	91	739	841	900	54	58
Other	--	--	--	--	--	2,646	2,735	--	232	214
Total	--	--	--	--	--	37,310	38,923	40,000	3,354	3,207

F = Forecast. -- = Not available. Projections are fiscal years (Oct. 1 through Sept. 30) and are from Outlook for U.S. Agricultural Exports.

1999 and 2000 data are from *Foreign Agricultural Trade of the U.S.* 1. Projection includes beef, pork, and variety meat. 2. Projection includes pulses. 3. Value projection includes wheat flour. 4. Projection excludes grain products. 5. Projection includes linters. 6. Value projection includes juice.

Information Contact: Mary Fant (202) 694-5272

Table 28—U.S. Agricultural Exports by Region

	Fiscal year			1999		2000				
	1999	2000	2001 F	Dec	Jul	Aug	Sep	Oct	Nov	Dec
	\$ millions									
Region & country										
Western Europe	7,528	6,712	6,600	689	391	470	454	795	650	704
European Union ¹	6,958	6,373	6,200	670	372	425	419	710	591	687
Belgium-Luxembourg	602	538	--	43	31	38	43	53	62	78
France	377	347	--	51	30	26	19	29	27	53
Germany	1,057	947	--	82	49	74	74	97	84	73
Italy	574	560	--	50	36	29	30	44	41	56
Netherlands	1,587	1,459	--	168	81	84	81	155	171	184
United Kingdom	1,122	1,033	--	98	82	79	91	144	101	72
Portugal	131	145	--	23	7	11	5	11	3	22
Spain, incl. Canary Islands	784	664	--	101	20	28	24	87	52	83
Other Western Europe	570	340	400	19	19	45	35	84	60	17
Switzerland	455	250	--	12	10	36	27	75	50	12
Eastern Europe	190	167	200	13	11	17	11	17	18	13
Poland	73	47	--	4	7	6	3	6	8	4
Former Yugoslavia	47	67	--	2	2	4	4	3	5	2
Romania	18	12	--	1	1	3	1	3	1	5
Former Soviet Union	881	934	800	77	39	56	72	100	86	61
Russia	532	671	600	45	27	47	41	76	67	43
Asia²	20,441	22,051	20,200	1,787	1,654	1,814	1,701	1,964	1,978	1,970
West Asia (Mideast)	1,978	2,363	2,400	193	175	215	215	254	203	194
Turkey	448	701	700	77	65	42	35	30	59	68
Iraq	9	8	--	--	--	8	--	--	--	--
Israel, incl. Gaza and W. Bank	417	458	--	34	30	43	41	39	47	51
Saudi Arabia	468	482	500	29	36	52	47	46	44	41
South Asia	499	416	400	29	28	29	40	49	33	53
Bangladesh	165	82	--	4	12	5	4	6	4	16
India	189	186	--	18	10	16	24	23	21	20
Pakistan	89	93	--	1	5	3	6	8	6	6
China	1,011	1,474	1,800	104	120	167	88	200	195	167
Japan	8,933	9,353	9,200	716	688	698	679	709	776	775
Southeast Asia	2,218	2,602	2,800	241	198	208	241	270	307	195
Indonesia	499	681	800	69	79	58	64	84	47	50
Philippines	735	866	900	83	56	70	76	78	111	68
Other East Asia	5,803	5,844	6,000	503	445	497	437	482	464	585
Korea, Rep.	2,482	2,569	2,700	205	202	233	200	183	196	276
Hong Kong	1,264	1,255	1,300	126	88	117	103	118	128	123
Taiwan	2,047	2,011	2,000	168	155	146	135	175	139	186
Africa	2,160	2,272	2,500	218	202	246	255	253	175	213
North Africa	1,468	1,565	1,700	162	132	180	189	190	103	149
Morocco	162	141	--	7	8	9	19	30	6	24
Algeria	223	255	--	21	27	36	22	21	23	16
Egypt	1,002	1,094	1,000	125	90	127	140	134	61	80
Sub-Sahara	693	707	800	56	70	66	66	63	72	65
Nigeria	176	160	--	10	21	19	14	17	21	14
S. Africa	165	164	--	25	15	8	17	9	13	7
Latin America and Caribbean	10,495	10,639	11,500	988	874	958	904	989	1,054	985
Brazil	366	253	300	18	16	23	14	18	29	19
Caribbean Islands	1,453	1,457	--	146	112	110	111	130	137	114
Central America	1,209	1,129	--	113	97	109	97	89	113	96
Colombia	468	427	--	30	41	35	22	39	35	30
Mexico	5,672	6,329	7,100	598	531	599	575	634	624	648
Peru	347	201	--	18	19	11	14	8	19	5
Venezuela	458	404	400	27	30	37	37	42	31	30
Canada	6,951	7,520	8,100	606	604	618	623	726	689	607
Oceania	502	490	500	44	39	51	41	49	43	41
Total	49,148	50,908	53,000	4,422	3,832	4,259	4,085	4,987	4,764	4,613

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

Farm Income

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

	1992	1993	1994	1995	1996	1997	1998	1999	2000F	2001F
	\$ billion									
Final crop output	88.9	82.4	100.3	95.7	115.6	112.3	102.1	93.1	96.3	101.0
Food grains	8.5	8.2	9.5	10.4	10.8	10.4	8.9	7.3	7.0	7.0
Feed crops	20.1	20.2	20.3	24.5	27.2	27.0	22.7	19.8	20.5	21.7
Cotton	5.2	5.2	6.7	6.9	7.0	6.3	6.1	4.7	5.3	6.2
Oil crops	13.3	13.2	14.7	15.5	16.4	19.8	17.5	13.6	15.0	15.7
Tobacco	3.0	2.9	2.7	2.5	2.8	2.9	2.8	2.3	2.0	2.4
Fruits and tree nuts	10.1	10.3	10.3	11.1	11.9	13.1	12.2	13.0	12.7	12.8
Vegetables	11.8	13.7	14.0	15.0	14.4	14.7	15.1	15.2	16.0	15.9
All other crops	13.7	13.7	14.7	15.0	15.8	16.9	17.1	17.4	18.1	18.4
Home consumption	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2
Value of inventory adjustment ¹	3.2	-5.3	7.2	-5.3	9.1	1.1	-0.5	-0.2	-0.4	0.6
Final animal output	87.1	92.0	89.7	87.7	92.0	96.5	94.2	95.1	99.2	100.2
Meat animals	47.7	51.0	46.7	44.9	44.2	49.7	43.3	45.6	51.8	50.6
Dairy products	19.7	19.3	20.0	19.9	22.8	20.9	24.1	23.2	20.7	21.7
Poultry and eggs	15.5	17.4	18.5	19.1	22.5	22.3	22.9	22.9	23.3	23.8
Miscellaneous livestock	2.6	2.9	3.1	3.3	3.4	3.6	3.7	3.7	3.7	3.7
Home consumption	0.5	0.4	0.4	0.4	0.3	0.4	0.3	0.4	0.4	0.4
Value of inventory adjustment ¹	1.0	1.1	1.1	0.2	-1.1	-0.4	-0.3	-0.7	-0.6	0.1
Services and forestry	15.2	17.0	18.1	19.9	20.8	22.1	24.7	26.7	27.5	27.6
Machine hire and customwork	1.8	1.9	2.1	1.9	2.2	2.4	2.2	2.0	2.2	2.3
Forest products sold	2.2	2.5	2.6	2.8	2.6	2.8	3.0	2.9	2.9	2.9
Other farm income	4.1	4.6	4.3	5.8	6.2	6.9	8.7	10.8	11.2	10.9
Gross imputed rental value of farm dwellings	7.2	8.1	9.0	9.4	9.9	10.1	10.8	10.9	11.2	11.5
Final agricultural sector output ²	191.3	191.3	208.0	203.4	228.4	230.9	221.0	214.9	223.0	228.9
<i>Minus</i> Intermediate consumption outlays:	93.4	100.7	104.9	109.7	113.2	121.0	118.5	120.8	126.5	127.6
Farm origin	38.6	41.3	41.3	41.8	42.7	46.8	44.8	45.5	47.1	46.2
Feed purchased	20.1	21.4	22.6	23.8	25.2	26.3	25.0	24.5	24.7	24.7
Livestock and poultry purchased	13.6	14.7	13.3	12.5	11.3	13.8	12.5	13.8	15.2	14.4
Seed purchased	4.9	5.2	5.4	5.5	6.2	6.7	7.2	7.2	7.2	7.1
Manufactured inputs	22.7	23.1	24.4	26.1	28.6	29.2	28.2	27.3	30.2	30.9
Fertilizers and lime	8.3	8.4	9.2	10.0	10.9	10.9	10.6	9.9	10.4	10.8
Pesticides	6.5	6.7	7.2	7.7	8.5	9.0	9.0	8.6	8.6	8.8
Petroleum fuel and oils	5.3	5.4	5.3	5.4	6.0	6.2	5.6	5.8	8.1	8.1
Electricity	2.6	2.7	2.7	3.0	3.2	3.0	2.9	3.0	3.0	3.1
Other intermediate expenses	32.1	36.2	39.2	41.7	41.9	44.9	45.6	48.0	49.2	50.6
Repair and maintenance of capital items	8.5	9.2	9.1	9.5	10.3	10.4	10.4	10.5	10.6	10.9
Machine hire and customwork	3.8	4.4	4.8	4.8	4.7	4.9	5.4	5.3	5.5	5.6
Marketing, storage, and transportation	4.5	5.6	6.8	7.2	6.9	7.1	6.9	7.3	7.6	8.0
Contract labor	1.7	1.8	1.8	2.0	2.1	2.6	2.4	2.6	2.7	2.8
Miscellaneous expenses	13.6	15.2	16.7	18.3	17.8	19.9	20.6	22.3	22.8	23.3
<i>Plus</i> Net government transactions:	2.7	6.9	1.1	0.2	0.2	0.2	4.8	13.1	14.5	6.4
+ Direct government payments	9.2	13.4	7.9	7.3	7.3	7.5	12.2	20.6	22.1	14.1
- Motor vehicle registration and licensing fees	0.4	0.4	0.4	0.5	0.4	0.4	0.5	0.4	0.4	0.5
- Property taxes	6.1	6.2	6.4	6.6	6.7	6.8	6.9	7.1	7.1	7.3
Gross value added	100.5	97.5	104.3	93.9	115.4	110.1	107.3	107.2	111.0	107.7
<i>Minus</i> Capital consumption	18.3	18.3	18.7	19.2	19.4	19.6	19.7	19.9	19.8	20.2
Net value added ²	82.2	79.2	85.6	74.7	96.0	90.6	87.5	87.3	91.2	87.5
<i>Minus</i> Factor payments:	34.6	34.8	36.8	37.8	41.1	42.0	42.9	43.9	45.8	46.2
Employee compensation (total hired labor)	12.3	13.2	13.5	14.3	15.2	16.0	16.9	17.5	18.1	18.9
Net rent received by nonoperator landlords	11.2	10.9	11.8	10.9	12.9	12.8	12.7	12.9	13.5	12.6
Real estate and non-real estate interest	11.0	10.7	11.6	12.6	13.0	13.1	13.4	13.6	14.2	14.7
Net farm income ²	47.7	44.3	48.8	36.9	54.9	48.6	44.6	43.4	45.4	41.3

Values in last two columns are preliminary or forecast. 1. A positive value of inventory change represents current-year production not sold by December 31. A negative value is an offset to production from prior years included in current-year sales. 2. Final sector output is the gross value of commodities and services produced within a year. Net value added is the sector's contribution to the National economy and is the sum of income from production earned by all factors of production. Net farm income is farm operators' share of income from the sector's production activities. The concept presented is consistent with that employed by the Organization for Economic Cooperation and Development. *Information contact: Roger Strickland: rogers@ers.usda.gov*

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

Table 30—Farm Income Statistics

	1992	1993	1994	1995	1996	1997	1998	1999	2000F	2001F
\$ billion										
Cash income statement:										
1. Cash receipts	171.3	177.9	181.1	188.0	199.1	207.6	196.6	188.6	196.0	200.0
Crops ¹	85.6	87.5	92.9	100.8	106.3	111.1	102.5	93.1	96.6	100.2
Livestock	85.7	90.4	88.2	87.1	92.8	96.5	94.1	95.5	99.5	99.8
2. Direct Government payments	9.2	13.4	7.9	7.3	7.3	7.5	12.2	20.6	22.1	14.1
3. Farm-related income ²	8.0	9.0	9.0	10.5	10.9	12.0	13.9	15.8	16.3	16.1
4. Gross cash income (1+2+3)	188.5	200.3	198.1	205.8	217.4	227.1	222.6	225.0	234.4	230.2
5. Cash expenses ³	133.5	141.2	147.4	153.2	159.8	168.6	167.2	170.4	178.0	179.5
6. Net cash income (4-5)	54.9	59.1	50.7	52.5	57.6	58.5	55.4	54.6	56.4	50.7
Farm income statement:										
7. Gross cash income (4)	188.5	200.3	198.1	205.8	217.4	227.1	222.6	225.0	234.4	230.2
8. Noncash income ⁴	7.8	8.7	9.6	9.9	10.3	10.6	11.3	11.4	11.7	12.1
9. Value of inventory adjustment	4.2	-4.2	8.3	-5.0	8.0	0.7	-0.7	-0.9	-1.0	0.7
10. Gross farm income (7+8+9)	200.4	204.7	215.9	210.7	235.7	238.4	233.2	235.5	245.1	243.0
11. Total production expenses	152.8	160.4	167.1	173.8	180.8	189.8	188.6	192.1	199.7	201.7
12. Net farm income (10-11)	47.7	44.3	48.8	36.9	54.9	48.6	44.6	43.4	45.4	41.3

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

Roger Strickland: rogers@ers.usda.gov

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

Table 31—Average Income to Farm Operator Households¹

	1992	1993	1994	1995	1996	1997	1998	1999	2000
\$ per farm									
Net cash farm business income ²	11,320	11,248	11,389	11,218	13,502	12,676	14,357	13,194	12,951
Less depreciation ³	5,187	6,219	6,466	6,795	6,906	6,578	7,409	7,027	--
Less wages paid to operator ⁴	216	454	425	522	531	513	637	499	--
Less farmland rental income ⁵	360	534	701	769	672	568	543	802	--
Less adjusted farm business income due to other household(s) ⁶	961	872	815	649	1,094	*1,505	1,332	1,262	--
\$ per farm operator household									
Equals adjusted farm business income	4,596	3,168	2,981	2,484	4,300	3,513	4,436	3,603	--
Plus wages paid to operator	216	454	425	522	531	513	637	499	--
Plus net income from farmland rental ⁷	360	--	--	1,053	1,178	945	868	1,312	--
Equals farm self-employment income	5,172	3,623	3,407	4,059	6,009	4,971	5,941	5,415	--
Plus other farm-related earnings ⁸	2,008	1,192	970	661	1,898	1,234	1,165	944	--
Equals earnings of the operator household from farming activities	7,180	4,815	4,376	4,720	7,906	6,205	7,106	6,359	4,600
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	64,658
\$ per U.S. household									
U.S. average household income ¹⁰	38,840	41,428	43,133	44,938	47,123	49,692	51,855	54,842	--
Percent									
Average farm operator household income as percent of U.S. average household income	110.5	97.1	98.5	98.8	106.9	105.8	115.2	117.3	--
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	9.9	--

-- = Not available. Values in last two columns are preliminary or forecast. 1. This table derives farm operator household income estimates from the Agricultural Resource Management Study (ARMS) that are consistent with Current Population Survey (CPS) methodology. The CPS, conducted by the Bureau of the Census, is the source of official U.S. household income statistics. The CPS defines income to include any income received as cash. The CPS definition departs from a strictly cash concept by including depreciation as an expense that farm operators and other self-employed people subtract from gross receipts when reporting net cash income. 2. A component of farm-sector income. Excludes income of contractors and landlords as well as the income of farms organized as nonfamily corporations or cooperatives, and farms run by a hired manager. Includes income of farms organized as proprietorships, partnerships, and family corporations. 3. Consistent with the CPS definition of self-employed income, reported depreciation expenses are subtracted from net cash farm income. The ARMS collects data on farm business depreciation used for tax purposes. 4. Wages paid to the operator are excluded because they are not shared among other households that have claims on farm business income. These wages are added to the operator household's adjusted farm business income to obtain farm self-employment income. 5. Gross rental income is excluded because net rental income from farm operation is added below to income received by the household. 6. More than one household may have a claim on the income of a farm business. On average, 1.1 households share the income of a farm business. 7. Includes net rental income from the farm business. Also includes net rental income from farmland held by household members that is not part of the farm business. In 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 rhope@ers.usda.gov

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

	1992	1993	1994	1995	1996	1997	1998	1999	2000F	2001F
	\$ billion									
Farm assets	868.3	910.2	936.1	967.6	1,004.8	1,053.1	1,085.5	1,116.6	1,121.0	1,132.1
Real estate	640.8	677.6	704.1	740.5	769.5	808.2	841.8	870.0	874.4	883.1
Livestock and poultry ¹	71.0	72.8	67.9	57.8	60.3	67.1	63.4	70.6	69.7	71.0
Machinery and motor vehicles	85.4	86.4	88.1	89.4	89.8	90.1	90.2	89.0	89.3	89.4
Crops stored ^{2,3}	24.2	23.3	23.3	27.4	31.7	32.9	30.1	26.9	28.1	28.0
Purchased inputs	3.9	3.8	5.0	3.4	4.4	5.1	5.3	4.2	4.5	4.6
Financial assets	43.1	46.3	47.6	49.1	49.0	49.7	54.8	55.8	55.0	56.0
Total farm debt	139.1	142.0	146.8	150.8	156.1	165.4	172.9	176.4	180.6	182.8
Real estate debt ³	75.4	76.0	77.7	79.3	81.7	85.4	89.6	94.2	97.3	98.6
Non-real estate debt ⁴	63.6	65.9	69.1	71.5	74.4	80.1	83.2	82.2	83.2	84.2
Total farm equity	729.3	768.2	789.3	816.8	848.7	887.7	912.7	940.2	940.4	949.3
Selected ratios										
Debt to equity	19.1	18.5	18.6	18.5	18.4	18.6	18.9	18.8	19.2	19.3
Debt to assets	16.0	15.6	15.7	15.6	15.5	15.7	15.9	15.8	16.1	16.1

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

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

Table 33—Cash Receipts from Farming

	Annual			1999		2000				
	1997	1998	1999	Nov	Jun	Jul	Aug	Sep	Oct	Nov
	\$ million									
Commodity sales ¹	207,596	196,575	188,610	17,893	14,108	15,316	16,129	16,859	21,758	18,649
Livestock and products	96,463	94,112	95,463	8,577	7,888	8,357	8,721	8,116	8,541	8,854
Meat animals	49,681	43,336	45,600	4,098	4,061	4,114	4,825	4,229	4,469	4,587
Dairy products	20,940	24,114	23,204	1,905	1,738	1,778	1,743	1,753	1,794	1,704
Poultry and eggs	22,260	22,942	22,942	2,054	1,826	1,815	1,880	1,799	2,038	2,042
Other	3,581	3,719	3,717	521	262	651	272	334	239	521
Crops	111,134	102,463	93,146	9,316	6,220	6,959	7,408	8,743	13,217	9,796
Food grains	10,411	8,892	7,292	341	780	1,189	804	733	465	325
Feed crops	27,048	22,666	19,752	1,770	1,304	1,304	1,507	1,410	2,812	2,107
Cotton (lint and seed)	6,345	6,101	4,696	625	98	85	205	342	971	771
Tobacco	2,874	2,803	2,273	319	0	0	314	430	168	62
Oil-bearing crops	19,802	17,483	13,555	1,230	715	723	812	1,027	3,788	1,283
Vegetables and melons	14,653	15,145	15,164	861	1,397	1,581	1,771	1,730	1,752	949
Fruits and tree nuts	13,134	12,238	12,975	1,796	998	1,099	1,036	1,505	1,630	1,940
Other	16,866	17,136	17,441	2,373	928	978	958	1,565	1,632	2,360
Government payments	7,495	12,209	20,594	3,303	700	396	967	6,272	--	--
Total	215,092	208,784	209,204	21,196	14,808	15,711	17,096	23,131	21,758	18,649

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	Oct 2000	Nov 2000	1998	1999	Oct 2000	Nov 2000	1998	1999	Oct 2000	Nov 2000
\$ million												
North Atlantic												
Maine	295	286	23	24	215	229	22	14	510	515	46	38
New Hampshire	69	63	5	5	86	90	9	7	155	153	14	12
Vermont	463	473	37	35	71	68	5	6	534	541	41	41
Massachusetts	108	101	8	8	314	295	28	37	422	396	36	45
Rhode Island	9	8	1	1	40	39	3	3	49	48	4	4
Connecticut	184	180	16	20	298	302	17	18	482	482	33	37
New York	2,092	2,043	159	160	1,055	1,054	114	85	3,146	3,097	273	245
New Jersey	219	187	12	44	609	554	45	47	828	740	56	91
Pennsylvania	2,909	2,877	269	267	1,252	1,193	103	108	4,161	4,070	372	375
North Central												
Ohio	1,854	1,786	157	158	3,064	2,643	397	269	4,918	4,429	554	427
Indiana	1,632	1,581	152	146	2,899	2,792	589	309	4,531	4,373	741	455
Illinois	1,574	1,524	135	133	6,448	5,233	780	245	8,022	6,757	916	378
Michigan	1,320	1,331	112	107	2,186	2,139	295	343	3,506	3,470	407	450
Wisconsin	4,491	4,149	314	319	1,610	1,447	193	260	6,101	5,596	507	579
Minnesota	3,773	3,548	334	317	4,102	3,513	607	411	7,875	7,061	941	728
Iowa	4,753	4,712	587	430	6,300	5,004	1,010	411	11,053	9,716	1,597	840
Missouri	2,469	2,477	215	226	2,285	1,779	319	180	4,754	4,256	535	406
North Dakota	555	647	57	44	2,359	2,112	232	262	2,913	2,759	289	306
South Dakota	1,549	1,830	169	186	1,855	1,709	443	156	3,404	3,539	613	343
Nebraska	5,124	5,425	536	538	3,906	3,130	485	308	9,030	8,555	1,021	846
Kansas	4,539	5,009	461	479	3,408	2,607	374	260	7,946	7,616	835	739
Southern												
Delaware	609	566	48	43	167	153	23	14	776	718	71	57
Maryland	942	937	84	79	571	544	68	56	1,513	1,481	152	135
Virginia	1,565	1,580	147	156	766	704	110	67	2,332	2,283	257	223
West Virginia	335	334	33	28	61	53	5	5	396	387	38	33
North Carolina	3,956	3,850	393	382	3,233	2,838	386	252	7,190	6,688	779	633
South Carolina	764	773	76	70	733	633	79	50	1,497	1,406	154	121
Georgia	3,400	3,334	282	271	2,017	1,907	386	177	5,418	5,241	668	448
Florida	1,390	1,363	107	126	5,573	5,702	252	400	6,963	7,066	359	526
Kentucky	2,171	2,158	119	382	1,603	1,298	75	44	3,773	3,456	193	426
Tennessee	1,039	1,011	90	88	1,166	963	170	139	2,205	1,974	260	227
Alabama	2,587	2,777	233	213	709	662	158	84	3,296	3,438	391	297
Mississippi	2,164	2,143	180	170	1,271	1,031	233	104	3,436	3,174	413	274
Arkansas	3,283	3,397	281	271	2,141	1,863	391	223	5,423	5,259	672	494
Louisiana	631	620	46	49	1,236	1,228	212	200	1,868	1,848	258	249
Oklahoma	2,803	3,135	322	349	962	855	90	81	3,765	3,991	412	430
Texas	8,149	8,480	718	801	5,005	4,572	497	547	13,154	13,052	1,215	1,348
Western												
Montana	883	928	110	113	924	789	73	96	1,808	1,716	183	209
Idaho	1,585	1,603	138	143	1,742	1,744	241	265	3,327	3,347	379	408
Wyoming	680	680	90	77	168	172	22	54	848	852	112	131
Colorado	2,842	3,016	244	309	1,529	1,338	132	147	4,371	4,354	376	456
New Mexico	1,420	1,441	117	115	521	513	63	72	1,941	1,953	180	186
Arizona	921	987	91	111	1,410	1,191	92	101	2,331	2,178	183	212
Utah	723	724	70	64	261	243	32	22	984	967	103	86
Nevada	199	216	22	14	149	118	14	12	348	334	36	27
Washington	1,743	1,658	131	138	3,413	3,275	403	291	5,156	4,933	535	429
Oregon	762	790	73	87	2,199	2,262	357	282	2,961	3,052	430	369
California	6,526	6,714	527	551	18,145	18,087	2,542	2,232	24,671	24,801	3,068	2,783
Alaska	27	29	2	2	18	19	2	1	44	48	4	4
Hawaii	90	86	7	7	423	447	41	39	514	533	49	46
U.S.	94,112	95,463	8,541	8,854	102,463	93,146	13,217	9,796	196,575	188,610	21,758	18,649

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

Commodity/Program	Fiscal year									
	1992	1993	1994	1995	1996	1997	1998	1999	2000 E	2001 E
	\$ million									
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	Oct	Nov	Dec	Oct	Nov	Dec
<i>\$ billion</i>									
Sales ¹									
At home ²	383.8	392.3	407.3	35.9	37.1	39.6	355.3	392.4	432.0
Away from home ³	309.5	322.1	343.7	31.6	30.2	34.0	312.2	342.5	376.5
<i>1998 \$ billion</i>									
Sales ¹									
At home ²	392.4	392.3	397.8	34.2	35.4	37.5	341.6	377.0	414.5
Away from home ³	317.4	322.1	335.3	29.9	28.6	32.1	298.2	326.8	358.8
<i>Percent change from year earlier (\$ billion)</i>									
Sales ¹									
At home ²	3.8	2.2	3.8	0.9	6.5	-2.6	5.9	5.9	5.1
Away from home ³	5.9	4.1	6.7	5.3	5.3	11.3	9.9	9.5	9.7
<i>Percent change from year earlier (1998 \$ billion)</i>									
Sales ¹									
At home ²	-0.2	0.0	1.4	-1.5	4.2	-5.4	5.8	5.7	4.6
Away from home ³	3.0	1.5	4.1	2.8	2.9	8.7	10.2	9.5	9.4

1. Food only (excludes alcoholic beverages). Not seasonally adjusted. 2. Excludes donations and home production. 3. Excludes donations, child nutrition 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			
	1998	1999	2000	Dec	Jul	Aug	Sep	Oct	Nov	Dec
Rail freight rate index ¹ (Dec. 1984=100)										
All products	113.4	113.0	114.5	113.3	114.5	114.6	114.7	115.2	115.1	115.5
Farm products	123.9	121.7	123.0	122.8	122.0	122.4	124.6	124.5	124.5	124.1
Grain food products	107.4	99.7	100.4	100.4	100.6	100.6	100.4	100.9	100.9	101.2
Grain shipments										
Rail carloadings (1,000 cars) ²	22.8	24.2	23.2	20.3	22.0	23.9	24.6	24.9	21.0	19.3
Barge shipments (mil. ton) ³	3.0	3.5	3.1	3.6	4.3	3.3	2.7	3.1	3.8	2.2
Fresh fruit and vegetable shipments ⁴										
Piggy back (mil. cwt)	0.9	0.7	0.8	0.7	0.8	0.7	0.8	0.6	0.8	0.8
Rail (mil. cwt)	1.2	1.1	1.4	1.8	1.3	1.0	1.2	1.7	2.1	2.2
Truck (mil. cwt)	42.2	45.2	45.0	42.2	44.4	42.5	39.4	40.1	39.9	42.9

P= Preliminary. R = Revised. -- = Not available. 1. Department of Labor, Bureau of Labor Statistics. 2. Weekly average; from Association of American Railroads. 3. Shipments on Illinois and Mississippi waterways, U.S. Corps of Engineers. Annual figure equals monthly average. 4. Annual data is the monthly average. 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
1992 = 100										
Farm output	88	83	89	94	94	100	94	107	101	106
All livestock products	92	93	94	95	98	100	100	108	110	109
Meat animals	95	97	97	96	99	100	100	102	103	100
Dairy products	94	96	95	98	98	100	99	114	115	115
Poultry and eggs	81	83	86	92	96	100	104	110	114	119
All crops	86	75	86	92	92	100	90	106	96	103
Feed crops	84	62	85	88	86	100	76	102	83	98
Food crops	84	76	83	107	82	100	96	97	90	93
Oil crops	88	72	88	87	94	100	85	115	99	107
Sugar	95	91	91	92	96	100	95	106	98	94
Cotton and cottonseed	92	96	75	96	109	100	100	122	110	117
Vegetables and melons	90	81	85	93	97	100	97	113	108	112
Fruit and nuts	95	102	98	97	96	100	107	111	102	102
Farm input ¹	101	100	100	101	102	100	101	102	101	100
Farm labor	101	103	104	102	106	100	96	96	92	100
Farm real estate	100	100	102	101	100	100	98	99	98	99
Durable equipment	120	113	108	105	103	100	97	94	92	89
Energy	102	102	101	100	101	100	100	103	109	104
Fertilizer	106	97	94	97	98	100	111	109	85	89
Pesticides	92	79	93	90	100	100	97	103	94	106
Feed, seed, and purchased livestock	97	96	91	99	99	100	101	102	109	95
Inventories	102	98	93	97	100	100	104	99	108	104
Farm output per unit of input	87	83	90	93	92	100	94	105	100	106
Output per unit of labor										
Farm ²	87	81	86	92	89	100	98	111	110	106
Nonfarm ³	95	95	96	96	97	100	100	101	--	--

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

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

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Food Supply & Use

Table 39—Per Capita Consumption of Major Food Commodities¹

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

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

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