AGRICULTURAL OUTLOOK

Statistical Indicators

Farm Business Outlook . . . Cotton & Soybean Markets . . . Dairy Prices . . . Regional Trade Agreements

Record 1997 Net Cash Income Braces Farmers For Market Downturn

U.S. agriculture is producing voluminous output in 1998, despite severe drought in portions of the Plains and the South. However, expanding field crop and meat supplies coincide with export demand that is lackluster compared with recent years. As a result, U.S. farm prices and income will drop sharply following generally strong farm financial performance in 1996 and 1997. Many farmers are financially stressed, particularly those in the Plains and the South and those with little off-farm income. But most farm businesses are financially sound as the U.S. agricultural sector enters this market downturn. Net farm income has been well above average in recent years and balance sheets are relatively strong. In addition, farm credit availability is strong, as are financial conditions of most farm lenders.

Current ERS analysis of the U.S. farm economy is based on the 1997 Agricultural Resource Management Study (ARMS). Data collected through the ARMS are the primary source of information about agricultural resource use, costs of production, the environment, the structure and financial condition of farm businesses, and the economic well-being of farm operator households.

U.S.-World Cotton Price Gap Has Stretched

The U.S. and foreign cotton sectors face divergent circumstances in the 1998 season, and the marketing year (August-July) has begun with an unusually wide gap between U.S. and world prices. Adverse weather, the Asian crisis, and U.S. and foreign government policies on cotton are among the factors affecting U.S. production and exports in 1998/99.

The 1998/99 U.S. outlook continues the trend toward smaller acreage planted to cotton, as net returns at planting time for some competing crops looked more favorable than for cotton in many areas of the Cotton Belt. USDA's August *Crop*

Production report projects this season's total output at 14.3 million bales, well below the 19-million-bale crops of the past 2 years. With U.S. stocks shrinking and with foreign stocks outside China expected to grow, the price premium for U.S. over foreign cotton has jumped. Government payments to encourage domestic use and exports of U.S. cotton—under Step 2 of the cotton marketing loan program—have soared, and funds are likely to be depleted ahead of expectations.

Soybean Prices To Plunge On Big World Harvests

Greater world supplies of soybeans and weaker demand have combined to produce a dramatic market turnabout this year. U.S. farmers enjoyed record sales of soybeans in 1997/98, thanks to a bumper harvest and favorable prices. In 1998, U.S. soybean farmers will produce their second consecutive record harvest—at 2.83 billion bushels, this year's crop will be nearly 4 percent larger than last year's. But the 1998/99 outlook for marketing has greatly changed. Global soybean ending stocks are projected to be twice as high in 1998/99 as their diminished level 2 years ago. Soybean prices at the farm level are forecast to slide from the 1997/98 average

of $6.45 per bushel to $4.85-$5.85 this season, the lowest since 1986/87.

Dairy Markets Unsettled, Prices Erratic

Strong economic growth continues to bolster demand for dairy products, although the effects have been uneven. Butter and cheese prices moved sharply higher over the summer, while nonfat dry milk remained close to the Federal support price. Strong milkfat demand, moderate skim solids demand, and sluggish milk production are expected to keep dairy markets unsettled and prices erratic during the remainder of 1998. Dairy prices are not likely to stabilize until substantial production gains are posted. Expansion in milk output may start accelerating by late 1998 or early 1999—if the recent declines in concentrate feed prices are combined with adequate supplies of dairy-quality forages.

Regional Trade Agreements & U.S. Agriculture

Regional trade agreements (RTA's) have become a fixture in the global trade arena. RTA's have generated intense debate, with opponents arguing that these trade pacts will divert trade from more efficient non-member producing countries, while advocates contend that RTA's can serve as building blocks for further multilateral trade liberalization.

USDA's analysis of the longrun impacts of four major RTA's (NAFTA, an expanded EU, the Asia Pacific Economic Cooperation forum, and the potential Free Trade Area of the Americas) indicates that, on balance, they will generate more trade economywide than they divert. In agriculture, RTA's have both trade-creating and trade-diverting effects, but trade creation dominates in most RTA's. While the U.S. can gain potentially more from global free trade than from RTA's, the commitments made within RTA's are expected to exceed those from the Uruguay Round's multilateral agreements and joint pursuit of RTA's and multilateralism can benefit U.S. agriculture.

Dennis Shields

Record 1997 Net Cash Income Braces Farms for Market Downturn

U.S. agriculture is producing voluminous output in 1998, despite severe drought in portions of the Plains and the South. Before the effects of the drought in Texas and Oklahoma set in, these States as well as Kansas set new wheat yield records, and current weather patterns have been favorable in most primary corn and soybean producing areas. Larger supplies and lower prices are expected for wheat, soybeans, and corn. Meanwhile, record-large commercial production of beef and pork has reduced livestock prices, with beef and hog prices in 1998 below last year and below the 1990-97 average (*AO* June-July 1998).

The expanding field crop and meat supplies coincide with export demand that is lackluster compared with recent years. Crop growing conditions have generally been favorable elsewhere in the world, and larger foreign supplies are reducing foreign import needs and heightening competition in export markets. In addition, the Asian economic crisis is interrupting growth in global agricultural demand, and a strengthening dollar is raising the cost of U.S. goods to foreign buyers.

With supplies building, U.S. farm prices and income will drop sharply following generally strong farm financial perfor-

mance in 1996 and 1997. U.S. net cash income in 1998 will fall nearly $7.4 billion below last year's record $60.8 billion, returning to the levels of the early 1990's. (The 1998 forecast excludes the effect of farm program payments made to farmers in advance under recent legislation.)

An analysis of short-term farm business performance by USDA's Economic Research Service (ERS), based on the 1997 Agricultural Resource Management Study (ARMS), provides the first comprehensive view of farm financial strength as the U.S. agricultural sector enters this market downturn. Results show that most farm businesses are financially sound and will likely withstand the current downturn into 1999. In addition, farm credit availability is relatively strong, as are financial conditions of most farm lenders. Nevertheless, many farmers are financially stressed, particularly in the Plains and the South where they face repeated crop losses or the combination of low output *and* reduced prices.

Today's market events, while causing financial stress in some parts of the U.S., are not altering the fundamental comparative advantage of U.S. agriculture. Growth in global income and population and advancing agricultural trade liberalization

are the underlying drivers of U.S. farm export opportunities, and in turn of U.S. farm income. These trends are expected to remain positive over the long term.

Farm Financial Health Status

Most farm business operations (those with at least $50,000 in gross farm sales) entered 1998 in good financial shape. Even though prices for many commodities retreated from 1996's unusually high levels, a turnaround in the cattle industry and near-record crop harvests brought profits to many of the Nation's farms and ranches in 1997.

Nationally, two out of every three farm businesses (65.5 percent) were considered to be in a favorable financial position (positive net farm income, and debt/asset ratio less than 40 percent) as of January 1, 1998. This represents a modest decline from a year earlier when 67.9 percent of farms qualified, but remains one of highest percentages of the 1990's. These profitable, low-leveraged operations entered 1998 with sufficient funds to take advantage of investment and expansion opportunities. The share of vulnerable farms (negative net farm income, and debt/asset ratio more than 40 percent) was slightly higher entering 1998 than the previous year—5.6 percent compared with 4.1 percent—but still below the 7.8 percent registered in 1995.

Some areas of the country—most notably the *Appalachian, Southeast,* and *Delta* regions— rebounded strongly from a weak performance in 1996, demonstrating increases in the share of financially favorable farm businesses.

Not all farmers registered a good year in 1997, particularly in the Northern Plains where a combination of poor growing conditions (spring flooding) and diminished yields (largely resulting from scab) left many producers with substantial losses and considerable financial uncertainty as they faced 1998.

Overall financial performance dropped in the *Lake States, Northern Plains, Corn Belt* and *Pacific* regions. Each of these regions exhibited a significant decline in the percentage of farm businesses classified in a favorable financial position and an increase in the share considered vulnerable.

The Corn Belt, despite a decline in overall financial performance, remained one of the regions with the highest percentage of financially favorable farm businesses.

Generally, farm businesses that specialized in the production of wheat and corn retreated from 1996's financial success, while beef cattle farms and ranches improved in overall financial performance in 1997.
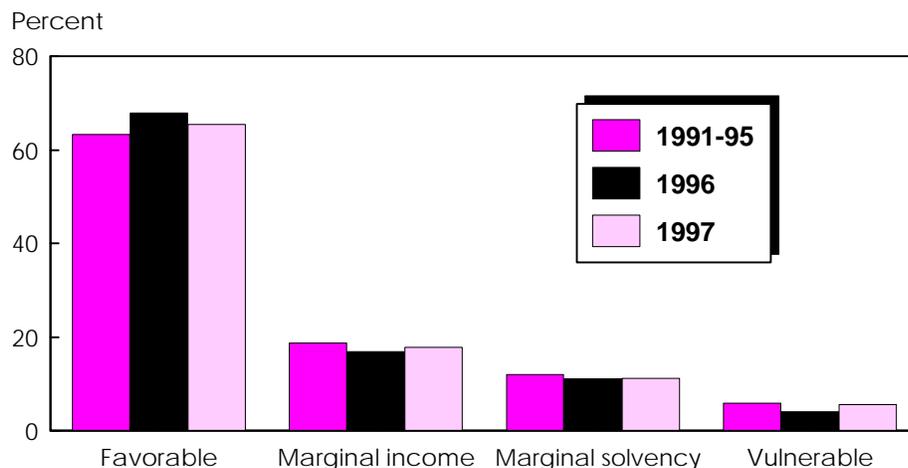
Farm business before-tax earnings were relatively consistent with the widespread profitability enjoyed in 1996. Net farm income, a comprehensive measure of farm business profits, averaged $58,943 in 1997—an increase from 1996's $55,384 and one of the highest levels reached during the 1990's. Larger gross incomes from higher livestock sales, steady government payments, and increased earnings from farm-related sources such as custom feeding generated an average income increase that offset average rises in production expenses.

Not all farm types nor all regions of the country reported relatively stable to increasing net farm income levels for 1997. Farms producing primarily corn, soybeans, cotton, a mix of cash grains, and hogs reported 1997 incomes that were lower than in 1996. For corn and cotton farms, however, 1997 incomes remained on par with those reported *before* 1996. For soybean and hog farms, 1997's net income, on average, remained above earlier years.

On average, reductions in farm business incomes were confined to three regions: the *Northern Plains, Mountain,* and *Corn Belt.* The share of farm businesses with negative net farm income notably increased in the Lake States, Corn Belt, and Northern Plains regions. The highest percentages of farms losing money in 1997 were in the Southern Plains (27 percent) and Mountain (28 percent) regions.

Even though farm households took in less from farming in 1997, *off-farm income kept average household income at 1991-95 levels.* (This includes all farm households, including those with less than $50,000 in gross farm sales.) The same is

Most U.S. Farm Businesses Ended 1997 in Good Financial Shape . . .

Percent

Legend: 1991-95, 1996, 1997

Categories: Favorable, Marginal income, Marginal solvency, Vulnerable

. . . but Financial Positions Declined in the Northern Plains

Percent

Categories: Favorable, Marginal income, Marginal solvency, Vulnerable
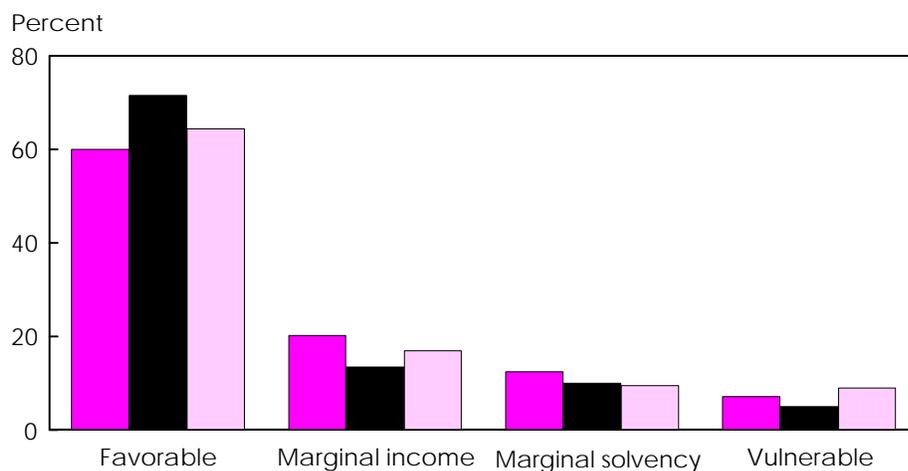
Northern Plains is North Dakota, South Dakota, Nebraska, and Kansas.
Favorable: positive income, with a debt/asset ratio less than 40 percent. *Marginal income*: negative income, with a debt/asset ratio of 40 percent or less. *Marginal solvency*: positive income, with a debt/asset ratio above 40 percent. *Vulnerable*: negative income, with a debt/asset ratio above 40 percent.

Source: Agricultural Resource Management Study.
Economic Research Service, USDA

expected in 1998. Since 1991, average operator household income has been relatively stable, mirroring the average for all U.S. households.

Changes in farm-related income are more critical to some households than others. To generate a cash income close to that of all U.S. households, farms need to generate sales in the upper end of the small farm category ($100,000-$249,999).

Operators in this category overwhelmingly name farming as their major occupation. Although small farm operators who named farming as their major occupation generated almost twice as much farm income as other small farms, their household income in 1997 was about the same as the average U.S. household. Farmers currently undergoing the most financial stress are those with little off-farm income (see page 8).

Agricultural Economy

Rising Off-farm Income Helps Maintain Average Farm Household Income

$1,000 per household
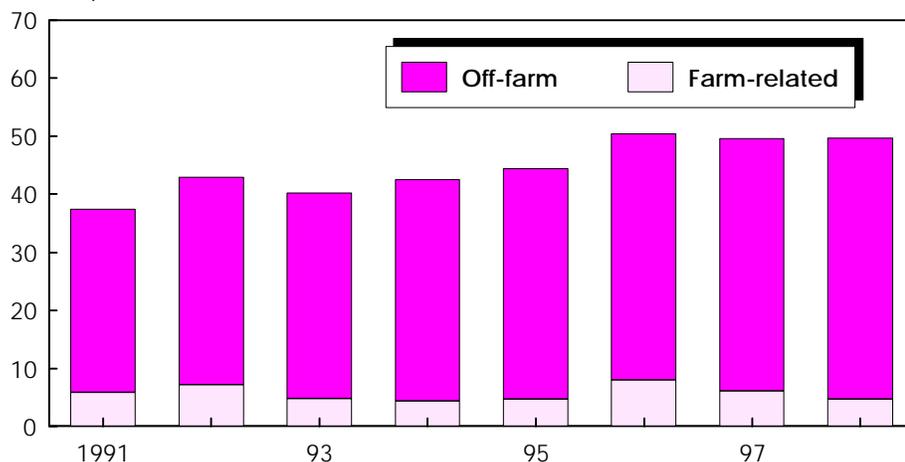
1998 forecast. Data are for all farm households, not just farm businesses (at least $50,000 in gross farm sales).

Economic Research Service, USDA

Balance Sheets Remain Strong

Average net worth of farm businesses increased for the fourth consecutive year in 1997. Increasing farm real estate values and modest increases in debt not only spurred increases in net worth, but also helped to hold the average debt/asset ratio at 1996's value of 17 percent. Since the late 1980's, most farm businesses have been reluctant to take on burdensome debt loads. That trend continued in 1997, with farm businesses strengthening their balance sheets. More than 80 percent ended the year with a debt/asset ratio below 40 percent, indicating only a small risk of insolvency or of cash-flow problems from debt commitment.

Only about 4 percent of farm businesses faced risk of insolvency, defined as having a debt/asset ratio above 70 percent. The number of highly leveraged farms was consistent with levels observed during the previous 5 years and remains well below the mid-1980's, when more than 10 percent of farms risked insolvency.

The *Lake States* region was one of the few where the average debt/asset ratio increased in 1997. Its 24-percent average debt/asset ratio was the highest among production regions. A reduction in average debt helped the *Southeast, Delta,* and *Mountain* regions reduce average debt/asset ratios in 1997. At the end of 1997, however, the *Delta, Lake States,* and *Southern Plains* regions had the highest concentration of highly leveraged farms— at least one out of five farm businesses had a debt/asset ratio above 40 percent.

Lower income in 1998 could weaken the ability of farm businesses to meet debt repayment obligations. Debt repayment capacity utilization (DRCU) is computed as the ratio of actual debt to maximum feasible debt and measures the extent of a farm business's or operator's use of potential credit repayment ability (i.e., a rise indicates that farmers tap a greater share of credit estimated to be available to them). In 1997, farm business DRCU averaged below 40 percent for the second consecutive year. At 36 percent, the DRCU was slightly lower than a year ear-

lier and comparable with 1992, the lowest of the 1990's. However, the percentage of farms that borrowed well beyond their ability to repay from current income increased to 20 percent.

In 1997, farm businesses in the *Mountain* and *Southern Plains* regions had improved debt repayment ability based on higher current incomes and modest changes in debt use. However, lower income and increased debt pushed debt repayment capacity utilization to dangerously high levels (DRCU above 70 percent) in the *Lake States* and *Northern Plains* regions.

This broad measure of farm business performance is sensitive to short-term changes in net income that are occurring in 1998. For example, a 20-percent reduction in net income applied to the 1997 base data would increase the DRCU to 60 percent, and the share of farm businesses with severe repayment problems would climb to 35 percent.

Regional and commodity changes in debt repayment ability reflect divergent financial strategies taken by farmers in recent years. Some farm businesses took advantage of the favorable financial conditions in 1996 to pay off or pay down existing debt. Others used available funds and debt capital to expand and invest in new machinery and equipment. Businesses that borrowed with the expectation of continued strong prices may experience debt repayment problems in 1998.

The makeup of vulnerable operations (high debt and negative income) varies by economic size and economic conditions during the year, but is concentrated among the larger small farms (those with gross sales of $100,000 to $249,999). More than 40 percent of all vulnerable operations were in this size group. Within this group, 6 percent were vulnerable in 1997, up from 4 percent the year before. This group includes a greater proportion of cash grain farms.

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Internet users will find more information (including a large number of charts and tables) on the financial performance of U.S. farm businesses at www.econ. ag.gov/briefing/fbe/sf/results97/brief97.html

Farm Credit Conditions Favorable at Mid-1998

Overall, farm credit availability remained strong in the first half of 1998. Most U.S. farmers continue to enjoy competitive credit markets and lower interest rates. However, if the prices of major commodities remain weak, lenders will be more cautious when lending to farmers in the coming months, particularly in regions most dependent on commodities experiencing lower prices and poor production.

As 1998 progresses, credit conditions in sections of the *Plains* and *Southern States* affected by poor production and lower prices can be expected to deteriorate more rapidly. Indicators of farm financial stress, such as farm loan delinquency rates, typically do not become evident until after serious problems arise (that is, they are lagging indicators of financial stress). Surveys of bankers indicate an uptick in farm loan repayment problems. A survey of Farm Credit System (FCS) lenders in February revealed that some FCS associations, particularly in the Northern Plains, expected higher levels of financial stress this year compared with last year.

Demand for Farm Service Agency (FSA) lending is also an indicator of farm financial health. Although loan demand was up in sections of the Northern Plains, total FSA loan volume obligations for the current fiscal year should be similar to last year. An increase in demand for FSA programs from 1998 events will occur in fiscal 1999 as farmers first exhaust their commercial credit sources.

Farmers have invested heavily in capital assets, such as new machinery, since 1994, adding over $20 billion in total outstanding farm debt. Some farmers will undoubtedly have difficulty servicing this additional debt if farm incomes weaken over an extended period. However, farm income is only a portion of total farm household income and other (off-farm) income sources remain strong. Also, most farmers' strong balance sheets will allow them to weather a temporary economic downturn.

Recent increases in farm debt have been supported by strong farmland markets. Farmland remains the sector's primary

U.S. Farm Income To Drop in 1998

	Average 1990-97	1994	1995	1996	1997	1998	Change 1997-98
	$ billion						
Crop receipts	94.9	100.3	95.8	115.6	112.5	105.7	-6.8
Food grains	9.1	9.5	10.4	10.7	10.6	9.1	-1.5
Feed crops	22.3	20.4	24.6	27.3	27.6	24.4	-3.2
Cotton	6.0	6.7	6.9	7.0	6.5	6.0	-0.6
Oil crops	14.7	14.7	15.5	16.4	19.9	17.9	-2.0
Livestock receipts	90.2	89.7	87.6	92.2	96.2	94.3	-1.9
Meat animals	48.2	46.8	44.8	44.4	49.9	46.9	-3.0
Dairy products	20.1	19.9	19.9	22.8	21.0	22.4	1.4
Poultry and eggs	18.2	18.4	19.1	22.3	22.2	22.1	-0.1
Services and forestry	17.8	17.9	19.4	20.7	22.1	22.5	0.4
Total value of production	203.0	207.9	202.8	228.4	230.4	222.6	-7.9
Direct government payments	8.8	7.9	7.3	7.3	7.5	7.4	-0.1
Net farm income	45.3	48.3	36.0	53.5	49.8	42.5	-7.3
Net cash income	54.6	50.7	51.8	56.4	60.8	53.4	-7.4

1997 preliminary; 1998 forecast does not include farm program payments made in advance under recent legislation.
Economic Research Service, USDA

asset and farmers' primary source of collateral. Strong farm incomes, coupled with government payments, a falling cost of capital, and in some regions strong urban demand for farmland, have increased farmland values. There are early indications that the rapid ascent in farmland values may be stalling. If farmland values fall, lenders will become much more circumspect when lending to farmers.

The financial condition of farm lenders remains strong at this time. Commercial banks with significant agricultural loan portfolios and most FCS associations are well capitalized and have reported strong profits in recent years. Therefore, lenders should be able to weather a shortrun deterioration in farm credit quality.
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Behind the Long-Term Growth In Ag Exports & Farm Incomes

Cyclical production is a major factor contributing to the current commodity market situation. Large global supplies of a number of agricultural commodities are pressuring prices. For wheat, part of this buildup of supplies results from an increase in global production over the last 2 years in response to high prices in 1996

and 1997. As wheat prices have fallen recently, global production can be expected to decline in 1999 in response.

The situation is also characterized by lower exports. The value of U.S. agricultural exports during the first 9 months (October-June) of the 1998 fiscal trade year was down 4 percent from the same period last year; exports to Asia were down 16 percent. These declines reflect in part the Asian economic crisis. Asia, including Japan, typically accounts for almost half of U.S. agricultural exports. U.S. farm exports to other regions, however, were up nearly 7 percent. In particular, agricultural exports to Canada were up 9 percent compared with October-June trade levels of last year, and were up 18 percent to Mexico. Outside Asia, economic growth mostly remains strong.

The Asian economic crisis is only one factor in the decline in U.S. agricultural exports this year. The U.S. is facing strong competition from record or near-record crops in South America, following 2 years of high field crop prices globally. In addition, lower U.S. exports to Asia reflect factors other than weakened demand from the economic crisis. For example, China, a significant importer of corn in 1994/95, was a net exporter in 1997/98 (and will be in 1998/99), contributing to the reduction in U.S. exports.

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In the longer term, growth in global income and population and advancing agricultural trade liberalization are the underlying drivers of U.S. farm export opportunities, and in turn, U.S. farm prices and income. Greater market orientation in the domestic agriculture sector under the 1996 Farm Act puts U.S. farmers in a favorable position to benefit from their comparative advantage in agriculture and compete in the global marketplace.

Growth in global agricultural demand, U.S. agricultural trade, prices, and farm incomes remains the most likely prospect for U.S. agriculture. However, several uncertainties could limit such growth over the next several years. This weaker scenario would stem not so much from the current situation, but from a number of medium-term factors.

The *Asian economic crisis* is a key factor leading to slower global demand prospects. The timepath of Asian economic recovery is uncertain and there is some possibility of economic growth below long-term rates for an extended period of time. A prolonged Asian adjustment period would weaken demand for U.S. agricultural exports for a number of years.

An ERS reassessment of *China's* agricultural sector data suggests the possibility of weaker future import demand for basic commodities in China. Preliminary work indicates that China underestimated agricultural acreage and overestimated livestock numbers and production. With more acres and less livestock, China would require less foodstuffs and livestock feed than forecasters have expected.

The *European Union (EU)* will be looking at options to implement a new agricultural policy— *Agenda 2000.* Lower levels of price support (closer to world prices) and eliminating the acreage set-aside could be key elements of the new policy. Preliminary research findings indicate that the EU could make sizable *unsubsidized* exports of commodities at lower price-support levels. This could create greater global competition in agricultural trade, particularly for wheat.

WTO negotiations in 1999 are becoming increasingly important. Because one of the keys to strong U.S. agriculture is growth in trade, further liberalizing of global markets will allow U.S. farmers to better realize gains from their comparative advantage in an environment of freer competition. Use of P.L. 480 (Food for Peace Program) and the Food Security Commodity Reserve, and more targeted use of GSM credits and other export programs can strengthen exports in the short term. However, the pace and scope of policy reforms resulting from the 1999 WTO negotiations to further liberalize trade will be more important for the long-term health of U.S. agriculture.

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The information in *Agricultural Outlook* is available in advance

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The Agricultural Resource Management Study: Serving the Information Needs of Agriculture

USDA's Agricultural Resource Management Study (ARMS) serves the need of farmers and policymakers for increasingly broad information about conditions in agriculture and about agriculture's contribution to environmental quality. The ARMS gathers data to show a detailed picture of the economics of agricultural production and is the only such information source available to address many agricultural policy issues.

Data collected through the ARMS are the primary source of information to the agricultural community about agricultural resource use, costs of production, the environment, the structure and financial condition of farm businesses, and the economic well-being of farm operator households. These data are important to addressing the question of how agriculture can produce high-quality food and fiber products and at the same time maintain the long-term viability of the natural resource base and farm businesses.

The ARMS, established in 1996, has improved the efficiency of data collection by combining the former Cropping Practices Survey and the Farm Costs and Returns Survey into a single, integrated effort. ARMS was designed with a flexible structure that accommodates a variety of questionnaire versions focusing on specific topics of interest. Special commodity cost-of-production versions are rotated every 5 to 6 years to focus on resource use and production cost for each targeted

commodity. The flexible structure also allows for collection of data on varying resource use and financial issues, such as national irrigation use, animal waste management, or risk management strategies like revenue insurance.

Each year, the study is conducted in three phases. The initial phase, which takes place in June, July, and August, collects general farm data such as crops grown, livestock produced, and sales of farm commodities. This phase generates screening data that are used to identify farms for inclusion in the other, issue-driven phases of the study. Using the screening data allows the second phase of the study to be directed to farms producing the commodities targeted for analysis in that year, reducing respondent burden and making the survey more cost-efficient. This second phase, conducted in the fall, collects data associated with agricultural production practices, application of technology, and resource use.

Phase III, conducted February through April, collects data about whole-farm income, assets, debts, managerial attributes, and specific data on costs for selected commodities. Respondents to the commodity cost-of-production questionnaire of Phase II are also asked to complete a Phase III follow-on that includes a shortened set of farm financial, resource use, and cost-of-production questions. The combined set of Phase II and Phase III data provides the link between agricultural resource use and farm financial conditions, fulfilling a major purpose of the ARMS design.

The detailed information gathered by this targeted, three-phase process allows, among other things, for accurate estimates of commodity costs. Most farm operations produce more than one commodity, which leads to problems in determining commodity costs. For example, tractors and implements are usually used for many activities on a farm, and costs for their use on a single commodity cannot easily be separated from whole-farm costs. Therefore, it is necessary to collect data on each separate field operation in order to estimate the share of costs accounted for by the commodity being surveyed.

Data collected from farmers in the ARMS are confidential. Those who work with the individual farm data are forbidden by law from disclosing any individual data and are subject to heavy penalties, including fines and prison, if they allow disclosure. Data from an individual farm are never released to any government official nor to anyone outside the government—the data are summarized in such a way that disclosure of data from individual farms is not possible.

How Are the Data Used?

Farmers may not realize that data they provide are the basis of general statistics on agricultural production presented to them and to the public. They may receive the information through farm magazines, newspapers, radio and television

Availability of ARMS Data

NASS publishes two reports from the ARMS, *Agricultural Chemical Usage -Field Crops* and *Farm Production Expenditures*. Most NASS State offices carry information from these two reports in their publications. ERS prepares State, regional, and national reports on the operating and financial characteristics of farms by type of farm, and by income and debt/asset categories, which are also available to NASS State offices. ERS also publishes a number of reports that depend on data from the ARMS, including the *Annual Report to Congress on the Status of Family Farms, Financial Performance of U.S. Farm Businesses*, and *Farm Operating and Financial Characteristics*.

Three internet sites carry summaries of the ARMS data online. Much of the farm financial information produced by ERS may be found at http://www.econ.ag.gov/Briefing/fbe/. *Agricultural Resources and Environmental Indicators*, an ERS handbook, may be found at http://www.econ.ag.gov/ Briefing/arei/ arei.htm. NASS reports can be found at http://usda.mannlib. cornell.edu/reports/nassr/other/pcu-bb/.

Researchers interested in access to datasets generated by the ARMS survey should contact Dave Banker *(dbanker@econ.ag.gov)* for information on availability.

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ARMS Data Indicate That Farm Household Income Varies By Type of Farm

Data from the ARMS made it possible to construct a typology of U.S. farms.

Small farms have sales less than $250,000. They include:
Limited-resource (291,700 farms):
operator household income under $20,000, farm assets under $150,000, and gross sales under $100,000.
Retirement (261,400 farms): operator's major occupation is retired.
Residential/lifestyle (537,200 farms): operator's major occupation is "other," i.e., neither farming occupation nor retired.
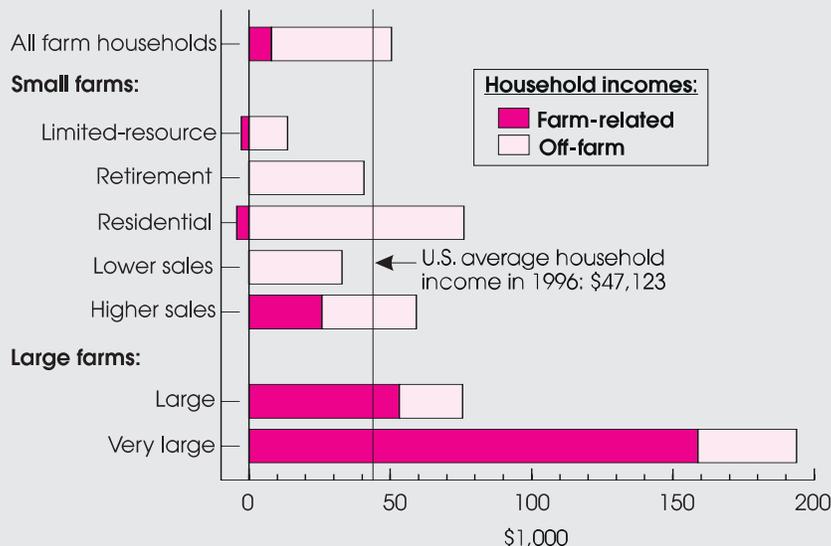**Lower sales** (524,800 farms): operator's major occupation is farming and farm sales are under $100,000.
Higher sales (192,300 farms): operator's major occupation is farming and farm sales are $100,000 to $249,999.

Large farms have sales of at least $250,000. They include:
Large (95,500 farms): farm sales are $250,000 to $499,999.
Very large (58,800 farms): farm sales are $500,000 or more.

Data source: Agricultural Resource Management Study, 1996.
Economic Research Service, USDA

spots, or through extension advisors or land grant university publications, often with no identification of the data source. But it is farmers' participation in the survey that ensures accurate and reliable estimates of practices, technologies, and inputs used in agricultural production.

The national coverage of ARMS reflects the varied financial and resource characteristics of producers across the U.S. Researchers use the data from the ARMS to investigate farm sector structure and performance, including measurement of farm production costs, farm income, and other indicators of farm financial performance. The data allow researchers to evaluate the comparative economic performance of farming operations by size, region, commodity speciality, and other structural parameters, including operator demographics, and to understand approaches that farmers and their households take to manage risk. Policymakers target programs and respond to changing economic and environmental conditions based on this information.

Congress, USDA, farm organizations, commodity groups, and agribusinesses rely on summaries of the data to better understand the problems and issues facing producers. For example, producer associations and USDA's Farm Service Agency use summaries of ARMS data on the costs of production, particularly when developing proposals for programs designed to assist farmers. ARMS data are used to produce annual estimates of the cost of producing wheat, feed grains, cotton, peanuts, tobacco, sugar, and dairy commodities, which are then used to assess the distribution of costs across and within commodity groups. The cost data can be used to analyze differences between low- and high-cost producers and to conduct studies of the cost efficiencies of different production practices such as conservation tillage.

ARMS data are indirectly used by the Bureau of Economic Analysis (BEA) of the U.S. Department of Commerce in producing estimates of the Gross Domestic Product (GDP)—analysts at USDA's Economic Research Service use ARMS data to prepare the farm sector data that are then transmitted to BEA for calculation of the farm portion of the GDP. If the ARMS data were not available, the BEA would need to conduct its own survey of farm operators in order to determine the contribution of agriculture to the national income and product accounts.

Costs and returns estimates also shed light on changes in the relative efficiency of crop and livestock production and the break-even prices needed to cover costs. The estimates also make it possible to develop regional estimates of costs and input use by size and type of farm. Commodity prices, and thus cash receipts, change in response to weather and to national or international events. To reflect the distribution and impact of these problems on farms and farm households, it is important to be able to monitor the health of the agricultural economy by region, as well as by size and type of operations.

The agricultural community is faced with many complex environmental issues, and the data collected by the ARMS can guide policymakers as they consider how best to approach these issues. For instance, ARMS data on fertilizer and pesticide use are being used in water quality studies. Data on machinery use and crop rotations are helping to identify tillage systems and crop residue levels that reduce soil erosion and that contribute to carbon sequestration, which may help mitigate global warming. ARMS data on pesticide use also can help determine the economic impact on producers of restrictions on the use of pesticides.

ARMS data demonstrate the speed at which U.S. farm opera-tors are adopting newer technologies. The 1997 ARMS indi-cated, for example, that although precision farming technology was introduced only within the past 3-4 years, yield monitors were being used on more than one-sixth of the corn acreage surveyed and about one-eighth of soybean acres. ARMS data also show that all three accepted conservation tillage practices—-reduced tillage, mulch tillage, and no-till—are commonly used in corn production; only one-fourth of all corn is still being grown with conventional tillage practices.

Data from the 1996 ARMS suggest that real economic effi-ciencies occur for corn producers using some form of conser-vation tillage—conservation tillage systems resulted in an 11-percent cost reduction compared with conventional tillage. The advantage of conservation tillage varies by region and soil type, but with the exception of the Lake States region on moderate-productivity soil, conservation tillage provided substantial cost savings.

Annual collection of general farm and ranch data are used to develop estimates of net farm income. Data from the ARMS provide the only national perspective on farmers' and ranch-ers' net farm income and financial situation, a crucial compo-nent of decisions made within USDA in response to changing economic conditions and policies. For example, the change in agricultural policy enacted in the Federal Agriculture Improvement and Reform Act of 1996 exposed farmers to increased level of market risk. Farmers' attitudes toward risk and their ability to sustain higher levels of risk in the open market can be explored through the data obtained in ARMS.

Current concerns about the welfare of producers on small farms and the income potential of these producers make col-lection of income and balance sheet data essential. The ARMS provides the data necessary to develop annual esti-mates of the farm operation's assets, debts, equity, capital gains, capital flows, and the rates of return to agricultural resources, and to determine how these items change from year to year. Areas of poor financial performance and pockets of potential stress can then be identified and comparisons undertaken among types of farms.

In response to the January 1998 report of the National Commission on Small Farms, ERS developed a new typol-ogy of farms using data from the ARMS. The Commission classified farms with gross sales of less than $250,000 as small farms, a description that includes approximately 9 out of 10 farms. Such a broad category includes farms that vary

ARMS Provides Data/Information on Adoption and Costs of Conservation Practices

Cost index

Economic Research Service, USDA

widely in their business and operator household characteris-tics, and that differ in their policy needs. The new typology identifies five subgroups of small family farms and two sub-groups of large family farms, with the remainder in nonfam-ily farms. The ARMS is the only source of farm business and farm household data complete enough to produce the typol-ogy at the national level.

The ARMS also provides the financial data necessary to determine how farm household finances change from year to year. The ability to pay operating costs and the interest and principal due on debts can change very rapidly in response to drought, flood, or other circumstances. However, farm and ranch operators and their households may not depend solely on the income from the farm and ranch business. Off-farm work is critical to the financial well-being of many farm households, and even the households of large commercial farms have substantial off-farm income. The ARMS is the only national data source that provides the information neces-sary to show a complete picture of the financial conditions of farmers.
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Field Crops

Weaker Price Prospects Dampen Expansion of U.S. Durum Acreage

U.S. durum producers signaled in early 1998 that they would sharply increase area seeded to durum wheat, according to USDA's *Prospective Plantings* report released on March 31. Tight world durum supplies in 1997/98 led to rising U.S. and world prices for durum, while prices for other types of wheat declined. This market rarity resulted in producers expecting to plant 4.08 million acres of durum in 1998, up a prospective 25 percent from 1997 and the largest acreage since 1982. In addition, Statistics Canada reported that Canadian producers intended to expand acreage by 29 percent in 1998.

However, prospects of larger world supplies and lower prices implied by larger 1998 durum crops eventually led U.S. producers to modify their 1998 cropping plans. USDA's June 30 *Acreage* report confirmed that durum producers actually seeded only 3.7 million acres to durum this spring, up from 3.25 million acres in 1997. Harvested area is projected at 3.6 million acres, up 15 percent from 1997 and the highest since 1989.

The larger harvested area and generally favorable growing conditions in the Northern Plains this summer are pointing to a substantially larger U.S. durum crop in 1998. USDA's August 1 forecast indicates that farmers will harvest 126 million bushels in 1998, up 46 percent from last year's weather-reduced crop and the largest since 1982. U.S. durum yields are projected at 35.2 bushels per acre, up 27 percent from last year and the highest since 1992. North Dakota, Montana, South Dakota, and Minnesota will account for over 91 percent of the U.S. durum acreage harvested in 1998. With yields averaging about 29 bushels per acre, these States will account for about three-fourths of U.S. durum production.

Durum is also grown under irrigation in California and Arizona, where farmers expect to harvest about 319,000 acres (9 percent of the total in 1998). Yields of almost 103 bushels per acre push their share of production to about one-fourth of the U.S. total.

Prices for all classes of wheat have been declining during the summer of 1998 as the prospects for large supplies coincide with weak export demand. However, durum prices do not necessarily fluctuate in unison with other classes of wheat because there is very little substitution between durum and the other classes of wheat—e.g., hard red winter, soft red winter, and white wheats. Durum is usually ground into semolina, a granular product used in pasta.

Because high-protein Dark Northern Spring wheat can be substituted for durum in the production of certain pasta products, the price premium for durum is often evaluated by comparing No. 1 Dark Northern Spring wheat (with 14 percent protein) and Hard Amber Durum wheat at Minneapolis Grain Exchange, a major trading center for both types of wheat. The premium has widened since the mid-1990's, sharply so in 1997/98 as world supplies of durum tightened. In 1998/99, the premium is declining as supplies rebuild. Durum was in abundant supply during the 1989-92 marketing years and the price differential was generally small during those years.

Larger U.S. supplies and weaker prices will encourage U.S. millers to expand purchases of U.S. durum and reduce imports from Canada, the world's largest durum producer. Although domestic use of durum is forecast to rise in 1998/99, ending stocks are projected to increase 46 percent from last year.

Export prospects are dampened by projected larger crops in Italy, France, Canada, Syria, and North Africa. World durum production is projected at 30.8 million metric tons (1.14 billion bushels), up about 26 percent from 1997/98. Canada's output is projected at 6.3 million tons, up 30 percent from 1997/98. Production in the three major exporters (Canada, U.S., and the European Union) is projected to total 18.4 million tons in 1998, up 5 million tons from 1997.

The expanded exportable supplies in 1998/99 are expected to coincide with a downturn in global import needs since many importers are experiencing production increases this year. The weaker import demand will intensify competition

Durum Price Premium To Narrow in 1998/99 As U.S. Stocks Build
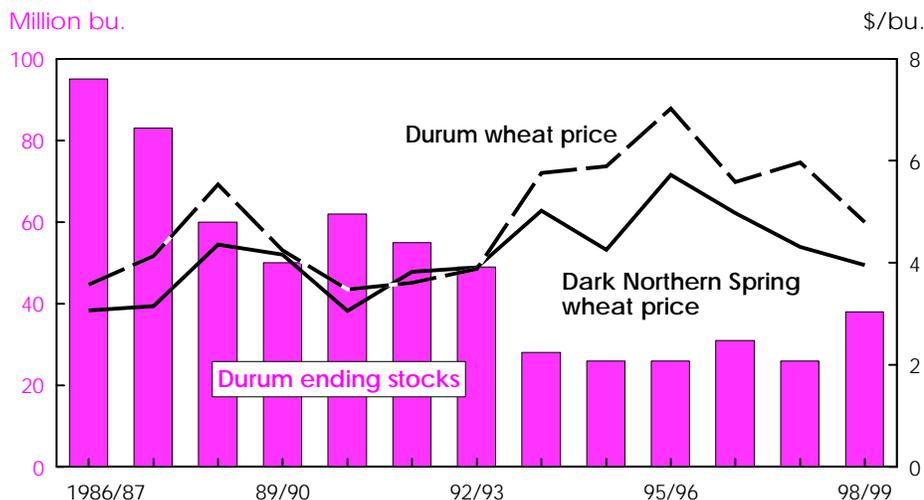
Prices for no. 1 Hard Amber Durum and no. 1 Dark Northern Spring (14 percent protein) at Minneapolis Grain Exchange. Dark Northern Spring can be substituted for durum in pasta. 1998/99 prices are averages for June and July 1998.

Economic Research Service, USDA

among the major exporters this year and reduce U.S. exports to a projected 45 million bushels (grain and products), down 15 percent from last year. Export sales have started slowly. As of August 13, accumulated export shipments plus outstanding export sales for the 1998/99 marketing year totaled only 13.1 million bushels, 43 percent below last year's pace. Despite the lower export projection, the U.S. will maintain its status as the world's second largest exporter behind Canada. *Mack N. Leath (202) 694-5302 mleath@econ.ag.gov* **AO**

Livestock, Dairy, & Poultry

Dairy Markets Unsettled, Prices Erratic

Strong economic growth continues to bolster demand for dairy products, although the effects have been uneven. Strong milkfat demand, moderate skim solids demand, and sluggish milk production are expected to keep dairy markets unsettled and prices erratic during the remainder of 1998. Dairy prices are not likely to stabilize until substantial production gains are posted. Expansion in milk output may start accelerating by late 1998 or early 1999—if the recent declines in concentrate feed prices are combined with adequate supplies of dairy-quality forages.

Sales of milkfat have increased despite very high prices since mid-1997. Use of regular ice cream, fluid cream, and cream cheese have increased, while declines in butter sales have been quite modest. In addition, direct use of milkfat in processed foods appears brisk. Some of this strength probably still represents the momentum of increased sales built up by the very low milkfat prices of 1992-95. There also seems to be some return to traditional products after experimentation with lower-fat versions. Milkfat demand is projected to be fairly strong during the rest of 1998, although the high summer butter prices may start to trim growth in milkfat sales.

Demand for skim solids has not matched demand for fat. Fluid milk sales have run about 1 percent below a year earlier, without significant growth in even the lowfat milks. Use of products such as cottage cheese has slipped. In addition, use of nonfat dry milk and other forms of skim solids in processed foods apparently has eased, in part because of their relatively high prices during much of the 1990's. Skim solids sales may have been affected by eroding sales of nonfat or very lowfat foods that had used milk solids to main-

tain quality when the fat was removed. If not for the moderate growth in cheese sales, sales of skim solids probably would be below a year earlier.

Rapidly rising prices spurred dairy product users and retailers to increase their pipeline holdings during the second quarter of 1998. These pipeline stocks will be worked down in the second half of the year. However, wholesale price changes since early July indicate that pipeline stocks probably did not reach excessive levels. Low warehouse stocks have bolstered prices—warehouse holdings of butter were down sharply on July 1, while cheese stocks were 5 percent lower than a year earlier.

Sluggish milk production and very strong milkfat demand shot wholesale butter prices to record highs by the end of June, where they held through July. Although pipeline holdings of milkfat may have been sizable by early July, total inventories (including commercial warehouse stocks) probably were a little tight and sales evidently stayed brisk. The strength in butter prices pulled cheese prices up sharply, as cheese demand was too strong to allow very much milk to be drawn from cheese production into production of butter and nonfat dry milk. Between early May and mid-July, cheese prices rose about a third. Since then, cheese prices have been mixed.

Butter and cheese prices are expected to decline in autumn, particularly if milk production begins to expand in earnest. Although milkfat demand stays seasonally strong in autumn, demand actually peaks in summer when milkfat production is at its seasonal low. Late summer-early autumn supplies may be more than adequate for sales at recent prices. However,

butter and cheese markets probably will stay relatively tight until late 1998.

Nonfat dry milk prices have stayed near the Federal support purchase price. Contributing to this situation have been demand weakness, large powder stocks, and butter prices high enough to keep milk going into joint production of butter and nonfat dry milk. Federal purchases of nonfat dry milk under the price support program continued in summer, despite seasonal production declines and the availability of new allocations under the Dairy Export Incentive Program (DEIP). Contracts under DEIP were sizable in July, but ample international supplies and demand weakness in Asia meant there was little reason for buyers to build stocks. Support purchases should diminish in coming months, as DEIP contracts absorb most of the seasonally smaller surplus.

The roller coaster in farm milk prices is likely to continue. The Basic Formula Price (BFP)—which represents the value of milk for manufacturing and is the mover of most prices under the Federal milk marketing orders—rose counterseasonally in early 1998, reaching a February peak of $13.32 per cwt. The delayed seasonal collapse of cheese prices dropped the BFP to $10.88 in May, before surging butter and cheese prices brought it back up to $14.77 in July. If wholesale prices ease as expected, the fourth-quarter average may decline to levels similar to a year earlier.

The average price of all milk in the fourth quarter is projected to post a much smaller increase from a year earlier than it did the first three quarters. Even so, the 1998 average will be more than $1 per cwt above 1997's $13.34 and second only to the 1996 record. This year's higher milk prices and lower concentrate feed prices should start to stimulate milk production. Increased returns are expected to spur herd expansions by stronger producers, and milk-feed price ratios have reached levels normally associated with above-average growth in milk per cow. But acceleration in milk production is likely to be gradual for a number of reasons.

Adequate supplies of good forage remain a major concern. A promising start to the forage season was dimmed by rains that reduced the quality of first and second

Briefs

Butter, Cheese Prices Remain Well Above Support Prices . . .

Butter

$/lb.
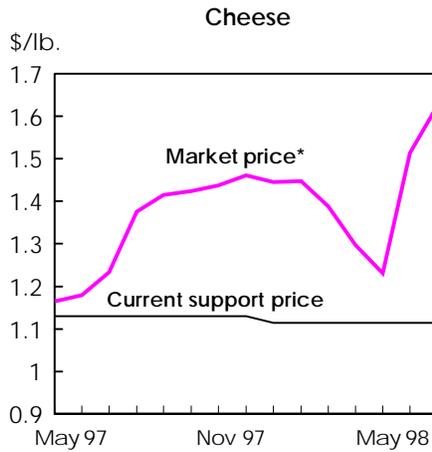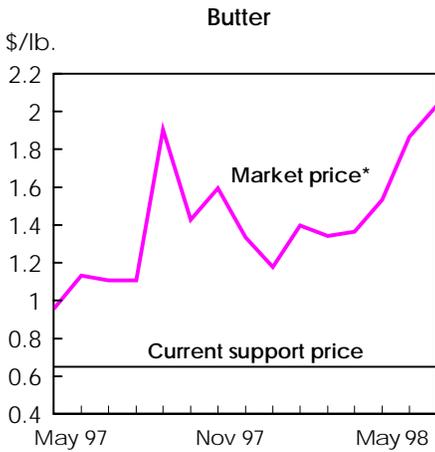
*Central States. Grade AA Chicago before June 1998.

Cheese

$/lb.

*Wisconsin assembly plant, 40-pound blocks.

. . . While Nonfat Dry Milk Price Falls Near Support Purchase Price

Nonfat Dry Milk

$/lb.

*Central States.

Economic Research Service, USDA

cuttings of hay across northern regions. Unless late cuttings are particularly good, lack of enough quality forage will continue to trim expansion in milk production. Also, high summer milk prices were a sudden reversal of a sharp decline in manufacturing values between February and May. Producers will not see the full effects of these higher prices in their milk checks until well into summer. Even then, producer response may be cautious because of the recent price volatility.

Year-over-year declines in milk cow numbers are expected to ease to only about 0.5 percent by late 1998, compared with drops of almost 1 percent in the first half of the year. Enough herd expansions are

projected to come into production to largely offset the exodus of weaker farmers. For all of 1998, cow numbers are projected to decrease less than 1 percent.

Despite a favorable milk-feed price ratio, summer milk per cow probably will post a relatively small increase from a year earlier. Last year's summer output was quite strong because of generally favorable weather, while 1998 has seen problems with heat. Autumn gains could exceed 2 percent, a truer representation of the underlying expansion in milk per cow. The 1998 total is projected to be almost 2 percent above last year.

Autumn and winter milk output is projected to rise considerably more than 1 percent from a year earlier. Possibly more important, milk production is expected to be on a firm expansion course for the first time in several years. The major threat to this growth remains the possibility of continued problems with forage quality. Annual 1998 production is projected to be nearly 1 percent above the 156.6 billion pounds of 1997.
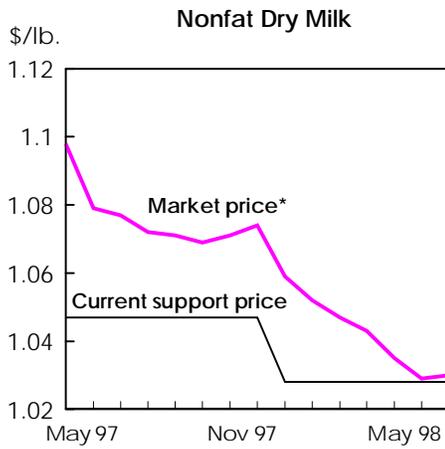*Jim Miller (202) 694-5184*
jjmiller@econ.ag.gov **AO**

Specialty Crops

U.S. Apple Production Up, Prices Down

USDA has forecast the 1998 apple crop to be 11.3 billion pounds, up 9 percent from a year ago. Larger expected crops in all apple-growing States in the Western U.S., except California, will offset production declines in the Central and Eastern regions and help increase availability of domestic apples during the 1998/99 marketing season.

Although increased production will likely put downward pressure on fresh-market grower prices, generally good-size fruit from this year's apple crop, as well as a smaller pear crop—which tends to compete with apples in the fall—will help keep fresh-apple prices strong for growers. In 1997/98, a 6-percent decline in fresh-market production helped raise the season-average grower price for fresh-market apples to 22.2 cents a pound, up 7 percent from the previous year.

Washington will produce more than half of all U.S. apples in 1998, and traditionally is the largest producer for both the fresh and processed market. Washington's 1998 apple harvest is forecast at 6.1 billion pounds, 22 percent larger than last year and the largest so far. Apple orchards in the State bloomed heavily following a smaller crop in 1997. Weather was also very favorable for much of the Northwest, especially during the stages of pollination, fruit set, and early-season growth. The potential crop size also grew as production increased on maturing trees that began bearing earlier in the 1990's.

Meanwhile, relatively cooler temperatures and above-normal rainfall in California have slowed development of its 1998 apple crop by about 2 weeks, just as weather has delayed many California summer fruits. California's apple crop is forecast at 915 million pounds, down 5 percent from a year ago but still about average.

Orchard blooms were generally good throughout Michigan, the largest apple-producing State in the Central region, and weather was mostly favorable, especially during pollination. However, production there is forecast at 1 billion pounds in 1998, down 5 percent. Smaller crops are expected in many States in the Eastern region as well, including New York and Pennsylvania, the two largest producers in this region. While orchard blooms in these States generally suggested average-to-large-size crops, hail and wind damage later in the season have reduced crop size potential.

Over 50 percent of U.S. apple production is for the fresh market. Fresh-market apple supplies for fall 1998 are expected to increase from a year ago, especially given the expected record crop in Washington and still a relatively large crop in California, where over 70 percent and over 30 percent of the apple crops are for the fresh market.

Increased fresh-market supplies, mostly of good exportable quality will help promote U.S. fresh apple exports in 1998/99. However, the Asian financial crisis has taken a toll—the stronger U.S. dollar relative to other currencies, particularly in Southeast and East Asia, will likely continue to dampen export prospects in these markets. During August 1997-May 1998, exports to the largest market in Asia for U.S. apples—Taiwan—fell nearly 10 percent over a year earlier. Similarly, exports to other important Asian markets such as Indonesia, Thailand, the Philippines, and Malaysia declined 50-58 percent.

Some of the decline in exports to Asia was offset by gains in exports to Canada, the second largest foreign market for U.S. apples. Exports to Canada increased 7 percent from August 1997 to May 1998. In contrast, exports to Mexico, another important market for U.S. apples, fell about 39 percent, attributed mainly to its decision in September 1997 to impose an antidumping duty of 101.1 percent on imports of U.S. Golden and Red Delicious varieties. Export prospects to Mexico this season could return to more normal levels with the March 1998 agreement between the U.S. apple industry and Mexican commerce officials to suspend the antidumping investigation.

Supplies of processing apples from the Central and Eastern regions during the 1998/99 marketing year will be limited by overall reduced production in these regions. However, large supplies from Washington and California, where about 44 percent of processing apples are produced, should help keep overall supplies at normal levels. Large stocks of processing apples entering the new season will also offset smaller Eastern supplies.
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Large Washington Apple Crop Expected in 1998

Billion lbs.
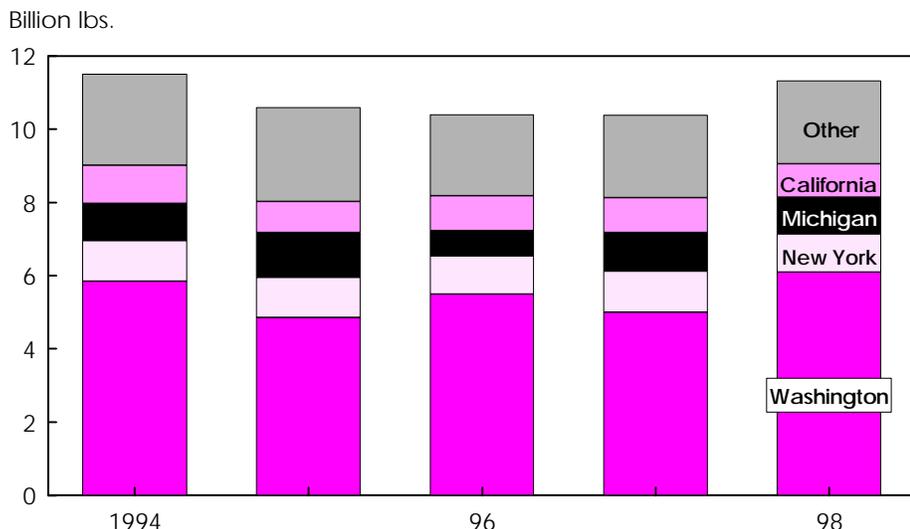
1998 forecasts.
Economic Research Service, USDA

National Cotton Council

U.S. & World Cotton Markets Diverge in 1998/99

The U.S. and the foreign cotton sectors face divergent circumstances in the 1998 season, and the marketing year (August-July) has begun with an unusually wide gap between U.S. and world prices. Adverse weather, the Asian crisis, and U.S. and foreign government policies on cotton are among the factors affecting U.S. production and exports in 1998/99.

With U.S. stocks shrinking and with foreign stocks outside of China expected to grow, the price premium for U.S. over foreign cotton has jumped. Moreover, government payments to encourage use and exports of U.S. cotton—under domestic Step 2 of the cotton marketing loan program—have soared, and funds are likely to be depleted well before potential reauthorization in 2002.

U.S. Crop To Shrink In 1998/99 Season

For the U.S., the 1998/99 outlook continues the trend toward smaller acreage planted to cotton. This trend is a result of the most recent U.S. farm legislation, currently in its third year, which allows producers greater flexibility to plant the crops they choose in response to market signals. Producers have sought to limit

their risk, given cotton's relatively high cost of production. As planting time approached this spring, net returns for some competing crops looked more favorable than for cotton in many areas of the Cotton Belt, signaling a need to plant fewer acres to cotton.

USDA's *Prospective Plantings* report, released in March, had indicated farmers' intentions to plant 13.2 million acres to cotton this season, 4 percent below 1997/98 and 22 percent below the recent high in 1995/96. However, cool, wet weather in California and dry conditions in Texas during planting time slashed cotton area further. In the June *Acreage* report, USDA indicated that cotton area planted—and to be planted—totaled only 12.9 million acres this year, 6 percent below 1997/98.

The U.S. Cotton Belt stretches across the southern-tier States and is usually divided into four major producing regions (West, Southwest, Delta, and Southeast). Although each region's cotton acreage is below 1997/98, the degree of decline varies. Based on USDA's August *Crop Production* report, declines ranging from 3 to 18 percent are projected for the cotton-producing regions.

The largest percentage decline projected for this season is in the West, where a cool, wet spring delayed planting and kept some intended cotton acreage from being planted at all. USDA's National Agricultural Statistics Service (NASS) projected area at 1.2 million acres in August, a drop of more than 18 percent. NASS estimated that the West would produce nearly 2.6 million bales in 1998/99, suggesting an average yield for the region of 1,021 pounds per harvested acre, both well below normal.

The Southwest plants and harvests the largest share of cotton area. However, drought conditions in Texas and Oklahoma have limited plantings this season, and the continued lack of moisture is likely to force large acreage abandonment. Planted area for the Southwest was projected in August at 5.5 million acres, only 5 percent below last season. However, the harvested area projection is only 3.4 million acres. In addition, the production estimate of 3.3 million bales is well below the region's 5-year average of 5 million bales and the lowest output since 1989.

In the Delta, the largest producing region by volume, cotton area has declined continuously since enactment of the 1996 farm legislation, reflecting the expansion of alternative crops in the region. NASS projected planted area at 3.1 million acres, about 9 percent below a year earlier. But with better growing conditions than in the West or Southwest, the Delta is projected to have above-average yields—747 pounds per harvested acre—and is expected to produce a crop of 4.8 million bales this season.

In the Southeast, where cotton area has remained relatively stable since 1996, plantings are projected at 3 million acres. Despite some weather-related problems of its own, the Southeast is projected to produce a crop of 3.6 million bales, equal to the 5-year average but implying a below-average yield of 585 pounds per harvested acre.

Based on the August *Crop Production* report, USDA currently projects this season's total output at 14.3 million bales, well below the 19-million-bale crops of the past 2 years. The national yield is

U.S. Cotton Production To Drop Sharply

Million bales

Legend: 1995 (black), 1996 (light gray), 1997 (magenta), 1998 (light pink)

Bar chart showing cotton production by region: West, Southwest, Delta, Southeast

One bale equals 480 pounds. 1998 forecast.
Economic Research Service, USDA

chases of durable goods fell 39 percent. Garment sales have reportedly fallen less than car sales, but perhaps as much as household appliances. In Southeast Asia, the contraction of GDP and consumer spending has been even more severe, and substantially larger declines in clothing purchases are likely.

Together, consumers in Southeast and East Asia could cut their purchases of cotton-containing products by 1 to 1.5 million bales during calendar 1998, the equivalent of about 1.4 percent of world consumption. Since income prospects in the region have been reduced for the foreseeable future, cotton consumption is not expected to rebound fully. This has exerted a negative influence on world cotton prices. While developed economies other than Japan are expected to continue expanding in 1998 and 1999, the increased demand will be more than offset by Asia's loss.

China's shift from net importer to net exporter of cotton has also depressed foreign prices. China vaulted to the position as the world's largest importer in the mid-1990's as policymakers encouraged imports to rebuild stocks and help tame soaring inflation. Now, China's economy may be undergoing deflation, and the years of high imports and large cotton crops appear to have driven stocks uncomfortably high.

The precise levels of China's production, consumption, and stocks are subject to wide debate in the cotton trade. But there is no question that China began restricting imports at the beginning of 1998, and during April 1998 it announced a large export tender.

While a second export tender was in effect withdrawn, China has announced an unprecedented cut in the government procurement price for 1998 crop cotton and the withdrawal of a price floor for procurement in Xinjiang Province, traditionally China's main exporting region. China's cotton procurement prices have been above world levels in recent years, so that exports would likely have required subsidies. This year's freeing of procurement prices in Xinjiang while freeing prices to end-users throughout China may open the way to exporting without exposing China to

forecast near the 5-year average, at 640 pounds per harvested acre, while the U.S. harvested area is projected at only 10.7 million acres.

With U.S. production significantly below the previous two seasons, beginning stocks near last year's 4 million bales, and imports forecast at 100,000 bales, cotton supplies for the 1998/99 season are currently projected at 18.3 million bales, 20 percent below 1997/98. As a consequence of tighter U.S. supplies, in addition to steeper competition from abroad, U.S. cotton exports are expected to be constrained this season.

As of August 12, USDA forecasts domestic mill use at 10.8 million bales during 1998/99, compared with 11.35 million bales last season, as the recent slowdown in cotton use is expected to continue in the near future. Factors likely to limit mill use this season are slower growth in the U.S. economy and the continued influences of the Asian crisis, which has provided relatively cheap cotton textile and apparel imports into the U.S. Liberalization of textile trade under the North American Free Trade Agreement has also contributed to increased imports.

Although U.S. cotton textile exports have risen this year, they have not kept pace with imports. Meanwhile, U.S. exports of

raw cotton are expected to take the brunt of the decline in 1998/99 and are projected at only 4.9 million bales, 35 percent below last season. The 2.6-million-bale decline in raw cotton exports is attributable in part to the loss of U.S. production in areas that typically provide cotton for the export market. Other factors are the financial problems across Asia and an anticipated increase in foreign competition, particularly from China.

Asian Consumers Reeling

The decade's most rapidly growing economies have sustained a severe setback as a result of the Asian crisis, and world cotton demand has suffered. At the same time, China appears poised to exchange its place as the world's largest importer of the last few years for a position among the world's largest exporters. These two developments have tended to depress world cotton prices and have contributed to the large disparity between U.S. and world prices.

Clothing is a semidurable good, and like true durable goods (e.g., cars and appliances), its purchase can be deferred at a given time while consumers rely on earlier purchases (unlike the purchase of food and many services). While Korea's urban consumer expenditures fell 9 percent in the first quarter of 1998, pur-

Commodity Spotlight

China's Net Exports of Cotton Rebound

Million bales

One bale equals 480 pounds. 1997/98 estimated; 1998/99 forecast.

Economic Research Service, USDA

charges of "dumping" cotton. Since China is not a member of the World Trade Organization (WTO), the validity of any dumping charges would be resolved bilaterally rather than through the dispute settlement mechanism of the WTO.

China's *imports* seem largely restricted to coastal mills that are joint ventures with foreign investors and that meet strict regulations mandating re-export of products made with imported cotton. But it seems likely that larger amounts of cotton will be available for *export* once adequate crop prospects are secure.

Exhaustion of Step 2 Funding Could Further Erode Demand

The 1990 farm legislation provided a mechanism—the Step 2 program—for keeping U.S. cotton competitive on the world export market as well as encouraging domestic mills to use U.S. cotton instead of importing cheaper foreign cotton. The Step 2 program is now an integral part of the upland cotton marketing loan provisions of the U.S. cotton program. But Step 2 funding for compensating domestic mills and exporters is close to depletion.

Step 2 provides a payment to exporters and domestic mill users of U.S. upland cotton when, after 4 consecutive weeks,

the U.S. price on the world market is more than 1.25 cents per pound above the weekly average of the five lowest price quotations offered (A-Index). In addition, the adjusted world price (AWP) must be no more than 30 percent above the per-unit government loan rate available to cotton farmers (*AO* July 1997). On October 1, 1998, the 30-percent threshold will be raised to 34 percent.

The 1996 farm legislation limited Step 2 expenditures to $701 million during the period FY 1996 through 2002. As the end of FY 1998 approaches, well over half of the budgeted amount for the 7-year period has already been spent, and the balance is expected to be depleted in FY 1999.

Early depletion of the Step 2 funds is the result of several concurrent developments last season. With U.S. prices already above world prices by the start of 1997/98, Step 2 payments averaging about 1.5 cents per pound were in effect from August 1997 through January 1998.

By the spring of 1998, the price gap widened as U.S. planting delays associated with weather problems diminished crop prospects and increased U.S. prices. Meanwhile, world prices declined as a result of the Asian crisis and of China's large offering of cotton for export.

Consequently, Step 2 rates increased, averaging 5 cents during February-April 1998, and rising to 7 cents in May. With the continued decline of the U.S. cotton crop, especially in Texas, and with prospects for a large foreign crop underway, the Step 2 rates jumped dramatically, averaging more than 11 cents per pound in June and July, with the rate peaking at 13.5 cents for the week of July 3-9.

The Step 2 program cost nearly $400 million in 1997/98, and the program functioned as intended by keeping U.S. cotton competitive. Estimates of increased demand resulting from Step 2 last season ranged from 300,000 to 650,000 bales. The increased demand kept U.S. stocks from rising in 1997/98 and U.S. average farm prices held near 65 cents per pound for the season.

As the 1998/99 season begins, the gap between U.S. and world prices is still wide, but prices are more closely aligned, and Step 2 rates have fallen to about half the rates seen in June and July. Despite the lower rates, the funds allocated for the Step 2 program are expected to be depleted sometime this season. The timing of the program's termination will depend on the level of future payment rates, the pace at which domestic mills use upland cotton, and the pace at which exporters ship the cotton to foreign markets.

Given the program's imminent demise, demand is expected to increase during the first part of the season to capture these payments. But if additional funding for the program does not materialize, domestic and foreign demand for U.S. cotton is expected to weaken in the short term.

Shortly after the Step 2 program is terminated, special import quotas would likely be triggered under Step 3 if U.S. cotton prices remain above the rest of the world. Step 3, which effectively raises quotas for imports at low tariff rates, ensures the U.S. textile industry access to competitively priced cotton. The program is authorized when, for 10 consecutive weeks, the U.S. price on the world market remains more than 1.25 cents per pound above the average of the five cheapest quotations offered (A-Index), after subtracting any Step 2 rate from the previous week.

However, the opening of Step 3 quotas does not necessarily result in large quantities of U.S. cotton imports. Ordinarily, the price of domestic cotton to U.S. mills is lower than imported fiber because of relative costs of transportation; in addition, U.S. cotton may command a premium due to quality, reliability, and the efficiency of "just-in-time" delivery. Therefore, tariff reduction by itself will not generate significant cotton imports. The magnitude of the price gap between the U.S. and the foreign source (including transportation costs) will be crucial, as well as the domestic availability of specific qualities of cotton that might be imported. Many variables, both in the U.S. and overseas, will be at work to determine the competitiveness of U.S. cotton.

Despite a potential setback in demand for U.S. cotton this season, the forecast decline in U.S. production exceeds the drop in demand—stocks at the end of 1998/99 are projected to decrease from the beginning level. The latest estimate places U.S. ending stocks at 2.6 million bales, just under the 1995/96 level and the lowest since 1990/91.

Gap Between U.S. and World Cotton Prices Widened in Spring 1998

Cents/lb.   Cents/lb., step 2
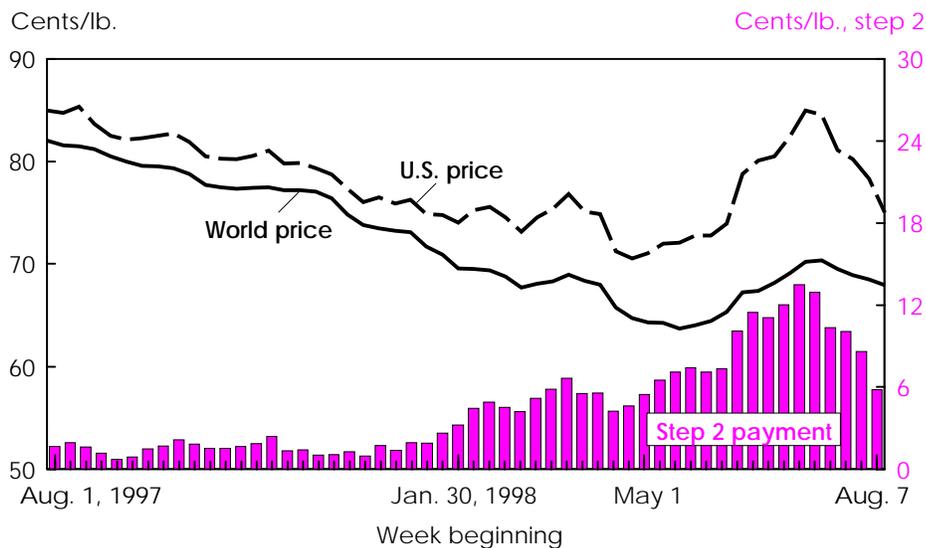
World price (A-Index), and least expensive U.S. cotton quote offered in Northern Europe.
Source: Foreign Agricultural Service, USDA.
Economic Research Service, USDA

While it is still early in the 1998/99 season, the outlook for cotton prices and U.S. competitiveness this year and the implications for 1999/2000 may well be determined over the next several months.

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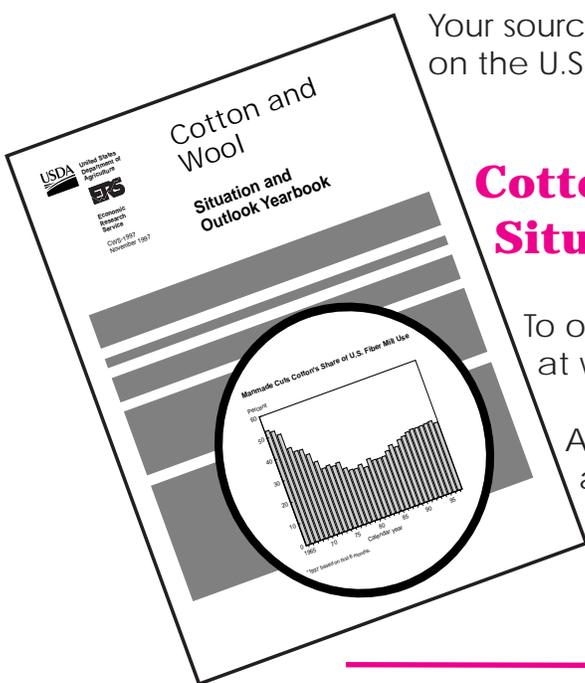
Soybean Prices Plunge on Big World Harvests, Weaker Demand

Last year, U.S. farmers enjoyed record sales of soybeans, thanks to a bumper harvest and favorable prices. In 1998, U.S. soybean farmers will produce their second consecutive record harvest. At 2.83 billion bushels, this year's crop will be nearly 4 percent larger than last year's. But the 1998/99 outlook for marketing has greatly changed. Soybean prices at the farm level are forecast to slide from the 1997/98 average of $6.45 per bushel to $4.85-$5.85 this season, the lowest since 1986/87. Greater world supplies and weaker demand are responsible for this dramatic market turnabout. Compared with the diminished level 2 years ago, projected global soybean ending stocks in 1998/99 are expected to be twice as high.

Farm policies promoting greater planting flexibility—which made expected market returns the major determinant of farmers' acreage—have helped make 1998 the sixth consecutive year of higher soybean plantings. Comparatively lower grain and cotton prices pushed U.S. soybean plantings this spring to an all-time-high 72.7 million acres. Steadily rising yields and lower production costs (partly due to widespread adoption of conservation tillage practices and herbicide-tolerant varieties) have also boosted soybean acreage.

Higher yields will also contribute to increased production. Most soybean acreage was planted earlier than usual in 1998, and a longer growing season tends to help yields. Early-season prospects were favorable, with ample soil moisture this spring. Despite concerns over drought that sometimes follows El Niño, adequate rain fell during the summer in the major producing States, although soybean fields in the South have been hurt by hot and dry weather. The U.S. average soybean yield is expected to reach 39.5 bushels per acre, which would rank second only to the 1994 yield of 41.4 bushels.

U.S. farmers have not been the only recipients of such bounty. Responding to the same net return incentives, South American producers expanded soybean plantings more than ever before. In Brazil, continuing transportation improvements have lowered marketing costs, opening more remote lands for competitive soybean production. El Niño helped bring abundant rainfall to South American fields in early 1998, resulting in bumper harvests for Brazil, Argentina, and Paraguay (the world's second, third, and sixth largest soybean-producing countries). Argentina's 1998 output was nearly 50 percent larger than the drought-damaged 1997 crop. In addition, a rain-delayed harvest and slower marketings will push even more foreign supplies into direct competition with U.S. exports in 1998/99 (September-August). Excellent worldwide harvests of competing oilseeds, such as rapeseed and sunflowerseed, will also pressure soybean prices.

Despite a superb start, 1997/98 U.S. soybean exports are expected to be down slightly from the previous year (870 million bushels) because of substitution of soybean oil and meal exports. In 1997/98, robust foreign demand is hiking U.S. exports of soybean meal and soybean oil (up 33 percent and 45 percent). Domestic soybean crushing consequently soared to satisfy increasing demand for meal and oil. But given large South American stocks this fall, export competition will be much fiercer for the U.S. than a year ago when it was virtually the world's only source of soybeans. As of mid-August, U.S. export sales of soybeans and soybean meal in 1998/99 (i.e., new crop to be delivered) were only 38 and 61 percent, respectively, of the amount sold a year earlier. U.S. soybean oil exports are forecast at 2.8 billion pounds in 1998/99, down 5 percent from the previous year.

Competitor exports will edge higher, although lower U.S. prices should moderate the decline in U.S. exports of soybeans to 850 million bushels in 1998/99. Projected U.S. exports of soybean meal are scaled back from 9.3 million short tons in 1997/98 to 9 million tons. The considerably lower total value of these exports will be felt at the farm level. U.S. soybean farm income in 1998/99 may be cut more than $2.5 billion (about $35 per harvested acre) from the record 1997/98 earnings.

Asian Financial Crisis Batters World Soybean Consumption

The other side of this outlook relates to the altered circumstances for foreign trade growth, especially in Asia. In 1996/97, Asian nations accounted for 44, 25, and 56 percent of U.S. exports of soybeans, soybean meal, and soybean oil. But serious economic recessions throughout the Pacific region have undermined the demand base in several major markets.

Since mid-1997, a wave of foreign exchange devaluations affecting Thailand,

Putting the Brakes on Consumption of Added Fats & Oils

Numerous reports and analyses by public health organizations conclude that Americans eat too much fat and recommend that Americans limit their fat intake. Americans appear to be following this advice. Recent analysis by USDA's Economic Research Service (ERS) suggests that consumer concern about fat intake, and food manufacturer response to this concern, is limiting use of added food fat in edible products (i.e., fat used as an ingredient or in cooking) and reducing per capita consumption. Historically, price and income were the principal determinants of annual levels of consumption.

Annual per capita consumption of fat added to food has generally increased over time since data collection began in 1909. Consumption occasionally declined year to year, but it dropped for an unprecedented fourth consecutive year in 1997, signaling a more substantive arrest. Preliminary data for 1998 show total use of fats and oils in edible products trailing last year, which strongly suggests that per capita consumption will fall again this year.

Total use of fats and oils in the domestic manufacture of edible products peaked in 1993 at 15.7 billion pounds (as per capita consumption peaked at 70.2 pounds). Total use fell for 3 consecutive years to 14.8 billion pounds in 1996, while per capita consumption declined to 65.8 pounds. In 1997, per capita use of fats and oils declined again, but total use rose to 15.2 billion pounds due to population growth.

While total fats and oils use declined during 1993-97, soybean oil's share of the total rose from 78 percent (12.2 billion pounds) in 1993 to 82 percent (12.4 billion pounds) in 1997. Among product categories for 1997, soybean oil comprised 83 percent of the total fats and oils used in salad and cooking oil manufacture, 80 percent of total use in production of baking and frying fats, and 95 percent of the total use in margarine production.

Soybean oil's rising share of the market over this period has come at the expense of virtually all other fats and oils reported. The shares of cottonseed oil, corn oil, and edible tallow dropped the most. The change in share is largely the result of competitive prices for soybean oil among vegetable oils and a long-term shift away from the use of animal fats in foods. But since soybean oil has been increasing its share of markets that are declining (margarine and baking/frying fat applications), gains in total use of soybean oil will likely be unsustainable.

The principal source of data on consumption of added fats and oils in the U.S. is the Department of Commerce's Bureau of Census report, *M20K—Fats and Oils, Production, Consumption and Stocks*. This report details the quantities of added fats and oils used in the domestic manufacture of edible products, such as salad and cooking oil, baking and frying fat, margarine, and other edible use. ERS calculates per capita domestic disappearance of added fats and oils by adjusting for trade and changes in stocks.

U.S. Per Capita Consumption Declines for All Edible Oils
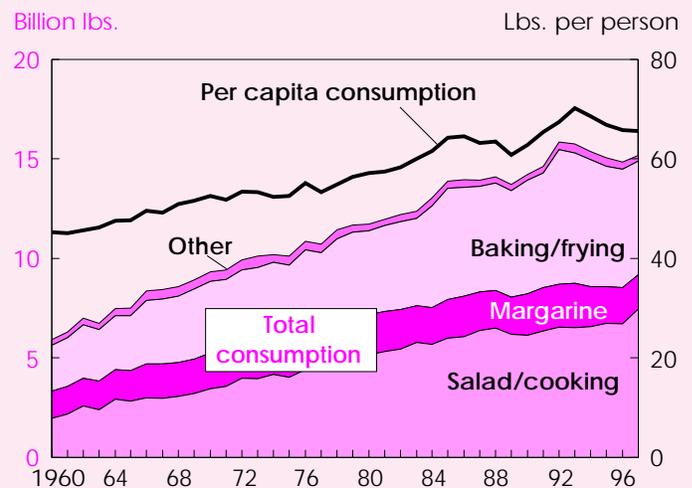
Economic Research Service, USDA

In addition, the share of soybean oil in the domestic food market may be approaching its limit. Additional gains will have to come in markets for which soybean oil is not as well suited. For instance, soybean oil will likely have difficulty replacing cottonseed oil in the domestic potato chip frying market, where cottonseed oil is deemed a premium oil because of its flavor-enhancing attributes and high cooking temperature. And rising imports of substitute oils will likely hinder significant growth in use of soybean oil. Olive oil imports (from Italy, for example) have been rising rapidly in recent years as consumer demand has led to more use in the salad and cooking oil market. Imports of canola oil (from Canada) have also made significant inroads to this market.

A continuing decline in per capita consumption of added fats and oils (and associated declines in total use of fats and oils in the domestic manufacture of edible products) is likely to reduce the growth potential of soybean oil in added fats and oils products. This potential slowing of domestic use is accompanied by forecasts for record levels of domestic soybean crush and soybean oil production. The greatest potential for growth is export markets, barring a sharp turnaround in domestic use of U.S. soybean oil. (Manufacturers have recently added modest amounts of fat to some products following a mild consumer backlash to "low-fat" foods. Also, there is some potential gain from the recent market introduction of the vegetable-oil-based fat substitute, olestra.) Should per capita declines in domestic consumption of fats and oils continue, oilseed producers could see farm prices for their products drop.
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An article in an upcoming issue of *Food Review* will discuss changes in U.S. fat consumption in more detail.

Commodity Spotlight

Indonesia, South Korea, Taiwan, Malaysia, and the Philippines has pushed their currencies to historical lows against the U.S. dollar. As a consequence, prices of agricultural imports in dollar terms have dramatically risen. Soybean meal consumption in Taiwan has also suffered a setback after the 1997 outbreak of foot-and-mouth disease in hogs, which halted that country's lucrative pork export trade with Japan. Imports of soybeans and meal (in soybean meal equivalent) by these six countries in 1998/99 is expected 17 percent lower than in 1996/97.

Short-term credit for U.S. agricultural commodities, offered through USDA's GSM-102 program, has been key in stabilizing soybean and soybean meal imports from the U.S. Despite the availability of GSM credit, the ongoing financial crisis has caused several Asian countries to ration imports. Even Japan's economy slipped into recession as the yen fell to the lowest level versus the dollar in 8 years. Rising meat imports will also trim Japanese 1998/99 soybean meal consumption, resulting in soybean imports 7 percent lower than the 1996/97 level.

One of the few bright spots for farmers in the current world soybean complex is a strong vegetable oil market. Since 1996/97, the average U.S. soybean oil price has risen from 22.5 cents per pound to the 1998/99 forecast of 25.5-27.5 cents. A shortfall in global palm oil production—with world prices rising 40 percent since mid-1997—is largely responsible for this situation. Palm oil ranks a close second to soybean oil in world vegetable oil production and is consumed extensively in Asia, the Middle East, and Africa.

Supplies of palm oil have been cut by a severe drought in the major Southeast Asian producing nations. In addition, Indonesia has placed restrictions on palm oil exports to control domestic consumer prices. With the dissipation of El Niño, the rains have resumed. But the long biological cycle of palm trees means that palm oil production may not increase greatly until well into next year. Sluggish growth would continue to buoy prices for soybean oil, providing the only price-supporting factor for soybeans in the short term.

China is the world's premier market for vegetable oils, importing large volumes of

World Soybean Production Outpaces Consumption Again in 1998/99

Million metric tons
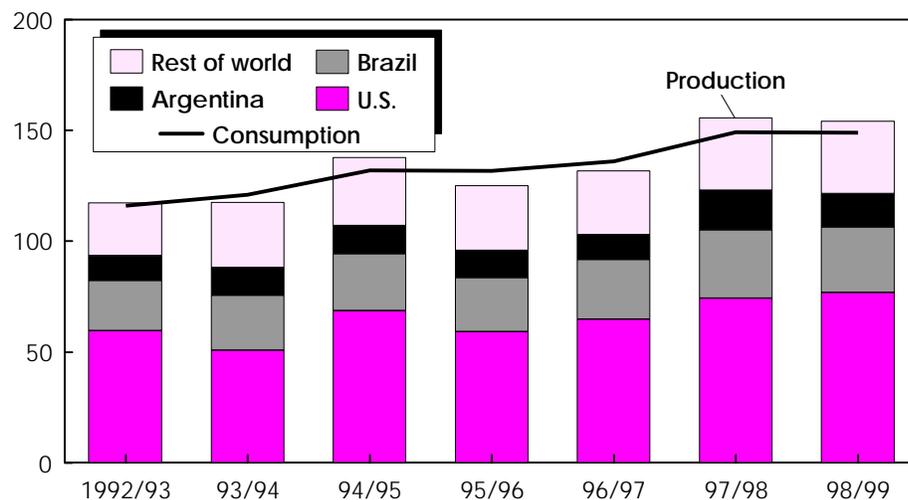
1997/98 preliminary; 1998/99 forecast.
Economic Research Service, USDA

both soybean and palm oil. China will import more oils in 1998 as consumption continues to expand and domestic oilseed production declines. China has not yet suffered the currency problems of its Asian neighbors, but Chinese economic growth is slowing as export competition for all goods from the other countries intensifies. Excluding China, there will be few other markets where soybean oil trade is expected to gain in the coming year. Pakistan and India, each large importers of soybean oil, may scale back oil imports to conserve foreign exchange. Both countries have devalued currencies and lost sources of credit because of economic sanctions imposed after nuclear weapons tests.

With attractive vegetable oil prices, farmers in Europe, Canada, Australia, and the U.S. expanded 1998 plantings of rapeseed and sunflowerseed, oilseeds with high oil content. Excellent oilseed harvests in Europe will squeeze international trade in soybeans and shift a greater proportion of imports in the form of soybean meal. Record oilseed output is anticipated in India, as well. This would trim India's need for vegetable oil imports and widen its surplus of soybean meal that it exports to Asian buyers.

Even at an intense crush rate, soybeans alone do not have oil content high enough to quickly rebuild world oil supplies. But global demand for protein meal has weak-

ened relative to the burgeoning meal supplies created jointly for the vegetable oil market. Income declines have induced many Asian consumers to reduce their consumption of meat (still considered a luxury item for many), and consequently lowered livestock use of protein meal. A cut in soybean meal demand has a greater effect on the soybean price, as protein meal is the predominant product from processing soybeans. U.S. soybean meal prices have fallen to their lowest level since 1985, a bargain for livestock producers. Lower feed costs are helping domestic poultry and hog production expand, and should raise U.S. soybean meal disappearance to a record 29.4 million short tons.

Late this year, South American producers should cut back their soybean plantings, and yields are expected to revert to trend levels. And, provided economic reforms are implemented, a modest recovery by several Asian importers would encourage demand. Nevertheless, while it is difficult to know how relative U.S. commodity prices will look next spring, the chances for an increase in 1999 soybean acreage are slim. The large expected 1998/99 carryout stocks will weigh heavily on soybean prices, encouraging farmers to look for more profitable crop alternatives.
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Exploring Methods of Selecting Cropland for Conservation

In the operation of conservation and environmental programs, environmental targeting is a practice that has been increasingly used to improve program performance. Environmental targeting directs program resources to lands where the greatest environmental benefit will be generated for a given expenditure. The objective of environmental targeting is to make the most efficient use of tax dollars allocated to a particular program.

Over half of the $3.2 billion USDA spent on conservation and environmental programs in 1996 was allocated to the Conservation Reserve Program (CRP), which is the largest natural resource conservation program currently operating in the U.S. Since 1991, the CRP has used an environmental targeting mechanism known as the environmental benefits index (EBI) for ranking and selecting offers of cropland to include in the program.

The CRP offers annual rental payments and cost-share assistance to farmers in exchange for the establishment of long-term resource-conserving covers—usually grass or trees—on highly erodible and other environmentally sensitive cropland. Conversion of these lands reduces erosion and improves wildlife habitat,

water quality, and air quality. Presently, approximately 30 million acres of cropland are enrolled under 10- or 15-year CRP contracts.

Enrolling millions of acres under the CRP has wide-ranging effects on government expenditures, air quality, water quality, and wildlife habitatat, and can affect agricultural income and food costs. But benefits from the CRP—improvements in environmental quality and the resulting gains in human welfare—depend on the type and location of the land that is enrolled. Until 1990, contracts for most CRP acres were selected based on their potential to reduce soil erosion. But with the environmental benefits index, the ranking of CRP offers can be based on a broader set of environmental criteria (*AO* October 1997).

The EBI scores candidate land parcels based on a wide array of environmental attributes (such as the potential to enhance water quality) as well as program cost factors. In developing the EBI, USDA and other Federal agencies translated the legislative intent of the CRP into factors representing categories of environmental attributes that were considered important, and a point-scoring sys-

tem was devised to reflect their relative importance. Each of the factors relies on observable characteristics that can be associated with a parcel of land when a farmer's offer is evaluated. At the close of a CRP signup period, candidate parcels with the highest EBI score are given priority for acceptance into the program.

In the 15th signup (March 1997), the scoring system was as follows:

- three factors—wildlife habitat, water quality, and erodibility—were given equal weights of up to 100 points each;

- another factor, the likelihood of retaining environmental benefits of certain practices (such as tree cover) after contracts expire, was given a weight of up to 50 points; and

- two factors—air quality and conservation priority areas—were given weights of up to 25 points each.

A seventh criterion, contract cost, is also considered. While the weight may change from signup to signup, it was weighted at 200 points in the 15th signup.

The EBI is a dynamic process, and its factors and relative weights have been periodically adjusted and improved based on evolving priorities and any perceived deficiencies. The construction of the EBI presently relies on the judgments of natural resource experts and program managers. USDA believes this is the best approach currently available for developing a CRP ranking method because comprehensive and consistent monetary benefit estimates needed for targeting land on a parcel-by-parcel basis do not exist. If disaggregated monetized benefit estimates could be developed to reflect social values for environmental improvement, these estimates could be used to directly select CRP acreage. Such estimates could also be used to compare alternative ranking and selection methods, such as different EBI weighting approaches, informing the process of CRP targeting while recognizing that cost efficiency may not be the only goal in enrolling cropland.

USDA's Economic Research Service is taking some promising steps toward developing a method that could eventually assist in the selection of CRP enrollment,

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EBI Scoring Criteria for CRP Cropland Enrollment in the Exploratory Analysis*

100 points

Wildlife	Cover factor 50		Proximity to wetlands 10	Proximity to protected areas 10	Upland/ wetland ratio 10	Endangered species area 15	Con- tract area 5
Water quality	Cover factor 30	Groundwater quality 20	Surface water quality 40				Cropped wetland 10
Erodibility Index	100						
Tree, shrub, and wetland retention	50						
Air quality	25						
Conservation priority area	25						

200 points

Contract cost	Bid factor 190	Cost share factor 10

* Based on 15th-signup criteria.

using estimates of the monetary value of environmental benefits associated with different land parcels. Using economic valuation techniques, and data on recreation, ERS researchers have demonstrated that it is possible to derive estimates of disaggregated recreational use values to measure and reflect social preferences (essentially, the public's willingness to pay for a particular environmental impact). Such monetized value estimates could be considered for providing additional or alternative input for targeting of CRP acreage, and might also assist targeting efforts in other USDA conservation and environmental programs.

Selecting Land for Conservation

Conceptually, using economic valuation techniques to target land for enrollment is simple. The potential benefits of land enrollment would be measured in mone-

tary terms. Given a complete set of benefits and retirement costs for each land parcel, the parcels would be selected for enrollment on the basis of which ones provide the greatest net benefits. Several alternative EBI scoring systems could be constructed to generate hypothetical CRP distributions, and the scoring system yielding the greatest benefits could be adopted.

Presently, the complete set of benefits needed for such an evaluation has not been determined. For example, the CRP affects a number of "use values" (values people derive from using the resource) for such elements as surface- and ground-water quality, air quality, outdoor recreation, and the maintenance of public works. In some cases, avoidance costs—such as the cost of using bottled drinking water due to impaired water quality, and the cost of dredging canals and rivers as a result of ero-

sion—have been used to estimate some of the benefits of environmental programs in the past.

In other cases, such as recreation, the cost-avoidance approach is not applicable. Determining the recreation benefits associated with improvements in the environment involves nonmarket valuation models, which allow the dollar value of these benefits to be estimated based on observed behavior—e.g., money spent by users of a lake for recreation. In any case, benefit estimates associated with small, localized land areas are required in order to effectively target lands for retirement. This requires models based on individual human preferences.

A number of "non-use" values are also affected by the CRP, such as the value people place on knowing that wildlife

Comparing Recreation Benefits: Baseline vs. Hypothetical CRP Distribution

Evaluating a potential environmental benefits index would involve generating a hypothetical CRP cropland distribution based on the criteria of the potential EBI. The benefits of this hypothetical distribution would then be compared with the benefits attributed to the baseline CRP distribution.

In this example, the benefits of CRP land retirement to the use value of recreational activities are measured in terms of *consumer surplus* in $ million/year attributed to the CRP baseline distribution in 1992, and to the hypothetical CRP distribution using 15th-signup EBI criteria. *Consumer surplus* is the amount of money, above and beyond the market price, that a consumer would be willing to pay for a good.

The Pacific/Mountain region contains WA, OR, CA, MT, ID, WY, NV, UT, CO, AZ, NM; the Northern Plains region contains ND, SD, NB, KS; the Southern Plains region contains OK, TX; the South Eastern region contains AR, LA, MS, AL, GA, SC, FL, TN, NC, VA, KT, WV; the North Eastern region contains MN, WI, MI, IA, MO, IL, IN, OH, PA, NY, VT, MD, DE, NJ, RI, CT, MA, NH, ME.

Region	CRP acres	Benefits		
		Water-based recreation	Pheasant hunting	Wildlife viewing
	Million acres	*$ million/year*	*$ million/year*	*$ million/year*
Pacific/Mtn	8.196 ➔ 7.966	1.69 ➔ 4.30	2.70 ➔ 2.51	-34.98** ➔ 3.78
N. Plains	8.884 ➔ 7.999	2.47 ➔ 8.23	26.69 ➔ 22.62	26.75 ➔ 26.95
S. Plains	5.136 ➔ 4.975	1.47 ➔ 3.92	N/A*	62.35 ➔ 115.02
South Eastern	3.678 ➔ 4.290	10.77 ➔ 32.85	N/A*	4.89 ➔ 148.21
North Eastern	8.146 ➔ 8.810	19.94 ➔ 79.66	50.86 ➔ 45.08	288.70 ➔ 341.21
Total	34.040 ➔ 34.040	36.35 ➔ 128.96	80.28 ➔ 70.21	347.71 ➔ 635.17

Numbers on the left side of the arrows represent the distribution/benefits of the baseline. Numbers on the right side represent the distribution/benefits of the hypothetical CRP that was constructed using 15th-signup EBI criteria.

*Limited pheasant hunting occurs in these regions. **The model yields an anomalous negative benefit for wildlife viewing in the Pacific region associated with the distribution of CRP acres. One possible explanation is that the Pacific region contains little CRP land in highly populated States such as California where intensive recreation occurs, and large amounts of CRP land in relatively unpopulated states such as Montana and Wyoming. This results in the appearance that CRP is negatively correlated with recreational activity.

Economic Research Service, USDA

populations are increasing. These values are more difficult to assess and involve the use of contingent valuation methods in which people are asked to designate a monetary value for a particular benefit. Presently, little is known about the magnitude of these types of benefits or even whether they are sensitive to the location of CRP lands.

As a way of demonstrating the potential for environmental targeting based on monetized value estimates, ERS focused on measuring the values the public places on the enhanced recreational benefits that result from the CRP. Recreational activities are often associated with environmental amenities. For example, improved water quality leads to increased enjoyment of water-based recreation activities, and improved species habitat results in better hunting and wildlife-viewing opportunities. Although there are many CRP benefits in addition to outdoor recreation, recreational activities are highly valued. Recreation also provides a useful demonstration of a valuation approach because it involves market-based costs such as travel, so that preferences can be interpreted in dollar-based terms.

New data and improved methodology have permitted a refinement in the estimation of recreation-use values. Although this is only a partial accounting of CRP use-value benefits, the results can demonstrate how economic valuation techniques would work in measuring the benefits of land retirement under the CRP and in developing more refined targeting measures.

Recent ERS analysis has focused on three specific recreational activities that are considered to be heavily influenced by the CRP: water-based recreation, wildlife viewing, and pheasant hunting (the pheasant population has apparently seen significant expansion as a result of habitat benefits resulting from the CRP). The economic models employed in the analysis are based on recreation-use behavior at the individual level, as well as on improved measures of landscape diversity and economic and statistical estimation techniques.

A link is assumed between the physical effects of the CRP and what recreationists value. For example, measures of the distribution of land types in an area (such as the percent of land in transitional wetlands) are used as indicators of the overall abundance of wildlife-viewing opportunities.

The recreation data were gathered from surveys asking the type, frequency, and location of outdoor recreational activities, including the distances respondents were willing to travel to participate in these activities. The distances (presumably involving travel costs) in effect served as a proxy for prices that respondents were willing to pay for recreational benefits of the CRP. Use values for the specific recreational activities were derived from these data.

The models for each of the three recreation activities were estimated from a baseline CRP land distribution observed in 1992, the year much of the survey data were collected. The first step in the analysis was to determine the benefits of the CRP at that time—the contributions added

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by CRP vegetative cover to the use value of the three recreational activities.

Once the benefits of a baseline distribution are established, alternative EBI formulations can be constructed and assessed by comparing their benefits to the baseline's. Assessing a potential EBI formulation involves generating a hypothetical CRP distribution based on the criteria of the candidate EBI and then determining the benefits associated with the hypothetical distribution.

To generate a *hypothetical CRP distribution,* ERS used the EBI scoring criteria from the 15th CRP enrollment (1997), as well as information from USDA's 1992 National Resource Inventory data. To make the results consistent with the baseline distribution, total acres were restricted to 34.04 million, with no more than 25 percent of the cropland in any county included in the hypothetical distribution. The results represent estimates of the recreation benefits of a distribution of land different from that of the actual 15th signup. A number of assumptions about what tracts of land would be offered, and especially about the cover types that would be adopted, leads to a different distribution of land than actually occurred in the 15th signup.

In the context of this exploratory analysis, which is limited to recreation benefits and is used to illustrate value-based targeting, observation of both the baseline distribution and the hypothetical redistribution would indicate several things about the recreation benefits of the CRP. Across the three recreation activities considered, wildlife viewing accounts for the largest share of benefits, followed by pheasant hunting and water-based recreation. Across regions, the more densely populated North Eastern region contains a large share of the total benefits, followed by the Plains, the South Eastern, and the Pacific/Mountain regions. (These regions do not coincide with USDA's farm production regions.)

In this exploratory analysis, population density plays an important role in the distribution of recreational benefits within these regions–larger benefits are usually found where CRP lands and population centers intersect, because the values

being measured are use values. In general, the closer a recreational resource is to a populated area, the more it will be used, resulting in a higher value. On the other hand, land near population centers typically costs more to enroll than land in less populated areas, affecting the net benefits of enrollment.

In the hypothetical distribution, water-based recreation benefits and wildlife-viewing benefits in all of the regions increase substantially over those in the 1992 baseline distribution. Even in regions that would lose CRP overall, the recreation benefits associated with these two activities increases. This suggests that the EBI of the actual 15th CRP signup more efficiently allocates acreage in terms of the recreation benefits associated with these activities compared with earlier CRP enrollments.

The redistribution shifts CRP acres somewhat from west to east. And since most pheasant hunting occurs in areas that lose CRP under the hypothetical distribution, the pheasant hunting benefits decline slightly from the baseline. However, the model does not take differing types of cover into account, which may affect these results.

If this analysis were being used in an actual application of value-based targeting of CRP land, the results suggest greater value for wildlife than water-based recreation in a future EBI, since the wildlife viewing benefits appear to be greater than the water-based recreation benefits. In addition, these results might indicate a somewhat greater role for human population density in future CRP targeting, since this is an important factor in recreation-use values.

These results are, of course, exploratory and are based solely on use values associated with three recreational activities. Nevertheless, these findings on recreation benefits illustrate how economic valuation techniques could eventually contribute to the development of more refined scoring criteria. Several alternative scoring systems could be constructed and could be used to generate hypothetical CRP distributions, and the scoring system yielding the largest benefits could be adopted for a particular signup.

Extensive work would be required before alternative EBI formulations could be compared and before acreage could be enrolled based on monetized measures of benefits. In addition to the three recreational benefits described in this article, all other benefits affected by the location as well as by the characteristics of CRP land would need to be determined. Among these benefits are:

- *The remaining recreational use values significantly affected by the CRP.* This requires analyzing additional new data on recreation and improving the understanding of ecological processes associated with the CRP, such as changes in animal populations.

- *The impact on public works and industrial operations as sediment loadings are reduced.* Updates to engineering and other physical models can address these issues.

- *The value of improved air quality.* This would require better models of wind erosion, and new estimates of the health and other impacts of airborne sediments.

- *A measure of public willingness to pay for the CRP's improvements in ecosystems,* including the preservation of endangered species, wetland protection and enhancement, and landscape amenities associated with the CRP. This requires the development and use of contingent valuation models which, while suffering from a host of biases and criticisms and involving an extensive commitment of resources, is the only method available to determine these values.

- *The effect of the CRP on the quality of ground and surface water used for drinking.* Studies examining the willingness to pay for cleaner drinking water already exist. To use these estimates, data are needed, for example, on the CRP's impact on groundwater pollutants, which involves the development of national-level physical-biological models on the transport of pollutants from the field to ground water.

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Regional Trade Agreements & U.S. Agriculture

Regional trade agreements (RTA's) have become a fixture in the global trade arena, and their role in world trade is increasing. Defined as arrangements among separate economies to reduce trade barriers among members, RTA's have been established in every region of the world. Over the period 1947-1994, 109 regional trade agreements were reported to the General Agreement on Tariffs and Trade (GATT), the multilateral body charged with oversight of global rules governing trade. Since 1995, at least 16 new RTA's have been reported to the World Trade Organization (WTO), the successor body to the GATT.

Nearly all WTO members are party to at least one RTA. In the Western Hemisphere, about 40 regional trade pacts are currently in force, and at least a dozen others are under negotiation. Moreover, RTA's formed over the last decade are more comprehensive in their treatment of agriculture compared with earlier RTA's, many of which excluded agriculture.

Another relatively new development is the effort to negotiate trade pacts that include existing RTA's as well as individual countries. While not technically RTA's, which are reported to the WTO, these free trade networks are likely to become a key force in reconciling and building on the proliferation of RTA's.

An example of such a network is the Asia Pacific Economic Cooperation (APEC) forum, a free trade initiative encompassing 21 economies, including the U.S., Japan, and China. Members of APEC include economies in the North American Free Trade Agreement (NAFTA), the ASEAN Free Trade Area (AFTA) of Southeast Asia, and the Australia-New Zealand Closer Economic Relations (CER). APEC is committed to achieving free regional trade in all sectors, including agriculture, by 2020. Among the challenges will be to reconcile the AFTA agreement, which excludes bulk agricultural products (e.g., grains, oilseeds), with NAFTA and CER, both of which free almost all internal agricultural trade.

The U.S. is an active participant in regional trade pacts and networks. In 1989, the U.S. and Canada formed the U.S.-Canada Free Trade Agreement (FTA), which specified a 10-year phase-out of bilateral tariffs on most products, including most agricultural commodities. In 1994, the framework was extended to include Mexico in NAFTA. Since 1989 the U.S. has participated in APEC and has trade initiatives in the Caribbean Basin and with Israel.

Most of the major RTA's formed in recent years have internally liberalized most agricultural trade. In the Western Hemisphere, NAFTA and MERCOSUR (Common Market of the South), have removed nearly all agricultural trade barriers to their members, or, like APEC, have a specified timeframe for their elimination. Notable exceptions among commodities are sugar, dairy, poultry, and eggs in the bilateral pacts within NAFTA, and sugar in

MERCOSUR. The European Union (EU) has gone furthest in economic integration among its members—fully liberalizing internal agricultural trade and adopting a common farm support program, the Common Agricultural Policy (CAP).

A potential major regional trade agreement is the proposed Free Trade Area of the Americas (FTAA). The goal is to encompass most countries of the Western Hemisphere and to fold the hemisphere's many trade agreements into one comprehensive trade bloc.

Pros & Cons of RTA's

Regional trade agreements have generated intense debate. Advocates emphasize their *trade-creating* effects. By providing for freer trade among members, RTA's can improve resource allocation within a region. With regional free trade, production shifts toward the most efficient producers of specific commodities within the RTA, and consumers are better off because they can purchase goods at lower prices.

But opponents of RTA's argue that most agreements generate a degree of trade discrimination by lowering barriers on internal trade while retaining barriers to trade with nonmembers. A likely result is that the RTA's will be *trade-diverting*, increasing trade among member countries while diverting it from more efficient, lower-cost producers in the rest of the world. Even if an RTA results in internal trade creation, such gains, some critics maintain, are likely to be outweighed by their trade-diverting effects.

A second issue raised by RTA's is their effect on the global trading system, and especially on multilateral trade negotiations. The current proliferation of RTA's has occurred simultaneously with successful global trade negotiations, which were concluded in 1993 under the GATT, and have continued in a series of "mini-rounds" addressing specific sectors, including telecommunications and services. A WTO mini-round of trade liberalization talks on agriculture is scheduled to begin in 1999.

Advocates of RTA's argue that recent regional trade agreements are likely to serve as building blocks for further multilateral trade liberalization in the WTO. This is because many recent RTA's, including NAFTA and MERCOSUR, have moved at a faster pace than the multilateral negotiations in liberalizing trade rules, particularly for agriculture. These smaller, regional negotiating groups may also be more effective than a large, global body in tackling difficult or complex issues such as sanitary and phytosanitary trade restraints.

Critics of RTA's contend that the agreements are more likely to act as stumbling blocks to multilateral trade liberalization. According to this line of reasoning, RTA's are more likely to create and entrench protectionist interests that benefit from trade diversion, and such RTA's may become "fortresses" with an interest in slowing or derailing multilateral trade negotiations. Furthermore, the current proliferation of RTA's has resulted in a bewildering "spaghetti bowl" of crisscrossing bilateral tariff rates and complicated rules of origin governing the transshipment of nonmembers' products through member countries. This leads to substantial administrative inefficiencies, and perhaps to disguised import protection resulting from complex provisions on domestic content of products.

RTA's & U.S. Agriculture

How are RTA's likely to affect U.S. agricultural production, trade, and support programs?

First, *U.S. agriculture can gain from U.S. participation in RTA's.* By lowering trade barriers among members, the major RTA's in which the U.S. participates—NAFTA, APEC, and potentially the FTAA—are expected to benefit U.S. agriculture. Increased agricultural trade and specialization among RTA partners will increase the efficiency of U.S. farm producers and lower prices for consumers, although this will lead to some adjustment and change in U.S. agriculture as some sectors gain through increased foreign sales and some lose domestic market share to imports. RTA membership is expected to improve U.S. international terms of trade in agriculture, with an increase in U.S. farm export prices relative to import prices as relatively high tariff barriers of some U.S. trade partners are reduced or eliminated.

This article draws from a forthcoming ERS report

Regional Trade Agreements and U.S. Agriculture

U.S. agriculture can lose when RTA's do not include the U.S. RTA's generally divert trade by lowering imports from the rest of the world as trade with partners increases. Expansion of the European Union (EU) is likely to divert agricultural trade and reduce U.S. agricultural exports to the EU and to third markets. But the farm subsidies under the current CAP program are probably unsustainable with EU expansion, and potential EU farm program reforms to limit subsidies would limit these negative impacts on the U.S.

In the case of the FTAA, the U.S. has the option of joining; a U.S. decision to remain outside the FTAA would divert trade from U.S. agriculture. However, many expect RTA's to induce economic growth in the developing countries of the Western Hemisphere, and if this trade-linked growth occurs as a result of the FTAA, then the U.S. is expected to benefit, even as a nonmember. Economic growth in the region would stimulate Latin American agricultural trade with the U.S., although this trade effect would be larger if the U.S. were party to the FTAA.

Agriculture is the source of most U.S. gains from RTA's. Gains from trade liberalization are roughly proportionate to the size of the trade barriers being reduced or dismantled in a trade agreement. Because agriculture still faces relatively high trade barriers in world markets, it stands to gain relatively more than many other sectors from U.S. inclusion in trade agreements. Agriculture accounts for 75 percent of the total expected U.S. benefits from APEC participation. With or without U.S. participation in the hemisphere-wide FTAA, U.S. agricultural trade will increase more than for other sectors. In the case of EU expansion, U.S. agriculture will be affected more than other sectors, but the effects will be negative, while effects on U.S. manufacturing will be positive as EU farm subsidies provide an incentive to Central and Eastern Europe to shift resources toward agriculture.

RTA's and domestic farm programs have mutual impacts. RTA's limit the ability of member countries to maintain independent farm programs. Market arbitrage within a free trade area will tend to unify prices, making members' efforts to use farm support programs to maintain different price levels either ineffective or costly. But the conversion of most U.S. farm support into decoupled contract payments, with the market determining the prices farmers receive, is compatible with free trade pacts. At the same time, the reduction in farm support and the increase in farm-sector market orientation in many countries over the past decade have diminished the inherent conflict between free trade and farm programs, making RTA's more likely to include agriculture, and increasing the gains from RTA's.

RTA's & Multilateralism: Peaceful Coexistence?

Are RTA's building blocks, stumbling blocks, or complements to multilateralism?

Economywide, trade-creating effects dominate in major RTA's, enhancing world welfare. Concern over the size of the trade-diverting impacts of RTA's has been a frequent argument against regionalism. USDA analysis of the longrun impacts of four major RTA's (NAFTA, APEC, FTAA, and an expanded EU)

Major RTA's and Summary of Agricultural Provisions

RTA	Year created	Current members	Agricultural provisions
European Union (EU)	1958 (EEC-6)	Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, United Kingdom	No internal trade barriers. Common Agricultural Policy (unified trade policy and support)
U.S.-Israel Free Trade Agreement (FTA)	1985	U.S., Israel	Agriculture covered, but Israel has the right to protect infant industries, particularly in agriculture; 1996 agreement designed to further liberalize agricultural trade, particularly U.S. products facing nontariff barriers
Asia-Pacific Economic Cooperation Forum (APEC)	1989	Australia, Brunei, Canada, Chile, China, Hong Kong, Indonesia, Japan, Malaysia, Mexico, New Zealand, Papua New Guinea, Philippines, Singapore, South Korea, Taiwan, Thailand. The U.S. Peru, Russia, and Vietnam became members in 1998.	A network of individual countries and several regional trade agreements that include NAFTA, AFTA, and the Australia and New Zealand Closer Economic Relations (CER). Goal of free trade in agricultural products by 2010 for developed economies and 2020 for developing economies
Southern Common Market (MERCOSUR)	1991	Argentina, Brazil, Uruguay, Paraguay	Nearly all intraregional tariffs removed; the only exempt agricultural product is sugar. Common external tariff, ranging from 0 to 20 percent for agricultural products (average 10 percent), generally lower than previous tariff levels
Association of Southeast Asian Nations Free Trade Area (AFTA)	1991	Indonesia, Malaysia, Philippines, Singapore, Thailand, Brunei, Vietnam, Laos, Myanmar	Transition to free trade area with common external tariff planned by 2003. Coverage excludes unprocessed agricultural product
North American Free Trade Agreement (NAFTA)	1994 (U.S.-Canada FTA--1988)	Canada, Mexico, U.S.	*Between Canada and U.S.:* • most agricultural tariffs eliminated by January 1, 1998, but restrictions on certain products remain (poultry, eggs, dairy, sugar-containing products) • agreement not to use export subsidies in bilateral trade and not to increase or introduce new tariffs *Between U.S. and Mexico:* • 15-year phase-out of all tariffs, quotas, and licenses that are barriers to agricultural trade *Between Canada and Mexico:* • 15-year phase-out of tariffs, quotas, and licenses for most Canadian-Mexican agricultural trade
Free Trade Area of the Americas (FTAA)	Negotiations to begin in 1999	Expected to encompass most Latin American countries, Mexico, and Canada; U.S. has not committed to participating	To be negotiated

indicate that their economywide trade diversion effects are likely to be smaller than trade creation effects. Because they are expected to be net trade-creating, these RTA's will improve global welfare. These findings suggest that the RTA's will fulfill the intent of the GATT/WTO rules that permit RTA's: their gains from liberalizing internal trade at a pace faster than committed to in the Uruguay Round will outweigh the negative impacts of their discrimination against nonmembers. The WTO specifies that the purpose of a regional trade agreement be to facilitate trade among the signatory countries—not to raise barriers to trade with WTO members that are not parties to the regional agreement.

In agriculture, RTA's have both trade-creating and trade-diverting effects, but trade creation dominates in most RTA's. To date, empirical evidence shows that the U.S.-Canada FTA, MER-COSUR, and the Australia-New Zealand CER have led to increased agricultural trade both with partners and with non-members, supporting the view that RTA's can unleash growth in trade that benefits members and nonmembers alike. When fully implemented, NAFTA, APEC, and the FTAA are expected to be net trade-creating for agriculture. Only the EU, with its generous agricultural subsidies, has so far resulted in net agricultural trade diversion. Its expansion to include Central and East European countries is also expected to be trade-diverting. While trade-creating RTA's are likely to pursue more open markets at multi-lateral talks, trade-diverting RTA's are less likely to do so.

Regionalism and multilateralism are likely to be mutually reinforcing. An effective multilateral process has already proved to be an important influence on the agricultural trade liberalization achieved in some regional agreements. In the future, multilateral commitments to reduce protection and support in agriculture could be pivotal in influencing the pace of regional agricultural trade liberalization as well as the directions to be taken by APEC, FTAA and an expanded EU on farm policy reforms. In turn, the freer agricultural trade already achieved in the Western Hemisphere and committed to in APEC is likely to strengthen efforts to achieve freer trade at the upcoming mini-round.

Should the U.S. pursue regionalism, multilateralism, or both?

Progress in the multilateral talks on reducing barriers to agricultural trade could reinforce RTA commitments to liberalize agricultural trade. While some newer RTA's have defined a timeframe for liberalizing substantially all agricultural trade (NAFTA, MERCOSUR), specific reduction commitments have not been fully defined in APEC, and the treatment of agriculture in the FTAA is still to be negotiated. Another shortcoming of some RTA's is selective trade liberalization, singling out certain sectors for exclusion, which makes the trade-diverting effects of RTA's more likely to dominate.

A strong multilateral process can help minimize the negative aspects of RTA's. USDA analyses find that most RTA's have trade-diverting impacts in agriculture, although they are smaller than the trade-creating effects. Among the examples of RTA protectionist practices are the EU's closed membership and the adoption by members of common, trade-distorting internal policies; AFTA's exclusion of bulk agricultural commodities; and the adoption by the Andean Pact and Central America Common Market (CACM) of common external tariffs that "escalate" or increase with the level of processing. A strong multilateral process that effectively disciplines the practices that lead to trade diversion can help minimize the negative aspects of RTA's. Such a process can also make it more likely that RTA's will evolve as trade-creating agreements.

The U.S., as a global trader with diverse trade partners, can gain potentially more from global free trade than from RTA's. But so far, multilateral talks have fallen far short of achieving free trade, and the gains to the U.S. from the deeper commitments made by RTA's are expected to exceed those from the Uruguay Round. The influence of RTA's on the multilateral process is still uncertain, and they have the potential to harm nonmembers. But *because RTA's and multilateralism can provide significant, mutually reinforcing influences, their joint pursuit can benefit U.S. agriculture.*

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Statistical Indicators

Summary Data

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

	1997	1998 F	1999 F	1997 III	1997 IV	1998 I	1998 II	1998 III	1998 IV	1999 F I
Prices received by farmers (1990-92=100)	107	--	--	107	106	102	103	--	--	--
Livestock & products	98	--	--	99	97	94	96	--	--	--
Crops	115	--	--	115	113	110	112	--	--	--
Prices paid by farmers (1990-92=100)								--	--	--
Production items	117	--	--	117	116	115	114	--	--	--
Commodities and services, interest,	117	--	--	117	117	117	117	--	--	--
taxes, and wages								--	--	--
Cash receipts ($ bil.)[1]	208	201	--	50	64	49	44	49	59	--
Livestock	97	94	--	25	25	23	23	24	24	--
Crops	112	107	--	25	39	26	21	25	35	--
Market basket (1982-84=100)										
Retail cost	160	--	--	160	161	162	--	--	--	--
Farm value	106	--	--	106	105	102	--	--	--	--
Spread	189	--	--	189	191	194	--	--	--	--
Farm value/retail cost (%)	23	--	--	23	23	23	--	--	--	--
Retail Prices (1982-84=100)										
All food	157	160	163	158	159	160	160	161	161	162
At home	158	160	162	158	159	160	160	161	160	162
Away from home	157	161	165	157	159	160	161	162	163	164
Agricultural exports ($ bil.)[2]	57.4	56.0	--	14.9	13.2	12.9	16.3	14.4	12.9	12.5
Agricultural imports ($ bil.)[2]	35.8	38.0	--	9.1	9.3	8.7	9.2	9.4	9.5	9.9
Commercial production										
Red meat (mil. lb.)	43,209	45,068	43,865	10,939	11,167	11,038	11,015	11,667	11,348	10,821
Poultry (mil. lb.)	33,258	33,658	35,045	8,398	8,383	8,258	8,420	8,480	8,500	8,435
Eggs (mil. doz.)	6,460	6,621	6,765	1,606	1,667	1,637	1,634	1,660	1,690	1,665
Milk (bil. lb.)	156.6	157.9	160.1	38.8	38.2	39.2	41.0	39.0	38.7	39.8
Consumption, per capita										
Red meat and poultry (lb.)	208.6	212.7	211.9	52.5	53.9	51.7	52.6	54.1	54.4	51.7
Corn beginning stocks (mil. bu.)[3]	425.9	883.2	1,433.7	4,494.1	2,496.6	883.2	7,246.8	4,939.9	3,039.1	--
Corn use (mil. bu.)[3]	8,849.5	8,825.0	--	2,001.3	1,617.1	3,004.2	2,307.8	1,904.4	--	--
Prices[4]										
Choice steers--Neb. Direct ($/cwt)	66.32	63-64	70-76	65.65	66.61	61.73	64.16	60-62	64-68	70-76
Barrows and gilts--IA, So. MN ($/cwt)	51.36	34-35	34-37	54.45	43.53	34.74	39.42	33-35	30-32	33-35
Broilers--12-city (cents/lb.)	58.80	61-63	56-61	62.00	54.00	56.40	61.00	68-70	60-64	56-60
Eggs--NY gr. A large (cents/doz.)	81.20	74-76	70-76	79.70	88.20	79.00	66.50	74-76	78-82	72-78
Milk--all at plant $/cwt	13.34	14.55-14.75	13.15-14.15	12.63	14.53	14.60	13.73	15.00-15.30	14.90-15.50	13.75-14.65
Wheat--KC HRW ordinary ($/bu.)	4.16	--	--	3.76	3.82	3.62	3.32	--	--	--
Corn--Chicago ($/bu.)	2.78	--	--	2.64	2.74	2.72	2.49	--	--	--
Soybeans--Chicago ($/bu.)	7.63	--	--	7.19	6.95	6.68	6.39	--	--	--
Cotton--avg. spot 41-34 (cents/lb)	69.89	--	--	71.40	67.64	64.48	66.86	--	--	--
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Farm real estate values[5]										
Nominal ($ per acre)	668	683	703	713	736	782	832	890	945	1,000
Real (1982 $)	539	528	521	507	511	529	550	574	598	620

F = Forecast. -- = Not available. 1. Quarterly data seasonally adjusted at annual rates. 2. Annual data based on Oct.-Sept. fiscal years ending with year indicated. 3. Sept.-Nov. first quarter; Dec.-Feb. second quarter; Mar.-May third quarter; Jun.-Aug. fourth quarter; Sept.-Aug. annual. Use includes exports and domestic disappearance. 4. Simple averages, Jan.-Dec. 5. 1990-98 values as of January 1. 1989 values as of February 1.

U.S. & Foreign Economic Data

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

				1996		1997				1998
	1995	1996	1997	III	IV	I	II	III	IV	I
	Billions of current dollars (quarterly data seasonally adjusted at annual rates)									
Gross Domestic Product	7,265.4	7,636.0	8,079.9	7,676.0	7,792.9	7,933.6	8,034.3	8,124.3	8,227.4	8,359.3
Gross National Product	7,270.6	7,637.7	8,060.1	7,669.1	7,796.1	7,919.2	8,013.6	8,103.5	8,204.2	8,340.7
Personal consumption										
expenditures	4,957.7	5,207.6	5,485.8	5,227.4	5,308.1	5,405.7	5,432.1	5,527.4	5,577.8	5,667.3
Durable goods	608.5	634.5	659.3	634.5	638.2	658.4	644.5	667.3	666.8	687.4
Nondurable goods	1,475.8	1,534.7	1,592.0	1,538.3	1,560.1	1,587.4	1,578.9	1,600.8	1,600.9	1,621.5
Food	735.1	756.1	776.4	757.4	766.6	775.5	771.4	779.3	779.4	787.4
Clothing and shoes	254.7	264.3	277.3	265.7	266.2	275.2	274.8	280.5	278.7	289.8
Services	2,873.4	3,038.4	3,234.5	3,054.6	3,109.8	3,159.9	3,208.7	3,259.3	3,310.0	3,358.4
Gross private domestic investment	1,038.2	1,116.5	1,242.5	1,149.2	1,151.1	1,193.6	1,242.0	1,250.2	1,284.1	1,359.5
Fixed investment	1,008.1	1,090.7	1,174.1	1,112.0	1,119.2	1,127.5	1,160.8	1,201.3	1,206.8	1,250.7
Change in business inventories	30.1	25.9	68.4	37.1	31.9	66.1	81.1	48.9	77.2	108.8
Net exports of goods and services	-86.0	-94.8	-101.1	-114	-88.6	-98.8	-88.7	-111.3	-105.3	-130.2
Government consumption expenditures										
and gross investment	1,355.5	1,406.7	1,452.7	1,413.5	1,422.3	1,433.1	1,449.0	1,457.9	1,470.9	1,462.6
	Billions of 1992 dollars (quarterly data seasonally adjusted at annual rates)[1]									
Gross Domestic Product	6,742.1	6,928.4	7,188.8	6,943.8	7,017.4	7,101.6	7,159.6	7,214.0	7,280.0	7,375.7
Gross National Product	6,748.7	6,932.0	7,174.4	6,940.2	7,023.1	7,091.8	7,144.4	7,198.8	7,262.6	7,362.6
Personal consumption										
expenditures	4,595.3	4,714.1	4,867.5	4,718.2	4,756.4	4,818.1	4,829.4	4,896.2	4,926.1	4,998.7
Durable goods	583.6	611.1	645.5	611.9	617.1	637.8	629.0	656.1	659.3	682.7
Nondurable goods	1,412.6	1,432.3	1,458.5	1,433.9	1,441.2	1,457.8	1,450.0	1,465.5	1,460.9	1,484.4
Food	690.5	689.7	689.7	687.3	689.0	694.6	688.2	689.5	686.6	691.3
Clothing and shoes	257.5	267.7	278.0	270.8	270.0	277.1	273.8	281.3	279.6	291.7
Services	2,599.6	2,671.0	2,764.1	2,672.8	2,698.2	2,723.9	2,749.8	2,776.1	2,806.4	2,834.1
Gross private domestic investment	991.5	1,069.1	1,197.0	1,100.3	1,104.8	1,149.2	1,197.1	1,204.6	1,237.2	1,318.3
Fixed investment	962.1	1,041.7	1,123.6	1,060.9	1,068.7	1,079.0	1,111.4	1,149.3	1,154.6	1,202.2
Change in business inventories	27.3	25.0	65.7	37.9	32.9	63.7	77.6	47.5	74.0	105.7
Net exports of goods and services	-98.8	-114.4	-146.5	-138.9	-105.6	-126.3	-136.6	-164.1	-159.1	-208.4
Government consumption expenditures										
and gross investment	1,251.9	1,257.9	1,269.6	1,261.5	1,261.8	1,260.5	1,270.1	1,273.4	1,274.4	1,264.1
GDP implicit price deflator (% change)	2.5	2.3	2.0	2.6	1.9	2.4	1.8	1.4	1.4	1.1
Disposable personal income ($ bil.)	5,355.7	5,608.3	5,885.2	5,644.6	5,695.8	5,790.5	5,849.9	5,908.9	5,991.4	6,095.6
Disposable per. income (1992 $ bil.)	4,964.2	5,076.9	5,221.9	5,094.8	5,103.8	5,161.1	5,200.9	5,234.1	5,291.4	5,350.0
Per capita disposable pers. income ($)	20,349	21,117	21,969	21,229	21,373	21,689	21,865	22,034	22,285	22,513
Per capita disp. pers. income (1992 $)	18,861	19,116	19,493	19,161	19,152	19,331	19,439	19,518	19,681	19,857
U.S. resident population plus Armed										
Forces overseas (mil.)[2]	263.0	265.5	267.9	265.7	266.4	266.9	267.5	268.1	268.9	269.3
Civilian population (mil.)[2]	261	263.9	266.4	264.1	264.9	265.4	266.0	266.6	267.3	267.8

		Annual		1997		1998				
	1995	1996	1997	May	Dec	Jan	Feb	Mar	Apr	May
	Monthly data seasonally adjusted									
Total industrial production (1992=100)	116.0	120.2	127.0	125.7	130.9	131.1	130.6	130.6	131.2	131.5
Leading economic indicators (1992=100)	100.8	102.0	103.8	103.6	104.5	104.5	105.0	105.2	105.2	105.2
Civilian employment (mil. persons)[3]	124.9	126.7	129.6	129.5	130.8	131.1	131.2	131.0	131.4	131.5
Civilian unemployment rate (%)[3]	5.6	5.4	4.9	4.8	4.7	4.7	4.6	4.7	4.3	4.3
Personal income ($ bil. annual rate)	6,150.8	6,495.2	6,873.9	6,822.8	7,050.4	7,089.6	7,130.5	7,156.2	7,184.8	7,223.1
Money stock-M2 (daily avg.) ($ bil.)[4]	3,651.2	3,826.1	4,045.8	3,892.5	4,045.8	4,071.3	4,103.9	4,132.3	4,165.0	4,174.6
Three-month Treasury bill rate (%)	5.51	5.02	5.07	5.13	5.16	5.09	5.11	5.03	5.00	5.03
AAA corporate bond yield (Moody's) (%)	7.59	7.37	7.27	7.58	6.76	6.61	6.67	6.72	6.69	6.69
Total housing starts (1,000)[5]	1,354.1	1,476.8	1,474.0	1,404	1,540	1,545	1,616	1,585	1,541	1,530
Business inventory/sales ratio[6]	1.43	1.40	1.37	1.38	1.38	1.38	1.38	1.37	1.38	--
Sales of all retail stores ($ bil.)[7]	2,346.3	2,465.1	2,546.3	210.5	214.9	217.1	220.9	221.1	222.7	225.5
Nondurable goods stores ($ bil.)	1,405.6	1,457.8	1,505.4	124.6	125.9	126.9	128.1	128.5	129.3	130.4
Food stores ($ bil.)	408.4	424.2	432.1	35.6	36.2	36.0	36.1	36.4	36.6	36.8
Apparel and accessory stores ($ bil.)	109.5	113.0	116.8	9.7	9.8	10.0	10.3	10.4	10.5	10.4
Eating and drinking places ($ bil.)	239.9	238.4	244.1	19.6	20.5	20.6	20.3	20.3	20.3	20.5

-- = Not available. 1. In April 1996, 1992 dollars replaced 1987 dollars. 2. Population estimates based on 1990 census. 3. Data beginning January 1994 not directly comparable with data for earlier periods because of a major redesign of 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*					
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
					Real GDP, annual percent change					
World	2.6	1.8	1.9	1.6	3.1	2.8	3.4	3.4	2.3	2.8
less U.S.	3.1	2.9	1.6	1.3	3.0	3.0	3.4	3.2	1.9	3.1
Developed Economies	2.7	1.7	1.5	0.8	2.7	2.2	2.8	2.8	2.2	2.4
less U.S.	3.5	3.0	1.0	0.0	2.4	2.1	2.5	2.1	1.5	2.5
United States	1.2	-0.9	2.7	2.3	3.5	2.3	3.4	3.9	3.5	2.2
Canada	0.3	-1.9	0.9	2.5	3.9	2.2	1.2	3.7	3.2	3.0
Japan	5.1	3.8	1.0	0.3	0.7	1.4	4.1	0.8	-1.7	1.5
Australia	1.5	-0.7	2.4	3.8	5.6	3.5	3.7	3.3	3.1	3.1
European Union	3.1	3.6	0.9	-0.6	3.0	2.5	1.7	2.6	2.9	2.8
Transition Economies	-4.2	-6.9	-11.2	-6.5	-8.8	-1.5	-2.2	5.1	1.1	1.9
Eastern Europe	-6.3	-10.6	-4.0	0.8	3.5	5.5	3.1	1.2	3.5	4.3
Poland	-10.8	-6.3	2.0	3.8	4.2	7.1	5.9	6.9	6.2	6.0
Former Soviet Union	-3.5	-5.5	-13.7	-9.3	-13.9	-5.1	-5.1	7.5	-0.3	0.4
Russia	-3.0	-5.0	-14.5	-8.7	-12.6	-4.1	-4.9	2.2	-0.5	0.0
Developing Economies	3.8	4.8	6.3	6.3	6.7	5.7	6.4	5.4	2.9	4.6
Asia	5.8	6.6	8.9	8.7	9.4	8.7	7.9	6	2.6	5.1
East Asia	5.1	8.8	10.9	10.7	10.8	9.3	8.4	7.8	4.3	6
China	3.8	9.3	14.2	13.5	12.6	10.5	9.6	8.8	6.9	7.8
Taiwan	5.4	7.5	6.8	6.3	6.5	6.0	5.7	6.8	5.1	5.0
Korea	9.5	9.2	5.1	5.8	8.8	8.7	7.1	5.5	-4.6	0.5
Southeast Asia	8.2	6.8	6.9	7.4	8.1	8.5	7.3	4.3	-5.1	1.0
Indonesia	8.9	8.9	7.2	7.2	7.5	8.2	7.6	4.9	-15.0	-2.0
Malaysia	9.7	8.8	7.8	8.4	9.4	9.5	8.0	8.3	-2.5	0.3
Philippines	2.7	-0.2	0.3	2.1	4.4	4.8	5.7	5.4	-1.5	1.5
Thailand	11.7	8.0	8.1	8.3	8.8	9.2	6.4	-1.8	-5.8	-0.2
South Asia	5.6	1.2	5.6	4.6	7	6.9	7.1	2.4	4.9	5.6
India	5.6	0.5	5.4	4.9	7.5	7.3	7.5	2.1	5.0	5.8
Pakistan	4.5	5.5	7.8	1.9	3.9	5.1	4.6	3.0	4.3	4.3
Latin America	-0.1	3.8	3.0	3.9	5.1	0.1	3.4	4.8	3.0	3.9
Mexico	5.1	4.2	3.6	2.0	4.5	-6.3	5.2	7.0	4.6	4.4
Caribbean/Central	1.4	4.2	7.9	4.9	3.8	3.1	3.3	-2.9	3.5	3.6
South America	-1.5	3.6	2.7	4.5	5.3	1.8	3.0	4.5	2.5	3.8
Argentina	0.2	8.9	8.6	6.0	7.4	-4.6	4.4	8.2	4.2	5.4
Brazil	-4.6	0.5	-1.2	4.5	5.8	3.0	2.9	2.9	1.1	2.7
Colombia	3.8	2.3	4.0	5.5	5.9	5.3	2.0	2.7	3.7	4.0
Venezuela	6.5	9.7	6.1	0.3	-2.9	3.4	-1.6	5.2	3.0	4.0
Middle East	5	2.9	5.5	3.5	0.3	3.5	4.6	3.8	3.7	3.9
Israel	6.8	7.7	5.6	5.6	6.9	7.0	4.5	2.1	2.8	3.5
Saudi Arabia	8.7	8.4	2.8	-0.6	0.5	0.5	2.4	0.7	2.1	2.0
Turkey	9.3	0.9	6.0	8.0	-5.5	7.0	7.0	7.2	6.7	7.0
Africa	1.6	0.7	1.2	1.3	2.7	2.8	4.7	4.6	4.0	3.9
North Africa	2.2	1.0	2.2	0.1	2.8	2.4	5.6	2.5	5.0	4.4
Egypt	5.6	1.1	4.4	2.9	3.9	4.6	5.0	4.9	4.5	4.3
Sub-Sahara	1.1	0.5	0.3	2.5	2.6	3.2	4.0	6.6	3.1	3.5
South Africa	-0.5	-1.0	-2.6	1.5	2.8	3.1	3.3	1.7	2.1	2.9
					Consumer prices, percent change					
Developed Economies	5.2	4.6	3.5	3.0	2.6	2.5	2.4	2.1	2.1	2.0
Transition Economies	38.6	95.8	656.6	609.3	268.4	124.1	41.4	27.8	13.8	8.7
Developing Economies	68.1	36.2	38.3	46.8	50.7	21.7	13.7	8.5	10.2	8.5
Asia	6.5	7.8	6.8	10.3	14.7	11.9	6.7	3.9	8.0	6.2
Latin America	438.3	129.1	151.4	208.8	210.2	35.9	22.3	13.1	9.1	7.4
Middle East	22.4	27.5	25.6	24.6	31.9	35.9	24.5	22.6	26.6	26.3
Africa	17.5	24.3	32.1	31.2	34.6	33.9	26.2	10.5	7.5	6.0

The last three years are either estimates or forecasts. Sources: Oxford Economic Forecasting; International Financial Statistics, IMF.
Information contact: Andy Jerardo (202) 694-5323

Farm Prices

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

	Annual			1997	1998					
	1995	1996	1997	Jul	Feb	Mar	Apr	May	Jun	Jul
					1990-92=100					
Prices received										
All farm products	102	112	107	107	101	102	104	103	102	102
All crops	112	126	115	114	110	111	115	113	107	107
Food grains	134	157	128	111	117	118	112	109	96	89
Feed grains and hay	112	146	117	112	113	113	109	108	105	99
Cotton	127	122	112	111	102	105	103	105	113	113
Tobacco	103	105	104	91	110	104	97	--	--	--
Oil-bearing crops	104	128	130	134	117	114	112	112	111	110
Fruit and nuts, all	100	118	109	127	89	94	102	110	124	131
Commercial vegetables	120	109	120	112	120	127	156	128	108	128
Potatoes and dry beans	107	114	93	100	103	107	106	112	105	108
Livestock and products	92	99	99	99	94	95	95	95	98	96
Meat animals	85	87	92	95	82	82	84	87	86	79
Dairy products	98	114	102	93	113	110	107	101	107	109
Poultry and eggs	107	120	114	118	104	108	109	107	115	121
Prices paid										
Commodities and services,										
interest, taxes, and wage rates	110	115	116	117	116	116	116	116	115	115
Production items	109	115	116	117	113	114	114	114	113	112
Feed	104	130	122	120	110	112	111	108	105	103
Livestock and poultry	82	75	93	100	93	91	94	91	88	83
Seeds	110	115	119	120	120	120	123	123	123	123
Fertilizer	120	124	121	120	114	114	114	115	115	115
Agricultural chemicals	115	119	121	119	123	122	122	121	122	122
Fuels	94	105	103	99	82	89	91	94	88	82
Supplies and repairs	112	115	117	118	118	118	119	119	118	118
Autos and trucks	107	108	109	118	109	119	119	118	118	117
Farm machinery	120	125	128	129	129	131	132	132	132	132
Building material	114	115	118	118	118	118	118	118	118	118
Farm services	118	118	118	118	116	116	116	116	117	118
Rent	116	119	119	121	124	124	124	124	124	124
Int. payable per acre on farm real estate debt	101	105	106	107	108	108	108	108	108	108
Taxes payable per acre on farm real estate	109	112	115	115	119	119	119	119	119	119
Wage rates (seasonally adjusted)	114	117	123	119	131	131	130	130	130	130
Production items, interest, taxes, and wage rates	109	114	116	116	115	115	115	115	114	113
Ratio, prices received to prices paid (%)*	93	98	92	91	87	88	90	89	89	89
Prices received (1910-14=100)	647	712	679	678	642	650	662	656	650	646
Prices paid, etc. (parity index) (1910-14=100)	1,437	1,504	1,527	1,555	1,517	1,525	1,528	1,522	1,536	1,526
Parity ratio (1910-14=100) (%)*	45	47	45	44	44	43	43	43	43	42

Values for 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.
Information contact: David Johnson (202) 694-5324.
For historical data or for categories not listed here, call the National Agricultural Statistics Service (NASS) Information Hotline at 1-800-727-9540.
Internet users can access the NASS Home Page at http://www.usda.gov/nass.

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

	Annual[1]			1997	1998					
	1995	1996	1997	Jul	Feb	Mar	Apr	May	Jun	Jul
Crops										
All wheat ($/bu.)	4.55	4.30	3.45	3.23	3.27	3.32	3.15	3.06	2.77	2.57
Rice, rough ($/cwt)	9.15	9.96	9.75	10.10	9.66	9.55	9.30	9.41	9.51	9.50
Corn ($/bu.)	3.24	2.71	2.60	2.42	2.55	2.54	2.41	2.34	2.28	2.11
Sorghum ($/cwt)	5.69	4.17	4.00	3.95	4.06	4.02	3.76	3.71	3.96	3.62
All hay, baled ($/ton)	82.20	95.80	102.50	98.40	97.20	97.50	101.00	103.00	91.80	88.60
Soybeans ($/bu.)	6.72	7.35	6.50	7.52	6.57	6.40	6.26	6.26	6.15	6.13
Cotton, upland (cents/lb.)	75.40	69.30	66.90	67.50	62.00	63.40	62.20	63.50	68.50	68.20
Potatoes ($/cwt)	6.77	4.93	5.68	5.60	5.86	6.25	6.17	6.52	6.04	6.15
Lettuce ($/cwt)[2]	23.50	14.70	17.30	17.10	10.90	13.40	27.90	14.70	11.40	15.80
Tomatoes fresh ($/cwt)[2]	25.80	28.00	33.00	28.60	48.00	33.20	36.50	34.70	27.00	50.00
Onions ($/cwt)	11.10	10.60	12.60	14.20	16.00	21.20	21.70	18.50	15.90	21.30
Beans, dry edible ($/cwt)	20.80	23.50	17.70	21.90	21.40	20.10	20.80	21.10	21.30	22.10
Apples for fresh use (cents/lb.)	24.00	20.80	22.20	14.60	21.60	21.30	19.20	18.20	16.30	16.10
Pears for fresh use ($/ton)	272.00	376.00	276.00	325.00	260.00	243.00	292.00	373.00	353.00	405.00
Oranges, all uses ($/box)[3]	4.23	5.01	4.57	6.64	3.53	4.75	5.82	5.68	6.41	5.85
Grapefruit, all uses ($/box)[3]	2.30	2.43	1.74	8.58	1.61	1.03	1.36	0.42	3.58	3.66
Livestock										
Cattle, all beef ($/cwt)	61.80	58.70	63.10	62.80	60.40	61.30	63.00	63.00	61.80	58.20
Calves ($/cwt)	73.10	58.40	78.90	86.90	88.70	89.80	90.80	88.90	81.70	78.10
Hogs, all ($/cwt)	40.50	51.90	52.90	58.90	35.70	34.80	35.60	42.20	42.20	36.10
Lambs ($/cwt)	78.20	88.20	90.30	81.10	73.40	70.00	66.10	63.30	88.70	--
All milk, sold to plants ($/cwt)	12.78	14.75	13.36	12.10	14.70	14.40	14.00	13.20	14.00	14.30
Milk, manuf. grade ($/cwt)	11.79	13.43	12.17	10.80	13.50	12.90	12.10	11.30	13.00	13.70
Broilers, live (cents/lb.)	34.40	38.10	37.70	40.00	34.40	35.20	36.50	36.90	40.30	43.20
Eggs, all (cents/doz.)[4]	62.40	74.90	70.20	65.60	64.70	69.90	63.50	54.80	60.00	58.30
Turkeys (cents/lb.)	41.00	43.30	39.90	41.10	34.00	34.60	35.70	35.40	35.90	37.50

-- = Not available. Values for last two months 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. *Information contact: David Johnson (202) 694-5324. For historical data or for categories not listed here, call the National Agricultural Statistics Service (NASS) Information Hotline at 1-800-727-9540. Internet users can 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			1997	1998					
	1995	1996	1997	Jul	Feb	Mar	Apr	May	Jun	Jul
	1982-84=100									
Consumer Price Index, all items	152.4	156.9	160.5	160.5	161.9	162.2	162.5	162.8	163.0	163.2
CPI, all items less food	153.1	157.5	161.1	161.1	162.3	162.6	163.0	163.3	165.3	163.6
All food	148.4	153.3	157.3	157.0	159.4	159.7	159.8	160.3	160.1	160.5
Food away from home	149.0	152.7	157.0	157.1	159.6	159.9	160.2	160.6	160.7	161.1
Food at home	148.8	154.3	158.1	157.7	160.0	160.2	160.2	160.7	160.5	160.8
Meats[1]	135.5	140.2	144.4	144.6	142.4	142.2	140.8	141.0	141.5	141.8
Beef and veal	134.9	134.5	136.8	136.5	135.9	136.8	136.5	136.3	136.3	136.1
Pork	134.8	148.2	155.9	157.5	151.5	149.5	145.9	147.6	148.7	149.7
Poultry	143.5	152.4	156.6	157.9	155.3	155.1	154.3	155.6	155.5	156.6
Fish and seafood	171.6	173.1	177.1	174.9	180.9	180.3	181.0	180.9	180.5	181.4
Eggs	120.5	142.1	140.0	132.9	137.3	136.4	139.1	128.6	126.3	127.5
Dairy products[2]	132.8	142.1	145.5	143.3	147.7	148.4	148.5	148.1	148.1	148.2
Fats and oils[3]	137.3	140.5	141.7	141.4	141.5	142.2	140.7	141.2	143.3	147.6
Fresh fruits	219.0	234.4	236.3	229.9	240.3	235.9	241.6	249.0	247.3	247.4
Processed fruits	137.1	145.2	148.8	149.7	--	--	--	--	--	--
Fresh vegetables	193.1	189.2	194.6	190.3	210.5	220.2	219.7	229.7	214.7	214.0
Potatoes	174.7	180.6	174.2	181.9	179.3	181.6	179.9	187.7	193.1	196.5
Processed vegetables	138.3	143.9	147.2	147.9	--	--	--	--	--	--
Cereal and bakery products	167.5	174.0	177.6	178.3	179.7	179.6	180.2	180.5	181.6	181.8
Sugar and sweets	137.5	143.7	147.8	149.2	149.6	150.8	150.1	149.5	150.5	149.9
Nonalcoholic beverages	131.7	128.6	133.4	136.3	134.8	134.2	133.9	132.9	132.8	132.3
Apparel										
Apparel, commodities less footwear	129.3	128.5	129.4	126.3	--	--	--	--	--	--
Footwear	125.4	126.6	127.6	125.9	126.6	126.5	127.9	128.3	128.2	127.0
Tobacco and smoking products	225.7	232.8	243.7	242.0	261.2	254.1	263.5	270.0	266.9	273.2
Alcoholic beverages	153.9	158.5	162.8	162.9	165.0	165.1	165.2	165.2	165.5	165.6

-- = Not available. 1. Beef, veal, lamb, pork, and processed meat. 2. Includes butter. 3. Includes butter as of Jan '98.
Information contact: David Johnson (202) 694-5324.
NOTE: For historical data or for categories not listed here, call the Bureau of Labor Statistics' CPI Information Hotline (202) 606-7828.

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

	Annual			1997	1998					
	1995	1996	1997	Jul	Feb	Mar	Apr	May	Jun	Jul
					1982=100					
All commodities	124.8	127.7	127.6	126.9	125.0	124.7	124.7	124.9	128.4	124.8
Finished goods[1]	127.9	131.3	131.8	131.3	130.2	130.1	130.0	130.4	130.6	130.9
All foods[2]	126.7	132.5	132.8	131.6	131.9	131.5	131.9	131.9	131.8	132.5
Consumer foods	129.0	133.6	134.5	134.0	133.6	133.4	133.6	133.5	133.6	134.6
Fresh fruits and melons	85.7	100.8	99.4	83.3	94.2	86.3	88.6	90.6	89.6	88.7
Fresh and dry vegetables	144.4	135.0	123.1	112.1	146.4	156.9	167.8	132.8	120.9	146.6
Dried and dehydrated fruits	121.2	124.2	124.9	125.7	123.4	122.3	122.5	127.4	127.4	127.4
Canned fruits and juices	129.4	137.5	137.6	137.5	134.4	134.2	133.9	134.1	133.8	134.6
Frozen fruits, juices and ades	115.9	123.9	117.2	118.1	111.7	112.5	114.5	115.5	115.4	117.5
Fresh veg. except potatoes	139.8	120.9	121.3	115.7	136.6	148.2	162.9	123.2	106.5	153.7
Canned vegetables and juices	116.6	121.2	120.1	119.1	121.9	121.8	121.8	122.0	121.9	122.2
Frozen vegetables	124.2	125.4	125.8	126.9	126.0	124.8	124.6	126.1	125.3	125.6
Potatoes	142.6	133.9	106.1	106.9	113.6	120.9	125.5	136.3	120.4	116.0
Eggs for fresh use (1991=100)	86.3	105.1	97.1	96.6	86.0	98.6	83.6	71.2	86.9	80.8
Bakery products	164.3	169.8	173.9	173.9	175.3	175.1	175.6	175.8	175.7	175.6
Meats	102.9	109.0	111.6	113.4	102.3	100.0	100.9	105.3	105.9	102.9
Beef and veal	100.9	100.2	102.8	100.9	100.1	98.4	99.4	103.7	99.9	99.5
Pork	101.4	120.9	123.1	131.8	97.6	93.0	95.1	103.8	111.2	100.8
Processed poultry	114.3	119.8	117.4	118.1	115.7	116.8	117.0	115.7	119.6	124.9
Unprocessed and packaged fish	170.9	165.9	178.1	169.3	193.0	187.2	185.4	189.7	178.3	180.0
Dairy products	119.7	130.4	128.1	124.5	133.1	132.2	131.5	131.5	132.8	135.3
Processed fruits and vegetables	122.4	127.6	126.4	126.2	125.4	125.2	125.3	126.0	125.8	126.4
Shortening and cooking oil	142.5	138.5	137.8	136.4	140.4	140.0	142.5	143.0	141.8	141.5
Soft drinks	133.1	134.0	133.2	133.2	134.7	135.2	134.8	134.0	134.5	134.7
Finished consumer goods less foods	123.9	127.6	128.2	127.6	125.6	125.6	125.3	126.4	126.8	127.0
Alcoholic beverages	128.5	132.8	135.1	135.7	135.0	135.0	135.0	134.6	134.9	134.9
Apparel	124.2	125.1	125.7	125.7	126.5	126.4	126.2	126.2	126.3	126.0
Footwear	139.2	141.6	143.7	144.1	144.7	144.7	144.7	144.4	144.7	144.4
Tobacco products	231.3	237.4	248.9	248.4	261.9	262.0	270.9	278.4	278.7	278.7
Intermediate materials[3]	124.9	125.8	125.6	125.5	123.8	123.3	123.3	123.4	123.4	123.4
Materials for food manufacturing	119.5	125.3	123.2	122.3	121.6	121.0	121.8	123.7	122.9	122.6
Flour	122.8	136.8	118.7	115.1	110.7	114.2	112.9	112.1	109.0	107.8
Refined sugar[4]	119.4	123.7	123.6	123.3	120.6	120.7	121.0	120.8	122.3	120.3
Crude vegetable oils	129.8	118.1	116.6	112.9	131.5	134.9	138.5	143.4	130.6	126.3
Crude materials[5]	102.7	113.8	111.1	107.1	100.1	99.4	100.0	100.2	98.5	97.1
Foodstuffs and feedstuffs	105.8	121.5	112.2	112.0	105.1	106.3	106.2	106.2	105.6	103.8
Fruits and vegetables and nuts[6]	108.4	122.5	115.5	101.8	122.2	121.7	127.4	114.6	109.4	119.0
Grains	112.6	151.1	111.2	105.9	105.2	107.2	99.8	98.7	93.8	91.4
Slaughter livestock	92.8	95.2	96.3	98.8	83.6	85.4	87.9	90.7	90.7	81.8
Slaughter poultry, live	125.6	140.5	131.0	146.9	116.1	125.3	128.5	131.1	140.5	156.7
Plant and animal fibers	155.3	129.4	117.0	120.0	108.1	110.1	101.5	107.9	117.9	120.9
Fluid milk	93.7	107.9	97.5	90.6	106.7	103.0	104.3	98.1	100.5	107.0
Oilseeds	112.6	139.4	140.8	146.6	126.9	123.4	118.1	121.0	115.9	120.5
Leaf tobacco	78.9	89.4	--	93.2	112.9	106.7	99.3	--	--	--
Raw cane sugar	119.7	118.6	116.8	117.6	116.4	115.8	117.6	118.0	118.1	119.3

1. Commodities ready for sale to ultimate consumer. 2. Includes all raw, intermediate, and processed foods (excludes soft drinks, alcholic beverages, and manufactured animal feeds). 3. Commodities requiring further processing to become finished goods. 4. All types and sizes of refined sugar.
5. Products entering market for the first time that have not been manufactured at that point. 6. Fresh and dried.
Information contact: David Johnson (202) 694-5324. For historical data or for categories not listed here, call the Bureau of Labor Statistics' PPI Information Hotline at (202) 606-7705.

Farm-Retail Price Spreads

Table 8—Farm-Retail Price Spreads

	Annual			1997				1998		
	1995	1996	1997	Mar	Oct	Nov	Dec	Jan	Feb	Mar
Market basket[1]										
Retail cost (1982-84=100)	149.4	155.9	159.7	159.4	160.4	160.6	161.0	162.9	161.6	160.9
Farm value (1982-84=100)	102.7	111.1	106.2	108.1	103.6	106.8	105.5	102.6	102.1	102.3
Farm-retail spread (1982-84=100)	174.6	180.1	188.6	187.0	190.9	189.6	191.0	195.5	193.6	192.5
Farm value-retail cost (%)	24.1	24.9	23.3	23.7	22.6	23.3	22.9	22.0	22.1	22.3
Meat products										
Retail cost (1982-84=100)	135.5	140.1	144.4	143.1	145.2	144.7	143.4	143.2	142.4	142.2
Farm value (1982-84=100)	93.8	100.4	101.2	100.1	97.8	97.0	94.8	102.2	88.0	85.2
Farm-retail spread (1982-84=100)	178.2	180.9	188.6	187.2	193.8	193.6	193.3	185.3	198.2	200.7
Farm value-retail cost (%)	35.1	36.3	35.5	35.4	34.1	34.0	33.5	36.1	31.3	30.3
Dairy products										
Retail cost (1982-84=100)	132.8	142.1	145.5	146.1	145.7	147.0	147.8	148.3	147.7	148.4
Farm value (1982-84=100)	92.2	107.2	98.0	98.2	100.6	105.3	104.0	105.7	107.7	107.2
Farm-retail spread (1982-84=100)	170.3	174.3	189.3	190.2	187.3	185.5	188.2	187.5	184.6	186.4
Farm value-retail cost (%)	33.3	36.2	32.3	32.3	33.1	34.3	33.8	34.2	35.0	34.7
Poultry										
Retail cost (1982-84=100)	143.5	152.4	156.6	156.3	155.6	157.4	155.2	155.1	155.3	155.1
Farm value (1982-84=100)	113.7	126.2	120.6	121.3	114.4	113.4	105.7	106.9	109.7	112.2
Farm-retail spread (1982-84=100)	177.7	182.6	198.1	196.6	203.1	208.0	212.2	210.6	207.8	204.6
Farm value-retail cost (%)	42.4	44.3	41.2	41.5	39.3	38.6	36.4	36.9	37.8	38.7
Eggs										
Retail cost (1982-84=100)	120.5	142.1	140.0	141.0	135.9	145.1	151.1	149.0	147.7	141.0
Farm value (1982-84=100)	91.1	114.7	99.3	104.0	91.4	121.9	116.9	143.8	137.3	136.4
Farm-retail spread (1982-84=100)	173.2	191.4	213.0	207.5	215.8	186.9	212.6	223.7	255.3	218.0
Farm value-retail cost (%)	48.6	51.9	45.6	47.4	43.2	54.0	49.7	46.3	38.2	44.7
Cereal and bakery products										
Retail cost (1982-84=100)	167.5	174.0	177.6	176.7	178.4	178.0	178.4	179.0	179.7	179.6
Farm value (1982-84=100)	110.1	125.6	107.7	111.8	103.8	102.7	103.8	100.8	101.0	102.0
Farm-retail spread (1982-84=100)	175.5	180.7	187.4	185.8	188.8	188.5	188.8	189.9	190.7	190.4
Farm value-retail cost (%)	8.1	7.2	7.4	7.7	7.1	7.1	7.1	6.9	6.9	7.0
Fresh fruit										
Retail cost (1982-84=100)	226.9	243.0	245.1	240.3	254.0	243.3	250.1	250.5	249.6	245.6
Farm value (1982-84=100)	136.2	151.7	137.0	134.2	137.1	140.6	159.0	136.6	137.4	136.7
Farm-retail spread (1982-84=100)	268.7	285.2	295.0	289.3	307.9	290.7	292.1	303.1	301.4	295.9
Farm value-retail cost (%)	19.0	19.7	17.7	17.6	17.1	18.3	20.1	17.2	17.4	17.6
Fresh vegetables										
Retail cost (1982-84=100)	193.1	189.2	194.6	202.2	192.8	205.2	205.2	233.8	210.5	202.2
Farm value (1982-84=100)	130.1	113.3	118.7	148.3	113.0	131.2	122.7	126.4	125.2	136.2
Farm-retail spread (1982-84=100)	225.5	228.3	233.6	229.9	233.8	243.2	247.6	289.0	254.4	236.1
Farm value-retail cost (%)	22.9	20.3	20.7	24.9	19.9	21.7	20.3	18.4	20.2	22.9
Processed fruits and vegetables										
Retail cost (1982-84=100)	137.5	144.4	147.9	148.0	147.2	146.9	147.2	147.2	148.5	149.0
Farm value (1982-84=100)	120.5	121.5	115.9	117.4	113.1	115.0	115.1	117.5	117.2	117.2
Farm-retail spread (1982-84=100)	142.8	151.6	157.9	157.6	157.5	156.8	157.2	156.5	158.3	158.9
Farm value-retail cost (%)	20.8	20.0	18.6	18.9	18.4	18.6	18.6	19.0	18.8	18.7
Fats and oils										
Retail cost (1982-84=100)	137.3	140.5	141.7	142.4	141.7	140.4	140.3	140.5	141.5	142.2
Farm value (1982-84=100)	121.3	112.3	109.4	110.0	113.0	117.9	114.3	113.6	120.3	122.9
Farm-retail spread (1982-84=100)	143.1	150.9	153.6	154.3	152.3	148.7	149.9	150.4	149.3	149.3
Farm value-retail cost (%)	23.8	21.5	20.8	20.8	21.4	22.6	21.9	21.8	22.9	23.2

See footnotes at end of table, next page.

Table 8—Farm-Retail Price Spreads (continued)

| | Annual | | | 1997 | 1998 | | | | | |
	1995	1996	1997	Jul	Feb	Mar	Apr	May	Jun	Jul
Beef, All Fresh Retail Price (¢/lb)	259.4	252.4	253.8	251.1	252.7	256.3	255.4	254.4	251.2	250.8
Beef, Choice										
Retail price (¢/lb.)[2]	284.4	280.2	279.5	279.2	272.0	273.1	278.2	277.4	278.7	278.5
Wholesale value (¢)[3]	163.9	158.1	158.2	157.1	148.5	147.0	151.6	157.0	154.5	154.0
Net farm value (¢)[4]	138.4	134.9	137.2	134.7	128.0	129.9	136.4	137.1	134.8	128.6
Farm-retail spread (¢)	146.0	145.3	142.3	144.5	144.0	143.2	141.8	140.3	143.9	149.9
Wholesale-retail (¢)[5]	120.5	122.1	121.3	122.1	123.5	126.1	126.6	120.4	124.2	124.5
Farm-wholesale (¢)[6]	25.5	23.2	21.0	22.4	20.5	17.1	15.2	19.9	19.7	25.4
Farm value-retail price (%)	49	48	49	48	47	48	49	49	48	46
Pork										
Retail price (¢/lb.)[2]	194.8	220.9	231.5	232.7	234.5	229.8	225.0	226.7	228.9	231.0
Wholesale value (¢)[3]	98.8	117.2	117.1	123.4	94.0	91.4	91.0	99.8	98.0	94.9
Net farm value (¢)[4]	66.7	84.6	81.1	93.3	54.6	54.3	55.7	66.3	65.8	57.6
Farm-retail spread (¢)	128.1	136.3	150.4	139.4	179.9	175.5	169.3	160.4	163.1	173.4
Wholesale-retail (¢)[5]	96.0	103.7	114.4	109.3	140.5	138.4	134.0	126.9	130.9	136.1
Farm-wholesale (¢)[6]	32.1	32.6	36.0	30.1	39.4	37.1	35.3	33.5	32.2	37.3
Farm value-retail price (%)	34	38	35	40	23	24	25	29	29	25

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 price and farm value, represents charges for assembling, processing, transporting, distributing. 2. Weighted-average price 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, Larry Duewer (202) 694-5172*

Table 9—Price Indexes of Food Marketing Costs

| | Annual | | | 1996 | | | 1997 | | | |
	1995	1996	1997	II	III	IV	I	II	III	IV
					*1987=100**					
Labor--hourly earnings										
and benefits	455.2	459.7	474.3	458.5	459.1	465.3	469.3	473.0	474.6	480.2
Processing	472.5	474.7	486.0	474.6	474.7	480.2	481.4	484.9	487.1	490.5
Wholesaling	502.2	516.0	536.2	514.4	518.3	520.5	526.2	534.1	538.9	545.4
Retailing	417.1	419.9	435.2	417.7	417.3	426.1	432.1	434.1	433.6	441.1
Packaging and containers	415.7	399.8	390.3	400.0	397.0	393.1	392.1	388.7	387.6	392.9
Paperboard boxes and containers	392.1	363.8	341.9	366.1	352.1	348.9	347.2	335.4	334.7	350.3
Metal cans	504.9	498.3	491.0	501.9	502.8	481.8	489.4	496.1	490.8	487.9
Paper bags and related products	457.8	437.8	441.9	434.2	438.2	443.3	443.8	441.6	439.5	442.5
Plastic films and bottles	330.6	326.5	326.6	321.9	328.9	331.9	326.6	325.3	326.9	327.5
Glass containers	463.3	460.5	447.4	460.0	460.3	459.3	449.3	446.9	446.6	446.6
Metal foil	263.1	235.7	233.4	239.9	230.8	229.9	228.2	232.0	237.2	236.4
Transportation services	436.6	429.8	430.0	425.0	428.8	430.2	431.0	430.6	429.0	429.4
Advertising	539.1	580.1	609.4	579.2	580.6	582.8	608.1	608.7	609.3	611.6
Fuel and power	633.7	670.7	668.5	670.3	678.0	699.2	689.5	657.4	658.1	669.0
Electric	511.3	501.3	499.2	503.8	521.0	492.6	488.5	499.0	517.7	491.5
Petroleum	559.7	666.8	616.7	669.3	658.9	745.5	672.8	609.7	574.8	609.6
Natural gas	1,091.7	1,136.7	1,214.0	1,123.6	1,136.7	1,180.9	1,261.1	1,165.7	1,179.7	1,249.4
Communications, water and sewage	284.9	296.8	302.8	297.5	299.1	299.1	301.1	302.2	303.5	304.2
Rent	269.0	268.2	265.6	268.1	268.6	268.3	266.6	265.6	265.1	265.1
Maintenance and repair	486.1	499.6	514.9	497.2	501.4	506.2	509.6	513.0	517.3	519.7
Business services	491.0	501.7	512.3	500.1	503.3	506.6	509.5	511.7	513.9	514.1
Supplies	342.7	338.3	337.8	339.2	338.2	339.0	338.8	337.0	337.5	337.9
Property taxes and insurance	546.8	564.3	580.1	561.8	566.5	570.4	573.6	577.3	582.2	587.3
Interest, short-term	113.5	103.9	108.9	106.8	107.5	104.2	105.3	111.2	108.8	110.1
Total marketing cost index	444.8	452.1	459.9	450.9	451.9	455.6	458.6	458.4	459.1	463.4

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

Livestock & Products

Table 10—U.S. Meat Supply & Use

	Beg. stocks	Produc-tion[1]	Imports	Total supply	Exports	Ending stocks	Consumption Total	Per capita[2]	Conversion factor[3]	Primary market price[4]
				Million lbs.[5]				*lbs.*		*$/cwt*
Beef										
1995	548	25,222	2,103	27,873	1,821	519	25,533	67	0.695	66
1996	519	25,525	2,073	28,117	1,877	377	25,863	68	0.700	65
1997	377	25,490	2,343	28,210	2,136	465	25,609	67	0.700	66
1998	465	25,884	2,615	28,964	2,100	400	26,464	69	0.700	63-64
1999	400	23,956	2,760	27,116	2,155	350	24,611	63	0.700	70-76
Pork										
1995	438	17,849	664	18,951	787	396	17,768	52	0.776	42
1996	396	17,117	618	18,131	970	366	16,795	49	0.776	53
1997	366	17,274	633	18,273	1,044	408	16,821	49	0.776	51
1998	408	18,822	585	19,815	1,260	475	18,080	52	0.776	34-35
1999	475	19,580	570	20,625	1,300	490	18,835	54	0.776	34-37
Veal[6]										
1995	7	319	0	326	0	7	319	1	0.83	75
1996	7	378	0	385	0	7	378	1	0.83	59
1997	7	334	0	341	0	8	333	1	0.83	82
1998	8	270	0	278	0	6	272	1	0.83	85
1999	6	255	0	261	0	6	255	1	0.83	95
Lamb and mutton										
1995	11	287	64	362	6	8	348	1	0.89	76
1996	8	268	73	349	6	9	334	1	0.89	85
1997	9	260	83	352	5	14	333	1	0.89	88
1998	14	241	98	353	8	11	334	1	0.89	77
1999	11	223	85	319	8	11	300	1	0.89	77
Total red meat										
1995	1,004	43,677	2,831	47,512	2,614	930	43,968	122	--	--
1996	930	43,288	2,764	46,982	2,853	759	43,370	120	--	--
1997	759	43,358	3,059	47,176	3,185	895	43,096	118	--	--
1998	895	45,217	3,298	49,410	3,368	892	45,150	122	--	--
1999	892	44,014	3,415	48,321	3,463	857	44,001	119	--	--
										¢/lb
Broilers										
1995	458	24,827	1	25,287	3,894	560	20,832	69	0.869	56
1996	560	26,124	4	26,688	4,420	641	21,626	71	0.869	61
1997	641	27,041	5	27,687	4,664	607	22,416	73	0.869	59
1998	607	27,566	4	28,177	5,066	600	22,511	72	0.869	61-63
1999	600	28,943	4	29,547	5,125	650	23,772	76	0.869	56-61
Mature chickens										
1995	14	496	3	513	99	7	406	2	1.0	--
1996	7	491	0	498	265	6	228	1	1.0	--
1997	6	510	0	516	384	7	125	1	1.0	--
1998	7	519	0	526	438	7	81	1	1.0	--
1999	7	546	0	554	412	5	137	1	1.0	--
Turkeys										
1995	254	5,069	2	5,326	348	271	4,706	18	1.0	66
1996	271	5,401	1	5,673	438	328	4,906	19	1.0	66
1997	328	5,412	1	5,741	598	415	4,727	18	1.0	65
1998	415	5,270	1	5,686	510	400	4,775	18	1.0	60-61
1999	400	5,235	1	5,636	580	400	4,655	17	1.0	60-64
Total poultry										
1995	727	30,393	6	31,125	4,342	839	25,944	88	--	--
1996	839	32,015	5	32,859	5,123	975	26,760	90	--	--
1997	975	32,964	6	33,944	5,646	1,029	27,269	91	--	--
1998	1,029	33,355	5	34,389	6,014	1,007	27,367	90	--	--
1999	1,007	34,724	5	35,736	6,117	1,055	28,563	93		
Red meat and poultry										
1995	1,731	74,070	2,837	78,637	6,956	1,769	69,912	210	--	--
1996	1,769	75,303	2,769	79,841	7,976	1,734	70,130	210	--	--
1997	1,734	76,322	3,065	81,120	8,831	1,924	70,364	209	--	--
1998	1,924	78,572	3,303	83,799	9,382	1,899	72,517	213	--	--
1999	1,899	78,738	3,420	84,057	9,580	1,912	72,564	212	--	--

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

Table 11—U.S. Egg Supply & Use

	Beg. stocks	Production	Imports	Total supply	Exports	Hatching use	Ending stocks	Consumption Total	Consumption Per capita	Primary market price*
				Million doz.					*No.*	*¢/doz.*
1992	13.0	5,905.0	4.3	5,922.3	157.0	732.0	13.5	5,019.8	235.9	65.4
1993	13.5	6,005.8	4.7	6,023.9	158.9	769.6	10.7	5,084.6	236.4	72.5
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	6,371.3	5.4	6,387.9	253.1	863.8	8.5	5,262.4	237.8	88.2
1997	8.5	6,459.8	6.9	6,475.2	227.8	894.8	7.4	5,345.2	239.4	81.2
1998	7.4	6,620.9	6.2	6,634.5	231.7	926.1	10.0	5,467.0	242.7	75.1
1999	10.0	6,765.0	4.0	6,779.0	243.0	970.0	10.0	5,556.0	244.5	72.5

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

Table 12—U.S. Milk Supply & Use[1]

	Production	Farm use	Commercial Farm Marketings	Beg. stocks	Imports	Total commercial supply	CCC net removals	Commercial Ending stocks	Commercial Disappearance	All milk price[1]	CCC net removals Skim solids basis	CCC net removals Total solid basis[2]
			Billion lbs. (milkfat basis)							*$/cwt*	*Billion lbs.*	
1991	147.7	2.0	145.7	5.1	2.6	153.4	10.4	4.5	138.6	12.24	3.9	6.5
1992	150.9	1.9	149.0	4.5	2.5	155.9	9.9	4.7	141.3	13.09	2.0	5.2
1993	150.6	1.8	148.8	4.7	2.8	156.2	6.7	4.6	145.0	12.80	3.9	5.0
1994	153.7	1.7	152.0	4.6	2.9	159.4	4.8	4.3	150.3	12.97	3.7	4.2
1995	155.4	1.6	153.9	4.3	2.9	161.1	2.1	4.1	154.9	12.74	4.4	3.5
1996	154.3	1.5	153.8	4.1	2.9	159.8	0.1	4.7	155.0	14.74	0.7	0.5
1997	156.6	1.4	155.2	4.7	2.7	162.6	1.1	4.9	156.6	13.34	3.7	2.7
1998	157.9	1.4	156.6	4.9	3.3	164.7	0.4	4.8	159.5	14.30	4.5	2.9
1999	160.1	1.3	158.8	4.8	3.3	166.8	0.8	4.9	161.1	13.60	3.6	2.5

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 1995	Annual 1996	Annual 1997	1997 Jun	1998 Jan	1998 Feb	1998 Mar	1998 Apr	1998 May	1998 Jun
Broilers										
Federally inspected slaughter certified (mil. lb.)	25,020.8	26,336.3	27,270.7	2,239.7	2,368.1	2,144.9	2,331.9	2,384.0	2,256.0	2126.8
Wholesale price, 12-city (cents/lb.)	56.2	61.2	58.8	59.0	54.7	56.4	58.1	58.8	60.1	64.3
Price of grower feed ($/ton)[1]	135.1	175.5	157.8	166.0	147.0	143.0	141.0	138.0	137.0	134.0
Broiler-feed price ratio[2]	5.1	4.4	4.7	4.5	4.5	4.8	5.0	5.3	5.4	6.0
Stocks beginning of period (mil. lb.)	458.4	560.1	641.3	723.7	606.8	616.1	629.5	665.8	710.3	654.8
Broiler-type chicks hatched (mil.)	7,932.4	8,076.9	8,306.5	704.1	710.6	644.5	732.0	709.4	740.0	719.0
Turkeys										
Federally inspected slaughter certified (mil. lb.)	5,128.8	5,465.6	5,477.9	483.3	433.7	410.9	445.5	442.3	421.2	457.0
Wholesale price, Eastern U.S. 8-16 lb. young hens (cents/lb.)	66.4	66.5	64.9	68.6	55.6	54.0	55.5	58.1	58.7	60.6
Price of turkey grower feed ($/ton)[1]	130.1	166.1	142.5	149.0	131.0	131.0	128.0	125.0	122.0	118.0
Turkey-feed price ratio[2]	6.3	5.3	5.6	5.6	5.4	5.2	5.4	5.7	5.8	6.1
Stocks beginning of period (mil. lb.)	254.4	271.3	328.0	611.8	415.1	497.6	512.7	527.0	580.2	612.9
Poults placed in U.S. (mil.)	321.7	327.2	321.5	28.4	26.2	25.1	26.4	25.7	25.7	27.0
Eggs										
Farm production (mil.)	74,587	76,456	77,515	6,276	6,742	6,071	6,829	6,571	6,630	6,422
Average number of layers (mil.)	294	298	303	300	311	312	313	311	308	308
Rate of lay (eggs per layer on farms)	253.8	256.2	255.2	20.9	21.7	19.5	21.8	21.1	21.5	20.9
Cartoned price, New York, grade A large (cents/doz.)[3]	72.9	88.2	81.2	68.4	83.2	72.4	81.4	71.6	60.4	67.3
Price of laying feed ($/ton)[1]	149.7	184.4	159.8	180.0	124.0	156.0	149.0	149.0	161.0	150.0
Egg-feed price ratio[2]	8.6	8.5	8.8	6.6	11.9	8.3	9.4	8.5	6.8	8.0
Stocks, first of month Frozen (mil. doz.)	14.8	10.5	7.7	6.2	7.4	9.1	9.3	7.9	7.0	9.8
Replacement chicks hatched (mil.)	397	407	422	36.9	37.2	34.6	40.0	39.9	39.6	39.2

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			1997	1998					
	1995	1996	1997	Jun	Jan	Feb	Mar	Apr	May	Jun
Milk--Basic Formula Price ($/cwt)[1]	11.83	13.39	12.05	10.74	13.25	13.32	12.81	12.01	10.88	13.10
Wholesale prices										
Butter, Central States (cents/lb.)[2]	81.9	108.2	116.2	113.4	117.8	139.8	134.1	136.4	153.2	186.7
Am. cheese, Wis. assembly pt. (cents/lb.)	132.8	149.1	132.4	117.9	144.5	144.7	138.8	129.7	123.0	151.3
Nonfat dry milk (cents/lb.)[3]	108.6	122.2	110.0	107.9	105.9	105.2	104.7	104.3	103.5	103.0
USDA net removals										
Total (mil. lb.)[4]	2,105.7	86.9	1,108.6	130.3	123.0	76.0	53.0	37.6	30.8	9.2
Butter (mil. lb.)	78.5	0.1	39.2	4.5	4.0	2.2	1.3	1.0	0.7	0.0
Am. cheese (mil. lb.)	6.1	4.6	11.3	2.2	0.7	0.7	0.6	0.6	0.5	0.2
Nonfat dry milk (Mil. lb.)	343.8	57.2	296.7	32.7	37.5	31.8	24.7	26.8	38.0	28.0
Milk										
Milk prod. 20 states (mil. lb.)	131,780	131,343	133,861	11,419	11,316	10,434	11,722	11,591	12,067	11,546
Milk per cow (lb.)	16,762	16,800	17,252	1,471	1,464	1,351	1,517	1,499	1,557	1,489
Number of milk cows (1,000)	7,862	7,818	7,759	7,765	7,730	7,726	7,725	7,735	7,750	7,753
U.S. milk production (mil. lb.)[5]	155,424	154,259	156,602	13,370	13,260	12,221	13,725	13,521	14,053	13,441
Stocks, beginning[4]										
Total (mil. lb.)	5,760	4,168	4,714	7,585	4,907	5,322	5,656	6,009	6,488	6,689
Commercial (mil. lb.)	4,263	4,099	4,704	7,548	4,889	5,306	5,640	5,990	6,460	6,663
Government (mil. lb.)	1,497	69	10	37	18	15	16	19	28	26
Imports, total (mil. lb.)[4]	2,936	2,911	2,698	205	196	215	310	279	317	--
Commercial disappearance (mil. lb.)[4]	154,843	154,985	156,578	13,344	12,802	11,923	13,518	13,163	14,021	--
Butter										
Production (mil. lb.)	1,264.5	1,174.5	1,151.2	82.0	113.5	102.7	100.8	103.0	92.9	73.4
Stocks, beginning (mil. lb.)	79.4	18.6	13.7	104.2	20.8	34.2	44.2	55.9	67.4	72.7
Commercial disappearance (mil. lb.)	1,186.3	1,179.8	1,107.9	87.5	97.6	91.4	89.1	91.8	87.6	--
American cheese										
Production (mil. lb.)	3,131.4	3,280.8	3,285.2	286.2	283.2	261.1	285.2	289.7	293.1	287.0
Stocks, beginning (mil. lb.)	310.4	307.0	379.9	447.0	410.8	412.1	411.2	421.5	442.2	443.2
Commercial disappearance (mil. lb.)	3,148.5	3,230.1	3,268.6	268.5	282.0	263.1	275.8	272.4	296.2	--
Other cheese										
Production (mil. lb.)	3,785.5	3,936.7	4,043.8	337.2	332.5	313.0	360.0	351.6	360.0	353.2
Stocks, beginning (mil. lb.)	126.8	105.3	107.3	138.2	70.0	81.7	98.8	98.2	103.1	108.8
Commercial disappearance (mil. lb.)	4,125.6	4,243.0	4,365.5	349.4	337.0	312.5	383.9	368.1	377.9	--
Nonfat dry milk										
Production (mil. lb.)	1,233.0	1,061.8	1,271.6	120.1	103.7	97.0	107.3	120.4	121.3	104.8
Stocks, beginning (mil. lb.)	131.2	85.0	71.4	151.3	124.9	128.1	131.2	128.9	161.2	186.8
Commercial disappearance (mil. lb.)	923.7	1,009.0	895.4	65.8	65.4	64.0	96.7	74.4	65.3	--
Frozen dessert										
Production (mil. gal.)[6]	1,229.6	1,240.9	1,281.4	131.0	83.3	91.7	109.4	115.4	118.9	131.4

	Annual			1996	1997				1998	
	1995	1996	1997	IV	I	II	III	IV	I	II
Milk production (mil. lb.)	155,424	154,259	156,602	37,946	38,961	40,683	38,805	38,154	39,209	40,997
Milk per cow (lb.)	16,433	16,479	16,915	4,071	4,192	4,384	4,195	4,144	4,268	4,457
No. of milk cows (1,000)	9,458	9,361	9,258	9,320	9,295	9,280	9,251	9,206	9,186	9,199
Milk-feed price ratio	1.63	1.60	1.54	1.67	1.54	1.45	1.47	1.71	1.73	1.67
Returns over concentrate costs ($/cwt milk)	9.50	10.98	9.80	11.55	9.85	9.05	9.05	11.00	11.10	10.20

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

Table 15—Wool

	Annual			1996	1997				1998	
	1995	1996	1997	IV	I	II	III	IV	I	II
U.S. wool price (¢/lb.)[1]	258	193	238	191	196	244	255	258	209	178
Imported wool price (¢/lb.)[2]	249	196	206	191	196	210	213	204	192	176
U.S. mill consumption, scoured										
Apparel wool (1,000 lb.)	129,299	129,525	130,386	23,092	33,124	33,830	30,638	32,794	29,208	29,591
Carpet wool (1,000 lb.)	12,667	12,311	13,576	3,111	3,437	3,324	3,395	3,420	3,549	3,729

1. Wool price delivered at U.S. mills, clean basis, Graded Territory 64ís (20.60-22.04 microns) staple 2-3/4" and up. 2. Wool price,
Charleston, SC warehouse, clean basis, Australian 60/62ís, type 64A (24 micron). Duty since 1982 has been 10 cents.
Information contact: Mae Dean Johnson (202) 694-5299

Table 16—Meat Animals_____

	Annual			1997	1998					
	1995	1996	1997	Jul	Feb	Mar	Apr	May	Jun	Jul
Cattle on feed (7 states, 1000+ head capacity)										
Number on feed (1,000 head)[1]	8,031	8,667	8,943	7,679	9,180	8,835	8,607	8,295	8,289	7,825
Placed on feed (1,000 head)	20,034	19,564	20,765	1,751	1,250	1,421	1,358	1,740	1,314	1,677
Marketings (1,000 head)	18,753	18,636	19,552	1,852	1,539	1,580	1,609	1,681	1,727	1,755
Other disappearance (1,000 head)	674	652	701	42	56	69	61	65	51	41
Market prices ($/cwt)										
Slaughter cattle										
Choice steers, 1,100-1,300 lb.										
Texas	66.69	65.06	65.99	63.80	60.77	62.05	64.52	64.52	63.85	60.28
Neb. direct	66.26	65.05	66.32	64.77	59.74	61.89	64.68	64.40	63.26	59.97
Boning utility cows, Sioux Falls	35.58	30.33	34.27	37.75	38.50	38.19	38.44	39.30	39.61	36.11
Feeder steers										
Medium no. 1, Oklahoma City										
600-650 lb.	70.49	61.31	81.34	89.43	83.14	85.65	86.20	85.86	77.40	72.96
750-800 lb.	68.03	61.08	76.19	82.21	75.28	73.95	74.96	73.95	73.10	69.13
Slaughter hogs										
Barrows and gilts, 230-250 lb.										
Iowa, S. Minn.	42.35	53.39	51.36	58.66	34.53	33.97	34.44	42.00	41.57	35.91
5 markets	41.99	53.42	51.30	58.80	34.11	34.29	35.12	41.74	41.40	41.40
Sows, 5 markets	32.62	44.61	44.51	47.70	28.49	28.17	28.19	30.37	30.54	26.77
Slaughter sheep and lambs										
Lambs, Choice, San Angelo	75.86	85.27	87.95	78.94	74.31	70.30	71.50	73.00	91.21	82.21
Ewes, Good, San Angelo	33.91	39.05	49.33	53.81	50.69	50.95	43.38	35.13	37.88	36.21
Feeder lambs										
Choice, San Angelo	81.08	94.88	104.43	98.00	92.00	82.80	76.00	76.56	88.00	76.43
Wholesale meat prices, Midwest										
Boxed beef cut-out value										
Choice, 700-800 lb.	106.09	102.01	102.75	102.43	94.57	94.04	97.61	101.49	99.58	98.46
Select, 700-800 lb.	98.45	95.34	96.15	96.39	92.77	91.97	96.23	92.24	94.71	90.41
Canner and cutter cow beef	68.67	58.18	64.50	70.09	65.64	64.08	65.60	66.58	63.50	62.83
Pork cutout	--	--	--	--	54.52	53.41	54.25	63.94	62.45	57.10
Pork loins, bone-in, 1/4 " trim,14-19 lb.	126.99	138.73	128.75	122.53	103.03	104.56	102.51	130.64	113.13	106.51
Pork bellies, 12-14 lb.	43.04	69.96	73.91	86.70	45.89	42.28	54.65	57.87	63.10	68.46
Hams, bone-in, trimmed, 20-27 lb.	--	--	--	--	48.88	46.41	42.82	46.62	50.80	--
All fresh beef retail price	259.42	252.44	253.72	251.10	252.70	256.30	255.40	254.50	251.20	250.90
Commercial slaughter (1,000 head)[2]										
Cattle	35,639	36,583	36,351	3,181	2,747	2,894	2,928	2,958	3,109	3,039
Steers	18,274	17,819	17,554	1,591	1,346	1,380	1,422	1,486	1,599	1,569
Heifers	10,399	10,756	11,538	1,012	894	997	970	962	967	929
Cows	6,281	7,274	6,563	515	462	470	484	457	488	489
Bull and stags	686	728	696	63	45	47	51	53	55	52
Calves	1,430	1,768	1,574	134	113	127	109	102	116	133
Sheep and lambs	4,560	4,184	3,911	306	309	356	384	281	294	281
Hogs	96,326	92,394	91,566	7,312	7,711	8,477	8,329	7,572	7,730	8,269
Barrows and gilts	91,683	88,224	88,253	6,989	7,417	8,152	7,998	7,269	7,391	7,902
Commercial production (mil. lb.)										
Beef	25,117	25,421	25,384	2,256	1,977	2,081	2,090	2,124	2,249	2,213
Veal	307	368	323	27	21	23	20	19	20	21
Lamb and mutton	284	265	257	20	21	26	25	19	19	18
Pork	17,810	17,084	17,245	1,354	1,457	1,596	1,566	3,582	1,444	1,529

	Annual			1997				1998		
	1995	1996	1997	I	II	III	IV	I	II	III
Hogs and pigs (U.S.)[3]										
Inventory (1,000 head)[1]	59,990	58,264	56,141	56,141	55,838	58,263	61,163	60,915	60,070	61,600
Breeding (1,000 head)[1]	7,060	6,839	6,667	6,667	6,842	6,960	6,944	6,986	6,986	7,018
Market (1,000 head)[1]	52,930	51,425	49,474	49,474	48,996	51,303	54,219	53,929	53,084	54,582
Farrowings (1,000 head)	11,847	11,187	11,440	2,702	2,944	2,959	2,929	2,898	3,055	3,034
Pig crop (1,000 head)	98,516	94,956	98,972	23,264	25,471	25,796	25,315	25,164	26,714	--
Cattle on feed, 7 states (1,000 head)[4]										
Steers and steer calves	5,218	5,588	5,410	5,410	5,417	4,615	5,147	5,803	5,245	4,609
Heifers and Heifer calves	2,785	3,005	3,455	3,455	3,431	3,026	3,383	3,615	3,325	3,191
Cows and bulls	30	74	78	78	56	38	28	37	37	26

-- = Not available. 1. Beginning of period. 2. Classes estimated. 3. Quarters are Dec. of preceding year to Feb. (1), 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]

	Set aside[3]	Planted	Harvested	Yield	Production	Total supply[4]	Feed & residual	Other domestic use	Exports	Total use	Ending stocks	Farm price[5]
	_____Mil. Acres_____			Bu./acre	_____Mil. bu._____							$/bu.
Wheat												
1994/95	5.2	70.3	61.8	37.6	2,321	2,981	344	942	1,188	2,475	507	3.45
1995/96	6.1	69.1	60.9	35.8	2,183	2,757	153	987	1,241	2,381	376	4.55
1996/97	--	75.6	62.9	36.3	2,285	2,753	314	995	1,001	2,310	444	4.30
1997/98*	--	71.0	63.6	39.7	2,527	3,065	294	1,007	1,040	2,342	723	3.38
1998/99*	--	65.8	59.2	43.0	2,549	3,362	400	1,018	1,125	2,543	819	2.55-2.95
	Mil. acres			lb./acre			Mil. cwt (rough equiv)					$/cwt
Rice[6]												
1994/95	0.3	3.4	3.3	5,964.0	197.8	230.9	--	100.7	98.9	199.6	31.3	6.78
1995/96	0.5	3.1	3.1	5,621.0	173.9	212.6	--	104.6	83.0	187.6	25.0	9.15
1996/97	--	2.8	2.8	6,121.0	171.3	206.3	--	100.7	78.4	179.1	27.2	9.96
1997/98*	--	3.1	3.0	5,896.0	178.9	215.9	--	106.9	84.0	190.9	25.0	9.65
1998/99*	--	3.2	3.2	5,576.0	177.7	212.7	--	108.9	80.0	188.9	23.8	9.25-10.25
	Mil. acres			Bu./acre			Mil. bu.					$/bu.
Corn												
1994/95	2.4	79.2	72.9	138.6	10,103	10,962	5,523	1,704	2,177	9,405	1,558	2.26
1995/96	7.7	71.2	65.0	113.5	7,374	8,948	4,682	1,612	2,228	8,522	426	3.24
1996/97	--	79.5	73.1	127.1	9,293	9,733	5,362	1,692	1,795	8,849	883	2.71
1997/98*	--	80.2	73.7	127.0	9,366	10,259	5,550	1,785	1,475	8,810	1,449	2.45
1998/99*	--	80.8	73.8	130.0	9,592	11,051	5,750	1,850	1,600	9,200	1,851	1.95-2.35
	Mil. acres			Bu./acre			Mil bu.					$/bu.
Sorghum												
1994/95	1.6	9.8	8.9	72.8	649	697	380	22	223	625	72	2.13
1995/96	1.7	9.5	8.3	55.6	460	532	297	19	198	514	18	3.19
1996/97	--	13.2	11.9	67.5	803	821	524	45	205	774	47	2.34
1997/98*	--	10.1	9.4	69.5	653	701	400	55	205	660	41	2.20
1998/99*	--	9.7	7.8	67.4	529	569	275	45	195	515	54	1.80-2.20
	Mil. acres			Bu./acre			Mil. bu.					$/bu.
Barley												
1994/95	2.7	7.2	6.7	56.2	375	580	228	173	66	467	113	2.03
1995/96	2.9	6.7	6.3	57.3	360	513	179	172	62	413	100	2.89
1996/97	--	7.1	6.8	58.5	396	532	220	172	31	423	109	2.74
1997/98*	--	6.9	6.4	58.3	374	524	158	172	74	404	120	2.38
1998/99*	--	6.4	6.1	61.6	374	530	210	172	30	412	118	1.80-2.20
	Mil. acres			Bu./acre			Mil. bu.					$/bu.
Oats												
1994/95	0.6	6.6	4.0	57.1	229	428	234	92	1	327	101	1.22
1995/96	0.8	6.3	3.0	54.7	162	343	183	92	2	277	66	1.67
1996/97	--	4.7	2.7	57.8	155	319	155	95	3	252	67	1.96
1997/98*	--	5.2	2.9	60.5	176	341	170	95	2	267	74	1.59
1998/99*	--	5.0	2.9	60.4	177	346	175	95	2	272	74	1.10-1.50
	Mil. acres			Bu./acre			Mil. bu.					$/bu.
Soybeans[7]												
1994/95	--	61.7	60.9	41.4	2,517	2,731	153	1,405	838	2,396	335	5.48
1995/96	--	62.6	61.6	35.3	2,177	2,516	112	1,370	851	2,333	183	6.72
1996/97	--	64.2	63.4	37.6	2,382	2,575	126	1,436	882	2,443	131	7.35
1997/98*	--	70.9	69.9	39.0	2,727	2,863	193	1,590	870	2,653	210	6.45
1998/99*	--	72.7	71.6	39.5	2,825	3,041	146	1,615	850	2,611	430	4.85-5.85
							Mil. lbs.					¢/lb.
Soybean oil												
1994/95	--	--	--	--	15,613	16,733	--	12,916	2,680	15,597	1,137	27.58
1995/96	--	--	--	--	15,240	16,472	--	13,465	992	14,457	2,015	24.75
1996/97	--	--	--	--	15,752	17,821	--	14,263	2,037	16,300	1,520	22.50
1997/98*	--	--	--	--	17,930	19,505	--	15,150	2,950	18,100	1,405	25.75
1998/99*	--	--	--	--	18,170	19,630	--	15,300	2,800	18,100	1,530	25.50-27.50
							1,000 tons					$/ton[8]
Soybean meal												
1994/95	--	--	--	--	33,270	33,483	--	26,542	6,717	33,260	223	162.6
1995/96	--	--	--	--	32,527	32,826	--	26,611	6,002	32,613	212	236.0
1996/97	--	--	--	--	34,210	34,524	--	27,320	6,994	34,314	210	270.9
1997/98*	--	--	--	--	37,710	37,975	--	28,425	9,300	37,725	250	187.0
1998/99*	--	--	--	--	38,325	38,625	--	29,375	9,000	38,375	250	140-155

See footnotes at end of table, next page

Table 17—Supply & Utilization (continued)_____

| | Area | | | | | | Feed | Other | | | | Farm |
	Set aside[3]	Planted	Harvested	Yield	Production	Total Supply[4]	& residual	domestic use	Exports	Total Use	Ending stocks	price[5]
	_____Mil. Acres_____			Lb./acre	_____Mil. Bales_____							¢/lb.
Cotton[9]												
1994/95	1.7	13.7	13.3	708	19.7	23.2	--	11.2	9.4	20.6	2.7	72.0
1995/96	0.3	16.9	16.0	537	17.9	21.0	--	10.6	7.7	18.3	2.6	75.4
1996/97	--	14.6	12.9	707	18.9	22.0	--	11.1	6.9	18.0	4.0	69.3
1997/98*	--	13.8	13.3	680	18.8	22.8	--	11.4	7.5	18.9	3.9	64.9
1998/99*	--	12.9	10.7	640	14.3	18.3	--	10.8	4.9	15.7	2.6	--

-- = Not available or not applicable. *August 12, 1998 Supply and Demand Estimates. 1. Marketing year beginning June1 for wheat, barley, and oats; August 1 for cotton and rice; September 1 for soybeans, corn, and sorghum; October 1 for soymeal and soyoil. 2. Conversion factors: Hectare (ha.) = 2.471 acres, 1 metric ton = 2,204.622 pounds, 36.7437 bushels of wheat or soybeans, 39.3679 bushels of corn or sorghum, 45.9296 bushels of barley, 68.8944 bushels of oats, 22.046 cwt of rice, and 4.59 480-pound bales of cotton. 3. Includes diversion, acreage reduction, 50-92, & 0-92 programs. 0/92 & 50/92 set-aside includes idled acreage and acreage planted to minor oilseeds, sesame, and crambe. 4. Includes imports. 5. Marketing-year weighted average price received by farmers. Does not include an allowance for loans outstanding and government purchases. 6. Residual included in domestic use. 7. Includes seed. 8. Simple average of 48 percent, Decatur. 9. Upland and extra-long staple. Stocks estimates based on Census Bureau data, resulting in an unaccounted difference between supply and use estimates and changes in ending stocks. *Information contacts: Wheat, rice, feed grains, Jenny Gonzales (202) 694-5296; soybeans, soybean products, and cotton, Mae Dean Johnson (202) 694-5299*

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

| | Marketing year[1] | | | 1997 | 1998 | | | | | | |
	1994/95	1995/96	1996/97	Jun	Jan	Feb	Mar	Apr	May	Jun
Wheat, no. 1 HRW, Kansas City ($/bu.)[2]	3.97	5.49	4.88	4.08	3.61	3.64	3.61	3.39	3.41	3.16
Wheat, DNS, Minneapolis ($/bu.)[3]	4.26	5.72	4.97	4.44	4.12	4.15	4.26	4.29	4.24	4.01
Rice, S.W. La. ($/cwt)[4]	14.55	18.90	20.34	20.70	19.00	19.00	18.55	18.38	18.31	18.50
Corn, no. 2 yellow, 30-day, Chicago ($/bu.)	2.43	3.97	2.84	2.72	2.73	2.72	2.71	2.53	2.50	2.44
Sorghum, no. 2 yellow, Kansas City ($/cwt)	4.10	6.66	4.54	4.48	4.33	4.36	4.40	4.10	4.09	4.03
Barley, feed, Duluth ($/bu.)	2.02	2.67	2.32	2.31	1.58	1.56	1.51	1.42	--	--
Barley, malting Minneapolis ($/bu.)	2.75	3.69	3.18	2.62	--	--	--	--	--	--
U.S. cotton price, SLM, 1-1/16 in. (¢/lb.)[5]	88.10	83.00	71.60	71.00	64.60	63.66	67.04	61.88	65.21	73.50
Northern Europe prices cotton index (¢/lb.)[6]	92.70	85.60	78.70	80.80	74.70	68.68	68.41	65.08	64.61	68.06
U.S. M 1-3/32 in. (¢/lb.)[7]	99.70	94.70	82.90	82.50	77.30	74.50	75.38	71.75	73.06	80.63
Soybeans, no. 1 yellow, 30-day Chicago ($/bu)	5.48	6.72	7.38	8.37	6.92	6.75	6.55	6.43	6.42	6.31
Soybean oil, crude, Decatur (¢/lb.)	27.60	24.75	22.50	22.97	25.08	26.51	27.09	28.10	28.27	25.83
Soybean meal, 48% protein, Decatur ($/ton)	162.55	236.00	270.90	287.90	222.50	192.75	174.20	162.50	160.00	168.60

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

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

	Target price	Basic loan rate	Findley or announced loan rate[1]	Total deficiency payment rate	Effective base acres[2]	Program[3]	Flexibility contract payment rate	Acres under contract	Contract payment yields	Partici-pation rate[4]
					Mil. acres	*Percent of base*				
		$/bu.					*$/bu.*	*Mil. acres*	*Bu./cwt*	*Percent*
Wheat										
1994/95	4.00	2.72	2.58	0.61	78.10	0/0/0	--	--	--	87
1995/96	4.00	2.69	2.58	0.00	77.70	0/0/0	--	--	--	85
1996/97	--	--	2.58	--	--	--	0.874	76.7	34.70	99
1997/98	--	--	2.58	--	--	--	0.631	76.7	34.70	--
1998/99[5]	--	--	2.58	--	--	--	0.660	76.7	34.70	--
		$/cwt					*$/cwt*			
Rice										
1994/95	10.71	6.50	5.88 [6]	3.79	4.20	0/0/0	--	--	--	95
1995/96	10.71	6.50	6.50 [6]	3.22 [7]	4.20	5/0/0	--	--	--	95
1996/97	--	6.50	--	--	--	--	2.766	4.2	48.27	99
1997/98	--	6.50	--	--	--	--	2.710	4.2	48.17	--
1998/99[5]	--	6.50	--	--	--	--	2.930	4.2	48.17	--
		$/bu.					*$/bu.*			
Corn										
1994/95	2.75	1.99	1.89	0.57	81.50	0/0/0	--	--	--	81
1995/96	2.75	1.94	1.89	0.00	81.80	7.5/0/0	--	--	--	82
1996/97	--	--	1.89	--	--	--	0.251	80.7	102.90	98
1997/98	--	--	1.89	--	--	--	0.486	80.9	102.80	--
1998/99[5]	--	--	1.89	--	--	--	0.370	80.9	102.60	--
		$/bu.					*$/bu.*			
Sorghum										
1994/95	2.61	1.89	1.80	0.59	13.50	0/0/0	--	--	--	81
1995/96	2.61	1.84	1.80	0.00	13.30	0/0/0	--	--	--	77
1996/97	--	--	1.81	--	--	--	0.323	13.1	57.30	99
1997/98	--	--	1.76	--	--	--	0.544	13.1	57.30	--
1998/99[5]	--	--	1.74	--	--	--	0.450	13.1	56.50	--
		$/bu.					*$/bu.*			
Barley										
1994/95	2.36	1.62	1.54	0.52	10.70	0/0/0	--	--	--	84
1995/96	2.36	1.58	1.54	0.00	10.70	0/0/0	--	--	--	82
1996/97	--	--	1.55	--	--	--	0.332	10.5	47.30	99
1997/98	--	--	1.57	--	--	--	0.277	10.5	47.20	--
1998/99[5]	--	--	1.56	--	--	--	0.280	10.5	46.70	--
		$/bu.					*$/bu.*			
Oats										
1994/95	1.45	1.02	0.97	0.19	6.80	0/0/0	--	--	--	40
1995/96	1.45	1.00	0.97	0.00	6.50	0/0/0	--	--	--	44
1996/97	--	--	1.03	--	--	--	0.033	6.2	50.80	97
1997/98	--	--	1.11	--	--	--	0.031	6.2	50.80	--
1998/99[5]	--	--	1.11	--	--	--	0.030	6.2	50.60	--
		$/bu.					*$/bu.*			
Soybeans[8]										
1994/95	--	--	4.92	--	--	--	--	--	--	--
1995/96	--	--	4.92	--	--	--	--	--	--	--
1996/97	--	--	4.97	--	--	--	--	--	--	--
1997/98	--	--	5.26	--	--	--	--	--	--	--
1998/99	--	--	5.26	--	--	--	--	--	--	--
		¢/lb.					*¢/lb.*			
Upland cotton										
1994/95	72.90	50.00	50.00 [9]	4.60	15.30	11/0/0	--	--	--	89
1995/96	72.90	51.92	51.92 [9]	0.00 [7]	15.50	0/0/0	--	--	--	79
1996/97	--	51.92	--	--	--	--	8.882	16.2	610.00	99
1997/98	--	51.92	--	--	--	--	7.625	16.2	608.00	--
1998/99[5]	--	51.92	--	--	--	--	7.900	16.2	608.00	--

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

Table 20—Fruit

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Citrus[1]										
Production (1,000 tons)	13,186	10,860	11,285	12,452	15,274	14,561	15,799	16,009	17,468	18,160
Per capita consumpt. (lb.)[2]	23.6	21.4	19.1	24.4	26.0	25.0	24.1	24.9	27.6	29.3
Noncitrus[3]										
Production (1,000 tons)	16,345	15,640	15,740	17,124	16,563	17,341	16,356	16,117	17,656	--
Per capita consumpt. (lb.)[2]	72.3	70.7	70.6	74.5	73.1	75.6	73.6	74.1	73.5	--

	1997			1998						
	Jul	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul
Grower prices										
Apples (cents/pound)[4]	14.6	23.0	23.3	22.3	21.6	21.3	19.2	18.2	16.3	16.1
Pears (cents/pound)[4]	16.3	17.6	15.3	12.7	13.0	12.2	14.6	18.7	17.7	20.3
Oranges ($/box)[5]	6.64	2.15	2.53	2.58	3.53	4.75	5.82	5.68	6.41	5.85
Grapefruit ($/box)[5]	8.58	2.49	2.57	1.79	1.61	1.03	1.36	0.42	3.58	3.66
Stocks, ending										
Fresh apples (mil. lb.)	296	5,165	4,423	3,729	2,841	2,277	1,626	1,113	637	--
Fresh pears (mil. lb.)	65	446	337	273	212	125	61	32	4	--
Frozen fruits (mil. lb.)	939	1,356	1,233	1,128	1,009	882	808	764	858	--
Frozen conc.orange juice										
(mil. single-strength gallons)	719	496	614	794	828	826	1,010	1,066	998	--

-- = 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

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Production 1/										
Total vegetables (1,000 cwt)	467,915	543,435	562,938	565,754	677,975	675,793	762,934	742,595	759,347	752,266
Fresh (1,000 cwt) 2/ 4/	240,249	254,418	254,039	242,733	393,249	377,698	396,671	391,699	408,823	428,171
Processed (tons) 3/ 4/	11,383,320	14,450,860	15,444,970	16,151,030	14,236,320	14,904,750	18,313,150	17,544,780	17,526,190	16,204,740
Mushrooms (1,000 lbs) 5/	667,759	714,992	749,151	746,832	776,357	750,799	782,340	777,870	776,677	808,602
Potatoes (1,000 cwt)	356,438	370,444	402,110	417,622	425,367	428,693	467,054	443,606	498,633	459,912
Sweetpotatoes (1,000 cwt)	10,945	11,358	12,594	11,203	12,005	11,053	13,395	12,906	13,456	13,512
Dry edible beans (1,000 cwt)	19,253	23,729	32,379	33,765	22,615	21,913	29,028	30,812	27,960	29,156

	1997			1998						
	Jul	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul
Shipments (1,000 cwt)										
Fresh	24,434	19,181	18,377	23,713	18,723	20,292	28,362	28,082	29,181	32,093
Iceberg lettuce	3,558	3,035	2,908	4,089	3,233	3,094	4,125	3,628	3,377	4,020
Tomatoes, all	3,645	2,977	3,776	4,189	3,057	3,647	4,767	3,540	3,031	3,962
Dry-bulb onions	3,253	3,795	3,627	4,075	3,436	2,753	4,009	3,584	3,006	3,254
Others 6/	13,978	9,374	8,066	11,360	8,997	10,798	15,461	17,330	19,767	20,857
Potatoes, all	9,797	13,788	14,067	16,328	11,870	15,619	23,416	14,554	11,965	12,732
Sweetpotatoes	138	363	172	146	180	252	373	213	147	140

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			1996	1997				1998	
	1995	1996	1997	IV	I	II	III	IV	I	II
Sugar										
Production[1]	7,978	7,268	7,418	3,874	2,075	679	576	4,088	2,376	818
Deliveries[1]	9,451	9,633	9,764	2,471	2,215	2,436	2,643	2,469	2,261	2,465
Stocks, ending[1]	2,908	3,195	3,376	2,908	3,901	2,734	1,487	3,195	3,917	2,881
Coffee										
Composite green price										
N.Y. (¢/lb.)	142.18	109.35	146.49	98.82	134.80	172.99	143.29	134.89	144.72	117.83
Imports, green bean										
equiv. (mil. lbs.)[2]	2,182	2,494	--	--	--	--	--	--	--	--

	Annual			1997			1998			
	1995	1996	1997	Apr	Nov	Dec	Jan	Feb	Mar	Apr
Tobacco										
Avg. price to grower[3]										
Flue-cured ($/lb.)	1.79	1.83	1.73	--	1.76	--	--	--	--	--
Burley ($/lb.)	1.85	1.92	1.86	--	1.91	1.92	1.88	1.80	1.76	1.70
Domestic taxable removals										
Cigarettes (bil.)	490.3	486.0	471.4	37.8	35.3	42.2	35.9	36.7	40.2	--
Large cigars (mil.)[4]	2,561.7	3,166.4	3,552.9	276.3	323.4	298.2	260.8	318.7	325.6	--

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

World Agriculture

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

	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98 F	1998/99 F
	Million units									
Wheat										
Area (hectares)	225.8	231.4	222.5	223.1	222.4	215.5	219.8	231.3	230.8	225.5
Production (metric tons)	533.2	588.0	542.9	562.2	559.4	525.1	538.1	583.3	611.1	597.7
Exports (metric tons[1]	103.7	101.1	111.1	112.7	101.1	100.0	98.0	100.1	99.6	98.8
Consumption (metric tons)[2]	532.7	561.9	555.5	550.2	562.3	548.1	550.7	577.9	588.4	605.9
Ending stocks (metric tons)[3]	118.9	145.1	132.5	144.5	141.5	118.5	105.9	111.3	134.0	125.7
Coarse grains										
Area (hectares)	321.9	316.2	321.8	323.7	317.5	323.2	313.5	322.8	314.7	313.2
Production (metric tons)	793.7	828.6	810.3	871.8	799.5	873.4	801.9	908.1	891.9	893.8
Exports (metric tons[1]	104.7	89.1	95.6	91.9	85.3	98.0	87.9	93.3	88.4	88.0
Consumption (metric tons)[2]	817.7	817.0	809.6	843.7	839.2	860.9	840.3	878.6	885.2	888.8
Ending stocks (metric tons)[3]	123.2	134.8	135.6	163.6	123.8	136.3	97.9	127.4	134.1	139.2
Rice, milled										
Area (hectares)	146.5	146.6	147.4	146.7	145.5	147.9	148.1	149.7	148.2	149.6
Production (metric tons)	343.9	352.0	354.7	355.8	355.6	364.8	371.2	380.0	384.6	386.3
Exports (metric tons[1]	11.7	12.1	14.1	14.9	16.4	21.0	19.5	18.9	23.6	20.2
Consumption (metric tons)[2]	338.2	347.4	356.4	357.9	358.7	366.9	371.2	379.0	383.7	388.6
Ending stocks (metric tons)[3]	54.5	59.1	57.5	55.3	52.2	50.1	50.1	51.2	52.1	49.8
Total grains										
Area (hectares)	694.2	694.2	691.7	693.5	685.4	686.6	681.4	703.8	693.7	688.3
Production (metric tons)	1,670.8	1,768.6	1,707.9	1,789.8	1,714.5	1,763.3	1,711.2	1,871.4	1,887.6	1877.8
Exports (metric tons[1]	220.1	202.3	220.8	219.5	202.8	219.0	205.4	212.3	211.6	207.0
Consumption (metric tons)[2]	1,668.6	1,726.3	1,721.5	1,751.8	1,760.2	1,775.9	1,762.2	1,835.5	1,857.3	1883.3
Ending stocks (metric tons)[3]	296.6	339.0	325.6	363.4	317.5	304.9	253.9	289.9	320.2	314.7
Oilseeds										
Crush (metric tons)	171.7	176.7	185.1	184.4	190.1	208.1	217.5	218.9	228.6	234.8
Production (metric tons)	212.4	215.7	224.3	227.5	229.4	261.7	258.4	261.1	287.0	388.1
Exports (metric tons)	35.6	33.4	37.6	38.2	38.7	44.1	44.3	49.3	52.6	51.6
Ending stocks (metric tons)	23.7	23.4	21.9	23.6	20.3	27.2	22.1	16.4	23.0	27.6
Meals										
Production (metric tons)	116.8	119.3	125.2	125.2	131.7	142.1	147.4	149.3	155.0	160.1
Exports (metric tons)	39.8	40.7	42.2	40.8	44.9	46.7	49.7	50.3	50.5	53.7
Oils										
Production (metric tons)	57.1	58.1	60.6	61.1	63.7	69.5	73.1	75.3	77.4	79.9
Exports (metric tons)	20.4	20.5	21.3	21.3	24.3	27.1	26.0	28.8	29.3	30.2
Cotton										
Area (hectares)	31.6	33.2	34.8	32.6	30.7	32.2	35.9	33.8	33.4	32.6
Production (bales)	79.7	87.1	95.7	82.5	76.7	85.6	93.0	89.4	91.2	86.2
Exports (bales)	31.3	29.8	28.2	25.6	26.7	28.4	27.8	26.8	26.2	25.8
Consumption (bales)	86.9	85.6	86.0	85.8	85.5	85.6	87.1	88.2	88.3	88.3
Ending stocks (bales)	24.8	26.9	37.0	34.4	26.3	28.3	33.8	37.0	40.4	38.3

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998 F
Red meat[4]										
Production (metric tons)	112.3	116.9	117.7	117.3	119.3	124.6	130.2	135.5	137.4	140.1
Consumption (metric tons)	110.9	114.8	116.1	115.7	118.3	123.5	128.7	132.8	135.1	138.9
Exports (metric tons)[1]	8.2	7.5	7.5	7.4	7.4	8.1	8.2	8.5	8.6	8.5
Poultry[4]										
Production (metric tons)	33.1	37.6	39.6	38.0	40.5	43.9	47.7	50.5	52.7	54.8
Consumption (metric tons)	32.6	36.5	38.4	37.0	39.4	42.5	46.2	48.8	50.8	53.0
Exports (metric tons)[1]	1.7	2.4	2.8	2.4	2.8	3.7	4.6	5.3	5.7	5.9
Dairy										
Milk production (metric tons)[5]	387.4	395.0	377.6	378.4	377.6	378.4	380.8	379.8	381.2	383.4

F = forecast. 1. Excludes intra-EU trade but includes intra-FSU trade. 2. Where stocks data are not available, consumption includes stock changes.
3. Stocks data are based on differing marketing years and do not represent levels at a given date. Data not available for all countries.
4. Calendar year data. 1990 data correspond with 1989/90, etc. 5. Data prior to 1989 no longer comparable.
Information contacts: *Crops, Ed Allen (202) 694-5288; red meat and poultry, Shayle Shagam (202) 694-5186; dairy, LaVerne Williams (202) 694-5190*

U.S. Agricultural Trade

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

	Annual			1997			1998			
	1995	1996	1997	Jul	Nov	Dec	Apr	May	Jun	Jul
Export commodities										
Wheat, f.o.b. vessel, Gulf ports ($/bu.)	4.82	5.63	4.35	3.81	4.09	3.95	3.55	3.50	3.28	3.21
Corn, f.o.b. vessel, Gulf ports ($/bu.)	3.13	4.17	2.98	2.67	2.99	2.90	2.72	2.70	2.65	2.56
Grain sorghum, f.o.b. vessel,										
Gulf ports ($/bu.)	3.13	3.90	2.89	2.72	2.90	2.85	2.68	2.63	2.56	2.51
Soybeans, f.o.b. vessel, Gulf ports ($/bu.)	6.50	7.88	7.94	7.83	7.48	7.23	6.68	6.66	6.59	6.57
Soybean oil, Decatur (cents/lb.)	26.75	23.75	23.33	21.89	25.73	25.08	28.10	28.28	25.83	24.88
Soybean meal, Decatur, ($/ton)	173.70	246.67	266.70	273.58	245.34	225.52	162.51	160.03	168.55	183.45
Cotton, 7-market avg. spot (cents/lb.)	93.45	77.93	69.62	72.05	65.35	64.57	61.88	65.21	73.50	74.18
Tobacco, avg. price at auction (cents/lb.)	178.79	183.20	182.74	158.47	184.46	192.05	169.05	---	---	---
Rice, f.o.b., mill, Houston ($/cwt)	16.68	19.64	20.88	21.38	19.75	19.75	19.00	19.00	19.00	19.00
Inedible tallow, Chicago (cents/lb.)	19.22	20.13	20.75	19.65	22.88	22.60	17.38	20.35	19.63	17.31
Import commodities										
Coffee, N.Y. spot ($/lb.)	1.45	1.29	2.05	2.09	1.60	1.76	1.57	1.43	1.30	1.20
Rubber, N.Y. spot (cents/lb.)	82.52	72.88	55.40	51.98	48.14	40.61	41.27	42.65	41.26	40.03
Cocoa beans, N.Y. ($/lb.)	0.61	0.62	0.69	0.72	0.73	0.76	0.75	0.78	0.74	0.73

Information contact: Mary Teymourian (202) 694-5284 or maryt@econ.ag.gov

Table 25—Trade Balance_____

	Calendar Year			1997	1998					
	1996	1997	1998 F[1]	June	Jan	Feb	Mar	Apr	May	June
					$ million					
Exports										
Agricultural	60,445	57,245	55,000	4,132	4,809	4,727	4,733	4,249	3,928	3,971
Nonagricultural	521,692	585,977	--	50,034	46,726	47,035	53,299	48,859	48,774	49,191
Total[2]	582,137	643,222	--	54,166	51,535	51,762	58,032	53,108	52,702	53,162
Imports										
Agricultural	33,643	36,289	38,000	2,946	3,197	3,107	3,453	3,328	2,981	3,099
Nonagricultural	756,827	828,412	--	68,208	67,198	65,369	74,105	72,059	70,193	73,577
Total[3]	790,470	864,701	--	71,154	70,395	68,476	77,558	75,387	73,174	76,676
Trade Balance										
Agricultural	26,802	20,956	17,000	1,186	1,612	1,620	1,280	921	947	872
Nonagricultural	-235,135	-242,435	--	-18,174	-20,472	-18,334	-20,806	-23,200	-21,419	-24,386
Total	-208,333	-221,479	--	-16,988	-18,860	-16,714	-19,526	-22,279	-20,472	-23,514

F = forecast. -- = Not available. 1. Forecasts based on fiscal year (Oct. 1-Sep. 30).   2. Domestic exports including Department of Defense shipments
(F.A.S. Value). 3. Imports for consumption (customs value). *Information contact: Mary Fant (202) 694-5272*

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

| | Annual | | | 1997 | 1998 | | | | | |
	1995	1996	1997	Jun	Jan P	Feb P	Mar P	Apr P	May P	Jun P
					1990=100					
Total U.S. trade	96.2	100.8	111.9	110.3	116.9	116.3	116.7	116.6	115.6	117.2
Agricultural trade										
U.S. markets	97.3	101.0	109.6	107.8	119.0	117.6	117.1	117.3	118.0	120.4
U.S. competitors	97.4	98.7	109.1	106.8	118.2	116.6	116.6	115.7	114.9	116.9
High-valued products										
U.S. markets	95.2	100.4	108.2	106.8	114.6	113.2	113.0	113.7	114.8	117.3
U.S. competitors	98.3	100.1	110.9	109.0	117.1	116.5	116.9	116.4	114.8	116.2
Corn										
U.S. markets	89.1	96.4	107.1	104.8	118.6	116.5	116.3	117.3	118.9	122.2
U.S. competitors	88.8	90.1	97.4	96.5	101.6	100.8	100.8	100.5	99.5	100.5
Soybeans										
U.S. markets	91.1	96.0	107.9	105.5	119.6	118.0	117.8	117.4	117.6	120.4
U.S. competitors	81.3	80.8	82.2	81.8	84.3	84.2	84.3	85.1	84.9	85.1
Wheat										
U.S. markets	100.4	100.7	105.4	103.7	114.8	113.3	112.5	112.3	112.8	114.4
U.S. competitors	100.8	102.1	109.8	108.1	115.6	114.9	114.9	115.4	115.4	117.1
Vegetables										
U.S. markets	102.2	105.6	112.4	111.0	119.4	118.3	117.5	118.4	119.6	122.0
U.S. competitors	99.1	100.5	112.0	110.0	119.1	118.1	117.8	116.9	115.1	116.6
Red meats										
U.S. markets	84.8	93.3	100.4	98.5	108.9	107.1	107.6	108.6	110.3	113.8
U.S. competitors	96.3	98.0	107.9	106.0	114.1	113.6	114.0	114.0	113.0	114.6
Fruits & fruit juices										
U.S. markets	96.2	101.3	111.3	109.8	118.0	116.8	116.4	117.4	118.5	121.0
U.S. competitors	98.2	98.2	107.2	105.0	113.7	113.0	113.2	113.0	111.6	113.1
Cotton										
U.S. markets	93.6	95.5	105.7	101.8	137.0	131.0	128.8	124.4	127.3	132.7
U.S. competitors	104.6	101.6	102.9	101.8	105.9	105.3	105.5	106.2	105.9	107.4
Poultry										
U.S. markets	107.3	102.8	111.9	111.3	114.1	113.6	113.3	113.3	113.8	115.3
U.S. competitors	93.9	95.7	107.3	104.4	116.4	114.4	113.4	112.3	110.7	112.2

P = preliminary. 1. Real indexes adjust nominal exchange rates to avoid the distortion caused by different levels of inflation among countries. A higher value means the dollar has appreciated. "Total U.S. Trade" Index uses the Federal Reserve Board Index of trade-weighted value of the U.S. dollar against 10 major countries. Weights are based on relative importance of major U.S. customers and competitors in world markets during 1990-94. Indexes are subject to revision for up to one year due to delayed reporting by some countries. High-value products conform to FAS's definition for consumer-oriented agricultural products. Data are available at http://mann77.mannlib.cornell.edu/data-sets/international/88021/.
Information contact: Tim Baxter (202) 694-5318 or Andy Jerardo (202) 694-5323

Table 27—U.S. Agricultural Exports & Imports

	Calendar Year			May		Calendar Year			May	
	1996	1997	1998 F	1997	1998	1996	1997	1998 F	1997	1998
	1,000 units					$ million				
EXPORTS										
Animals, live (no.)[1]	595	1,802	--	79	67	427	566	--	25	29
Meats and preps., excl. poultry (mt)[2]	1,849	1,924	1,400	147	175	4,590	4,597	4,000	382	388
Dairy products (mt)[1]	109	125	--	9	8	727	932	900	78	70
Poultry meats (mt)	2,388	2,585	2,600	217	252	2,483	2,423	--	208	212
Fats, oils, and greases (mt)	1,257	1,089	900	90	103	614	562	--	45	48
Hides and skins incl. furskins	--	--	--	--	--	1,675	1,651	1,500	149	109
Cattle hides, whole (no.)[1]	21,410	20,113	--	1,731	1,613	1,176	1,187	--	107	79
Mink pelts (no.)[1]	3,441	3,763	--	398	263	110	97	--	9	7
Grains and feeds (mt)[3]	106,131	91,061	--	6,203	6,496	20,863	15,361	15,300	1,122	1,034
Wheat (mt)[4]	30,946	25,264	28,000	1,261	1,845	6,265	4,095	4,400	221	269
Wheat flour (mt)	491	508	500	41	18	147	138	--	12	5
Rice (mt)	2,839	2,508	2,700	154	232	1,029	932	1,000	64	71
Feed grains, incl. products (mt)[5]	58,687	49,032	47,900	3,596	3,337	9,575	6,211	5,600	482	388
Feeds and fodders (mt)	11,842	12,352	12,700	1,004	943	2,646	2,669	2,600	226	190
Other grain products (mt)	1,325	1,397	--	147	120	1,200	1,316	--	118	112
Fruits, nuts, and preps. (mt)	3,689	3,896	--	327	283	4,282	4,235	4,500	348	309
Fruit juices incl. froz. (1,000 hectoliters)[1]	9,719	10,689	--	1,257	900	634	662	--	67	56
Vegetables and preps. (mt)	3,142	3,402	--	338	351	3,822	4,152	2,800	367	383
Tobacco, unmanufactured (mt)	222	222	--	32	20	1,390	1,553	1,600	226	149
Cotton, excl. linters (mt)[6]	1,497	1,568	1,600	137	104	2,715	2,682	2,700	230	160
Seeds (mt)	895	1,098	--	104	84	795	884	900	55	48
Sugar, cane or beet (mt)[1]	244	125	--	10	8	95	54	--	4	3
Oilseeds and products (mt)	34,213	36,665	36,700	1,720	1,626	10,792	12,057	11,200	634	512
Oilseeds (mt)	26,181	26,764	--	1,187	832	7,875	8,326	--	420	245
Soybeans (mt)	25,566	26,023	25,900	1,111	754	7,324	7,379	6,700	361	194
Protein meal (mt)	6,131	7,311	--	386	598	1,542	1,966	--	106	117
Vegetable oils (mt)	1,901	2,590	--	147	196	1,375	1,766	--	109	149
Essential oils (mt)	44	45	--	4	4	593	588	--	50	49
Other	132	173	--	0	0	3,948	4,287	--	375	370
Total	155,812	143,978	149,200	0	0	60,445	57,245	56,000	4,366	3,928
IMPORTS										
Animals, live (no.)[1]	4,871	5,331	--	440	547	1,545	1,594	1,600	128	149
Meats and preps., excl. poultry (mt)	1,039	1,154	1,200	95	106	2,295	2,630	2,800	209	234
Beef and veal (mt)	708	797	--	64	76	1,341	1,609	--	122	160
Pork (mt)	252	261	--	22	21	728	754	--	64	50
Dairy products (mt)[1]	347	354	--	31	31	1,274	1,225	1,400	80	93
Poultry and products[1]	--	--	--	--	--	181	195	--	17	17
Fats, oils, and greases (mt)	59	80	--	6	6	49	60	--	4	4
Hides and skins, incl. furskins (mt)	--	--	--	--	--	205	206	--	32	25
Wool, unmanufactured (mt)	44	44	--	6	5	152	154	--	20	19
Grains and feeds (mt)	6,784	8,342	8,700	612	543	2,657	2,963	3,200	213	216
Fruits, nuts, and preps., excl. juices (mt)[7]	6,962	7,252	7,500	611	623	3,640	3,837	5,100	349	328
Bananas and plantains (mt)	4,001	3,998	4,000	312	337	1,184	1,220	1,300	96	94
Fruit juices (1,000 hectoliters)[1]	28,002	27,807	30,000	2,506	2,461	913	829	--	77	62
Vegetables and preps. (mt)	4,071	4,218	4,800	457	488	3,526	3,707	4,000	364	449
Tobacco, unmanufactured (mt)	302	294	400	40	30	923	1,089	1,400	165	118
Cotton, unmanufactured (mt)	189	17	--	1	1	300	20	--	1	1
Seeds (mt)	199	224	--	14	14	310	371	--	27	29
Nursery stock and cut flowers[1]	--	--	--	--	--	952	1,004	1,200	77	105
Sugar, cane or beet (mt)	2,891	2,913	--	351	136	1,087	984	--	105	48
Oilseeds and products (mt)	3,419	3,963	3,600	296	407	2,147	2,242	2,100	183	198
Oilseeds (mt)	776	1,035	--	70	90	330	384	--	28	32
Protein meal (mt)	1,001	1,048	--	73	108	179	188	--	14	17
Vegetable oils (mt)	1,643	1,880	--	153	209	1,637	1,670	--	141	149
Beverages excl. fruit juices (1,000 hectoliters)[1]	20,138	23,792	--	1,387	1,595	2,903	3,375	--	189	216
Coffee, tea, cocoa, spices (mt)	2,256	2,265	--	205	221	4,797	6,048	--	429	583
Coffee, incl. products (mt)	1,123	1,180	1,200	99	109	2,788	3,886	3,400	234	355
Cocoa beans and products (mt)	821	767	800	80	86	1,400	1,471	1,600	140	170
Rubber and allied gums (mt)	1,034	1,068	1,100	96	106	1,468	1,229	1,300	122	97
Other	--	--	--	--	--	2,321	2,528	--	187	207
Total	--	--	--	--	--	33,643	36,289	38,000	2,979	3,197

F = Forecast. -- = Not available. 1997 data are from *Foreign Agricultural Trade of the U.S.* 1998 forecasts are from *Outlook for U.S. Agricultural Exports.*
Fiscal years begin October 1 and end September 30. 1. Not included in total volume. 2. Forecast includes only beef, pork, and variety meat. 3. Forecast includes pulses. 4. Forecast includes wheat flour. 5. Forecast excludes grain products. 6. Forecast includes linters. 7. Forecast includes juice.
Note: Totals include transshipments through Canada, but transshipments are not distributed by commodity as previously.
Note: Unadjusted transshipments through Canada for 1997 exports. *Information contact: Mary Fant (202) 694-5272*

Table 28—U.S. Agricultural Exports by Region

Region & country	Calendar year 1996	Calendar year 1997	Calendar year 1998F	June 1997	June 1998	Change from year earlier 1996	Change from year earlier 1997	Change from year earlier 1998F	June 1997	June 1998
	$ million					Percent				
WESTERN EUROPE	9,702	9,540	9,000	529	517	7	-2	--	-16	-2
European Union[1]	9,322	8,918	8,500	482	501	7	-4	--	-21	4
Belgium-Luxembourg	749	668	--	38	43	14	-11	--	-11	14
France	524	570	--	24	25	-2	9	--	-2	2
Germany	1,489	1,319	--	73	87	20	-11	--	-19	19
Italy	796	756	--	42	40	13	-5	--	14	-3
Netherlands	2,218	1,928	--	97	84	1	-13	--	-48	-13
United Kingdom	1,233	1,312	--	91	89	15	6	--	0	-2
Portugal	291	249	--	10	35	7	-14	--	-51	238
Spain, incl. Canary Islands	1,124	1,140	--	62	48	-9	1	--	-2	-23
Other Western Europe	380	622	500	47	16	10	64	--	87	-65
Switzerland	211	517	--	41	9	0	144	--	236	-77
EASTERN EUROPE	439	282	300	13	31	44	-36	--	-22	132
Poland	232	121	--	8	18	96	-48	--	9	120
Former Yugoslavia	88	96	--	1	6	12	9	--	-83	404
Romania	57	16	--	1	4	-7	-72	--	159	247
NEWLY INDEPENDENT STATES	1,747	1,483	1,200	119	124	31	-15	--	16	4
Russia	1,328	1,204	1,000	100	93	29	-9	--	23	-8
ASIA[2]	28,560	25,624	20,300	1,841	1,567	1	-10	--	-9	-15
West Asia (Mideast)	2,513	2,553	2,600	248	171	1	2	--	83	-31
Turkey	637	727	600	92	60	19	14	--	183	-34
Iraq	3	82	--	9	6	31	2,913	--	100	-25
Israel, incl. Gaza and W. Bank	617	537	--	46	19	28	-13	--	-22	-59
Saudi Arabia	551	618	600	34	35	6	12	--	206	3
South Asia	653	760	700	42	33	-36	16	--	19	-21
Bangladesh	88	120	--	8	6	-60	37	--	-51	-23
India	113	155	--	6	20	-42	38	--	43	243
Pakistan	352	442	--	27	6	-22	26	--	253	-78
China	2,092	1,600	1,600	73	63	-21	-24	--	-2	-14
Japan	11,704	10,532	9,800	751	711	5	-10	--	-21	-5
Southeast Asia	3,270	2,988	2,200	213	163	7	-9	--	10	-23
Indonesia	852	772	500	56	45	4	-9	--	2	-19
Philippines	892	873	700	88	68	16	-2	--	28	-22
Other East Asia	8,327	7,191	6,000	515	427	6	-14	--	-18	-17
Korea, Rep.	3,871	2,857	2,000	211	172	3	-26	--	-30	-18
Hong Kong	1,490	1,712	1,700	125	128	-1	15	--	14	2
Taiwan	2,965	2,616	2,300	179	127	14	-12	--	-18	-29
AFRICA	2,877	2,267	2,300	167	145	-3	-21	--	11	-13
North Africa	1,986	1,559	1,600	94	73	-4	-21	--	-9	-22
Morocco	244	163	--	14	7	49	-33	--	175	-50
Algeria	322	315	--	17	20	-25	-2	--	-49	18
Egypt	1,319	964	1,000	52	44	-4	-27	--	-14	-15
Sub-Sahara	891	707	700	73	72	-3	-21	--	53	-1
Nigeria	190	115	--	12	19	51	-39	--	17	64
S. Africa	309	220	--	22	16	10	-29	--	3	-26
LATIN AMERICA and CARIBBEAN	10,486	10,363	11,400	829	878	30	-1	--	2	6
Brazil	588	536	500	30	36	10	-9	--	-13	21
Caribbean Islands	1,419	1,501	--	111	99	10	6	--	17	-11
Central America	1,006	1,047	--	100	98	15	4	--	26	-3
Colombia	631	538	--	44	67	33	-15	--	-22	53
Mexico	5,447	5,184	6,000	429	486	54	-5	--	-3	13
Peru	310	193	--	12	16	3	-38	--	-59	32
Venezuela	483	571	600	61	29	-1	18	--	69	-52
CANADA	6,146	6,795	7,000	561	645	6	11	--	3	15
OCEANIA	489	550	600	56	46	-4	13	--	64	-18
TOTAL	60,445	57,245	55,000	4,132	3,971	7	-5	--	-6	-4
Developed countries	28,890	28,431	--	1,976	1,964	6	-2	--	-13	-1
Developing countries	27,681	25,687	--	1,961	1,820	10	-7	--	1	-7
Other countries	3,873	3,128	--	195	187	-3	-19	--	9	-4

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).
Information contact: Mary Fant (202) 694-5272 Note: Adjusted for transhipments through Canada, but transhipments are not distributed as previously.

Farm Income

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

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
					$ billion					
Final crop output	81.5	83.3	81.0	89.0	82.4	100.3	95.8	115.6	112.5	105.7
Food grains	8.2	7.5	7.3	8.5	8.2	9.5	10.4	10.7	10.6	9.1
Feed crops	17.0	18.7	19.3	20.1	20.2	20.4	24.6	27.3	27.6	24.4
Cotton	5.0	5.5	5.2	5.2	5.2	6.7	6.9	7.0	6.5	6.0
Oil crops	11.9	12.3	12.7	13.3	13.2	14.7	15.5	16.4	19.9	17.9
Tobacco	2.4	2.7	2.9	3.0	2.9	2.7	2.5	2.8	2.9	3.1
Fruits and tree nuts	9.2	9.4	9.9	10.2	10.3	10.3	11.1	11.9	12.8	12.6
Vegetables	11.6	11.5	11.6	11.9	13.5	13.9	14.9	14.6	15.1	16.2
All other crops	11.6	12.8	13.1	13.7	14.0	14.9	15.2	15.9	16.7	16.5
Home consumption	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Value of inventory adjustment[1]	4.5	2.8	(1.2)	3.2	(5.3)	7.2	(5.4)	8.9	0.3	(0.2)
Final animal output	83.8	90.2	87.3	87.1	91.7	89.7	87.6	92.2	96.2	94.3
Meat animals	46.7	51.2	50.1	47.7	50.8	46.8	44.8	44.4	49.9	46.9
Dairy products	19.4	20.2	18.0	19.7	19.2	19.9	19.9	22.8	21.0	22.4
Poultry and eggs	15.4	15.3	15.2	15.5	17.3	18.4	19.1	22.3	22.2	22.1
Miscellaneous livestock	2.5	2.5	2.5	2.6	2.8	3.0	3.2	3.4	3.5	3.5
Home consumption	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.3	0.4	0.4
Value of inventory adjustment[1]	(0.7)	0.4	1.0	1.0	1.1	1.1	0.2	(1.1)	(0.7)	(0.9)
Services and forestry	15.8	15.3	15.4	15.2	16.6	17.9	19.4	20.7	22.1	22.5
Machine hire and customwork	1.7	1.8	1.8	1.8	1.9	2.1	1.9	2.2	2.6	2.6
Forest products sold	2.0	1.8	1.8	2.2	2.6	2.7	2.9	2.8	2.8	2.6
Other farm income	4.9	4.5	4.7	4.2	4.6	4.4	5.2	5.9	6.3	6.3
Gross imputed rental value of farm dwellings	7.2	7.2	7.2	7.0	7.6	8.7	9.3	9.8	10.3	11.0
Final agricultural sector output[2]	181.0	188.7	183.7	191.3	190.7	207.9	202.8	228.5	230.8	222.6
Minus Intermediate consumption outlays:	88.7	92.9	94.6	93.5	100.6	104.9	109.0	112.9	118.6	117.0
Farm origin	38.1	39.5	38.6	38.6	41.2	41.3	41.6	42.7	45.7	44.1
Feed purchased	20.7	20.4	19.3	20.1	21.4	22.6	23.8	25.2	25.2	24.5
Livestock and poultry purchased	12.9	14.6	14.1	13.6	14.6	13.3	12.3	11.2	13.8	13.0
Seed purchased	4.4	4.5	5.1	4.9	5.2	5.4	5.5	6.2	6.7	6.6
Manufactured inputs	20.6	22.0	23.2	22.7	23.1	24.4	26.2	28.6	29.0	28.9
Fertilizers and lime	8.2	8.2	8.7	8.3	8.4	9.2	10.0	10.9	10.9	11.0
Pesticides	5.0	5.4	6.3	6.5	6.7	7.2	7.7	8.5	8.8	8.8
Petroleum fuel and oils	4.8	5.8	5.6	5.3	5.3	5.3	5.4	6.0	6.2	6.2
Electricity	2.6	2.6	2.6	2.6	2.7	2.7	3.0	3.2	3.0	2.9
Other intermediate expenses	30.0	31.4	32.8	32.2	36.2	39.2	41.2	41.5	43.9	44.0
Repair and maintenance of capital items	8.4	8.6	8.6	8.5	9.2	9.1	9.5	10.3	10.4	10.6
Machine hire and customwork	3.4	3.6	3.5	3.8	4.4	4.8	4.8	4.7	4.8	4.9
Marketing, storage, and transportation	4.2	4.2	4.7	4.5	5.6	6.8	7.2	6.9	7.1	7.1
Contract labor	1.3	1.6	1.6	1.7	1.8	1.8	2.0	2.1	2.6	2.7
Miscellaneous expenses	12.7	13.5	14.3	13.7	15.2	16.7	17.8	17.5	19.0	18.8
Plus Net government transactions:	5.1	3.1	2.1	2.7	6.9	1.0	0.1	0.1	0.1	(0.1)
+ Direct government payments	10.9	9.3	8.2	9.2	13.4	7.9	7.3	7.3	7.5	7.4
- Motor vehicle registration and licensing fees	0.3	0.4	0.3	0.4	0.4	0.4	0.5	0.4	0.5	0.4
- Property taxes	5.5	5.9	5.8	6.1	6.2	6.5	6.7	6.8	7.0	7.0
Gross value added	97.4	98.9	91.2	100.5	97.0	104.0	93.9	115.7	112.3	105.5
Minus Capital consumption	18.1	18.1	18.2	18.3	18.4	18.7	19.1	19.4	19.5	19.6
Net value added[2]	79.3	80.7	73.0	82.1	78.6	85.3	74.8	96.3	92.8	85.8
Minus Factor payments:	34.0	36.0	34.4	34.6	35.1	37.0	38.8	42.9	42.9	43.3
Employee compensation (total hired labor)	10.7	12.5	12.3	12.3	13.2	13.5	14.3	15.4	16.0	16.7
Net rent received by nonoperator landlords	9.4	10.0	9.9	11.2	11.0	11.8	11.8	14.3	13.2	13.0
Real estate and non-real estate interest	13.9	13.4	12.1	11.1	10.8	11.7	12.7	13.2	13.7	13.6
Net farm income[2]	45.3	44.7	38.6	47.5	43.6	48.3	36.0	53.4	49.8	42.5

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

Table 30—Farm Income Statistics

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
					$ billion					
Cash Income statement:										
1. Cash receipts	160.8	169.5	167.9	171.4	177.8	181.2	188.1	199.6	208.7	200.6
Crops[1]	76.9	80.3	82.1	85.7	87.6	93.1	101.1	106.6	112.1	105.8
Livestock	83.9	89.2	85.8	85.6	90.2	88.2	87.0	93.0	96.6	94.8
2. Direct Government payments	10.9	9.3	8.2	9.2	13.4	7.9	7.3	7.3	7.5	7.4
3. Farm-related income[2]	8.6	8.1	8.3	8.2	9.0	9.2	10.1	10.9	11.8	11.5
4. Gross cash income (1+2+3)	180.3	186.9	184.3	188.7	200.2	198.3	205.5	217.8	228.0	219.5
5. Cash expenses[3]	127.5	134.1	134.0	133.6	141.2	147.6	153.6	161.4	167.2	166.2
6. Net cash income (4-5)	52.8	52.8	50.4	55.1	59.0	50.7	51.8	56.4	60.8	53.4
Farm income statement:										
7. Gross cash income (4)	180.3	186.9	184.3	188.7	200.2	198.3	205.5	217.8	228.0	219.5
8. Noncash income[4]	7.9	7.9	7.8	7.6	8.1	9.2	9.8	10.2	10.7	11.4
9. Value of inventory adjustment	3.8	3.3	-0.2	4.2	-4.2	8.3	-5.1	7.8	-0.4	-1.0
10. Gross farm income (7+8+9)	191.9	198.0	191.9	200.5	204.1	215.8	210.1	235.8	238.3	230.0
11. Total production expenses	146.7	153.3	153.3	152.9	160.5	167.5	174.1	182.4	188.4	187.4
12. Net farm income (10-11)	45.3	44.7	38.6	47.5	43.6	48.3	36.0	53.4	49.8	42.5

Values for last 2 years are preliminary or forecasts. Numbers in parentheses indicate the combination of items required to calculate an item. Totals may not add due to rounding. 1. Includes commodities placed under CCC loans and profits made on loans redeemed. 2. Income from custom labor, machine hire, recreational activities, forest product sales, and other farm sources. 3. Excludes depreciation and perquisites to hired labor. Excludes farm operator dwellings. 4. Value of farm products consumed on farms where produced plus the imputed rental value of farm dwellings. *Information contact: Roger Strickland (202) 694-5582 or rogers@econ.ag.gov*

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

	1991	1992	1993	1994	1995	1996	1997	1998
				$ per farm				
Net cash farm business income[2]	10,678	11,320	11,248	11,389	11,218	13,502	--	--
Less depreciation[3]	5,127	5,187	6,219	6,466	6,795	6,906	--	--
Less wages paid to operator[4]	441	216	454	425	522	531	--	--
Less farmland rental income[5]	323	360	534	701	769	672	--	--
Less adjusted farm business income due to other household(s)[6]	1,093	961	872	815	649	1,094	--	--
			$ per farm operator household					
Equals adjusted farm business income	3,694	4,596	3,168	2,981	2,484	4,300	--	--
Plus wages paid to operator	441	216	454	425	522	531	--	--
Plus net income from farmland rental[7]	323	360	--	--	1,053	1,178	--	--
Equals farm self-employment income	4,458	5,172	3,623	3,407	4,059	6,009	--	--
Plus other farm-related earnings[8]	1,352	2,008	1,192	970	661	1,898	--	--
Equals earnings of the operator household from farming activities	5,810	7,180	4,815	4,376	4,720	7,906	6,034	4,628
Plus earnings of the operator household from off-farm sources[9]	31,638	35,731	35,408	38,092	39,671	42,455	43,572	45,060
Equals average farm operator household income	37,447	42,911	40,223	42,469	44,392	50,361	49,606	49,687
			$ per U.S. household					
U.S. average household income[10]	37,922	38,840	41,428	43,133	44,938	47,123	--	--
			Percent					
Average farm operator household income as percent of U.S. average household income	98.7	110.5	97.1	98.5	98.8	106.9	--	--
Average operator household earnings from farming activities as percent of average operator household income	15.5	16.7	12.0	10.3	10.6	15.7	--	--

-- = Not available. Values in the last three years 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, 1991, 1992, 1993, 1994, and 1995 Farm Costs and Returns Survey (FCRS), and 1996 Agricultural Resource Management Study for farm operator household data. U.S. Department of Commerce, Bureau of the Census Current Population Survey (PCS), for average household income. *Information contact: Bob Hoppe (202) 694-5572 or rhoppe@econ.ag.gov*

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

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
					$ billion					
Farm assets	794.0	819.7	822.1	873.8	910.7	943.0	985.4	$1,034.9	$1,083.0	$1,131.5
Real estate	604.3	623.3	628.9	646.3	678.3	712.4	761.3	805.4	852.9	895.6
Livestock and poultry[1]	66.2	70.9	68.1	71.0	72.8	67.9	57.8	60.1	58.5	59.0
Machinery and motor vehicles	84.1	86.3	85.9	85.3	85.9	86.7	86.7	85.5	90.0	92.7
Crops stored [2,3]	23.7	23.0	22.2	24.2	23.3	23.1	27.2	30.6	28.0	29.0
Purchased inputs	2.6	2.8	2.6	3.9	3.8	5.0	3.4	4.4	4.7	4.5
Financial assets	36.8	38.3	40.5	43.0	46.5	47.9	49.0	48.9	49.0	50.5
Total farm debt	138.1	138.1	139.4	139.3	142.2	147.1	151.0	156.2	162.2	167.6
Real estate debt [3]	76.2	74.9	75.1	75.6	76.3	78.0	79.6	81.9	84.1	86.5
Non-real estate debt [4]	61.9	63.2	64.3	63.6	65.9	69.1	71.5	74.2	78.1	81.2
Total farm equity	656.0	681.5	682.7	734.5	768.5	795.9	834.3	878.7	920.8	963.8
					Percent					
Selected ratios										
Debt to assets	17.4	16.9	17.0	15.9	15.6	15.6	15.3	15.1	15.0	14.8
Debt to equity	21.0	20.3	20.4	19.0	18.5	18.5	18.1	17.8	17.6	17.4

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

Table 33—Cash Receipts from Farming

	Annual			1997		1998				
	1995	1996	1997	May	Dec	Jan	Feb	Mar	Apr	May
					$ million					
Commodity sales[1]	188,108	199,580	208,665	14,234	19,238	19,517	13,987	15,823	14,329	13,918
Livestock and products	87,018	93,005	96,568	7,843	8,288	8,064	7,351	8,731	7,465	7,801
Meat animals	44,828	44,414	49,925	3,986	4,457	4,081	3,889	4,852	3,554	3,995
Dairy products	19,894	22,820	20,989	1,821	1,892	1,962	1,810	1,989	1,913	1,903
Poultry and eggs	19,070	22,345	22,183	1,809	1,713	1,757	1,434	1,655	1,781	1,674
Other	3,227	3,425	3,471	228	227	264	218	236	217	228
Crops	101,090	106,575	112,097	6,391	10,950	11,453	6,637	7,091	6,864	6,118
Food grains	10,417	10,741	10,603	474	805	853	521	531	375	363
Feed crops	24,581	27,265	27,638	1,223	2,732	3,730	1,914	1,772	1,249	1,117
Cotton (lint and seed)	6,851	6,983	6,515	201	1,119	1,132	495	284	302	274
Tobacco	2,548	2,796	2,886	0	564	418	120	43	61	0
Oil-bearing crops	15,496	16,362	19,911	841	1,697	2,676	1,245	1,214	880	694
Vegetables and melons	14,913	14,561	15,086	1,490	905	1,051	848	1,218	1,414	1,550
Fruits and tree nuts	11,119	11,933	12,790	780	1,350	583	511	616	757	737
Other	15,165	15,935	16,668	1,382	1,778	1,009	983	1,414	1,826	1,384
Government payments	7,279	7,340	7,496	20	743	1,828	93	52	75	80
Total	195,388	206,919	216,160	14,254	26,734	19,537	15,816	15,916	14,382	13,994

Annual values for the most recent year and monthly values for the current 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 contact: Roger Strickland (202) 694-5592. To receive current monthly cash receipts, contact Larry Traub at (202)694-5593 or ltraub@econ.ag.gov.

Table 34—Cash Receipts from Farm Marketings, by State

Region and State	Livestock and products				Crops[1]				Total[1]			
	1996	1997	Apr 1998	May 1998	1996	1997	Apr 1998	May 1998	1996	1997	Apr 1998	May 1998
							$ million					
NORTH ATLANTIC												
Maine	262	258	18	18	220	228	28	15	482	486	46	33
New Hampshire	72	69	6	6	97	97	9	6	169	166	15	12
Vermont	433	416	38	39	99	97	12	8	532	513	49	46
Massachusetts	110	102	9	9	392	430	18	18	502	532	27	27
Rhode Island	11	9	1	1	73	74	8	6	84	83	9	7
Connecticut	236	218	15	15	253	279	23	19	489	496	39	34
New York	2,050	1,859	160	163	981	1,037	76	55	3,031	2,896	237	218
New Jersey	196	180	15	16	607	596	45	41	803	776	60	57
Pennsylvania	2,865	2,789	246	250	1,283	1,339	109	91	4,148	4,128	355	340
NORTH CENTRAL												
Ohio	1,943	1,869	146	158	2,853	3,476	216	153	4,796	5,345	363	312
Indiana	1,913	1,896	124	135	3,620	3,610	175	126	5,533	5,506	299	261
Illinois	2,063	1,937	118	175	6,453	7,339	350	302	8,516	9,276	468	477
Michigan	1,450	1,352	117	120	2,154	2,236	156	123	3,604	3,588	273	243
Wisconsin	4,299	4,070	334	350	1,732	1,686	100	76	6,030	5,756	434	427
Minnesota	4,147	4,054	293	336	4,654	4,101	204	196	8,800	8,155	497	533
Iowa	5,451	5,530	420	397	6,698	7,311	417	318	12,148	12,841	836	716
Missouri	2,463	2,795	212	220	2,409	2,768	107	99	4,872	5,564	319	319
North Dakota	539	611	52	50	2,891	2,702	125	94	3,429	3,313	176	144
South Dakota	1,634	1,820	133	156	1,875	2,417	104	77	3,509	4,237	237	233
Nebraska	5,277	5,542	360	387	3,933	4,550	211	170	9,211	10,092	571	557
Kansas	4,541	5,017	370	381	2,978	3,985	100	103	7,519	9,001	471	484
SOUTHERN												
Delaware	573	573	53	48	180	174	8	6	753	748	61	54
Maryland	901	915	85	80	639	623	52	38	1,540	1,538	137	119
Virginia	1,477	1,538	126	127	907	863	33	31	2,384	2,401	159	158
West Virginia	309	324	28	26	79	71	2	3	388	394	30	29
North Carolina	4,431	4,694	337	320	3,466	3,608	198	188	7,897	8,302	535	508
South Carolina	748	797	63	63	869	898	43	40	1,616	1,695	106	103
Georgia	3,279	3,442	277	283	2,452	2,445	131	158	5,731	5,887	408	440
Florida	1,206	1,265	92	91	5,038	4,978	714	668	6,244	6,243	806	760
Kentucky	1,727	1,978	116	135	1,842	1,655	90	34	3,569	3,633	206	169
Tennessee	999	1,005	90	103	1,406	1,287	54	54	2,405	2,292	144	157
Alabama	2,362	2,431	200	193	808	796	45	60	3,170	3,227	246	253
Mississippi	1,934	2,006	163	152	1,504	1,470	55	56	3,438	3,476	218	208
Arkansas	3,374	3,416	286	277	2,470	2,446	81	82	5,844	5,862	366	358
Louisiana	688	659	63	58	1,641	1,481	39	35	2,328	2,140	102	93
Oklahoma	2,414	3,061	248	288	1,105	1,308	59	76	3,519	4,369	307	364
Texas	7,821	8,184	645	643	5,139	5,277	264	277	12,960	13,461	909	921
WESTERN												
Montana	797	991	70	80	1,203	1,072	70	42	1,999	2,063	139	122
Idaho	1,330	1,389	116	141	2,043	1,926	113	82	3,372	3,315	229	224
Wyoming	478	646	46	102	189	199	4	3	667	845	50	106
Colorado	2,763	3,012	206	215	1,362	1,388	80	62	4,125	4,399	286	277
New Mexico	1,198	1,354	116	145	506	562	24	40	1,704	1,915	140	185
Arizona	840	888	68	68	1,306	1,257	115	114	2,145	2,145	183	183
Utah	644	715	57	58	228	238	21	11	872	953	77	68
Nevada	154	180	15	17	132	130	10	4	287	310	26	21
Washington	1,665	1,604	135	125	3,833	3,778	201	187	5,497	5,382	337	312
Oregon	658	740	59	71	2,246	2,373	119	91	2,904	3,113	178	163
California	6,212	6,294	512	501	17,285	18,995	1,615	1,544	23,497	25,289	2,127	2,045
Alaska	6	6	1	1	23	26	2	2	29	32	2	2
Hawaii	66	68	6	6	420	415	33	33	487	483	38	39
U.S.	93,005	96,568	7,465	7,801	106,575	112,097	6,864	6,118	199,580	208,665	14,329	13,918

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 realizd on redemptions during the period. *Information contact: Roger Strickland (202) 694-5592. To receive current monthly cash receipts contact Larry Traub at (202) 694-5593 or ltraub@econ.ag.gov*

Table 35—CCC Net Outlays by Commodity & Function

					Fiscal year					
	1990	1991	1992	1993	1994	1995	1996	1997	1998 E	1999 E
						$ million				
COMMODITY/PROGRAM										
Feed grains:										
Corn	2,435	2,387	2,105	5,143	625	2,090	2,021	2,587	2,649	2,604
Grain sorghum	349	243	190	410	130	153	261	284	285	280
Barley	-94	71	174	186	202	129	114	109	152	114
Oats	-5	12	32	16	5	19	8	8	9	8
Corn and oat products	8	9	9	10	10	1	0	0	0	0
Total feed grains	2,693	2,722	2,510	5,765	972	2,392	2,404	2,988	3,095	3,006
Wheat and products	796	2,805	1,719	2,185	1,729	803	1,491	1,332	1,587	1,486
Rice	667	867	715	887	836	814	499	459	515	471
Upland cotton	-79	382	1,443	2,239	1,539	99	685	561	1,065	957
Tobacco	-307	-143	29	235	693	-298	-496	-156	286	-49
Dairy	505	839	232	253	158	4	-98	67	224	113
Soybeans	5	40	-29	109	-183	77	-65	5	11	222
Peanuts	1	48	41	-13	37	120	100	6	0	-1
Sugar	15	-20	-19	-35	-24	-3	-63	-34	-39	-39
Honey	47	19	17	22	0	-9	-14	-2	0	0
Wool	104	172	191	179	211	108	55	0	0	0
Operating expense[1]	618	625	6	6	6	6	6	6	5	6
Interest expenditure	632	745	532	129	-17	-1	140	-111	-109	-42
Export programs[2]	-34	733	1,459	2,193	1,950	1,361	-422	125	329	530
1988/96 Disaster/tree/										
livestock assistance	161 [3]	121	1,054	944	2,566	660	95	130	25	5
Conservation reserve program	0	0	0	0	0	0	2	1,671	1,829	1,639
Other conservation programs	0	0	0	0	0	0	7	105	291	340
Other	647	155	-162	949	-137	-103	320	104	209	426
Total	6,471	10,110	9,738	16,047	10,336	6,030	4,646	7,256	9,323	9,070
Function										
Price support loans (net)	-399	418	584	2,065	527	-119	-951	110	444	115
Cash direct payments:[4]										
Production flexibility contract	0	0	0	0	0	0	5,141	6,320	5,716	5,512
Deficiency	4,178	6,224	5,491	8,607	4,391	4,008	567	-1,118	-11	0
Diversion	0	0	0	0	0	0	0	0	0	0
Dairy termination	189	96	2	0	0	0	0	0	0	0
Loan Deficiency	3	21	214	387	495	29	0	0	6	103
Other	0	0	140	149	171	97	95	7	360	335
Disaster	0	0	0	0	0	0	0	0	0	0
Conservation reserve program	0	0	0	0	0	0	2	1,671	1,829	1,639
Other conservation programs	0	0	0	0	0	0	0	85	238	298
Non-Insured Assistance (NAP)	0	0	0	0	0	0	2	52	54	77
Total direct payments	4,370	6,341	5,847	9,143	5,057	4,134	5,807	7,017	8,192	7,964
1988-94 crop disaster	5 [3]	6	960	872	2,461	584	14	2	0	0
Emergency livestock/tree/DRAP										
livestock indemn/forage assist.	156	115	94	72	105	76	81	128	25	5
Purchases (net)	-48	646	321	525	293	-51	-249	-60	145	72
Producer storage	185	1	14	9	12	23	0	0	0	0
payments										
Processing, storage, and										
transportation	278	240	185	136	112	72	51	33	32	30
Operating expense[1]	618	625	6	6	6	6	6	6	5	6
Interest expenditure	632	745	532	129	-17	-1	140	-111	-109	-42
Export programs[2]	-34	733	1,459	2,193	1,950	1,361	-422	125	329	530
Other	708	240	-264	897	-170	-55	169	6	260	390
Total	6,471	10,110	9,738	16,047	10,336	6,030	4,646	7,256	9,323	9,070

1. Does not include CCC Transfers to General Sales Manager. 2. Includes Export Guarantee Program, Direct Export Credit Program, CCC Transfers to the General Sales Manager, Market Access (Promotion) Program, starting in FY 1991 and starting in FY 1992 the Export Guarantee Program - Credit Reform, Export Enhancement Program, Dairy Export Incentive Program, and Technical Assistance to Emerging Markets. 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 the FY 1999 Mid-Session Review Budget which was released on May 26, 1998 based on April 1998 supply and demand estimates. The CCC outlays shown for 1996-1999 include the impact of the Federal Agricultural Improvement and Reform Act of 1996, which was enacted April 4, 1996. Minus (-) indicates a net receipt (excess of repayments or other receipts over gross outlays of funds). *Information contact: Richard Pazdalski Farm Sevice Agency - Budget at (202) 720-3675 or Richard_Pazdalski@wdc.fsa.usda.gov.*

Food Expenditures

Table 36—Food Expenditures_____

	Annual			1998			Year-to-date cumulative		
	1995	1996	1997 P	May	Jun P	Jul P	May	Jun P	Jul P
					$ billion				
Sales[1]									
At home[2]	354.2	367.6	380.2	34.5	29.0	30.5	158.2	187.2	217.7
Away from home[3]	280.8	288.5	297.9	27.0	25.6	28.0	121.8	147.4	175.4
					1995 $ billion				
Sales[1]									
At home[2]	367.3	367.4	371.0	33.1	27.9	29.3	152.1	180.1	209.3
Away from home[3]	287.7	288.5	289.7	25.7	24.3	26.5	116.3	140.6	167.1
				Percent change from year earlier ($ billion)					
Sales[1]									
At home[2]	3.8	3.8	3.4	3.4	-7.3	-6.7	3.5	1.7	0.4
Away from home[3]	4.5	2.7	3.0	2.4	0.7	6.8	0.5	0.5	1.5
				Percent change from year earlier (1995 $ billion)					
Sales[1]									
At home[2]	0.5	0.1	1.0	1.3	-9.1	-8.5	1.7	-0.1	-1.4
Away from home[3]	2.2	0.3	0.2	-0.4	-1.9	4.1	-2.0	-2.0	-1.1

P = Preliminary. 1. Food only (excludes alcoholic beverages). Not seasonally adjusted. 2. Excludes donations and home production.
3. Excludes donations, child nutrition subsidies, and meals furnished to employees, patients, and inmates.*Information contact: Annette Clauson (202) 694-5373*
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 ε 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			1997	1998					
	1995	1996	1997 R	Jun	Jan	Feb	Mar P	Apr P	May P	Jun P
Rail freight rate index[1] (Dec. 1984=100)										
All products	111.7	111.5	112.1	111.9	113.5	113.5	113.6	114.0	114.0	113.6
Farm products	115.6	115.9	120.3	119.6	124.7	124.7	124.7	124.7	124.7	124.7
Grain[2]	117.1	118.0	--	--	--	--	--	--	--	--
Food products	111.7	108.8	107.6	106.8	108.5	108.0	108.7	108.7	108.7	108.2
Barge freight rate index[1] (Dec 1990=100)										
Grain	172.6	129.5	107.1	88.8	95.8	102.8	90.9	93.0	86.9	94.5
Grain shipments										
Rail carloadings (1,000 cars)[3]	28.9	25.2	23.2	21.3	23.9	24.6	21.7	20.4	20.4	20.7
Barge shipments (mil. ton)[4,5]	3.5	3.1	2.4	4.5	2.0	1.7	--	--	--	--
Fresh fruit and vegetable shipments[6]										
Piggy back (mil. cwt)	1.3	1.1	1.1	1.3	1.0	0.9	0.9	0.9	1.3	1.0
Rail (mil. cwt)	1.9	1.6	1.7	2.5	1.5	1.0	1.1	1.2	1.1	1.5
Truck (mil. cwt)	40.5	35.7	42.6	49.7	38.8	34.2	39.9	44.5	50.3	51.4
Cost of operating trucks hauling produce[6]										
Fleet operation (cents/mile)	130.3	123.0	135.4	135.6	--	--	--	--	--	--

P= Preliminary. R = Revised. -- = Not available. 1. Department of Labor, Bureau of Labor Statistics. 2. Discontinued. 3. Weekly average; from Association of American Railroads. 4. Shipments on Illinois and Mississippi waterways, U.S. Corps of Engineers. 5. Annual 1996 is 7-month average. 6. Agricultural Marketing Service, USDA.*Information contact: Jenny Gonzales (202) 694-5296*

Indicators of Farm Productivity

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

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

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

Food Supply & Use

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

Commodity	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
					Lbs.					
Red meats[2,3,4]	117.4	119.5	115.9	112.3	111.9	114.1	112.2	114.8	115.1	112.8
Beef	69.6	68.6	65.4	63.9	63.1	62.8	61.5	63.6	64.4	65.0
Veal	1.3	1.1	1.0	0.9	0.8	0.8	0.8	0.8	0.8	1.0
Lamb & mutton	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.9	0.9	0.8
Pork	45.6	48.8	48.4	46.4	46.9	49.5	48.9	49.6	49.0	46.0
Poultry[2,3,4]	51.0	51.9	53.9	56.3	58.3	60.8	62.5	63.3	62.9	64.4
Chicken	39.4	39.6	40.9	42.4	44.2	46.7	48.5	49.3	48.8	49.8
Turkey	11.6	12.4	13.1	13.8	14.1	14.1	14.0	14.1	14.1	14.6
Fish and shellfish[3]	16.1	15.1	15.6	15.0	14.8	14.7	14.9	15.1	14.9	14.7
Eggs[4]	32.7	31.8	30.5	30.2	30.1	30.3	30.4	30.6	30.2	30.5
Dairy products										
Cheese (excluding cottage)[2,5]	24.1	23.7	23.8	24.6	25.0	26.0	26.2	26.8	27.3	27.7
American	12.4	11.5	11.0	11.1	11.1	11.3	11.4	11.5	11.8	12.0
Italian	7.6	8.1	8.5	9.0	9.4	10.0	9.8	10.3	10.4	10.8
Other cheeses[6]	4.1	4.1	4.3	4.5	4.6	4.7	5.0	5.0	5.0	5.0
Cottage cheese	3.9	3.9	3.6	3.4	3.3	3.1	2.9	2.8	2.7	2.6
Beverage milks[2]	226.5	222.3	224.2	221.8	221.2	218.3	213.4	213.5	209.7	210.0
Fluid whole milk[7]	111.9	105.7	97.5	90.4	87.3	84.0	80.1	78.8	75.3	74.6
Fluid lowfat milk[8]	100.6	100.5	106.5	108.4	109.9	109.3	106.5	105.9	102.5	101.7
Fluid skim milk	14.0	16.1	20.2	22.9	23.9	25.0	26.7	28.7	31.9	33.7
Fluid cream products[9]	7.6	7.6	7.8	7.6	7.7	8.0	8.0	8.1	8.4	8.7
Yogurt (excluding frozen)	4.3	4.5	4.2	4.0	4.2	4.2	4.3	4.7	5.1	4.8
Ice cream	18.4	17.3	16.1	15.8	16.3	16.3	16.1	16.1	15.7	15.9
Ice milk	7.4	8.0	8.4	7.7	7.4	7.1	6.9	7.6	7.5	7.6
Frozen yogurt	--	--	2.0	2.8	3.5	3.1	3.5	3.5	3.5	2.6
All dairy products, milk										
equivalent, milkfat basis[10]	601.2	582.5	563.8	568.4	565.6	565.9	574.1	586.0	584.4	575.5
Fats and oils--total fat content	62.9	63.6	60.8	62.8	65.4	67.4	70.2	68.6	66.9	65.8
Butter and margarine (product weight)	15.2	14.8	14.6	15.3	15.0	15.4	15.8	14.7	13.7	13.5
Shortening	21.4	21.5	21.5	22.2	22.4	22.4	25.1	24.1	22.5	22.3
Lard and edible tallow (direct use)	2.7	2.6	2.1	2.4	3.1	4.1	3.9	4.7	4.9	5.3
Salad and cooking oils	25.4	26.3	24.4	24.8	26.7	27.2	26.8	26.3	26.9	26.1
Fresh fruits[11]	121.6	120.9	122.9	116.3	113.0	123.5	124.9	126.4	124.5	129.2
Canned fruit[12]	18.4	18.5	19.0	18.4	17.1	19.8	18.0	18.3	15.0	16.4
Dried fruit	3.1	3.3	3.3	3.1	3.0	2.8	3.0	3.0	2.8	2.8
Frozen fruit	3.6	3.4	3.7	3.5	3.5	3.8	3.4	2.9	4.2	3.9
Selected fruit juices[13]	72.8	68.3	70.5	66.2	66.6	63.6	74.9	71.6	75.6	75.5
Vegetables[11]										
Fresh	162.4	167.4	172.2	166.2	163.3	171.3	172.3	175.6	176.3	178.7
Canning	99.1	94.8	102.4	110.9	113.3	111.6	112.1	107.6	110.4	109.4
Freezing	67.0	64.2	67.6	70.5	72.8	71.6	76.7	81.4	78.2	83.3
Dehydrated and chips	29.9	29.3	29.9	31.8	32.6	32.1	33.0	31.6	31.2	32.9
Pulses	5.7	7.5	6.3	7.1	7.8	8.2	7.8	8.4	8.5	8.0
Peanuts (shelled)	6.4	6.9	7.0	6.0	6.5	6.2	6.0	5.8	5.7	5.7
Tree nuts (shelled)	2.2	2.3	2.2	2.4	2.2	2.2	2.2	2.3	1.9	2.1
Flour and cereal products[14]	171.4	175.5	174.5	182.0	183.6	186.2	191.0	194.1	192.5	198.5
Wheat flour	129.8	131.7	129.6	136.0	136.9	138.8	143.3	144.5	141.8	148.8
Rice (milled basis)	14.0	14.3	15.2	16.2	16.8	17.5	17.6	19.3	20.1	18.9
Caloric sweeteners[15]	131.6	132.7	133.1	137.0	138.0	141.2	144.4	147.3	149.8	152.0
Coffee (green bean equiv.)	10.2	9.8	10.1	10.3	10.3	10.0	9.1	8.2	8.0	9.0
Cocoa (chocolate liquor equiv.)	3.8	3.8	4.0	4.3	4.6	4.6	4.3	3.9	3.6	--

-- = Not available. 1. In pounds, retail weight unless otherwise stated. Consumption normally represents total supply minus exports, nonfood use, and ending stocks. Calendar-year data, except fresh citrus fruits, peanuts, tree nuts, and rice, which are on crop-year basis. 2. Totals may not add due to rounding. 3. Boneless, trimmed weight. Chicken series revised to exclude amount of ready-to-cook chicken going to pet food as well as some water leakage that occurs when chicken is cut up before packaging. 4. Excludes shipments to the U.S. territories. 5. Whole and part-skim milk cheese. Natural equivalent of cheese and cheese products. 6. Includes Swiss, Brick, Muenster, cream, Neufchatel, Blue, Gorgonzola, Edam, and Gouda. 7. Plain and flavored. 8. Plain and flavored, and buttermilk. 9. Heavy cream, light cream, half and half, eggnog, sour cream, and dip. 10. Includes condensed and evaporated milk and dry milk products. 11. Farm weight. 12. Excludes pineapples and berries. 13. Single strength equivalent. 14. Includes rye, corn, oat, and barley products. Excludes quantities used in alcoholic beverages, corn sweeteners, and fuel. 15. Dry weight equivalent.
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