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### **Abbreviations and Acronyms**

This list of abbreviations and acronyms used in the *Agricultural Outlook* is provided for the convenience of our readers. Abbreviations and acronyms typically are not spelled out in the text.

ARP Acreage Reduction Program
APEC Asia Pacific Economic Cooperation
ASEAN Association of South East Asian Nations

CAP Common Agricultural Policy
CBO Congressional Budget Office
CCC Commodity Credit Corporation

CEE Central Eastern Europe
CIF Cost, Insurance, and Freight

COP Cereals, Oilseeds, and Protein Crops

CPI Consumer Price Index

CRP Conservation Reserve Program

CSF classic swine fever cwt hundredweight

DEIP Dairy Export Incentive Program
EEP Export Enhancement Program

EU European Union
ECU European currency unit

FACTA-90 Food, Agriculture, Conservation, and Trade Act of 1990 FAIR Act Federal Agriculture Improvement and Reform Act of 1996

FAPRI Food and Agricultural Policy Research Institute

FMD foot-and-mouth disease

FOB freight on board FOR Farmer-Owned Reserve FSU Former Soviet Union

GATT General Agreement on Tariffs and Trade

GRIP Gross Revenue Insurance Plan

GDP gross domestic product

ha hectare

HFCS high-fructose corn syrup HRW hard red winter (wheat)

MERCOSUR The Common Market of the Southern Cone of South America

MGA maximum guaranteed area MGQ maximum guaranteed quantity

mha million hectares mmt million metric tons

mt metric ton

NAFTA North American Free Trade Agreement

NFA net flexed area
NFD nonfat dry milk
PLD Paid Land Diversion

PROCAMPO Mexican direct income support program rBST recombinant bovine somatotropin

ROW Rest of World tmt thousand metric tons TRQ tariff rate quota

WGTA Western Grain Transportation Act

WTO World Trade Organization

### Overview of the 1999 U.S. Outlook

The Food and Agricultural Policy Research Institute (FAPRI) develops a long-term outlook for world agriculture each year. In July or August of each year, the FAPRI analysts complete work on models that will be used for the outlook. Each fall, the FAPRI consortium of universities meets to discuss important assumptions that will be a part of the outlook. Macroeconomic assumptions and policy assumptions are agreed upon at that time. A preliminary baseline is then done in November and is published in the FAPRI Rainbow Book.

That baseline is reviewed in January of each year. FAPRI invites more than 100 respondents to analyze the preliminary baseline. The review involves experts from both the public and private sector and takes two days to complete. Subsequent to the review, the FAPRI consortium meets again to create the final baseline in late January. Once Congress comes back into session in March, FAPRI leaders travel to Washington. A briefing is then given to the House, Senate, and USDA, followed by a general release to commodity groups and the press.

The outlook contained in this document therefore, is the result of six months of work by hundreds of people. FAPRI projections for world agriculture can be used for policy analysis; however, it is not a forecast. Actual conditions over the next 10 years may be substantially different from the baseline. The baseline is a plausible outlook that is conditioned by the assumptions used to create it. FAPRI receives macroeconomic projections from the WEFA group, DRI McGraw-Hill, and the United Nations Project Link.

In general, the outlook for economic growth is modest, as short-term difficulties temper the long-run optimism. For the next two to three years, the world economy will still be adjusting to the Asian financial crisis, and the devaluation of the Russian Ruble and Brazilian Real. The projections indicate that it will be 2001 before developing economies approach historical growth rates. With the exception of Japan, developed economies are expected to show only a modest

slowdown in growth. The U.S. economy is a bright spot in the world economy. Inflation rates, as measured by the Consumer Price Index (CPI), have steadily declined during the 1990s. After remaining flat in 1997, the overall Producer Price Index (PPI) fell by 2 percent in 1998. A further decline is expected in 1999. Substantial inflation is not a part of the current projections. The prime interest rate averaged just over 8 percent in 1998. Rates are expected to range between 7.5 and 8 percent from 1999 through 2008.

FAPRI assumes that current agricultural policies in the United States and abroad remain in place during the baseline period. This simplifying assumption is appropriate for a baseline against which alternative polices will be tested. The 1996 Federal Agricultural Improvement and Reform (FAIR) Act, for example, remains in effect throughout the baseline. After the FAIR Act expires in 2002, the assumption is that support will continue at the 2002 levels. For European policy, this baseline assumes no changes to the European Union's (EU) Common Agricultural Policy (CAP). Though changes to CAP were being offered while the baseline was made, none were yet accepted or implemented by the EU.

Assumptions regarding technology are critical in determining the supply and demand outlook for agriculture. In general, FAPRI assumes that the future rate of technological growth is in line with the recent history. For example, crop yields grow at the same rate as recent trends. Because the baseline assumes "normal" weather, no year-to-year fluctuations are included. Another technology assumption is for livestock: Dairy and livestock production per animal measures are assumed to continue at historical rates. For a baseline that alternative technologies may be scored against, the assumption of continued historical growth rates is appropriate.

### The Outlook for the Near Term

Lower world economic activity has led to a fall in demand for agricultural products from the United States. This, coupled with increases in world supplies, has depressed market prices for most commodities (dairy being the exception) and led to substantial increases in government costs associated with the farm program. This situation is likely to continue for the next two to three years, barring some weather problem here or elsewhere around the world.

The pork sector went through the sharpest decline in prices of any commodity last year as slaughter capacity constraints, together with large supplies, generated some of the lowest real prices for hogs on record. Some recovery in hog prices is expected for 1999, but many producers will continue to face severe financial pressure from the large losses incurred in recent months.

Crop cash receipts compared to 1996 levels were down nearly \$8 billion in 1998 and are expected to drop a further \$3 billion in 1999. For the next two to three years, the crops sector is expected to be under some pressure. When compared to other crops, the soybean loan rate appears to be high enough to attract acreage in 1999, which will likely keep soybean supplies fairly high and prices low in the year to come. Corn prices will struggle to remain above \$2.00 per bushel, and wheat prices are likely to get back to the \$3.00 per bushel rate with next year's crop. Cotton prices are not expected to average more than \$0.55 per pound until the 2001/02 crop year.

Livestock cash receipts also dipped in 1998, mainly due to the major decline in hog cash receipts. For the next few years, livestock cash receipts are expected to recover and move to or above record 1997 levels by 2000 or 2001. Pork prices should recover somewhat in 1999 and then move up again in 2000, averaging \$42.50 per hundredweight (cwt) in 2000. Cattle prices dipped slightly in 1998, but are expected to recover in 1999 and continue to improve for the next several years. Milk prices set record levels in 1998 and are showing extreme volatility in the early part of 1999. The Basic Formula Price dropped \$6.00 per cwt in February 1999, relative to January levels. Expect the dairy sector to be a major source of discussion in 1999.

Government costs are expected to rise by \$7 billion in fiscal year 1999 compared to 1998 levels. This increase is due to higher loan deficiency payments, disaster payments, and additional contract payments provided

under last year's legislation. Loan deficiency payments are expected to rise further in 2000, in response to lower soybean prices and potential cotton exposure. In the absence of new legislation, government outlays should dip to \$10.6 billion in 2000, and average \$6.3 to \$6.5 billion from 2002 through the end of the analysis.

Farm income has declined by 18 percent from 1996 levels. Without the increase in government payments in 1998, farm income would have likely dropped an additional \$2 billion. Some recovery is expected in 2000, but in general, farm income is expected to remain in the \$45 to \$47 billion range for much of the coming decade.

In the longer run, the world economy is expected to show signs of recovery. With growing incomes, consumption patterns of meats are expected to return to growth rates similar to that observed in the mid 1990s. Consequently, the United States export demand for feed grains, meats, oilseeds, and their products should again grow, providing support to many of these markets. This should provide upward price pressure to the feed grain and oilseed sector, with wheat prices also showing signs of strength. Cotton prices should also begin to recover, with farm prices getting above \$0.60 per pound by the 2003/04 crop year.

### Major Causes of Uncertainty Around the Baseline

World weather is the first major cause for concern. While stock levels of many commodities have increased significantly in the last two years, any weather problems that translate to a drop in supplies will likely tighten the market and bring prices up quickly. This production decline will likely have a similar effect if it occurs in the United States, Europe, South America, or China. The effects of tighter supplies will likely show a larger price increase effect than the price decrease associated with a large crop.

Changing world economic conditions could also impact the baseline. The WEFA Group, Project Link, and other sources generate the macroeconomic conditions assumed in the baseline. In general, they expect the global economic situation to stabilize in 1999 and begin to show signs of recovery in 2000. Behavior in Japan is critical to this assumption. Should the recovery not develop, the projection would obviously weaken.

Conversely, if the recovery would gain strength, the demand situation could tighten even more.

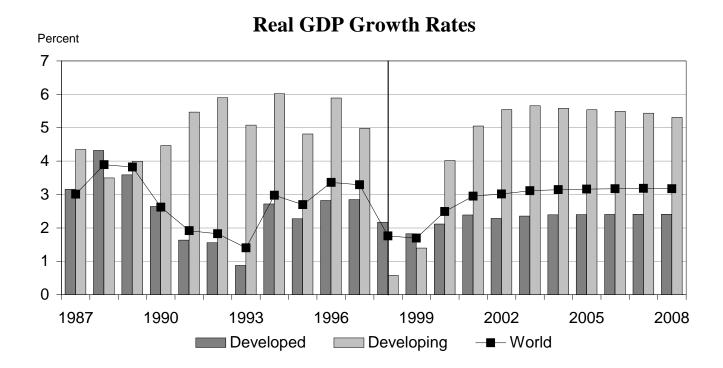
The U.S. pork sector is undergoing major adjustments since last fall's price drop. Several expansion plans are being placed on hold, and many producers will likely exit the industry in the next few months. While the breeding herd is projected to decline to 6.38 million head in December 1999, it is possible that the decline could be even sharper, leading to higher prices in 2000.

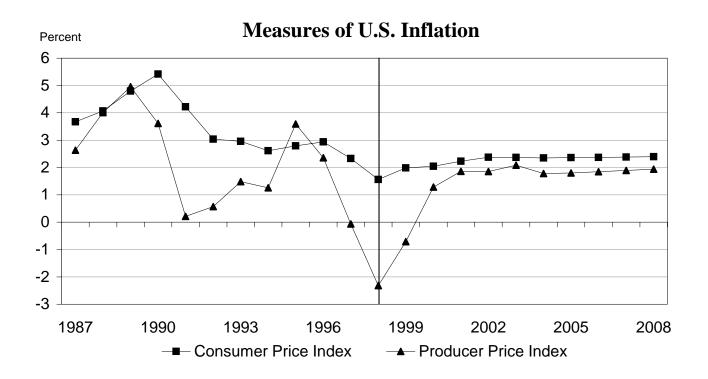
Farmers and ranchers may have used cash reserves in dealing with the current situation. The pork, grains, and oilseeds sectors saw fairly good prices in 1996 and 1997. During those years, some cash reserves could have been accumulated or debt paid off. For the most

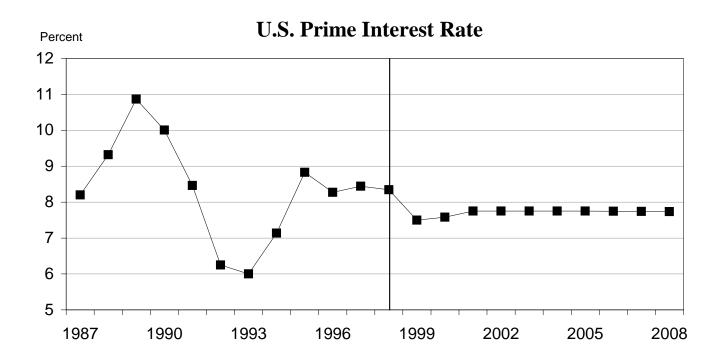
part, that was not the case in 1998. Many of these earlier reserves have likely been used in the last 12 months. Prices remaining at the level suggested in this baseline will likely generate some pressure in the next two years.

While current policies are assumed in this baseline, the European Union is in the midst of developing reforms to the Common Agricultural Policy. While the reforms under discussion at the current time are not expected to significantly impact their export levels in the near term, they could have significant effects on wheat trade in the years to come. The exact provisions of the final agreement will be important.

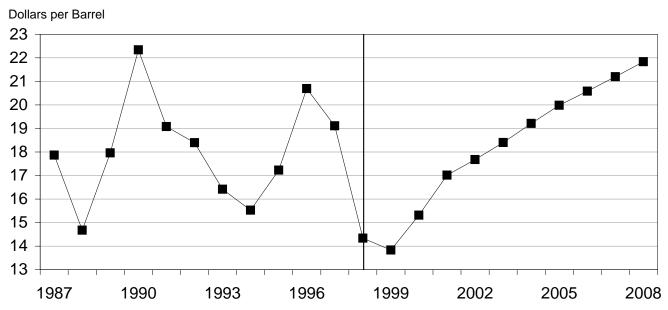
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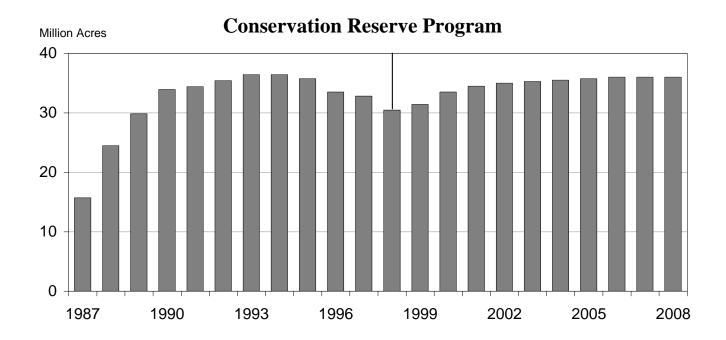


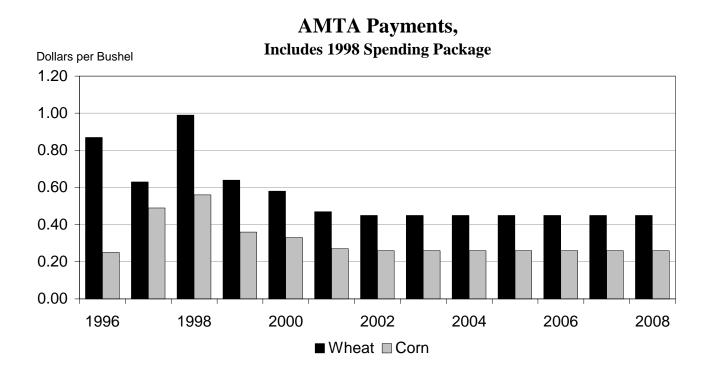


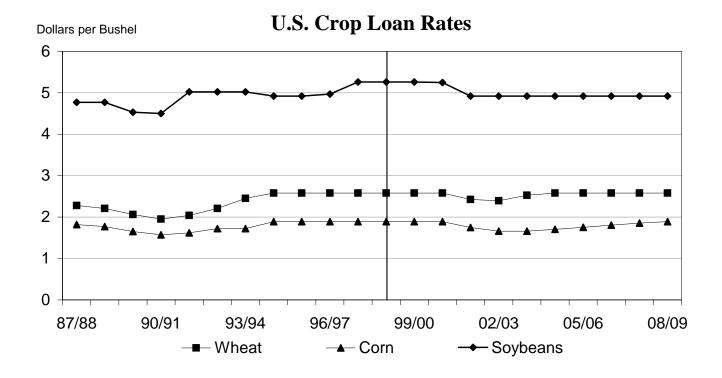


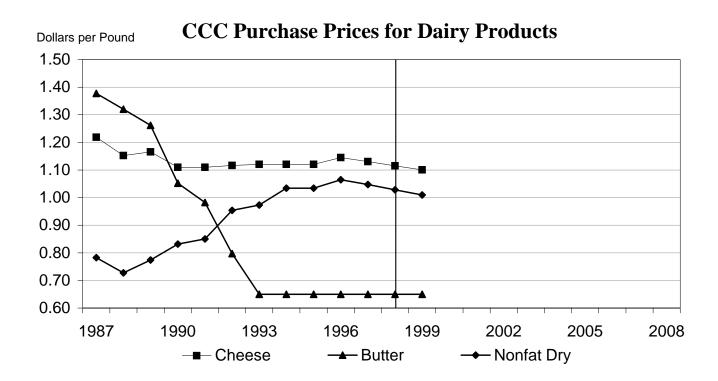
# **Crude Oil, Average Refiner's Acquisition Costs**











### **Macroeconomic Assumptions**

The rate of world economic growth of real GDP is projected to slowdown to 1 percent in 1999 because of negative growth in many Asian and Latin American countries and slower growth in developed countries. As countries recover from crisis, world real GDP growth rate is projected to bounce back to more than 3 percent by 2003, and remain at that level.

The U.S. economy is expected to slow in the short run because of the financial crisis in Asia and Latin America. The strength of the U.S. dollar relative to Asian and Latin American currencies is further weakening U.S. export competitiveness and reducing GDP growth to 2.1 percent in 1999. Currency devaluation in Asia and Latin America will continue over the next two to three years, with the notable exceptions of South Korea and Thailand. Currencies in Europe, Japan, and Canada are expected to strengthen against the U.S. dollar over the 10-year horizon. In the long run, U.S. GDP growth recovers to 2.3 percent as Asia begins to recover. U.S. inflation rates are expected to remain low over the next 10 years, with cheap imports disciplining U.S. prices.

Japan is projected to have negative real GDP growth for 1999. South Korea, is emerging from its financial crisis, and is projected to have 1 percent growth in 1999. In addition to countries directly affected by recent crisis, other major countries such as China, India, and Taiwan area also projected to slowdown significantly in 1999 but without recession.

After 1999, Asian countries are projected to recover to close to the pre-crisis levels by 2003. Chinese real GDP

growth rate is projected to increase from 4.3 percent in 1999 to 7.9 percent by 2002 and then slowly decline, reaching 6.9 percent by 2009. Other Asian countries exhibit similar recovery patterns.

Major Latin American countries (Brazil, Argentina, and Venezuela) will have negative income growth in 1999. The Brazilian economy is affected by its own financial problems, huge government debt, and also its strong ties with Asian economies. Slowdown in Brazil, the largest economy in Latin America, is also projected to impact Argentina because of its dependence on the Brazilian market. Over the long run, Latin American countries recover more vigorously and grow at a stronger rate. For example, Brazil will grow at a rate of around 4.5 percent, and Argentina is projected to grow at a rate close to 6 percent annually.

Many African countries have been spared from the recent slowdown because of their isolation from the rest of world in terms of trade. Many African countries are projected to have strong growth in the next decade. For example, Egypt and South Africa are projected to grow at 5.7 and 3.1 percent, respectively, for most of the projection period.

Many oil exporting countries such as Iran, Saudi Arabia, and Venezuela have also been hit hard in 1998 because of low oil prices. The projected low oil price for 1999 is keeping the economic growth in these countries at very low levels. Over the long run, the real GDP growth in these countries is projected to rise as oil prices recover.

# **Domestic and International Economic Projections**

|  | 1998  | 1999  | 2000  | 2001  | 2002           | 2003                | 2004        | 2005  | 2006  | 2007  | 2008  |
|--|-------|-------|-------|-------|----------------|---------------------|-------------|-------|-------|-------|-------|
| United States                                    |       |       |       |       |                |                     |             |       |       |       |       |
| Real GDP *                                       | 3.7   | 2.3   | 1.7   | 2.2   | (Percer<br>2.2 | ntage Cha<br>2.3    | nge)<br>2.4 | 2.4   | 2.3   | 2.3   | 2.3   |
| Real Cons. Expenditure *                         | 4.8   | 2.8   | 2.1   | 2.4   | 2.2            | 2.2                 | 2.2         | 2.2   | 2.2   | 2.1   | 2.1   |
| CPI, All Urban Consumers *                       | 1.6   | 2.0   | 2.0   | 2.2   | 2.4            | 2.4                 | 2.3         | 2.4   | 2.4   | 2.4   | 2.4   |
| PPI, All Commodities *                           | -2.3  | -0.7  | 1.3   | 1.9   | 1.9            | 2.1                 | 1.8         | 1.8   | 1.8   | 1.9   | 1.9   |
| Unemployment Rate                                | 4.5   | 4.6   | 4.7   | 4.7   | 5.0            | 5.0                 | 4.9         | 4.8   | 5.0   | 5.1   | 5.0   |
| 3-Month Treasury Bill Rate                       | 4.7   | 4.0   | 4.4   | 4.5   | 4.5            | 4.5                 | 4.5         | 4.5   | 4.5   | 4.4   | 4.3   |
| Moody's AAA Corp. Rate                           | 6.5   | 6.4   | 6.7   | 6.7   | 6.6            | 6.6                 | 6.6         | 6.5   | 6.4   | 6.4   | 6.4   |
| Avg. Hourly Earnings Food and Kindred Products * | 2.9   | 2.5   | 2.8   | 3.4   | 3.0            | 2.6                 | 3.0         | 2.9   | 2.8   | 2.7   | 2.7   |
|  | 2.9   | 2.0   | 2.0   | 5.4   |                |                     |             | 2.9   | 2.0   | 2.1   | 2.1   |
| Federal Budget Deficit Unified Budget Basis      | -88.8 | -88.9 | -55.2 | -41.6 | -39.3          | U.S. Dolla<br>-16.2 | -1.6        | 17.9  | 53.9  | 79.1  | 92.7  |
| Current Account Deficit                          | 224.4 | 276.3 | 296.7 | 306.1 | 301.2          | 282.5               | 263.0       | 240.1 | 214.4 | 188.2 | 162.3 |
|  |       |       |       |       | ,              | llars per B         | ,           |       |       |       |       |
| Refiners Cost of Oil                             | 14.3  | 13.8  | 15.3  | 17.0  | 17.7           | 18.4                | 19.2        | 20.0  | 20.6  | 21.2  | 21.8  |
| International Real GDP *                         |       |       |       |       | (D             | -4 Ob               |             |       |       |       |       |
| Argentina  | 4.9   | -1.5  | 3.1   | 5.7   | (Percer 5.4    | ntage Cha<br>5.6    | nge)<br>6.0 | 6.1   | 6.0   | 5.9   | 5.7   |
| Brazil   | 0.2   | -2.0  | 2.4   | 4.0   | 5.2            | 4.8                 | 4.7         | 4.7   | 4.7   | 5.0   | 4.4   |
| Canada   | 3.0   | 2.2   | 2.0   | 3.8   | 3.7            | 3.6                 | 3.5         | 3.4   | 3.3   | 3.3   | 3.3   |
| Australia  | 4.0   | 2.4   | 2.9   | 1.7   | 1.8            | 2.0                 | 2.1         | 2.2   | 2.3   | 2.4   | 2.5   |
| Thailand   | -8.5  | -2.3  | 4.8   | 6.6   | 7.7            | 7.3                 | 6.6         | 6.4   | 6.2   | 6.0   | 5.8   |
| Japan  | -3.6  | -3.2  | -0.4  | 0.9   | 1.8            | 3.0                 | 3.2         | 2.5   | 2.5   | 2.6   | 2.4   |
| European Union                                   | 2.7   | 2.4   | 2.6   | 2.6   | 2.5            | 2.5                 | 2.5         | 2.5   | 2.5   | 2.5   | 2.5   |
| South Korea                                      | -6.7  | 1.0   | 4.2   | 6.1   | 6.7            | 6.6                 | 6.1         | 6.0   | 5.9   | 5.9   | 5.8   |
| Taiwan   | 3.8   | 1.0   | 4.4   | 4.7   | 5.6            | 5.7                 | 5.9         | 5.7   | 5.6   | 5.5   | 5.5   |
| Local Currency per U.S. Dollar *                 |       |       |       |       |                |                     |             |       |       |       |       |
| Argentina  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0            | 0.0                 | 0.0         | 0.0   | 0.0   | 0.0   | 0.0   |
| Brazil   | 8.3   | 18.3  | 10.9  | 2.5   | 4.0            | 3.9                 | 3.0         | 2.8   | 2.8   | 2.8   | 2.5   |
| Canada   | 10.3  | -0.8  | -0.3  | -0.3  | -0.3           | -0.3                | -0.3        | -0.3  | -0.3  | -0.3  | -0.3  |
| Australia  | 19.0  | -3.5  | -2.5  | -1.0  | 0.5            | 0.5                 | 0.5         | 0.5   | 0.5   | 0.5   | 0.5   |
| Thailand   | 48.6  | 1.2   | -3.5  | -2.7  | -0.6           | 0.5                 | 0.5         | 0.5   | 0.5   | 0.4   | 0.3   |
| Japan  | 10.9  | -4.6  | -1.6  | -2.4  | -1.9           | -2.3                | -2.3        | -2.2  | -2.1  | -2.0  | -2.5  |
| European Union                                   | 2.5   | -4.2  | -1.8  | -1.0  | -0.5           | -0.2                | -0.3        | -0.2  | -0.2  | -0.2  | -0.2  |
| South Korea                                      | 56.8  | 3.5   | -10.3 | -4.7  | 2.6            | 2.2                 | 2.1         | 1.8   | 1.6   | 1.4   | 1.3   |
| Taiwan   | 20.0  | 10.9  | 4.5   | -4.5  | -5.7           | -2.6                | -2.3        | -2.1  | -2.0  | -1.9  | -1.8  |

\* Percentage change from preceding year.

Source: The WEFA Group, First Quarter 1999; Project Link, November 1998; and Standard & Poor's DRI Projections after 2003 are FAPRI estimates.

## U.S. and World Policy Assumptions

FAPRI projections incorporate provisions of the FAIR Act of 1996, which are assumed to be extended indefinitely. The projections also incorporate requirements of both NAFTA and GATT.

Contract payments and marketing loan rates for food grains, feed grains, oilseeds, and cotton are calculated according to the formulas set forth in the FAIR Act. The loan rate for sugar cane is set at \$0.18 per pound of raw sugar, and the rate for sugar beets is set at \$0.23 per pound on a refined sugar basis. As mandated by the FAIR Act, the loan rate for peanuts is fixed at \$0.305 per pound.

As legislated by the FAIR Act, U.S. dairy policy will undergo a number changes in the coming years. These include the phasing down of milk support price from \$10.20 per cwt in 1997 to \$9.90 per cwt in 1999, with corresponding reductions in support prices for butter, cheese, and nonfat dry milk. It also includes the elimination of government purchases of dairy products beginning in 2000 and the elimination of producer assessments. In addition DEIP exports will be maintained at WTO maximum levels throughout the period. The baseline does not assume policy changes associated with reform of the federal milk marketing order system.

CRP is continued in the current FAPRI projections, with some contracts allowed to expire, other contracts re-enrolled, and new contracts allowed by the Secretary of Agriculture. After a decline in 1998, the ability to write new contracts pushes the total number of acres upwards, exceeding 36 million acres by the end of the baseline period.

The FAIR Act legislates maximum spending under the Export Enhancement Program (EEP) and the Market Access Program (MAP). MAP is assumed to operate at the maximum allowed level of \$90 million per year, and

EEP is not assumed to be used during the projection period. The baseline also incorporates the provisions of the emergency spending package passed by Congress in 1998, as direct payments and disaster assistance affect farm income in both 1998 and 1999.

The proposed Agenda 2000 and the EU enlargement are not included in this baseline. Set-aside, already announced as 10 percent in 1999/00, is assumed to increase to 15 percent by 2008/09 in response to growing intervention stock. Cereal intervention prices and compensatory payments are assumed to remain at 119 and 54 ECUs per mt, respectively. Similarly, the beef support price and pig meat basic prices are assumed to remain at 3,475 and 1,509 ECUs per mt, respectively.

Japan is assumed to comply with import access commitments according to GATT requirements. No tariffication of rice trade is included in the baseline. Continued tariff reduction for beef is in place. Similarly, South Korea is assumed to comply with its import access commitments

The baseline assumes no new accession to the WTO during the projection period, including the case of the FSU, China, or Taiwan.

Unilateral liberalization has been incorporated for a number of countries. Examples include the elimination of the wheat and corn board, and wheat import liberalization in South Africa; import liberalization for wheat in Morocco and Indonesia; and import and export liberalization for crops in India (flour millers are allowed to import wheat, and feed manufacturers are allowed to import corn).

In the FSU, the transformation of market economies is assumed to continue. Price liberalization is assumed to proceed during the next several years.

**U.S. Program Provisions** 

|                      | 98/99                            | 99/00   | 00/01 | 01/02      | 02/03       | 03/04            | 04/05              | 05/06 | 06/07 | 07/08 | 08/09 |  |  |  |  |
|----------------------|----------------------------------|---|-------|------------|-------------|------------------|--------------------|-------|-------|-------|-------|--|--|--|--|
| Contract Payments    |                                  |   |       |            | (U.S. Do    | llars per B      | Sushel)            |       |       |       |       |  |  |  |  |
| Corn                 | 0.56                             | 0.36  | 0.33  | 0.27       | 0.26        | 0.26             | 0.26               | 0.26  | 0.26  | 0.26  | 0.26  |  |  |  |  |
| Sorghum              | 0.67                             | 0.44  | 0.40  | 0.32       | 0.31        | 0.31             | 0.31               | 0.31  | 0.31  | 0.31  | 0.31  |  |  |  |  |
| Barley               | 0.42                             | 0.27  | 0.25  | 0.20       | 0.19        | 0.19             | 0.19               | 0.19  | 0.19  | 0.19  | 0.19  |  |  |  |  |
| Oats                 | 0.05                             | 0.03  | 0.03  | 0.02       | 0.02        | 0.02             | 0.02               | 0.02  | 0.02  | 0.02  | 0.02  |  |  |  |  |
| Wheat                | 0.99                             | 0.64  | 0.58  | 0.47       | 0.45        | 0.45             | 0.45               | 0.45  | 0.45  | 0.45  | 0.45  |  |  |  |  |
|                      |                                  | (U.S. Dollars per Hundredweight)  |       |            |             |                  |                    |       |       |       |       |  |  |  |  |
| Rice                 | 4.35                             | 2.82  | 2.60  | 2.11       | 2.04        | 2.04             | 2.04               | 2.04  | 2.04  | 2.04  | 2.04  |  |  |  |  |
|                      |                                  |   |       |            | (U.S. Do    | llars per F      | ound)              |       |       |       |       |  |  |  |  |
| Cotton               | 0.122                            | 0.079   | 0.071 | 0.057      | 0.055       | 0.055            | 0.055              | 0.055 | 0.055 | 0.055 | 0.055 |  |  |  |  |
| Loan Rates           |                                  | (U.S. Dollars per Bushel)<br>1.89 1.89 1.89 1.75 1.66 1.66 1.70 1.75 1.80 1.85 1.89 |       |            |             |                  |                    |       |       |       |       |  |  |  |  |
| Corn                 | 1.89                             | 1.89  | 1.89  | 1.75       |             |                  |                    | 1.75  | 1.80  | 1.85  | 1.89  |  |  |  |  |
| Sorghum              | 1.74                             | 1.74  | 1.74  | 1.61       | 1.53        | 1.53             | 1.57               | 1.61  | 1.66  | 1.70  | 1.74  |  |  |  |  |
| Barley               | 1.56                             | 1.56  | 1.56  | 1.44       | 1.37        | 1.37             | 1.41               | 1.45  | 1.49  | 1.53  | 1.56  |  |  |  |  |
| Oats                 | 1.11                             | 1.11  | 1.11  | 1.03       | 0.97        | 0.97             | 1.00               | 1.03  | 1.06  | 1.09  | 1.11  |  |  |  |  |
| Soybeans             | 5.26                             | 5.26  | 5.25  | 4.92       | 4.92        | 4.92             | 4.92               | 4.92  | 4.92  | 4.92  | 4.92  |  |  |  |  |
| Wheat                | 2.58                             | 2.58  | 2.58  | 2.43       | 2.39        | 2.53             | 2.58               | 2.58  | 2.58  | 2.58  | 2.58  |  |  |  |  |
|                      | (U.S. Dollars per Hundredweight) |   |       |            |             |                  |                    |       |       |       |       |  |  |  |  |
| Rice                 | 6.50                             | 6.50  | 6.50  | 6.50       | 6.50        | 6.50             | 6.50               | 6.50  | 6.50  | 6.50  | 6.50  |  |  |  |  |
|                      | (U.S. Dollars per Pound)         |   |       |            |             |                  |                    |       |       |       |       |  |  |  |  |
| Cotton               | 0.519                            | 0.519   | 0.519 | 0.516      | 0.500       | 0.500            | 0.500              | 0.500 | 0.511 | 0.519 | 0.519 |  |  |  |  |
| Peanuts              | 0.305                            | 0.305   | 0.305 | 0.305      | 0.305       | 0.305            | 0.305              | 0.305 | 0.305 | 0.305 | 0.305 |  |  |  |  |
|                      |                                  |   |       |            | (U.S. Ce    | ents per P       | ound)              |       |       |       |       |  |  |  |  |
| Sugarcane            | 18.00                            | 18.00   | 18.00 | 18.00      | 18.00       | 18.00            | 18.00              | 18.00 | 18.00 | 18.00 | 18.00 |  |  |  |  |
|                      |                                  |   |       |            | (Mi         | llion Acres      | s)                 |       |       |       |       |  |  |  |  |
| Conservation Reserve | 30.5                             | 31.4  | 33.5  | 34.5       | 35.0        | 35.3             | 35.5               | 35.8  | 36.0  | 36.0  | 36.0  |  |  |  |  |
|                      | 1998                             | 1999  | 2000  | 2001       | 2002        | 2003             | 2004               | 2005  | 2006  | 2007  | 2008  |  |  |  |  |
| Milk Support Price   | 10.05                            | 9.90  | 0.00  | (U<br>0.00 | .S. Dollars | per Hund<br>0.00 | redweight)<br>0.00 | 0.00  | 0.00  | 0.00  | 0.00  |  |  |  |  |

# **Agricultural Policy Assumptions for Crops**

|                               | 98/99    | 99/00    | 00/01    | 01/02     | 02/03      | 03/04         | 04/05      | 05/06     | 06/07     | 07/08     | 08/09     |
|-------------------------------|----------|----------|----------|-----------|------------|---------------|------------|-----------|-----------|-----------|-----------|
| European Union                |          |          |          |           |            |               |            |           |           |           |           |
| Policy Prices                 |          |          |          |           | (ECUs      | per Metric    | Ton)       |           |           |           |           |
| Cereal Intervention           | 119.2    | 119.2    | 119.2    | 119.2     | 119.2      | 119.2         | 119.2      | 119.2     | 119.2     | 119.2     | 119.2     |
| Rice Intervention             | 316.0    | 298.0    | 298.0    | 298.0     | 298.0      | 298.0         | 298.0      | 298.0     | 298.0     | 298.0     | 298.0     |
| Oilseed Reference Price       | 196.0    | 196.0    | 196.0    | 196.0     | 196.0      | 196.0         | 196.0      | 196.0     | 196.0     | 196.0     | 196.0     |
| White Sugar Intervention      | 632.0    | 632.0    | 632.0    | 632.0     | 632.0      | 632.0         | 632.0      | 632.0     | 632.0     | 632.0     | 632.0     |
| Raw Sugar Intervention        | 467.0    | 467.0    | 467.0    | 467.0     | 467.0      | 467.0         | 467.0      | 467.0     | 467.0     | 467.0     | 467.0     |
| A Beet Minimum                | 46.0     | 46.0     | 46.0     | 46.0      | 46.0       | 46.0          | 46.0       | 46.0      | 46.0      | 46.0      | 46.0      |
| B Beet Minimum                | 32.0     | 32.0     | 32.0     | 32.0      | 32.0       | 32.0          | 32.0       | 32.0      | 32.0      | 32.0      | 32.0      |
| Grains Compensatory Payment   | 54.3     | 54.3     | 54.3     | 54.3      | 54.3       | 54.3          | 54.3       | 54.3      | 54.3      | 54.3      | 54.3      |
| Subsidized Export Limits      |          |          |          |           | •          | n Metric To   | •          |           |           |           |           |
| Wheat                         | 19.2     | 18.0     | 16.8     | 15.6      | 14.4       | 14.4          | 14.4       | 14.4      | 14.4      | 14.4      | 14.4      |
| Coarse Grains                 | 13.1     | 12.6     | 12.0     | 11.4      | 10.8       | 10.8          | 10.8       | 10.8      | 10.8      | 10.8      | 10.8      |
| Production Aid                |          |          |          |           | (ECUs      | per Hect      | are)       |           |           |           |           |
| Oilseeds                      | 468      | 468      | 468      | 468       | 468        | 468           | 468        | 468       | 468       | 468       | 468       |
|                               |          |          |          |           | (Thous     | and Hecta     | ares)      |           |           |           |           |
| Oilseed Base Area             | 5,482    | 5,482    | 5,482    | 5,482     | 5,482      | 5,482         | 5,482      | 5,482     | 5,482     | 5,482     | 5,482     |
| Set-aside Rate *              |          |          |          |           | (          | Percent)      |            |           |           |           |           |
| Grains, Protein Crops         | 5        | 10       | 10       | 10        | 12         | 12            | 12         | 15        | 15        | 15        | 15        |
| Oilseeds                      | 10       | 10       | 10       | 10        | 10         | 10            | 10         | 10        | 10        | 10        | 10        |
| Japan                         |          |          |          |           |            |               |            |           |           |           |           |
| Policy Prices                 |          |          |          |           | housand `  | •             |            |           |           |           |           |
| Wheat Purchase                | 149.3    | 149.3    | 149.3    | 149.3     | 149.3      | 149.3         | 149.3      | 149.3     | 149.3     | 149.3     | 149.3     |
| Wheat Resale (Dom. Prod.)     | 41.8     | 41.8     | 41.8     | 41.8      | 41.8       | 41.8          | 41.8       | 41.8      | 41.8      | 41.8      | 41.8      |
| Barley Purchase               | 130.8    | 130.8    | 130.8    | 130.8     | 130.8      | 130.8         | 130.8      | 130.8     | 130.8     | 130.8     | 130.8     |
| Barley Resale (Dom. Prod.)    | 35.3     | 35.3     | 35.3     | 35.3      | 35.3       | 35.3          | 35.3       | 35.3      | 35.3      | 35.3      | 35.3      |
| Rice Purchase                 | 263.4    | 258.8    | 258.8    | 258.8     | 258.8      | 258.8         | 258.8      | 258.8     | 258.8     | 258.8     | 258.8     |
| Rice Resale (Dom. Prod.)      | 294.1    | 294.1    | 294.1    | 294.1     | 294.1      | 294.1         | 294.1      | 294.1     | 294.1     | 294.1     | 294.1     |
| Min. Import Access Commitment |          |          |          |           | •          | nd Metric     |            |           |           |           |           |
| Rice                          | 607      | 683      | 758      | 758       | 758        | 758           | 758        | 758       | 758       | 758       | 758       |
| South Korea                   |          |          |          |           |            |               |            |           |           |           |           |
| Min. Import Access Commitment |          |          |          |           |            |               |            |           |           |           |           |
| Rice                          | 125      | 103      | 103      | 128       | 154        | 180           | 205        | 205       | 205       | 205       | 205       |
| Corn                          | 6,100    | 6,100    | 6,100    | 6,100     | 6,100      | 6,100         | 6,100      | 6,100     | 6,100     | 6,100     | 6,100     |
| United States                 |          |          |          | ,         | O D-II-    |               | ···        |           |           |           |           |
| Policy Prices                 | 74       | 7.4      | 7.4      | ,         | U.S. Dolla | •             |            | 00        | 74        | 70        | 74        |
| Corn Loan                     | 74       | 74<br>05 | 74       | 69        | 65         | 65            | 67         | 69        | 71        | 73        | 74        |
| Wheat Loan                    | 95<br>72 | 95<br>72 | 95<br>72 | 89        | 88         | 93            | 95<br>65   | 95<br>67  | 95<br>69  | 95<br>70  | 95        |
| Barley Loan<br>Rice Loan      | 143      | 143      | 143      | 66<br>143 | 63<br>143  | 63<br>143     | 65<br>143  | 67<br>143 | 68<br>143 | 70<br>143 | 72<br>143 |
| Cotton Loan                   | 1,144    | 1,144    | 1,144    | 1,138     | 1,102      | 1,102         | 1,102      | 1,102     | 1,127     | 1,144     | 1,144     |
| Soybean Loan                  | 1,144    | 1,144    | 1,144    | 1,136     | 1,102      | 1,102         | 181        | 1,102     | 1,127     | 181       | 1,144     |
| Cane Loan                     | 397      | 397      | 397      | 397       | 397        | 397           | 397        | 397       | 397       | 397       | 397       |
| Export Enhancement Program    |          |          |          |           |            |               | scal Year) |           |           |           |           |
| Program Expenditure           | 0        | 0        | 0        | 0         | 0          | 0 (Dollars, F | 0          | 0         | 0         | 0         | 0         |
| Wheat                         | 0        | 0        | 0        | 0         | 0          | 0             | 0          | 0         | 0         | 0         | 0         |
| Barley                        | 0        | 0        | 0        | 0         | 0          | 0             | 0          | 0         | 0         | 0         | 0         |
| •                             |          |          |          |           |            | on Hectare    |            |           |           |           |           |
| Conservation Reserve Program  | 12.3     | 12.7     | 13.6     | 14.0      | 14.2       | 14.3          | 14.4       | 14.5      | 14.6      | 14.6      | 14.6      |

<sup>\*</sup> Average set-aside prior to exemption for small farms.

# **Agricultural Policy Assumptions for Livestock**

|                                    | 1998    | 1999    | 2000    | 2001    | 2002     | 2003        | 2004      | 2005    | 2006    | 2007    | 2008    |
|------------------------------------|---------|---------|---------|---------|----------|-------------|-----------|---------|---------|---------|---------|
| European Union                     |         |         |         |         |          |             |           |         |         |         |         |
| Policy Prices                      |         |         |         |         | (ECUs    | per Metri   | c Ton)    |         |         |         |         |
| Beef Intervention                  | 3,475   | 3,475   | 3,475   | 3,475   | 3,475    | 3,475       | 3,475     | 3,475   | 3,475   | 3,475   | 3,475   |
| Pork Basic                         | 1,510   | 1,510   | 1,510   | 1,510   | 1,510    | 1,510       | 1,510     | 1,510   | 1,510   | 1,510   | 1,510   |
| Intervention Purchase Limits       |         |         |         |         | (Thous   | and Metric  | Tons)     |         |         |         |         |
| Beef                               | 350     | 350     | 350     | 350     | 350      | 350         | 350       | 350     | 350     | 350     | 350     |
| GATT Maximum<br>Subsidized Exports |         |         |         |         |          |             |           |         |         |         |         |
| Beef                               | 948     | 885     | 822     | 822     | 822      | 822         | 822       | 822     | 822     | 822     | 822     |
| Pork                               | 483     | 463     | 444     | 444     | 444      | 444         | 444       | 444     | 444     | 444     | 444     |
| Poultry                            | 345     | 316     | 286     | 286     | 286      | 286         | 286       | 286     | 286     | 286     | 286     |
| ,                                  |         |         |         |         | /A 4:11: |             | - \       |         |         |         |         |
| Mills Delivery Overtor F 15        | 117 150 | 117 150 | 117 150 | 117 150 |          | on Metric T |           | 117,450 | 117 150 | 117 150 | 117 150 |
| Milk Delivery Quota: E-15          | 117,450 | 117,450 | 117,450 | 117,450 | 117,450  | 117,450     | 117,450   | 117,450 | 117,450 | 117,450 | 117,450 |
|                                    |         |         |         |         | (ECU     | per Metric  | Ton)      |         |         |         |         |
| Target Price for Milk              | 307     | 307     | 307     | 307     | 307      | 307         | 307       | 307     | 307     | 307     | 307     |
| Intervention Price for Butter      | 3,282   | 3,282   | 3,282   | 3,282   | 3,282    | 3,282       | 3,282     | 3,282   | 3,282   | 3,282   | 3,282   |
| Intervention Price for SMP         | 2,055   | 2,055   | 2,055   | 2,055   | 2,055    | 2,055       | 2,055     | 2,055   | 2,055   | 2,055   | 2,055   |
| SMP Feed Subsidy                   | 75      | 75      | 75      | 75      | 75       | 75          | 75        | 75      | 75      | 75      | 75      |
| GATT Maximum                       |         |         |         |         |          |             |           |         |         |         |         |
| Subsidized Exports                 |         |         |         |         | ,        | and Metric  | : Tons)   |         |         |         |         |
| Butter                             | 444     | 426     | 408     | 399     | 399      | 399         | 399       | 399     | 399     | 399     | 399     |
| SMP                                | 304     | 292     | 279     | 273     | 273      | 273         | 273       | 273     | 273     | 273     | 273     |
| Cheese                             | 374     | 353     | 332     | 321     | 321      | 321         | 321       | 321     | 321     | 321     | 321     |
| Other Milk Products                | 1,072   | 1,026   | 981     | 958     | 958      | 958         | 958       | 958     | 958     | 958     | 958     |
| Canada                             |         |         |         |         | (Canadia | an Cents p  | er Liter) |         |         |         |         |
| Target Price for Industrial Milk   | 56      | 57      | 57      | 57      | 58       | 58          | 59        | 60      | 61      | 63      | 64      |
|                                    |         |         |         |         | (Canadia | an Dollars  | per Kg)   |         |         |         |         |
| Support Price, Butter              | 5       | 5       | 5       | 5       | 5        | 5           | 5         | 6       | 6       | 6       | 6       |
| Support Price, NFD                 | 4       | 5       | 5       | 5       | 5        | 5           | 5         | 5       | 5       | 6       | 6       |

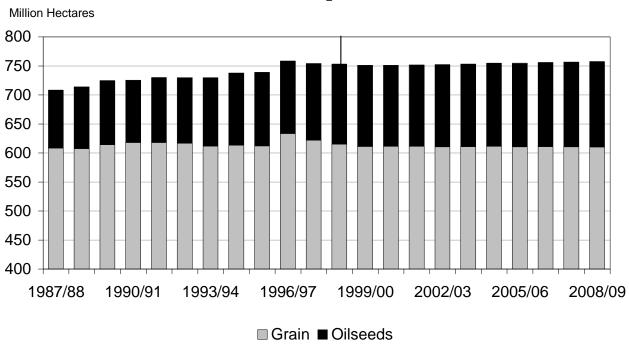
# **Policy Prices and World Prices, by Commodity**

|                            | 98/99 | 99/00 | 00/01 | 01/02    | 02/03        | 03/04       | 04/05     | 05/06 | 06/07 | 07/08 | 08/09 |
|----------------------------|-------|-------|-------|----------|--------------|-------------|-----------|-------|-------|-------|-------|
| Wheat                      |       |       |       | (U.S. Do | ollars per M | letric Ton, | Marketing | Year) |       |       |       |
| EU Intervention            | 140   | 142   | 143   | 143      | 144          | 144         | 144       | 144   | 145   | 145   | 145   |
| FOB U.S. Gulf              | 121   | 135   | 142   | 146      | 150          | 155         | 159       | 163   | 164   | 165   | 167   |
| Canadian Thunder Bay       | 132   | 148   | 156   | 161      | 165          | 171         | 175       | 180   | 181   | 183   | 185   |
| Australian Wheat Board     | 120   | 134   | 141   | 145      | 149          | 154         | 157       | 161   | 162   | 164   | 165   |
| Barley                     |       |       |       |          |              |             |           |       |       |       |       |
| EU Intervention            | 140   | 142   | 143   | 143      | 144          | 144         | 144       | 144   | 145   | 145   | 145   |
| FOB U.S. Pacific Northwest | 108   | 110   | 111   | 113      | 116          | 119         | 121       | 123   | 124   | 126   | 129   |
| Corn                       |       |       |       |          |              |             |           |       |       |       |       |
| EU Intervention            | 140   | 142   | 143   | 143      | 144          | 144         | 144       | 144   | 145   | 145   | 145   |
| FOB U.S. Gulf              | 94    | 97    | 99    | 101      | 104          | 107         | 109       | 111   | 113   | 115   | 118   |
| Rice                       |       |       |       |          |              |             |           |       |       |       |       |
| FOB Bangkok 5% Parboiled   | 295   | 295   | 297   | 302      | 305          | 311         | 314       | 320   | 323   | 326   | 330   |
| Soybeans                   |       |       |       |          |              |             |           |       |       |       |       |
| U.S. Loan Rate             | 193   | 193   | 193   | 181      | 181          | 181         | 181       | 181   | 181   | 181   | 181   |
| FOB U.S. Gulf              | 213   | 203   | 207   | 212      | 215          | 216         | 220       | 222   | 226   | 227   | 232   |
| Rapeseed                   |       |       |       |          |              |             |           |       |       |       |       |
| EU Oilseeds Reference      | 303   | 290   | 319   | 313      | 310          | 331         | 342       | 337   | 439   | 440   | 407   |
| Cash Vancouver             | 253   | 235   | 238   | 242      | 245          | 246         | 250       | 251   | 255   | 256   | 256   |
| Cotton                     |       |       |       |          |              |             |           |       |       |       |       |
| Cotlook A Index            | 1,278 | 1,231 | 1,218 | 1,280    | 1,356        | 1,419       | 1,471     | 1,521 | 1,565 | 1,604 | 1,632 |

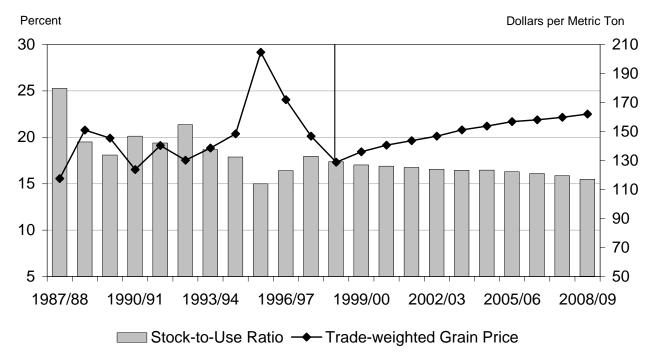
# **Policy Prices and World Prices, by Commodity (continued)**

|   | 1998           | 1999           | 2000           | 2001           | 2002           | 2003           | 2004           | 2005           | 2006           | 2007           | 2008           |
|---|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Beef                                      |                |                |                |                | (U.S. Doll     | ars per Me     | etric Ton)     |                |                |                |                |
| EU Intervention Japanese Wholesale        | 3,853          | 4,021          | 4,095          | 4,137          | 4,157          | 4,166          | 4,178          | 4,187          | 4,195          | 4,203          | 4,212          |
| Dairy beef                                | 6,485          | 6,259          | 6,561          | 6,865          | 7,142          | 7,346          | 7,697          | 7,905          | 8,128          | 8,484          | 8,983          |
| Wagyu beef                                | 14,466         | 14,777         | 14,711         | 15,021         | 15,248         | 15,475         | 16,066         | 16,299         | 16,651         | 17,230         | 18,099         |
| Nebraska Direct                           | ,              | ,              | ,              | .0,02.         | .0,2.0         | .0, 0          | .0,000         | .0,200         | . 0,00         | ,200           | .0,000         |
| Fed Steer Price                           | 1,355          | 1,449          | 1,528          | 1,605          | 1,665          | 1,644          | 1,613          | 1,563          | 1,530          | 1,569          | 1,644          |
| U.S. Retail                               | 6,107          | 6,261          | 6,415          | 6,570          | 6,680          | 6,680          | 6,680          | 6,614          | 6,614          | 6,658          | 6,790          |
| Pork                                      |                |                |                |                |                |                |                |                |                |                |                |
| EU Basic                                  | 1,674          | 1,747          | 1,779          | 1,797          | 1,806          | 1,810          | 1,816          | 1,819          | 1,823          | 1,826          | 1,830          |
| Japanese Wholesale                        | 3,441          | 3,637          | 3,879          | 4,025          | 4,122          | 4,034          | 4,435          | 4,602          | 4,673          | 4,721          | 5,039          |
| U.S. Barrows, Gilts                       | 700            | 781            | 937            | 980            | 958            | 805            | 922            | 994            | 938            | 864            | 920            |
| U.S. Retail                               | 5,049          | 5,071          | 5,247          | 5,335          | 5,313          | 5,181          | 5,247          | 5,313          | 5,291          | 5,181          | 5,203          |
| Broilers                                  |                |                |                |                |                |                |                |                |                |                |                |
| EU Producer                               | 1,369          | 1,331          | 1,359          | 1,405          | 1,444          | 1,481          | 1,519          | 1,555          | 1,593          | 1,633          | 1,672          |
| Japanese Wholesale                        | 2,001          | 1,937          | 1,961          | 2,057          | 2,128          | 2,207          | 2,292          | 2,359          | 2,426          | 2,512          | 2,625          |
| U.S. 12-City Wholesale                    | 1,391          | 1,310          | 1,242          | 1,258          | 1,252          | 1,256          | 1,253          | 1,248          | 1,240          | 1,239          | 1,254          |
| U.S. Retail                               | 3,401          | 3,321          | 3,284          | 3,278          | 3,311          | 3,356          | 3,384          | 3,399          | 3,395          | 3,403          | 3,446          |
| Butter                                    |                |                |                |                |                |                |                |                |                |                |                |
| EU Intervention                           | 3,639          | 3,798          | 3,868          | 3,907          | 3,926          | 3,934          | 3,946          | 3,954          | 3,962          | 3,970          | 3,978          |
| U.S. CCC Purchase                         | 1,433          | 1,433          | 0              | 0              | 0              | 0              | 0              | 0              | 0              | 0              | 0              |
| U.S. Wholesale                            | 3,926          | 3,254          | 2,934          | 2,751          | 2,711          | 2,763          | 2,809          | 2,783          | 2,814          | 2,855          | 2,899          |
| FOB Northern Europe                       | 1,853          | 1,798          | 1,761          | 1,778          | 1,801          | 1,826          | 1,848          | 1,875          | 1,886          | 1,882          | 1,875          |
| Canadian Support                          | 3,531          | 3,608          | 3,623          | 3,637          | 3,651          | 3,665          | 3,680          | 3,694          | 3,708          | 3,723          | 3,737          |
| Canadian Retail                           | 4,201          | 4,294          | 4,311          | 4,328          | 4,345          | 4,362          | 4,379          | 4,397          | 4,414          | 4,431          | 4,449          |
| Australian Export                         | 1,571          | 1,516          | 1,479          | 1,496          | 1,519          | 1,544          | 1,566          | 1,594          | 1,604          | 1,600          | 1,593          |
| Nonfat Dry Milk                           | 0.070          | 0.070          | 0.400          | 0.440          | 0.450          | 0.404          | 0.474          | 0.470          | 0.404          | 0.400          | 0.404          |
| EU Intervention                           | 2,278          | 2,378          | 2,422          | 2,446          | 2,459          | 2,464          | 2,471          | 2,476          | 2,481          | 2,486          | 2,491          |
| U.S. CCC Purchase                         | 2,266          | 2,225          | 0              | 1.056          | 1 003          | 0              | 0              | 1 000          | 1 006          | 0              | 0              |
| U.S. Wholesale                            | 2,407          | 2,258          | 1,976          | 1,956          | 1,983          | 2,000          | 2,002          | 1,988          | 1,996          | 2,026          | 2,064          |
| FOB Northern Europe Canadian Support      | 1,453          | 1,260          | 1,289          | 1,413          | 1,460          | 1,486          | 1,518          | 1,540          | 1,568          | 1,604          | 1,640<br>3,832 |
| Canadian Retail                           | 2,901<br>6,601 | 2,987<br>6,845 | 3,070<br>7,097 | 3,157<br>7,356 | 3,245<br>7,622 | 3,337<br>7,896 | 3,430<br>8,177 | 3,527<br>8,467 | 3,626<br>8,765 | 3,727<br>9,072 | 9,388          |
| Australian Export                         | 1,560          | 1,367          | 1,396          | 1,520          | 1,567          | 1,593          | 1,625          | 1,647          | 1,675          | 1,711          | 1,747          |
| •   | 1,000          | 1,007          | 1,000          | 1,020          | 1,001          | 1,000          | 1,020          | 1,011          | 1,070          | .,             | .,, .,         |
| Cheese U.S. CCC Purchase                  | 2,459          | 0.406          | 0              | 0              | 0              | 0              | 0              | 0              | 0              | 0              | 0              |
|   |                | 2,426          |                |                |                |                |                | 2,933          |                |                |                |
| U.S. Wholesale                            | 3,397<br>2,225 | 2,980          | 2,920          | 2,921<br>2,436 | 2,936          | 2,948          | 2,942          | ,              | 2,922<br>2,471 | 2,906          | 2,888<br>2,488 |
| FOB Northern Europe<br>Canadian Wholesale | 5,290          | 2,316<br>5,475 | 2,351<br>5,581 | 2,430<br>5,714 | 2,443<br>5,848 | 2,448<br>5,983 | 2,463<br>6,177 | 2,469<br>6,383 | 6,593          | 2,485<br>6,809 | 7,032          |
| Canadian Retail                           | 7,985          | 8,264          | 8,424          | 8,623          | 8,825          | 9,029          | 9,320          | 9,629          | 9,945          | 10,270         | 10,604         |
| Australian Export                         | 2,473          | 2,564          | 2,599          | 2,684          | 2,691          | 2,696          | 2,711          | 2,717          | 2,719          | 2,733          | 2,736          |
| •   | _,             | _,             | _,             | _,             | _,             | _,,            | _,             | _,             | _,             | _,             | _,             |
| Milk<br>EU Target                         | 340            | 355            | 362            | 365            | 367            | 368            | 369            | 370            | 370            | 371            | 372            |
| U.S. Support                              | 222            | 218            | 0              | 0              | 0              | 0              | 0              | 0              | 0              | 0              | 0              |
| U.S. Farm                                 | 313            | 270            | 265            | 265            | 266            | 268            | 267            | 266            | 265            | 263            | 261            |
| Canadian Target, Industrial               | 37             | 38             | 38             | 38             | 38             | 39             | 40             | 41             | 41             | 42             | 43             |
| Canadian Fluid Milk, Ontario              | 40             | 36<br>42       | 36<br>42       | 30<br>42       | 36<br>43       | 39<br>43       | 40<br>44       | 45             | 46             | 42<br>47       | 43<br>48       |
| Australian Industrial Milk                | 15             | 16             | 16             | 17             | 43<br>17       | 43<br>17       | 17             | 17             | 17             | 18             | 18             |
| Australian Fluid Milk                     | 33             | 33             | 34             | 35             | 35             | 35             | 36             | 36             | 36             | 36             | 36             |
|   |                | 00             | ٠.             |                |                | 00             | 00             | 00             |                |                |                |

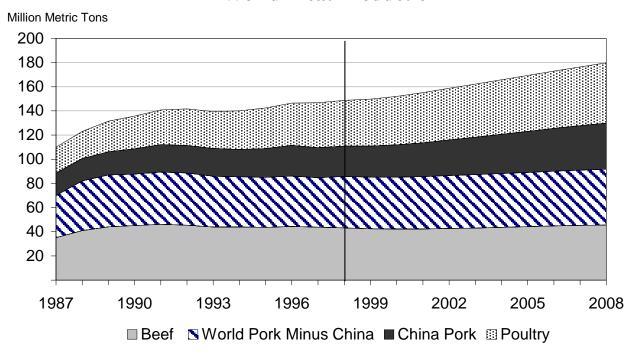
# **World Crop Area**



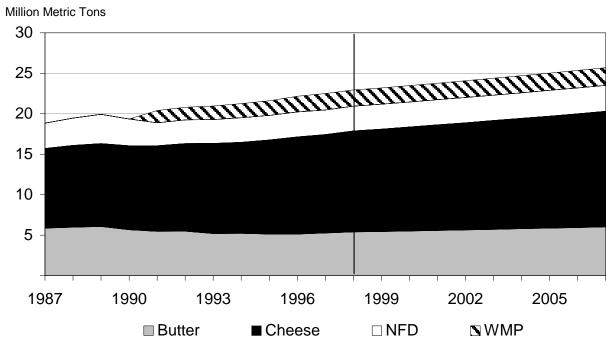
# World Grain Stock-to-Use Ratio Versus Price



# **World Meat Production**



# **World Dairy Product Output**



### **World Wheat Trade**

World wheat production primarily grows through yield growth, increasing from 584 to 661 mmt throughout the projected years, an increase of more than 13 percent. Consumption is projected to grow neck-and-neck with production, adding little or nothing to the stock. During the baseline period, world wheat stock-to-use ratio declines from 21 to 19 percent and thus, raises price by more than 39 percent.

Slowdown in world economic growth induces a decline in wheat trade in 1999/00, which will grow slowly thereafter as the economies recover. By 2008/09 wheat trade is projected to increase by 19 percent.

Most of the growth in wheat trade will come from developing countries where economic growth and urbanization increase wheat consumption. Asia is expected to be the fastest developing market in the long run, with imports increasing by more than 27 percent.

Over the next decade, Chinese imports increase by 2 to 3 mmt in the next few years and then stay flat for the remaining period.

India, with rising per capita consumption in non-traditional wheat consuming regions and import liberalization, will be a consistent wheat buyer in the international markets. Indian wheat imports are projected to increase by more than 1 mmt during the projection period.

Income growth in high income East Asia has made them increasingly dependent on imported wheat to meet consumption. Imports of this region are projected to be stagnant in the next two years as economic growth recovers. Over the long run, wheat imports are projected to increase by more than 1 mmt.

Behind Asia, North African and Middle Eastern regions are likely to be the second growth market for wheat in the next decade, with imports increasing by 22 percent.

Similarly, Latin America is also projected to expand its imports by more than 15 percent. Brazil and Mexico, accounting for more than 50 percent of the region's imports, are likely to expand their imports by 13 percent and 30 percent, respectively, over the next decade.

Traditional exporters, such as Argentina, Australia, Canada, the EU, and the United States, will meet most of the increased import demand from developing countries. Argentina, Australia, and Canada primarily depend on the export market to dispose of their surplus wheat. The lower wheat price is likely to constrain the EU subsidized exports at the GATT maximum level until 2005/06. Between 2006 and 2008, the EU expands its wheat exports from 13.3 to 20.6 mmt, as world price exceeds the EU domestic price.

After 1999, U.S. exports strengthen until 2005/06, reaching above 30 mmt and then remaining flat for the last three years.

# **Wheat Trade**

|                           | 98/99  | 99/00  | 00/01  | 01/02  | 02/03       | 03/04      | 04/05     | 05/06  | 06/07  | 07/08  | 08/09  |
|---------------------------|--------|--------|--------|--------|-------------|------------|-----------|--------|--------|--------|--------|
| Net Exporters             |        |        |        |        | (Millio     | n Metric T | ons)      |        |        |        |        |
| Argentina                 | 5.98   | 6.27   | 6.48   | 6.72   | 6.94        | 7.15       | 7.37      | 7.59   | 7.80   | 7.99   | 8.19   |
| Australia                 | 13.97  | 14.95  | 14.70  | 14.41  | 14.38       | 14.61      | 14.99     | 15.42  | 15.85  | 16.24  | 16.55  |
| Canada                    | 15.30  | 15.54  | 15.66  | 15.88  | 16.15       | 16.49      | 16.83     | 17.18  | 17.52  | 17.68  | 17.85  |
| Czech Republic            | 0.05   | 0.12   | 0.21   | 0.27   | 0.31        | 0.31       | 0.30      | 0.26   | 0.21   | 0.19   | 0.15   |
| Hungary                   | 1.18   | 1.38   | 1.47   | 1.51   | 1.52        | 1.51       | 1.50      | 1.50   | 1.50   | 1.52   | 1.55   |
| European Union            | 15.24  | 14.72  | 13.29  | 13.29  | 13.29       | 13.29      | 13.29     | 13.29  | 15.16  | 17.40  | 20.62  |
| Ukraine                   | 1.05   | 0.19   | 0.58   | 0.86   | 1.22        | 1.23       | 1.31      | 1.30   | 1.25   | 1.20   | 0.98   |
| Total Non-U.S.            | 52.77  | 53.16  | 53.37  | 54.27  | 55.42       | 56.22      | 57.13     | 57.94  | 60.43  | 62.96  | 66.11  |
| United States             | 27.37  | 25.90  | 27.03  | 28.26  | 28.68       | 29.01      | 29.56     | 30.25  | 30.08  | 29.83  | 29.48  |
| Trade Share               | 34.2%  | 32.8%  | 33.6%  | 34.2%  | 34.1%       | 34.0%      | 34.1%     | 34.3%  | 33.2%  | 32.2%  | 30.8%  |
| Total Net Exports         | 80.14  | 79.06  | 80.40  | 82.53  | 84.10       | 85.23      | 86.69     | 88.19  | 90.51  | 92.79  | 95.59  |
| Net Importers             |        |        |        |        |             |            |           |        |        |        |        |
| Japan                     | 5.80   | 5.80   | 5.79   | 5.80   | 5.81        | 5.84       | 5.87      | 5.89   | 5.93   | 5.97   | 6.01   |
| Russia                    | 3.70   | 0.39   | -0.98  | -1.33  | -1.60       | -1.62      | -1.54     | -1.39  | -1.13  | -0.74  | -0.20  |
| Other Former Soviet Union | 1.03   | 1.06   | 1.43   | 1.77   | 1.49        | 1.56       | 1.63      | 1.70   | 1.80   | 1.93   | 2.09   |
| Other Western Europe      | 0.49   | 0.50   | 0.50   | 0.51   | 0.52        | 0.52       | 0.53      | 0.54   | 0.56   | 0.57   | 0.59   |
| Other Eastern Europe      | -0.15  | 0.45   | 0.21   | 0.16   | 0.17        | 0.19       | 0.22      | 0.23   | 0.28   | 0.31   | 0.37   |
| Poland                    | 0.20   | 0.38   | 0.31   | 0.22   | 0.21        | 0.19       | 0.16      | 0.13   | 0.12   | 0.12   | 0.13   |
| Developing                | 69.08  | 70.48  | 72.16  | 74.07  | 75.89       | 76.93      | 78.28     | 79.69  | 81.82  | 83.89  | 86.41  |
| China                     | 1.00   | 0.98   | 1.55   | 2.17   | 2.81        | 2.57       | 2.28      | 1.88   | 1.71   | 1.63   | 1.74   |
| High-Income East Asia     | 5.81   | 5.79   | 5.84   | 5.94   | 6.05        | 6.16       | 6.28      | 6.41   | 6.56   | 6.72   | 6.88   |
| India                     | 1.65   | 1.26   | 1.36   | 1.42   | 1.38        | 1.36       | 1.43      | 1.54   | 1.94   | 2.32   | 2.71   |
| Pakistan                  | 2.20   | 2.66   | 2.68   | 2.78   | 2.79        | 2.77       | 2.75      | 2.81   | 2.92   | 3.14   | 3.38   |
| Other Asia                | 10.82  | 11.25  | 11.14  | 11.20  | 11.40       | 11.69      | 12.10     | 12.54  | 12.95  | 13.38  | 13.96  |
| Brazil                    | 5.86   | 5.96   | 6.03   | 6.10   | 6.15        | 6.22       | 6.29      | 6.38   | 6.48   | 6.57   | 6.66   |
| Mexico                    | 2.25   | 2.26   | 2.32   | 2.38   | 2.47        | 2.58       | 2.69      | 2.81   | 2.95   | 3.10   | 3.26   |
| Other Latin America       | 8.19   | 8.02   | 8.15   | 8.27   | 8.41        | 8.56       | 8.71      | 8.87   | 9.05   | 9.25   | 9.46   |
| Algeria                   | 4.60   | 4.38   | 4.38   | 4.38   | 4.39        | 4.41       | 4.43      | 4.46   | 4.49   | 4.53   | 4.56   |
| Egypt                     | 7.20   | 7.44   | 7.43   | 7.44   | 7.47        | 7.51       | 7.57      | 7.65   | 7.74   | 7.85   | 7.98   |
| Iran                      | 3.50   | 3.44   | 3.56   | 3.60   | 3.69        | 3.81       | 3.95      | 4.11   | 4.28   | 4.47   | 4.66   |
| Morocco                   | 1.47   | 1.52   | 1.63   | 1.78   | 1.84        | 1.91       | 1.98      | 2.07   | 2.16   | 2.27   | 2.38   |
| Tunisia                   | 0.85   | 0.87   | 0.89   | 0.93   | 0.98        | 1.03       | 1.09      | 1.16   | 1.23   | 1.31   | 1.40   |
| Other Africa/Middle East  | 13.18  | 14.12  | 14.67  | 15.13  | 15.49       | 15.79      | 16.10     | 16.39  | 16.73  | 16.71  | 16.71  |
| Rest of World             | 0.51   | 0.53   | 0.54   | 0.55   | 0.57        | 0.58       | 0.60      | 0.62   | 0.64   | 0.66   | 0.68   |
| Residual                  | 0.00   | 0.00   | 0.00   | 0.00   | 0.00        | 0.00       | 0.00      | 0.00   | 0.00   | 0.00   | 0.00   |
| Total Net Imports         | 80.14  | 79.06  | 80.40  | 82.53  | 84.10       | 85.23      | 86.69     | 88.19  | 90.51  | 92.79  | 95.59  |
| Wheat Prices              |        |        |        |        | (U.S. Dolla | ars per Me | tric Ton) |        |        |        |        |
| U.S. FOB Gulf             | 120.54 | 134.69 | 141.93 | 145.98 | 149.92      | 155.20     | 158.66    | 162.80 | 163.71 | 165.32 | 167.11 |
| Canadian Thunder Bay      | 132.12 | 148.19 | 156.43 | 161.02 | 165.49      | 171.48     | 175.40    | 180.10 | 181.12 | 182.94 | 184.96 |
| Australian Wheat Board    | 119.97 | 133.80 | 140.88 | 144.81 | 148.63      | 153.76     | 157.11    | 161.13 | 162.00 | 163.56 | 165.29 |
| CIF Rotterdam             | 142.10 | 158.60 | 167.05 | 171.77 | 176.36      | 182.52     | 186.55    | 191.39 | 192.45 | 194.33 | 196.41 |

### **World Coarse Grain Trade**

World coarse grain area has declined more than 5 percent since its peak in 1996/97, and it is projected to decline slightly in the next decade, with a decrease in barley area partially offset by an increase in corn area.

Even with declining area, world coarse grain production expands from 789 to 899 mmt, entirely through yield growth. Consumption is also expected to rise with the recovery of Asian economies, increasing coarse grain prices by more than 24 percent.

World coarse grain trade is projected to be sluggish in the next two years, primarily because of slowdown in world economic growth. However, coarse grain trade is likely to expand by more than 32 percent over the next decade.

Among coarse grains, corn increases by more than 36 percent over the projection period. Most of the growth in import demand is likely to come from developing countries. Asia remains the fastest growing market for corn, accounting for more than 50 percent of the total increase.

Within Asia, Japan, South Korea, and Taiwan account for more than 90 percent of Asian corn imports. Japanese corn imports are projected to decline steadily in response to declining livestock production. Taiwan's corn imports have declined significantly since 1997 because of FMD. Although Taiwan seems to have recovered from FMD, livestock production is projected to grow rather slowly because of environmental regulations. Corn imports are projected to increase by 1.1 mmt in the next decade.

Recent economic turmoil has reduced corn imports by Far East Asian countries, such as Thailand, Indonesia, Malaysia, and Philippines, by more than 40 percent. As these countries recover from the crisis, it is projected that corn imports will increase close to the pre-crisis level by the end of the projection period.

India and China have potential to import significant amounts of corn in the next decade. In the last decade, China has been able to remain a large net exporter of corn in most years. Considering the slowdown in Chinese economic growth in the short run and possible devaluation, China is projected to remain a net exporter of corn until 2002/03, but at a declining rate. However, domestic consumption is likely to outpace production in the second half of the projection period, leaving the country in a net importer position. By 2008/09, China is projected to import more than 5 mmt of corn.

The Latin American region is the second largest growth market for corn in the next decade. Corn imports in the region are projected to increase by more than 13 percent. Mexico is the largest importer of corn in the region and has been importing well above TRQ levels since its implementation under NAFTA. Growing feed use is likely to expand corn imports from 4.15 mmt in 1998/99 to 4.3 mmt in 2001/02. However, Mexico's corn imports are projected to decline to 3.8 mmt in 2002/03 because of lower feed utilization. Decline in feed utilization comes from the poultry sector, which is assumed to be liberalized as a part of the NAFTA agreement, negatively affecting the domestic poultry industry.

Other Latin American countries are also expected to increase their imports by around 2 mmt, mainly because of the inability of these countries to expand domestic production to meet growing domestic consumption.

Argentine corn-planted area is projected to decline next year in response to weak corn prices, reducing its exports by more than 13 mmt. Over the baseline period, production mostly grows through yield growth, expanding corn exports from 7.67 mmt in 1999/00 to 9.3 mmt in 2008/09.

South African corn imports are projected to double in 1998/99 because of higher production resulting from large area and favorable weather. Assuming normal weather next year, corn exports decline to 1.6 mmt. For the rest of the period, South African corn exports increase slowly and reach 1.85 mmt by 2008/09.

The U.S. corn area is projected to expand by 1 mha during the baseline period in response to declining bean-to-corn price ratio. U.S. exports expand from 42.5 to 60.3 mmt, accounting for most of the increased import demand. The U.S. market share increases from 77 to 81 percent by 2008/09.

Growth in barley import demand primarily comes from China and Saudi Arabia. In China, higher barley

demand in the brewing industry increases imports from 2 to 3.3 mmt, whereas Saudi Arabia increases its barley imports from 5 to 5.9 mmt. The EU supplies most of the expanded barley markets, whereas other major exporters, such as Australia and Canada, are limited because of lower barley production.

In the sorghum market, import demand primarily comes from two countries, Japan and Mexico. Japanese demand is projected to decrease because of falling livestock production. Similarly, Mexican sorghum import increases from 2.8 to 3.86 mmt during the projection period. On the export side, the United States and Argentina supply most of the market.

# **Corn Trade**

|                           | 98/99        | 99/00        | 00/01        | 01/02        | 02/03        | 03/04        | 04/05        | 05/06        | 06/07        | 07/08        | 08/09        |
|---------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Net Exporters             |              |              |              |              | (Millio      | n Metric T   | ons)         |              |              |              |              |
| Argentina                 | 9.00         | 7.67         | 7.62         | 7.70         | 7.86         | 8.08         | 8.34         | 8.60         | 8.85         | 9.08         | 9.30         |
| Hungary                   | 0.79         | 0.64         | 0.67         | 0.73         | 0.82         | 0.89         | 0.96         | 1.03         | 1.10         | 1.15         | 1.18         |
| Other Eastern Europe      | 0.95         | 1.05         | 1.43         | 1.57         | 1.70         | 1.76         | 1.70         | 1.67         | 1.59         | 1.54         | 1.54         |
| South Africa              | 1.75         | 1.60         | 1.55         | 1.55         | 1.60         | 1.66         | 1.69         | 1.74         | 1.76         | 1.79         | 1.84         |
| Ukraine                   | 0.05         | 0.02         | 0.06         | 0.12         | 0.14         | 0.14         | 0.15         | 0.16         | 0.18         | 0.19         | 0.22         |
| Total Non-U.S.            | 12.59        | 10.99        | 11.31        | 11.65        | 12.08        | 12.49        | 12.82        | 13.16        | 13.46        | 13.74        | 14.07        |
| United States             | 42.46        | 44.04        | 45.18        | 47.27        | 48.85        | 50.02        | 51.41        | 53.47        | 55.60        | 57.64        | 60.27        |
| Trade Share               | 77.1%        | 80.0%        | 80.0%        | 80.2%        | 80.2%        | 80.0%        | 80.0%        | 80.3%        | 80.5%        | 80.7%        | 81.1%        |
| Total Net Exports         | 55.05        | 55.02        | 56.50        | 58.92        | 60.93        | 62.51        | 64.23        | 66.63        | 69.07        | 71.38        | 74.35        |
| Net Importers             |              |              |              |              |              |              |              |              |              |              |              |
| Canada                    | 0.50         | 0.60         | 0.59         | 0.63         | 0.69         | 0.73         | 0.80         | 0.87         | 0.96         | 1.05         | 1.15         |
| European Union            | 1.54         | 1.62         | 1.57         | 1.18         | 1.28         | 1.10         | 0.83         | 1.15         | 1.17         | 1.18         | 1.19         |
| Czech Republic            | 0.00         | 0.01         | 0.00         | 0.00         | 0.00         | 0.00         | 0.01         | 0.01         | 0.02         | 0.03         | 0.04         |
| Poland                    | 0.25         | 0.33         | 0.34         | 0.35         | 0.35         | 0.36         | 0.36         | 0.36         | 0.37         | 0.38         | 0.40         |
| Israel                    | 0.50         | 0.55         | 0.56         | 0.57         | 0.58         | 0.58         | 0.59         | 0.59         | 0.59         | 0.59         | 0.60         |
| Japan                     | 15.50        | 15.39        | 15.26        | 15.14        | 14.96        | 14.83        | 14.53        | 14.33        | 14.20        | 14.10        | 13.97        |
| Russia                    | 0.65         | 0.71         | 0.54         | 0.46         | 0.41         | 0.38         | 0.40         | 0.41         | 0.43         | 0.45         | 0.49         |
| Other Former Soviet Union | 0.22         | 0.09         | 0.10         | 0.16         | 0.21         | 0.26         | 0.29         | 0.31         | 0.32         | 0.33         | 0.35         |
| Developing                | 34.77        | 34.53        | 36.30        | 39.16        | 41.15        | 42.95        | 45.08        | 47.25        | 49.64        | 51.89        | 54.80        |
| Algeria                   | 1.00         | 1.03         | 1.07         | 1.09         | 1.12         | 1.15         | 1.18         | 1.21         | 1.24         | 1.27         | 1.30         |
| Egypt                     | 3.25         | 3.28         | 3.43         | 3.57         | 3.70         | 3.84         | 3.99         | 4.14         | 4.33         | 4.52         | 4.73         |
| Other Africa              | 2.60         | 2.31         | 2.66         | 2.89         | 3.04         | 3.14         | 3.29         | 3.42         | 3.56         | 3.70         | 3.87         |
| Other Middle East         | 4.97         | 5.09         | 5.11         | 5.14         | 5.16         | 5.18         | 5.20         | 5.23         | 5.26         | 5.28         | 5.30         |
| Brazil                    | 0.90         | 0.53         | 0.35         | 0.35         | 0.33         | 0.35         | 0.36         | 0.38         | 0.41         | 0.58         | 0.91         |
| Mexico                    | 4.15         | 4.17         | 4.22         | 4.30         | 3.78         | 3.73         | 3.71         | 3.68         | 3.71         | 3.77         | 3.91         |
| Other Latin America       | 7.46         | 7.50         | 7.78         | 8.02         | 8.22         | 8.40         | 8.58         | 8.78         | 8.98         | 9.17         | 9.36         |
| China                     | -3.50        | -3.75        | -3.42        | -2.10        | -0.91        | -0.15        | 0.91         | 1.98         | 3.11         | 4.01         | 5.29         |
| Indonesia                 | -0.25        | -0.28        | -0.19        | -0.07        | 0.06         | 0.18         | 0.30         | 0.43         | 0.56         | 0.67         | 0.79         |
| Malaysia                  | 2.30         | 2.24         | 2.22         | 2.26         | 2.30         | 2.35         | 2.42         | 2.50         | 2.58         | 2.65         | 2.73         |
| South Korea               | 6.50         | 6.91         | 6.86         | 6.94         | 7.09         | 7.23         | 7.30         | 7.39         | 7.52         | 7.64         | 7.70         |
| Taiwan                    | 4.50         | 4.54         | 4.74         | 4.97         | 5.10         | 5.16         | 5.27         | 5.41         | 5.53         | 5.62         | 5.70         |
| Thailand                  | 0.05         | 0.11         | 0.19         | 0.30         | 0.38         | 0.46         | 0.53         | 0.59         | 0.66         | 0.73         | 0.81         |
| Philippines               | 0.35         | 0.34         | 0.39         | 0.46         | 0.52         | 0.58         | 0.63         | 0.67         | 0.73         | 0.79         | 0.85         |
| India                     | 0.04         | 0.06         | 0.42         | 0.59         | 0.78         | 0.87         | 0.92         | 0.91         | 0.95         | 0.94         | 0.98         |
| Pakistan                  | 0.00         | 0.00         | 0.00         | 0.00         | 0.00         | 0.00         | 0.00         | 0.00         | 0.00         | 0.00         | 0.00         |
| Vietnam                   | -0.05        | -0.02        | 0.01         | 0.02         | 0.03         | 0.03         | 0.03         | 0.03         | 0.02         | 0.01         | -0.01        |
| Other Asia                | 0.45         | 0.46         | 0.47         | 0.48         | 0.49         | 0.50         | 0.51         | 0.52         | 0.53         | 0.54         | 0.55         |
| Rest of World<br>Residual | 0.18<br>1.00 | 0.20<br>1.00 | 0.23<br>1.00 | 0.25<br>1.00 | 0.27<br>1.00 | 0.29<br>1.00 | 0.31<br>1.00 | 0.33<br>1.00 | 0.35<br>1.00 | 0.37<br>1.00 | 0.38<br>1.00 |
| Total Net Imports         | 55.05        | 55.02        | 56.50        | 58.92        | 60.93        | 62.51        | 64.23        | 66.63        | 69.07        | 71.38        | 74.35        |
| Coarse Grain Prices       |              |              |              |              | (U.S. Dolla  | ars per Me   | tric Ton)    |              |              |              |              |
| Corn (FOB Gulf)           | 93.80        | 96.54        | 99.05        | 100.80       | 103.61       | 106.83       | 108.85       | 111.32       | 112.96       | 114.90       | 117.95       |
| Sorghum (FOB Gulf)        | 86.05        | 93.04        | 95.73        | 98.38        | 101.53       | 104.69       | 106.76       | 109.00       | 110.80       | 112.95       | 116.34       |
| Barley (Portland)         | 108.16       | 109.71       | 111.49       | 112.83       | 116.04       | 118.79       | 120.69       | 122.57       | 124.06       | 125.88       | 128.69       |
| Daney (Fortiand)          | 100.10       | 103.71       | 111.49       | 112.03       | 110.04       | 110.79       | 120.09       | 122.01       | 124.00       | 123.00       | 120.09       |

# **Barley Trade**

|                           | 98/99  | 99/00  | 00/01  | 01/02  | 02/03       | 03/04      | 04/05     | 05/06  | 06/07  | 07/08  | 08/09  |
|---------------------------|--------|--------|--------|--------|-------------|------------|-----------|--------|--------|--------|--------|
| Net Exporters             |        |        |        |        | (Millio     | n Metric T | ons)      |        |        |        |        |
| Argentina                 | 0.14   | 0.11   | 0.12   | 0.12   | 0.12        | 0.13       | 0.13      | 0.13   | 0.14   | 0.14   | 0.15   |
| Australia                 | 2.55   | 2.53   | 2.43   | 2.41   | 2.40        | 2.39       | 2.37      | 2.36   | 2.35   | 2.35   | 2.37   |
| Canada                    | 1.59   | 1.18   | 1.04   | 1.00   | 1.04        | 1.11       | 1.18      | 1.27   | 1.37   | 1.47   | 1.58   |
| European Union            | 8.02   | 8.59   | 8.65   | 8.72   | 8.77        | 8.82       | 8.87      | 8.85   | 9.05   | 9.12   | 9.36   |
| Russia                    | -0.35  | 0.36   | 0.65   | 0.89   | 1.10        | 1.20       | 1.28      | 1.22   | 1.07   | 1.01   | 0.92   |
| Ukraine                   | 0.50   | 0.29   | 0.32   | 0.38   | 0.43        | 0.43       | 0.43      | 0.42   | 0.42   | 0.56   | 0.66   |
| Total Non-U.S.            | 12.45  | 13.07  | 13.22  | 13.52  | 13.87       | 14.08      | 14.26     | 14.25  | 14.40  | 14.65  | 15.04  |
| United States             | -0.15  | -0.05  | 0.01   | 0.05   | 0.07        | 0.12       | 0.15      | 0.20   | 0.23   | 0.26   | 0.30   |
| Trade Share               | -1.2%  | -0.4%  | 0.1%   | 0.4%   | 0.5%        | 0.8%       | 1.0%      | 1.4%   | 1.6%   | 1.7%   | 1.9%   |
| Total Net Exports         | 12.30  | 13.02  | 13.22  | 13.58  | 13.94       | 14.20      | 14.41     | 14.45  | 14.63  | 14.91  | 15.33  |
| Net Importers             |        |        |        |        |             |            |           |        |        |        |        |
| Czech Republic            | 0.08   | 0.12   | 0.05   | -0.01  | -0.07       | -0.10      | -0.11     | -0.11  | -0.09  | -0.04  | 0.02   |
| Hungary                   | -0.04  | -0.11  | -0.09  | -0.10  | -0.12       | -0.15      | -0.18     | -0.21  | -0.24  | -0.28  | -0.32  |
| Poland                    | 0.10   | 0.31   | 0.36   | 0.37   | 0.34        | 0.33       | 0.33      | 0.33   | 0.34   | 0.36   | 0.40   |
| Other Eastern Europe      | -0.27  | 0.05   | 0.03   | -0.02  | -0.09       | -0.13      | -0.16     | -0.16  | -0.18  | -0.18  | -0.17  |
| Israel                    | 0.40   | 0.45   | 0.46   | 0.47   | 0.48        | 0.49       | 0.50      | 0.51   | 0.52   | 0.53   | 0.54   |
| Japan                     | 1.40   | 1.36   | 1.33   | 1.32   | 1.31        | 1.31       | 1.26      | 1.24   | 1.23   | 1.22   | 1.19   |
| Other Former Soviet Union | 0.48   | 0.95   | 0.78   | 0.80   | 0.82        | 0.86       | 0.89      | 0.92   | 0.93   | 0.93   | 0.93   |
| Developing                | 8.92   | 9.71   | 9.80   | 10.00  | 10.27       | 10.45      | 10.68     | 10.94  | 11.20  | 11.63  | 12.03  |
| Algeria                   | 0.10   | 0.08   | 0.09   | 0.09   | 0.09        | 0.10       | 0.10      | 0.10   | 0.11   | 0.11   | 0.12   |
| Other Africa              | 1.15   | 1.18   | 1.20   | 1.23   | 1.26        | 1.28       | 1.31      | 1.34   | 1.38   | 1.41   | 1.45   |
| Saudi Arabia              | 5.00   | 5.14   | 5.23   | 5.30   | 5.36        | 5.40       | 5.44      | 5.47   | 5.49   | 5.68   | 5.82   |
| Other Middle East         | -0.13  | 0.29   | 0.20   | 0.15   | 0.24        | 0.22       | 0.23      | 0.26   | 0.26   | 0.27   | 0.28   |
| Brazil                    | 0.20   | 0.21   | 0.22   | 0.23   | 0.24        | 0.25       | 0.27      | 0.28   | 0.30   | 0.31   | 0.33   |
| Mexico                    | 0.10   | 0.05   | 0.06   | 0.06   | 0.06        | 0.06       | 0.07      | 0.07   | 0.07   | 0.07   | 0.08   |
| Other Latin America       | 0.25   | 0.25   | 0.25   | 0.26   | 0.26        | 0.26       | 0.27      | 0.28   | 0.28   | 0.29   | 0.30   |
| China                     | 2.00   | 2.24   | 2.28   | 2.39   | 2.47        | 2.56       | 2.68      | 2.81   | 2.96   | 3.12   | 3.29   |
| Pakistan                  | 0.00   | 0.00   | 0.00   | 0.00   | 0.00        | 0.00       | 0.00      | 0.00   | 0.00   | 0.00   | 0.00   |
| Taiwan                    | 0.15   | 0.16   | 0.17   | 0.18   | 0.19        | 0.21       | 0.22      | 0.23   | 0.24   | 0.25   | 0.27   |
| Other Asia                | 0.10   | 0.10   | 0.10   | 0.10   | 0.10        | 0.10       | 0.10      | 0.10   | 0.10   | 0.10   | 0.10   |
| Rest of World             | 0.38   | 0.44   | 0.53   | 0.62   | 0.72        | 0.81       | 0.91      | 1.02   | 1.14   | 1.26   | 1.38   |
| Residual                  | 0.86   | -0.27  | -0.02  | 0.12   | 0.26        | 0.32       | 0.29      | -0.03  | -0.21  | -0.51  | -0.67  |
| Total Net Imports         | 12.30  | 13.02  | 13.22  | 13.58  | 13.94       | 14.20      | 14.41     | 14.45  | 14.63  | 14.91  | 15.33  |
| Coarse Grain Prices       |        |        |        |        | (U.S. Dolla | ars per Me | tric Ton) |        |        |        |        |
| Corn (FOB Gulf)           | 93.80  | 96.54  | 99.05  | 100.80 | 103.61      | 106.83     | 108.85    | 111.32 | 112.96 | 114.90 | 117.95 |
| Sorghum (FOB Gulf)        | 86.05  | 93.04  | 95.73  | 98.38  | 101.53      | 104.69     | 106.76    | 109.00 | 110.80 | 112.95 | 116.34 |
| Barley (Portland)         | 108.16 | 109.71 | 111.49 | 112.83 | 116.04      | 118.79     | 120.69    | 122.57 | 124.06 | 125.88 | 128.69 |

# **Sorghum Trade**

|                     | 98/99  | 99/00  | 00/01  | 01/02  | 02/03       | 03/04      | 04/05      | 05/06  | 06/07  | 07/08  | 08/09  |
|---------------------|--------|--------|--------|--------|-------------|------------|------------|--------|--------|--------|--------|
| Net Exporters       |        |        |        |        | (Millio     | n Metric T | ons)       |        |        |        |        |
| Argentina           | 1.00   | 0.86   | 0.78   | 0.76   | 0.80        | 0.86       | 0.92       | 0.98   | 1.02   | 1.08   | 1.13   |
| Australia           | 0.25   | 0.24   | 0.25   | 0.25   | 0.26        | 0.27       | 0.27       | 0.28   | 0.28   | 0.28   | 0.29   |
| Total Non-U.S.      | 1.25   | 1.10   | 1.03   | 1.01   | 1.06        | 1.13       | 1.20       | 1.25   | 1.30   | 1.36   | 1.42   |
| United States       | 4.85   | 5.43   | 5.66   | 5.79   | 5.80        | 5.86       | 5.87       | 5.91   | 6.02   | 6.06   | 6.11   |
| Trade Share         | 79.5%  | 83.2%  | 84.7%  | 85.1%  | 84.5%       | 83.8%      | 83.1%      | 82.5%  | 82.2%  | 81.7%  | 81.2%  |
| Total Net Exports   | 6.10   | 6.53   | 6.68   | 6.80   | 6.86        | 6.99       | 7.06       | 7.17   | 7.32   | 7.42   | 7.53   |
| Net Importers       |        |        |        |        |             |            |            |        |        |        |        |
| Israel              | 0.20   | 0.23   | 0.25   | 0.25   | 0.25        | 0.25       | 0.25       | 0.25   | 0.25   | 0.25   | 0.26   |
| Japan               | 2.70   | 2.55   | 2.48   | 2.43   | 2.37        | 2.35       | 2.20       | 2.13   | 2.07   | 2.01   | 1.90   |
| Developing          | 2.70   | 3.09   | 3.17   | 3.26   | 3.30        | 3.38       | 3.52       | 3.60   | 3.71   | 3.78   | 3.95   |
| Mexico              | 2.70   | 3.05   | 3.13   | 3.21   | 3.25        | 3.33       | 3.46       | 3.53   | 3.64   | 3.70   | 3.86   |
| South Africa        | 0.00   | 0.04   | 0.04   | 0.05   | 0.05        | 0.06       | 0.06       | 0.07   | 0.07   | 0.08   | 0.09   |
| Nigeria             | 0.00   | 0.00   | 0.00   | 0.00   | 0.00        | 0.00       | 0.00       | 0.00   | 0.00   | 0.00   | 0.00   |
| India               | 0.00   | 0.00   | 0.00   | 0.00   | 0.00        | 0.00       | 0.00       | 0.00   | 0.00   | 0.00   | 0.00   |
| Pakistan            | 0.00   | 0.00   | 0.00   | 0.00   | 0.00        | 0.00       | 0.00       | 0.00   | 0.00   | 0.00   | 0.00   |
| Rest of World       | 0.35   | 0.49   | 0.63   | 0.70   | 0.77        | 0.85       | 0.93       | 1.03   | 1.13   | 1.22   | 1.27   |
| Residual            | 0.16   | 0.16   | 0.16   | 0.16   | 0.16        | 0.16       | 0.16       | 0.16   | 0.16   | 0.16   | 0.16   |
| Total Net Imports   | 6.10   | 6.53   | 6.68   | 6.80   | 6.86        | 6.99       | 7.06       | 7.17   | 7.32   | 7.42   | 7.53   |
| Coarse Grain Prices |        |        |        |        | (U.S. Dolla | ars per Me | etric Ton) |        |        |        |        |
| Corn (FOB Gulf)     | 93.80  | 96.54  | 99.05  | 100.80 | 103.61      | 106.83     | 108.85     | 111.32 | 112.96 | 114.90 | 117.95 |
| Sorghum (FOB Gulf)  | 86.05  | 93.04  | 95.73  | 98.38  | 101.53      | 104.69     | 106.76     | 109.00 | 110.80 | 112.95 | 116.34 |
| Barley (Portland)   | 108.16 | 109.71 | 111.49 | 112.83 | 116.04      | 118.79     | 120.69     | 122.57 | 124.06 | 125.88 | 128.69 |

### World Soybean and Soybean Products Trade

World soybean markets have been in turmoil this year, with soybean prices falling by 16.8 percent from a year ago and by 26.3 percent from two years ago.

Decreasing prices next year will stimulate world demand for soybean and reduce acreage in relatively more export-oriented markets such as Argentina. Acreage increases projected in Brazil and the United States will be sufficient to cover any supply shortfalls. Prices are expected to strengthen during the rest of the projection period.

World soybean area increased to a record 70.6 mha during 1998/99. Nearly half of the increase in soybean area occurred in the United States (0.7 mha) and the rest in India (0.5 mha) and other countries. Chinese area under soybean (as well as yields) declined substantially this year due to devastating floods in key growing regions. Total soybean area in the South American countries remained constant at last year's level.

Overall, soybean area is projected to increase by 6.78 percent, to more than 75.4 mha by 2008/09, with an associated increase of nearly 28 mmt in soybean production. The increase in soybean crush is expected to increase meal production by about 23 mmt and oil production by about 5 mmt (each by about 22 percent) over the projection period.

Soybean area in the United States will increase next year, driven by the attractive loan rates, before trending down as the corn-to-soybean price ratio decreases in later years. The United States is, and is projected to remain, the largest soybean exporter.

South American soybean area is expected to grow further next year as early estimates for 1999/00 indicate another record crop year. It is projected that this area will increase by nearly 2.32 mha in the coming decade. Soybean exports from Brazil are expected to reach 8.1 mmt by 2008/09. Brazil and Argentina will continue to remain the top soy meal exporters, with exports reaching 13.1 mmt and 13.6 mmt, respectively, by the end of the projection period. Argentina is projected to remain,

by far, the largest soy oil exporter, with exports increasing from 2.2 mmt in the current year to more than 2.8 mmt by the end of the period.

Although the world soybean trade decreased slightly in 1998/99 from a year ago, it represents an increase of about 6 percent over 1996/97 trade levels. (The total trade had increased by almost 4.25 mmt between 1996/97 and 1997/98.) The 0.84 mmt decrease in the European Union's soybean imports in 1998/99, compared to the previous year, was more than compensated by a nearly 0.9 mmt increase in Chinese soybean imports.

Although the oilseeds area in the European Union is bound by the Blair House Agreement to a maximum of 5.482 mha, some member states do report over-planting when relative prices tend to favor oilseeds over other crops. Overall, the EU oilseeds area overshot Blair House limits by 8.35 percent in 1998/99. This trend might continue while the relative oilseeds prices remain sufficiently lucrative.

India is expected to remain the fourth largest exporter of soymeal and to strengthen this position during the projection period, precluding the United States to increase its share of the global trade in soy meal. Total soybean acreage in India is projected to grow to more than 7.5 mha by the end of the projections. Although the Indian government recently uplifted the restrictions on oilseeds imports, its implementation is yet to take place. This policy shift may be beneficial for U.S. soybean exporters in the coming years.

Chinese soybean imports reached record highs during the current year, mainly due to devastating floods in major soybean producing regions of China. As supply returns to normal next year, soybean import requirements are expected to decrease. Total soybean and soybean meal imports closely follow the developments in the Chinese livestock sector, which, in turn, reflects changes in macroeconomic assumptions.

Japan imports a large quantity of soybeans for its domestic crushing industry. Its total bean imports are

projected to increase to more than 4.85 mmt by 2008/09, while its long-term meal imports are expected to decline from 800 tmt in the current year to about 608 tmt by the end of the period, reflecting the downtrend in the Japanese livestock sector.

Like Japan, Taiwan also imports relatively large quantities of beans for domestic crushing to supply soy meal to its hog and poultry industries. As its hog industry recovers slowly from this recent crisis, its soybean imports are projected to grow (from the current low level of 2.4 mmt) by only 300 tmt over the next 10 years.

Slow economic recovery in Former Soviet Union countries is expected to restrain their import demand for both soybeans and soybean meal. Their total soybean and meal imports are projected to grow by only 280 tmt by the year 2008/09.

South Korean bean and meal demand is also projected to grow at a slower rate, with bean imports increasing by 87 tmt and meal imports by 540 tmt by the end of the period. Mexican soybean imports are projected to grow by about 815 tmt during this period.

Total soybean trade is projected to increase by more than 8 mmt (23 percent) between 1998/99 and 2008/09.

Trade in soy meal and soy oil is also projected to grow by similar percentages during the next 10 years.

The European Union is expected to remain, by far, the largest soybean and soybean meal importer in the world, with combined imports projected to reach nearly 30 mmt by the year 2008/09.

Soybean meal prices plummeted 23.3 percent compared to 1997/98 and 48.3 percent compared to 1996/97 levels. Stagnating soy meal demand and record crush caused this free fall in prices. However, toward the latter part of the year, relatively weaker soy meal prices resulted in large imports from countries like the European Union, where meal manufacturers reported substituting meal in feed rations in place of higher priced grains.

Soy oil had been the only redeeming factor as prices strengthened in the later part of the year (a drop of only 4.9 percent from last year, but an increase of 9.3 percent above 1996/97). The shortfall in palm oil supply caused palm oil prices to be relatively higher and led importers to substitute soy oil for palm oil.

Chinese soy oil imports are projected to grow rather rapidly during the later projection years, as per capita incomes grow at a relatively faster rate.

# Soybean Trade

|                           | 98/99  | 99/00  | 00/01  | 01/02  | 02/03       | 03/04      | 04/05      | 05/06  | 06/07  | 07/08  | 08/09  |
|---------------------------|--------|--------|--------|--------|-------------|------------|------------|--------|--------|--------|--------|
| Net Exporters             |        |        |        |        | (Thousa     | and Metric | Tons)      |        |        |        |        |
| Argentina                 | 2,450  | 2,368  | 2,456  | 2,554  | 2,635       | 2,701      | 2,790      | 2,861  | 2,950  | 3,015  | 3,115  |
| Brazil                    | 7,450  | 7,257  | 7,094  | 7,197  | 7,300       | 7,431      | 7,543      | 7,690  | 7,814  | 7,958  | 8,123  |
| Canada                    | 450    | 450    | 487    | 517    | 528         | 521        | 544        | 544    | 568    | 562    | 540    |
| Paraguay                  | 2,400  | 2,409  | 2,445  | 2,495  | 2,546       | 2,598      | 2,651      | 2,701  | 2,753  | 2,802  | 2,854  |
| Total Non-U.S.            | 12,750 | 12,485 | 12,483 | 12,762 | 13,009      | 13,252     | 13,528     | 13,796 | 14,085 | 14,337 | 14,632 |
| United States             | 22,017 | 25,828 | 26,127 | 26,181 | 26,426      | 26,671     | 26,862     | 27,188 | 27,433 | 27,842 | 28,168 |
| Trade Share               | 63.3%  | 67.4%  | 67.7%  | 67.2%  | 67.0%       | 66.8%      | 66.5%      | 66.3%  | 66.1%  | 66.0%  | 65.8%  |
| Total Net Exports         | 34,765 | 38,323 | 38,601 | 38,939 | 39,426      | 39,930     | 40,390     | 40,980 | 41,531 | 42,170 | 42,795 |
| Net Importers             |        |        |        |        |             |            |            |        |        |        |        |
| Eastern Europe            | 148    | 152    | 168    | 187    | 208         | 230        | 251        | 274    | 296    | 319    | 342    |
| European Union            | 15,278 | 15,879 | 15,982 | 16,011 | 16,105      | 16,199     | 16,267     | 16,407 | 16,508 | 16,678 | 16,816 |
| Former Soviet Union       | 412    | 428    | 451    | 473    | 493         | 512        | 530        | 547    | 562    | 575    | 588    |
| Russia                    | 115    | 123    | 141    | 158    | 175         | 191        | 206        | 221    | 235    | 249    | 262    |
| Ukraine                   | 20     | 19     | 23     | 28     | 32          | 35         | 38         | 40     | 42     | 43     | 44     |
| Other Former Soviet Union | 277    | 286    | 287    | 287    | 287         | 286        | 286        | 285    | 284    | 283    | 282    |
| Japan                     | 4,700  | 4,767  | 4,764  | 4,770  | 4,784       | 4,798      | 4,807      | 4,819  | 4,830  | 4,842  | 4,854  |
| Developing                | 10,690 | 10,810 | 10,960 | 11,261 | 11,560      | 11,835     | 12,082     | 12,343 | 12,588 | 12,843 | 13,090 |
| China                     | 3,420  | 3,349  | 3,346  | 3,504  | 3,678       | 3,834      | 3,976      | 4,140  | 4,296  | 4,463  | 4,616  |
| India                     | 0      | 0      | 0      | 0      | 0           | 0          | 0          | 0      | 0      | 0      | 0      |
| Mexico                    | 3,470  | 3,632  | 3,751  | 3,851  | 3,937       | 4,011      | 4,076      | 4,134  | 4,188  | 4,238  | 4,285  |
| South Korea               | 1,400  | 1,423  | 1,432  | 1,435  | 1,436       | 1,444      | 1,450      | 1,458  | 1,467  | 1,473  | 1,487  |
| Taiwan                    | 2,400  | 2,405  | 2,431  | 2,470  | 2,509       | 2,546      | 2,580      | 2,611  | 2,638  | 2,668  | 2,701  |
| Rest of World             | 4,449  | 4,789  | 4,777  | 4,738  | 4,777       | 4,856      | 4,952      | 5,090  | 5,248  | 5,413  | 5,606  |
| Residual                  | -912   | 1,500  | 1,500  | 1,500  | 1,500       | 1,500      | 1,500      | 1,500  | 1,500  | 1,500  | 1,500  |
| Total Net Imports         | 34,765 | 38,323 | 38,601 | 38,939 | 39,426      | 39,930     | 40,390     | 40,980 | 41,531 | 42,170 | 42,795 |
| Soybean Prices            |        |        |        |        | (U.S. Dolla | ars per Me | etric Ton) |        |        |        |        |
| FOB Gulf                  | 212.74 | 203.45 | 207.17 | 211.76 | 214.84      | 216.40     | 220.16     | 222.18 | 225.97 | 227.49 | 232.28 |
| CIF Rotterdam             | 230.00 | 214.54 | 218.19 | 222.71 | 225.72      | 227.26     | 230.96     | 232.94 | 236.67 | 238.16 | 242.86 |

### Soybean Meal Trade

|                           | 98/99  | 99/00  | 00/01  | 01/02  | 02/03       | 03/04      | 04/05      | 05/06  | 06/07  | 07/08  | 08/09  |
|---------------------------|--------|--------|--------|--------|-------------|------------|------------|--------|--------|--------|--------|
| Net Exporters             |        |        |        |        | (Thousa     | and Metric | Tons)      |        |        |        |        |
| Argentina                 | 10,872 | 11,276 | 11,540 | 11,792 | 12,054      | 12,322     | 12,570     | 12,839 | 13,092 | 13,369 | 13,633 |
| Brazil                    | 10,625 | 11,527 | 11,291 | 11,479 | 11,619      | 11,878     | 12,077     | 12,298 | 12,531 | 12,792 | 13,055 |
| India                     | 2,950  | 3,214  | 3,363  | 3,510  | 3,663       | 3,814      | 3,967      | 4,118  | 4,268  | 4,414  | 4,563  |
| Paraguay                  | 390    | 414    | 430    | 445    | 465         | 484        | 503        | 526    | 547    | 573    | 596    |
| Total Non-U.S.            | 24,837 | 26,431 | 26,625 | 27,227 | 27,801      | 28,498     | 29,116     | 29,781 | 30,438 | 31,149 | 31,846 |
| United States             | 7,442  | 7,246  | 7,226  | 7,155  | 7,251       | 7,272      | 7,473      | 7,681  | 7,971  | 8,302  | 8,548  |
| Trade Share               | 23.1%  | 21.5%  | 21.3%  | 20.8%  | 20.7%       | 20.3%      | 20.4%      | 20.5%  | 20.8%  | 21.0%  | 21.2%  |
| Total Net Exports         | 32,279 | 33,677 | 33,851 | 34,382 | 35,052      | 35,770     | 36,589     | 37,462 | 38,409 | 39,451 | 40,394 |
| Net Importers             |        |        |        |        |             |            |            |        |        |        |        |
| Canada                    | 485    | 470    | 541    | 587    | 627         | 634        | 593        | 573    | 579    | 585    | 550    |
| Eastern Europe            | 2,070  | 2,096  | 2,142  | 2,178  | 2,210       | 2,240      | 2,272      | 2,305  | 2,339  | 2,374  | 2,410  |
| European Union            | 12,849 | 12,336 | 12,406 | 12,494 | 12,483      | 12,580     | 12,656     | 12,715 | 12,792 | 12,920 | 12,963 |
| Former Soviet Union       | 687    | 745    | 759    | 729    | 703         | 700        | 723        | 749    | 774    | 797    | 798    |
| Russia                    | 307    | 291    | 270    | 272    | 271         | 273        | 287        | 302    | 320    | 341    | 361    |
| Ukraine                   | 115    | 145    | 149    | 145    | 143         | 145        | 147        | 149    | 152    | 157    | 151    |
| Other Former Soviet Union | 265    | 309    | 340    | 312    | 288         | 283        | 289        | 298    | 302    | 299    | 285    |
| Japan                     | 800    | 877    | 855    | 832    | 797         | 752        | 728        | 698    | 665    | 640    | 608    |
| Developing                | 5,482  | 5,602  | 5,637  | 6,158  | 6,814       | 7,366      | 8,028      | 8,745  | 9,449  | 10,199 | 11,000 |
| China                     | 4,390  | 4,450  | 4,485  | 4,966  | 5,570       | 6,183      | 6,799      | 7,445  | 8,086  | 8,724  | 9,396  |
| Mexico                    | 232    | 224    | 194    | 183    | 184         | 59         | 49         | 62     | 80     | 110    | 152    |
| South Korea               | 850    | 925    | 945    | 988    | 1,032       | 1,088      | 1,139      | 1,193  | 1,234  | 1,310  | 1,389  |
| Taiwan                    | 10     | 2      | 12     | 21     | 28          | 35         | 41         | 45     | 49     | 56     | 63     |
| Rest of World             | 10,521 | 10,801 | 10,762 | 10,655 | 10,669      | 10,747     | 10,839     | 10,927 | 11,062 | 11,187 | 11,316 |
| Residual                  | -614   | 750    | 750    | 750    | 750         | 750        | 750        | 750    | 750    | 750    | 750    |
| Total Net Imports         | 32,279 | 33,677 | 33,851 | 34,382 | 35,052      | 35,770     | 36,589     | 37,462 | 38,409 | 39,451 | 40,394 |
| Soybean Meal Prices       |        |        |        |        | (U.S. Dolla | ars per Me | etric Ton) |        |        |        |        |
| FOB Decatur 44%           | 148.49 | 145.67 | 152.20 | 159.14 | 165.86      | 170.15     | 175.07     | 179.27 | 183.63 | 185.62 | 191.04 |
| CIF Rotterdam             | 148.00 | 147.90 | 154.26 | 161.01 | 167.54      | 171.72     | 176.51     | 180.60 | 184.84 | 186.78 | 192.05 |

# Soybean Oil Trade

|                           | 98/99  | 99/00  | 00/01  | 01/02  | 02/03       | 03/04      | 04/05      | 05/06  | 06/07  | 07/08  | 08/09  |
|---------------------------|--------|--------|--------|--------|-------------|------------|------------|--------|--------|--------|--------|
| Net Exporters             |        |        |        |        | (Thousa     | and Metric | Tons)      |        |        |        |        |
| Argentina                 | 2,228  | 2,319  | 2,376  | 2,429  | 2,485       | 2,542      | 2,596      | 2,654  | 2,709  | 2,770  | 2,824  |
| Brazil                    | 1,175  | 1,488  | 1,417  | 1,452  | 1,478       | 1,533      | 1,577      | 1,626  | 1,677  | 1,734  | 1,791  |
| European Union            | 973    | 1,058  | 1,091  | 1,097  | 1,111       | 1,125      | 1,139      | 1,161  | 1,178  | 1,203  | 1,231  |
| Paraguay                  | 98     | 109    | 112    | 117    | 123         | 129        | 134        | 141    | 148    | 156    | 163    |
| Total Non-U.S.            | 4,474  | 4,974  | 4,995  | 5,095  | 5,197       | 5,328      | 5,446      | 5,582  | 5,713  | 5,862  | 6,010  |
| United States             | 1,197  | 1,066  | 1,069  | 1,054  | 1,083       | 1,104      | 1,153      | 1,207  | 1,279  | 1,365  | 1,466  |
| Trade Share               | 21.1%  | 17.6%  | 17.6%  | 17.1%  | 17.2%       | 17.2%      | 17.5%      | 17.8%  | 18.3%  | 18.9%  | 19.6%  |
| Total Net Exports         | 5,671  | 6,040  | 6,064  | 6,149  | 6,280       | 6,432      | 6,598      | 6,789  | 6,991  | 7,228  | 7,476  |
| Net Importers             |        |        |        |        |             |            |            |        |        |        |        |
| Canada                    | -20    | -23    | -24    | -25    | -25         | -26        | -27        | -28    | -29    | -30    | -31    |
| Eastern Europe            | 107    | 120    | 120    | 121    | 121         | 123        | 124        | 125    | 126    | 127    | 128    |
| Former Soviet Union       | 110    | 132    | 135    | 138    | 142         | 145        | 149        | 153    | 157    | 161    | 165    |
| Russia                    | 70     | 89     | 92     | 96     | 99          | 103        | 106        | 110    | 113    | 117    | 121    |
| Ukraine                   | 40     | 43     | 42     | 42     | 42          | 43         | 43         | 43     | 43     | 44     | 44     |
| Other Former Soviet Union | 0      | 0      | 0      | 0      | 0           | 0          | 0          | 0      | 0      | 0      | 0      |
| Japan                     | 6      | 26     | 26     | 28     | 30          | 31         | 33         | 34     | 36     | 38     | 39     |
| Developing                | 2,134  | 2,229  | 2,306  | 2,421  | 2,578       | 2,751      | 2,937      | 3,150  | 3,375  | 3,633  | 3,905  |
| China                     | 1,700  | 1,803  | 1,858  | 1,959  | 2,096       | 2,246      | 2,405      | 2,588  | 2,780  | 2,985  | 3,204  |
| India                     | 250    | 204    | 209    | 217    | 226         | 233        | 240        | 247    | 255    | 264    | 275    |
| Mexico                    | 90     | 75     | 72     | 74     | 81          | 91         | 103        | 117    | 133    | 151    | 170    |
| South Korea               | 74     | 96     | 101    | 110    | 119         | 128        | 137        | 146    | 156    | 167    | 177    |
| Taiwan                    | 20     | 51     | 65     | 60     | 56          | 52         | 52         | 51     | 52     | 66     | 80     |
| Rest of World             | 3,520  | 3,707  | 3,712  | 3,736  | 3,764       | 3,799      | 3,832      | 3,865  | 3,897  | 3,929  | 3,959  |
| Residual                  | -187   | -150   | -210   | -270   | -330        | -390       | -450       | -510   | -570   | -630   | -690   |
| Total Net Imports         | 5,671  | 6,040  | 6,064  | 6,149  | 6,280       | 6,432      | 6,598      | 6,789  | 6,991  | 7,228  | 7,476  |
| Soybean Oil Prices        |        |        |        |        | (U.S. Dolla | ars per Me | etric Ton) |        |        |        |        |
| FOB Decatur               | 541.58 | 540.41 | 538.81 | 530.64 | 519.66      | 510.21     | 509.36     | 506.61 | 510.85 | 516.55 | 526.07 |
| FOB Rotterdam             | 571.00 | 566.25 | 564.46 | 555.36 | 543.13      | 532.62     | 531.67     | 528.61 | 533.33 | 539.68 | 550.27 |

### World Rapeseed and Rapeseed Products Trade

World trade in rapeseed/canola surged by almost 300,000 mt over the 1998/99 level. Lower prices next year are projected to increase import demand for all countries except China, as it recovers from this year's supply shock. Long-term trade in rapeseed is expected to remain around 3.5 mmt.

World rapeseed area is projected to grow relatively slow to about 2.18 mha by 2008/09. Consequently, rapeseed production and crush are expected to grow by about 7.3 mmt each over the projection period.

Relatively lucrative rapeseed prices led to an increase of more than half-a-million hectares in Canadian canola area. The increase will continue with an overall projected increase of 6.16 percent over the entire projection period.

Rapeseed area in the EU increased this year by about 0.305 mha over the previous year, despite ensuing penalties for overshooting Blair House limits on total oilseeds area. Major growth was reported in Italy and the United Kingdom. Due to relative price advantage, another large overshoot is expected in EU area next year.

Rapeseed area in India declined slightly under increased competition from wheat and rice crops in the Northern Plains region. Nonetheless, the rapeseed area is expected to grow by nearly 300,000 hectares in the coming decade.

Although the Chinese rapeseed area harvested grew by 0.225 mha this year, the per hectare yields dropped from 1.48 mt in 1997/98 to 1.24 in 1998/99 due to devastating floods in key growing areas. To cover this fall in total production and to increase the utilization of domestic crush capacity toward self sufficiency in oil, China imported a record 1.5 mmt of rapeseed this year. This amount is expected to decrease as production recovers in coming years, while rape oil imports are projected to increase slowly by about 250,000 tons over the next 10 years.

Canola meal is imported from Canada primarily by the EU and Japan for its meal quality. Rape meal from the rapeseed varieties grown in countries like China and India is not suitable for animal consumption. Most of the rape meal is exported from India to the EU for industrial purposes. Total trade in meal increased by more than 136 percent between 1987/88 and 1998/99. A relatively slower growth of about 75 percent is projected between 1998/99 and 2008/09.

Rape oil is widely used as a cooking oil in China, India, and some other developing countries, and it is also used in several industrial products. Increasing incomes in these countries are expected to drive the demand for rape oil. Declining area in exporting countries, particularly the EU, and increases in domestic oil production in importing countries, are expected to restrict the trade in rape oil in coming years to between 1.7 and 1.8 mmt.

### **Rapeseed Trade**

|                   | 98/99  | 99/00  | 00/01  | 01/02  | 02/03       | 03/04      | 04/05     | 05/06  | 06/07  | 07/08  | 08/09  |
|-------------------|--------|--------|--------|--------|-------------|------------|-----------|--------|--------|--------|--------|
| Net Exporters     |        |        |        |        | (Thousa     | and Metric | Tons)     |        |        |        |        |
| Canada            | 3,180  | 3,376  | 3,427  | 3,388  | 3,407       | 3,417      | 3,387     | 3,406  | 3,417  | 3,506  | 3,561  |
| Total Net Exports | 3,699  | 3,453  | 3,429  | 3,388  | 3,429       | 3,417      | 3,387     | 3,406  | 3,417  | 3,506  | 3,561  |
| Net Importers     |        |        |        |        |             |            |           |        |        |        |        |
| China             | 1,500  | 216    | 271    | 278    | 282         | 293        | 310       | 314    | 324    | 326    | 340    |
| European Union    | -112   | -77    | -1     | 32     | -23         | 158        | 243       | 300    | 391    | 507    | 596    |
| India             | 0      | 0      | 0      | 0      | 0           | 0          | 0         | 0      | 0      | 0      | 0      |
| Japan             | 2,100  | 2,155  | 2,062  | 2,158  | 2,169       | 2,181      | 2,196     | 2,209  | 2,224  | 2,239  | 2,255  |
| Rest of World     | -407   | 582    | 696    | 620    | 777         | 685        | 638       | 683    | 677    | 734    | 770    |
| Residual          | 99     | 500    | 400    | 300    | 200         | 100        | 0         | -100   | -200   | -300   | -400   |
| Total Net Imports | 3,699  | 3,453  | 3,429  | 3,388  | 3,429       | 3,417      | 3,387     | 3,406  | 3,417  | 3,506  | 3,561  |
| Rapeseed Prices   |        |        |        |        | (U.S. Dolla | ars per Me | tric Ton) |        |        |        |        |
| Cash Vancouver    | 253.24 | 234.85 | 238.14 | 242.13 | 244.85      | 246.34     | 249.62    | 251.47 | 254.75 | 256.19 | 256.41 |
| CIF Hamburg       | 258.79 | 238.85 | 240.30 | 242.55 | 243.40      | 242.84     | 244.33    | 244.20 | 245.71 | 245.12 | 247.56 |

# **Rapeseed Meal Trade**

|                     | 98/99  | 99/00 | 00/01  | 01/02  | 02/03       | 03/04      | 04/05      | 05/06  | 06/07  | 07/08  | 08/09  |
|---------------------|--------|-------|--------|--------|-------------|------------|------------|--------|--------|--------|--------|
| Net Exporters       |        |       |        |        | (Thousa     | and Metric | Tons)      |        |        |        |        |
| Canada              | 1,500  | 1,551 | 1,574  | 1,597  | 1,645       | 1,692      | 1,740      | 1,787  | 1,835  | 1,882  | 1,989  |
| China               | -50    | 128   | 147    | 173    | 181         | 181        | 168        | 144    | 135    | 120    | 106    |
| India               | 900    | 770   | 823    | 883    | 930         | 968        | 996        | 1,015  | 1,026  | 1,037  | 1,044  |
| Total Net Exports   | 2,350  | 2,448 | 2,545  | 2,652  | 2,756       | 2,841      | 2,904      | 2,946  | 2,996  | 3,039  | 3,139  |
| Net Importers       |        |       |        |        |             |            |            |        |        |        |        |
| European Union      | 626    | 595   | 710    | 762    | 764         | 934        | 1,046      | 1,044  | 1,123  | 1,240  | 1,263  |
| Japan               | 120    | 106   | 78     | 68     | 64          | 65         | 64         | 63     | 63     | 65     | 65     |
| Rest of World       | 1,574  | 1,647 | 1,681  | 1,772  | 1,902       | 1,843      | 1,819      | 1,888  | 1,884  | 1,833  | 1,936  |
| Residual            | 30     | 100   | 75     | 50     | 25          | 0          | -25        | -50    | -75    | -100   | -125   |
| Total Net Imports   | 2,350  | 2,448 | 2,545  | 2,652  | 2,756       | 2,841      | 2,904      | 2,946  | 2,996  | 3,038  | 3,139  |
| Rapeseed Meal Price |        |       |        |        | (U.S. Dolla | ars per Me | etric Ton) |        |        |        |        |
| FOB Hamburg         | 110.00 | 99.65 | 104.36 | 109.33 | 114.16      | 117.43     | 121.10     | 124.30 | 127.61 | 129.40 | 133.39 |

### **Rapeseed Oil Trade**

|                    | 98/99  | 99/00  | 00/01  | 01/02  | 02/03       | 03/04      | 04/05      | 05/06  | 06/07  | 07/08  | 08/09  |
|--------------------|--------|--------|--------|--------|-------------|------------|------------|--------|--------|--------|--------|
| Net Exporters      |        |        |        |        | (Thousa     | and Metric | Tons)      |        |        |        |        |
| Canada             | 839    | 878    | 891    | 897    | 920         | 941        | 961        | 984    | 1,011  | 1,041  | 1,071  |
| European Union     | 798    | 930    | 863    | 839    | 842         | 751        | 703        | 735    | 720    | 694    | 722    |
| Total Net Exports  | 1,637  | 1,808  | 1,753  | 1,736  | 1,762       | 1,692      | 1,664      | 1,719  | 1,731  | 1,734  | 1,793  |
| Net Importers      |        |        |        |        |             |            |            |        |        |        |        |
| China              | 430    | 517    | 441    | 393    | 376         | 385        | 410        | 461    | 528    | 615    | 687    |
| India              | 30     | 75     | 68     | 57     | 57          | 59         | 61         | 65     | 71     | 75     | 78     |
| Japan              | 5      | 4      | 4      | 3      | 4           | 4          | 4          | 3      | 3      | 3      | 3      |
| Rest of World      | 1,033  | 1,011  | 1,116  | 1,233  | 1,350       | 1,343      | 1,364      | 1,439  | 1,453  | 1,442  | 1,499  |
| Residual           | 139    | 200    | 125    | 50     | -25         | -100       | -175       | -250   | -325   | -400   | -475   |
| Total Net Imports  | 1,637  | 1,808  | 1,753  | 1,736  | 1,762       | 1,691      | 1,664      | 1,719  | 1,731  | 1,734  | 1,792  |
| Rapeseed Oil Price |        |        |        |        | (U.S. Dolla | ars per Me | etric Ton) |        |        |        |        |
| FOB Rotterdam      | 560.00 | 546.11 | 542.36 | 531.43 | 517.44      | 505.13     | 502.20     | 497.19 | 499.82 | 504.05 | 512.44 |

#### **World Sunflower Seed and Products Trade**

World area under sunflower is expected to grow by 8.27 percent, from 21.7 mha in 1998/99 to 23.5 mha in 2008/09. During the same period, total sunflower trade is expected to grow by another 826,000 mt, or 28.5 percent.

Argentine area under sunflowers responded positively to the world sunflower oil prices in 1998/99, when the total area grew from 3.25 mha in the previous year to 3.75 mha. This area is projected to grow by another 350,000 hectares over the next decade.

Another region for growth in the sunflower area planted is the Rest of the World, which includes Eastern Europe. In addition, farmers in countries like India are also warming up to this cash crop, and the total area might increase there as well in the coming years.

Argentina is, by far, the world's largest exporter of sunflower seed meal and oil, while the EU is the largest importer of sunflower seeds and meal. Russian imports of sunflower meal and oil are projected to continue their upward trend as the economy begins a positive growth path.

Sunflower oil consumption is also on the increase. Total consumption is expected to reach about 11.3 mmt by the end of the projection period. New markets are likely to emerge for sunflower oil, showing promise for extended growth in this sector. Countries like India and China hold the key to the ultimate outcome, as consumption in both these countries is steadily rising. In fact, Indian traders foresee sunflower oil demand increasing rapidly, primarily due to the domestic price advantage compared to palm oil.

### **Sunflower Seed Trade**

|                           | 98/99  | 99/00  | 00/01  | 01/02  | 02/03       | 03/04      | 04/05      | 05/06  | 06/07  | 07/08  | 08/09  |
|---------------------------|--------|--------|--------|--------|-------------|------------|------------|--------|--------|--------|--------|
| Net Exporters             |        |        |        |        | (Thousa     | and Metric | Tons)      |        |        |        |        |
| Argentina                 | 800    | 753    | 779    | 807    | 832         | 853        | 879        | 901    | 927    | 947    | 976    |
| China                     | 5      | 20     | 33     | 30     | 30          | 29         | 31         | 31     | 31     | 30     | 30     |
| Russia                    | 895    | 913    | 937    | 965    | 996         | 1,029      | 1,065      | 1,102  | 1,140  | 1,179  | 1,218  |
| Ukraine                   | 1,085  | 1,110  | 1,140  | 1,171  | 1,202       | 1,232      | 1,263      | 1,294  | 1,324  | 1,355  | 1,385  |
| Other Former Soviet Union | 108    | 107    | 102    | 96     | 94          | 95         | 96         | 100    | 100    | 103    | 109    |
| Total Net Exports         | 2,893  | 2,903  | 2,992  | 3,068  | 3,153       | 3,238      | 3,333      | 3,426  | 3,521  | 3,614  | 3,719  |
| Net Importers             |        |        |        |        |             |            |            |        |        |        |        |
| European Union            | 2,553  | 2,793  | 2,912  | 2,974  | 3,027       | 3,084      | 3,118      | 3,162  | 3,212  | 3,284  | 3,365  |
| Rest of World             | 241    | 160    | 129    | 144    | 176         | 205        | 265        | 314    | 359    | 380    | 404    |
| Residual                  | 99     | -50    | -50    | -50    | -50         | -50        | -50        | -50    | -50    | -50    | -50    |
| Total Net Imports         | 2,893  | 2,903  | 2,992  | 3,068  | 3,153       | 3,238      | 3,333      | 3,426  | 3,521  | 3,614  | 3,719  |
|                           |        |        |        |        | (U.S. Dolla | ars per Me | etric Ton) |        |        |        |        |
| CIF Lower Rhine Price     | 274.64 | 250.64 | 250.93 | 251.88 | 251.68      | 250.35     | 250.67     | 249.69 | 250.03 | 248.67 | 249.76 |

### **Sunflower Meal Trade**

|                           | 98/99 | 99/00 | 00/01 | 01/02 | 02/03       | 03/04      | 04/05     | 05/06  | 06/07  | 07/08  | 08/09  |
|---------------------------|-------|-------|-------|-------|-------------|------------|-----------|--------|--------|--------|--------|
| Net Exporters             |       |       |       |       | (Thousa     | nd Metric  | Tons)     |        |        |        |        |
| Argentina                 | 2,260 | 2,225 | 2,225 | 2,275 | 2,328       | 2,378      | 2,427     | 2,479  | 2,529  | 2,581  | 2,632  |
| China                     | 0     | 3     | 1     | 3     | 0           | -1         | -2        | -1     | 1      | 1      | 0      |
| Ukraine                   | 25    | 30    | 36    | 42    | 47          | 53         | 58        | 64     | 70     | 75     | 81     |
| Total Net Exports         | 2,285 | 2,259 | 2,262 | 2,319 | 2,376       | 2,430      | 2,483     | 2,542  | 2,599  | 2,657  | 2,713  |
| Net Importers             |       |       |       |       |             |            |           |        |        |        |        |
| European Union            | 2,031 | 1,993 | 1,993 | 2,023 | 2,055       | 2,123      | 2,176     | 2,238  | 2,293  | 2,363  | 2,402  |
| Russia                    | 8     | 17    | 13    | -11   | -30         | -25        | -30       | -35    | -39    | -48    | -48    |
| Other Former Soviet Union | 44    | 54    | 58    | 53    | 49          | 49         | 50        | 52     | 54     | 54     | 51     |
| Rest of World             | 186   | 170   | 173   | 229   | 275         | 258        | 262       | 261    | 266    | 262    | 283    |
| Residual                  | 16    | 25    | 25    | 25    | 25          | 25         | 25        | 25     | 25     | 25     | 25     |
| Total Net Imports         | 2,285 | 2,259 | 2,262 | 2,319 | 2,376       | 2,430      | 2,483     | 2,542  | 2,599  | 2,657  | 2,713  |
|                           |       |       |       |       | (U.S. Dolla | ars per Me | tric Ton) |        |        |        |        |
| CIF Rotterdam Price       | 83.00 | 84.32 | 87.51 | 90.91 | 94.19       | 96.29      | 98.70     | 100.76 | 102.89 | 103.86 | 106.51 |

### **Sunflower Oil Trade**

|                           | 98/99  | 99/00  | 00/01  | 01/02  | 02/03       | 03/04      | 04/05      | 05/06  | 06/07  | 07/08  | 08/09  |
|---------------------------|--------|--------|--------|--------|-------------|------------|------------|--------|--------|--------|--------|
| Net Exporters             |        |        |        |        | (Thousa     | and Metric | Tons)      |        |        |        |        |
| Argentina                 | 1,734  | 1,731  | 1,723  | 1,763  | 1,805       | 1,843      | 1,878      | 1,916  | 1,952  | 1,990  | 2,026  |
| China                     | 0      | 0      | 0      | 0      | 0           | 0          | 0          | 0      | 0      | 0      | 0      |
| European Union            | 248    | 216    | 239    | 234    | 220         | 204        | 198        | 186    | 187    | 195    | 219    |
| Ukraine                   | -9     | -19    | -42    | -42    | -48         | -42        | -36        | -24    | -19    | 6      | 42     |
| Total Net Exports         | 1,973  | 1,927  | 1,920  | 1,956  | 1,978       | 2,005      | 2,040      | 2,078  | 2,120  | 2,190  | 2,286  |
| Net Importers             |        |        |        |        |             |            |            |        |        |        |        |
| Russia                    | 348    | 375    | 384    | 392    | 400         | 408        | 416        | 424    | 433    | 439    | 445    |
| Other Former Soviet Union | 94     | 89     | 110    | 129    | 142         | 152        | 162        | 170    | 177    | 167    | 155    |
| Rest of World             | 1,745  | 1,713  | 1,676  | 1,685  | 1,685       | 1,695      | 1,712      | 1,734  | 1,760  | 1,834  | 1,935  |
| Residual                  | -215   | -250   | -250   | -250   | -250        | -250       | -250       | -250   | -250   | -250   | -250   |
| Total Net Imports         | 1,973  | 1,927  | 1,920  | 1,956  | 1,978       | 2,005      | 2,040      | 2,077  | 2,119  | 2,190  | 2,286  |
|                           |        |        |        |        | (U.S. Dolla | ars per Me | etric Ton) |        |        |        |        |
| FOB NW Europe Price       | 608.95 | 583.81 | 579.28 | 566.40 | 549.96      | 535.47     | 531.89     | 525.89 | 528.78 | 533.52 | 543.10 |

### **World Palm Oil Complex Trade**

While planting of palm trees is on the rise by traditional producers such as Malaysia and Indonesia, the palm oil market will also be affected by the increased emphasis on palm production in major importing countries such as India.

The EU accounts for almost all world trade in palm kernel meal and is expected to import 733 tmt more meal by the end of the period. Its palm oil imports are expected to increase by more than 660 tmt by 2008/09.

Malaysia and Indonesia are the major producers of palm oil and related products, accounting for more than 75 percent of total production. Among the major importing countries are China, the EU, and India.

During 1997/98, Malaysian and Indonesian palm oil production declined by 6 to 7 percent. Although production is slightly higher in 1998/99, palm oil was still selling at a premium over other vegetable oils. This resulted in some substitution away from palm oil by major importing countries.

A steady increase in palm oil production is projected for Malaysia and Indonesia from about 14.3 mmt at present to about 18.6 mmt by 2008/09. Palm oil consumption is expected to drive this surge, mainly from countries like China and India, whose demand for palm oil is projected to increase the total trade by about 2.5 mmt by the end of the period.

### **World Palm Trade**

|                                | 98/99  | 99/00  | 00/01  | 01/02  | 02/03       | 03/04      | 04/05      | 05/06  | 06/07  | 07/08  | 08/09  |
|--------------------------------|--------|--------|--------|--------|-------------|------------|------------|--------|--------|--------|--------|
| Palm Oil                       |        |        |        |        |             |            |            |        |        |        |        |
| Net Exporters                  |        |        |        |        |             | and Metric | ,          |        |        |        |        |
| Malaysia                       | 7,345  | 7,289  | 7,634  | 7,673  | 7,814       | 7,865      | 7,996      | 8,089  | 8,223  | 8,331  | 8,443  |
| Indonesia                      | 2,450  | 2,737  | 2,789  | 3,145  | 3,296       | 3,346      | 3,430      | 3,524  | 3,639  | 3,744  | 3,744  |
| Total Net Exports              | 9,795  | 10,026 | 10,423 | 10,818 | 11,110      | 11,211     | 11,426     | 11,613 | 11,862 | 12,075 | 12,187 |
| Net Importers                  |        |        |        |        |             |            |            |        |        |        |        |
| China                          | 1,250  | 1,288  | 1,330  | 1,331  | 1,363       | 1,423      | 1,495      | 1,552  | 1,610  | 1,656  | 1,706  |
| European Union                 | 1,835  | 1,864  | 1,952  | 2,022  | 2,089       | 2,154      | 2,215      | 2,277  | 2,331  | 2,384  | 2,444  |
| Rest of World                  | 5,225  | 5,373  | 5,690  | 6,065  | 6,309       | 6,334      | 6,466      | 6,584  | 6,771  | 6,934  | 6,986  |
| Residual                       | 1,485  | 1,500  | 1,450  | 1,400  | 1,350       | 1,300      | 1,250      | 1,200  | 1,150  | 1,100  | 1,050  |
| Total Net Imports              | 9,795  | 10,026 | 10,423 | 10,818 | 11,110      | 11,211     | 11,426     | 11,613 | 11,862 | 12,075 | 12,187 |
| Palm Kernel Meal Net Exporters |        |        |        |        |             |            |            |        |        |        |        |
| Malaysia                       | 1,376  | 1,352  | 1,402  | 1,403  | 1,441       | 1,456      | 1,486      | 1,505  | 1,533  | 1,555  | 1,580  |
| Indonesia                      | 745    | 785    | 833    | 930    | 981         | 1,014      | 1,051      | 1,090  | 1,126  | 1,156  | 1,190  |
| Rest of World                  | 99     | 86     | 113    | 118    | 122         | 123        | 125        | 126    | 127    | 126    | 127    |
| Total Net Exports              | 2,220  | 2,223  | 2,348  | 2,451  | 2,544       | 2,593      | 2,662      | 2,721  | 2,786  | 2,836  | 2,897  |
| Net Importers                  | 98/99  | 99/00  | 00/01  | 01/02  | 02/03       | 03/04      | 04/05      | 05/06  | 06/07  | 07/08  | 08/09  |
| European Union                 | 2,220  | 2,223  | 2,348  | 2,451  | 2,544       | 2,593      | 2,662      | 2,721  | 2,786  | 2,836  | 2,897  |
| Residual                       | 0      | 0      | 0      | 0      | 0           | 0          | 0          | 0      | 0      | 0      | 0      |
| Total Net Imports              | 2,220  | 2,223  | 2,348  | 2,451  | 2,544       | 2,593      | 2,662      | 2,721  | 2,786  | 2,836  | 2,897  |
| Palm Kernel Oil                |        |        |        |        |             |            |            |        |        |        |        |
| Net Exporters                  |        |        |        |        |             |            |            |        |        |        |        |
| Malaysia                       | 440    | 410    | 439    | 509    | 406         | 395        | 398        | 387    | 387    | 382    | 667    |
| Indonesia                      | 516    | 547    | 594    | 673    | 709         | 730        | 755        | 779    | 805    | 829    | 845    |
| Total Net Exports              | 956    | 957    | 1,033  | 1,182  | 1,115       | 1,125      | 1,153      | 1,166  | 1,193  | 1,210  | 1,511  |
| Net Importers                  |        |        |        |        |             |            |            |        |        |        |        |
| European Union                 | 496    | 497    | 500    | 505    | 511         | 518        | 525        | 533    | 540    | 547    | 554    |
| Rest of World                  | 381    | 360    | 438    | 587    | 520         | 527        | 553        | 563    | 588    | 603    | 902    |
| Residual                       | 70     | 100    | 95     | 90     | 85          | 80         | 75         | 70     | 65     | 60     | 55     |
| Total Net Imports              | 947    | 957    | 1,033  | 1,182  | 1,115       | 1,125      | 1,153      | 1,166  | 1,193  | 1,210  | 1,511  |
| CIF Rotterdam Prices           |        |        |        |        | (U.S. Dolla | ars per Me | etric Ton) |        |        |        |        |
| Palm Oil                       | 640.00 | 575.87 | 553.92 | 538.98 | 523.17      | 509.31     | 505.78     | 499.98 | 505.07 | 511.93 | 518.18 |
| Palm Kernel Oil                | 623.00 | 577.68 | 575.04 | 561.61 | 543.69      | 528.41     | 527.04     | 522.61 | 529.44 | 538.65 | 537.65 |
| Palm Kernel Meal               | 65.00  | 66.37  | 70.01  | 73.86  | 77.56       | 79.92      | 82.62      | 84.91  | 87.29  | 88.37  | 90.51  |

#### **World Peanut Trade**

World area under peanuts is projected to grow by another 325 thousand hectares in the coming decade, increasing the total production to 28.1 mmt by 2008/09. One distinguishing characteristic of the peanut sector is that a large amount of the production (nearly 50 percent) is consumed directly (as food or in confectionery products), while only about 10 percent of other oilseeds are directly used as food. In addition, most of the production is either consumed or processed domestically, and only a small fraction is traded globally (about 6 to 7 percent of total production).

China is the largest peanut producer in the world, with 10.2 mmt from 3.8 million hectares in 1998/99. As increases are projected in both Chinese peanut area, as well as productivity, total peanut production is projected to increase by another 1.7 mmt by the end of the projection period to 11.9 mmt.

India ranks first in world harvested peanut area. However, due to extremely low productivity (about 1 mt per hectare, compared to about 3 mt per hectare in China), total output is only about 8 mmt per year.

The European Union is, by far, the largest importer of all peanut products and is expected to remain so over the projection period.

About 45 percent of Chinese peanut output is used in direct food consumption, while most of the rest is crushed for oil and meal. Subsequent to increases in crush amounts over the projection years, Chinese total meal and oil production is expected to increase by 19 percent and 21.2 percent, respectively. Trade in both meal and oil is negligible.

Unlike China, most peanuts in India (80 percent) are processed for oil to meet the growing domestic demand for vegetable oils. Although India exports small amounts of both peanuts and peanut meal, there are no imports of peanut oil. This is primarily due to the high premium on peanut oil in world markets, inducing the government to import the cheaper oils (like sunflower, soybean, or palm) instead.

While consumption of most of the other oils is increasing globally, per capita consumption of peanut oil is mostly stagnant or even showing a slight decline. This can mostly be attributed to the relatively higher levels of saturated fat in the composition of peanut oil, compared to other vegetable oils such as soybean or sunflower.

### **World Peanut Trade**

|                   | 98/99 | 99/00 | 00/01 | 01/02 | 02/03 | 03/04       | 04/05 | 05/06 | 06/07 | 07/08 | 08/09 |
|-------------------|-------|-------|-------|-------|-------|-------------|-------|-------|-------|-------|-------|
| Peanut            |       |       |       |       |       |             |       |       |       |       |       |
| Net Exporters     |       |       |       |       |       | nd Metric 1 | ons)  |       |       |       |       |
| China             | 270   | 279   | 274   | 271   | 269   | 267         | 268   | 269   | 272   | 274   | 278   |
| India             | 180   | 185   | 189   | 194   | 199   | 204         | 209   | 214   | 219   | 225   | 230   |
| United States     | 271   | 310   | 309   | 310   | 308   | 309         | 304   | 303   | 301   | 300   | 298   |
| Total Net Exports | 721   | 773   | 772   | 775   | 775   | 780         | 781   | 787   | 793   | 799   | 807   |
| Net Importers     |       |       |       |       |       |             |       |       |       |       |       |
| European Union    | 514   | 506   | 505   | 505   | 505   | 505         | 505   | 505   | 505   | 505   | 505   |
| Rest of World     | 191   | 217   | 218   | 220   | 220   | 224         | 226   | 231   | 238   | 243   | 252   |
| Residual          | 16    | 50    | 50    | 50    | 50    | 50          | 50    | 50    | 50    | 50    | 50    |
| Total Net Imports | 721   | 773   | 772   | 775   | 775   | 780         | 781   | 787   | 793   | 799   | 807   |
| Peanut Meal       |       |       |       |       |       |             |       |       |       |       |       |
| Net Exporters     |       |       |       |       |       |             |       |       |       |       |       |
| China             | 0     | 4     | 5     | 5     | 4     | 3           | 3     | 3     | 4     | 5     | 6     |
| India             | 250   | 269   | 261   | 254   | 246   | 239         | 231   | 224   | 216   | 209   | 201   |
| United States     | 18    | 16    | 16    | 14    | 16    | 17          | 16    | 17    | 17    | 17    | 18    |
| Total Net Exports | 268   | 288   | 283   | 272   | 271   | 274         | 276   | 279   | 283   | 286   | 290   |
| Net Importers     |       |       |       |       |       |             |       |       |       |       |       |
| European Union    | 216   | 220   | 217   | 214   | 211   | 209         | 207   | 205   | 203   | 202   | 199   |
| Rest of World     | 43    | 43    | 51    | 53    | 60    | 65          | 69    | 74    | 80    | 85    | 91    |
| Residual          | 9     | 25    | 15    | 5     | -5    | -15         | -25   | -35   | -45   | -55   | -65   |
| Total Net Imports | 268   | 288   | 283   | 272   | 271   | 274         | 276   | 279   | 283   | 286   | 290   |
| Peanut Oil        |       |       |       |       |       |             |       |       |       |       |       |
| Net Exporters     |       |       |       |       |       |             |       |       |       |       |       |
| United States     | 5     | 5     | 5     | 5     | 5     | 5           | 4     | 4     | 4     | 4     | 4     |
| Rest of World     | 154   | 160   | 161   | 165   | 170   | 174         | 175   | 177   | 177   | 177   | 175   |
| Total Net Exports | 159   | 165   | 167   | 170   | 174   | 178         | 180   | 182   | 182   | 181   | 179   |
| Net Importers     |       |       |       |       |       |             |       |       |       |       |       |
| China             | 41    | 1     | 5     | 6     | 7     | 7           | 8     | 12    | 17    | 21    | 27    |
| European Union    | 131   | 144   | 142   | 143   | 148   | 152         | 151   | 150   | 145   | 140   | 132   |
| Residual          | 9     | 20    | 20    | 20    | 20    | 20          | 20    | 20    | 20    | 20    | 20    |
| Total Net Imports | 159   | 165   | 167   | 170   | 174   | 178         | 180   | 182   | 182   | 181   | 179   |

#### World Rice Trade

Although consumption is projected to increase by a significant amount, world rice trade is expected to increase by only 3 mmt, suggesting thinness of the world rice market, where less than 5 percent trade is unlikely to change in the future.

Thailand rice production growth and declining per capita consumption enables Thailand to expand its exports by more than 1 mmt in the next decade.

Vietnam, India, and Pakistan also expand their rice exports during the projection period. In the last decade Vietnam has transformed itself from an importer to the second largest exporter, and exports will increase to 4.63 mmt in the next 10 years.

Indian rice exports are expected to grow from 1.94 mmt in a 1999/00 to 3.12 mmt in 2008/09

Per capita rice consumption in Pakistan is flat; most of the additional production will find its way through the export market, increasing its exports to 2.25 mmt.

Other Asian exporters include China, Taiwan, and Myanmar, which account for a small proportion of total Asian exports.

Strong growth in U.S. domestic uses from steadily rising per capita consumption and slow production growth cause exports to fall by 0.5 mmt between 1999 and 2008.

In the future, under MERCOSUR Argentina and Uruguay continue to export to Brazil.

Production returns to a more normal level this year in Indonesia, and imports are projected to decline to 2 mmt. Demand arising from rising per capita consumption and higher population growth is likely to outpace domestic supply, requiring Indonesia to increase its imports by more than 50 percent in the next 10 years.

Under GATT minimum-access commitments, Japan and South Korea have agreed to import 0.758 mmt of rice by 2001, and must import 0.205 mmt by 2004. With declining per capita consumption, Japan and South Korea will have to reduce domestic production to accommodate imported rice.

**Rice Trade** 

|                          | 98/99  | 99/00  | 00/01  | 01/02  | 02/03       | 03/04      | 04/05      | 05/06  | 06/07  | 07/08  | 08/09  |
|--------------------------|--------|--------|--------|--------|-------------|------------|------------|--------|--------|--------|--------|
| Net Exporters            |        |        |        |        | (Millio     | n Metric T | ons)       |        |        |        |        |
| Argentina                | 0.60   | 0.64   | 0.66   | 0.68   | 0.69        | 0.71       | 0.73       | 0.75   | 0.77   | 0.79   | 0.80   |
| China                    | 0.95   | 0.58   | 0.96   | 1.24   | 1.19        | 1.11       | 1.12       | 1.03   | 0.91   | 0.82   | 0.72   |
| India                    | 2.85   | 2.12   | 1.94   | 2.09   | 2.29        | 2.39       | 2.44       | 2.57   | 2.80   | 2.97   | 3.12   |
| Myanmar (Burma)          | 0.10   | 0.13   | 0.15   | 0.15   | 0.14        | 0.11       | 0.09       | 0.06   | 0.06   | 0.06   | 0.09   |
| Pakistan                 | 2.00   | 2.04   | 2.08   | 2.10   | 2.12        | 2.14       | 2.16       | 2.19   | 2.21   | 2.23   | 2.25   |
| Taiwan                   | 0.04   | 0.07   | 0.10   | 0.11   | 0.12        | 0.12       | 0.11       | 0.09   | 0.06   | 0.04   | 0.01   |
| Thailand                 | 5.50   | 5.86   | 5.88   | 5.95   | 6.03        | 6.12       | 6.22       | 6.31   | 6.40   | 6.50   | 6.59   |
| Uruguay                  | 0.70   | 0.74   | 0.77   | 0.80   | 0.83        | 0.87       | 0.90       | 0.94   | 0.99   | 1.04   | 1.09   |
| Vietnam                  | 3.50   | 3.32   | 3.46   | 3.59   | 3.74        | 3.88       | 4.03       | 4.18   | 4.33   | 4.48   | 4.63   |
| Total Non-U.S.           | 16.20  | 15.43  | 15.90  | 16.61  | 17.03       | 17.34      | 17.70      | 18.03  | 18.47  | 18.89  | 19.30  |
| United States            | 2.54   | 2.88   | 2.80   | 2.74   | 2.69        | 2.64       | 2.60       | 2.54   | 2.49   | 2.43   | 2.38   |
| Trade Share              | 31.2%  | 31.2%  | 31.2%  | 31.2%  | 31.2%       | 31.2%      | 31.2%      | 31.2%  | 31.2%  | 31.2%  | 31.2%  |
| Total Net Exports        | 18.74  | 18.31  | 18.70  | 19.34  | 19.72       | 19.98      | 20.30      | 20.57  | 20.96  | 21.32  | 21.68  |
| Net Importers            |        |        |        |        |             |            |            |        |        |        |        |
| Brazil                   | 1.00   | 1.05   | 0.90   | 0.80   | 0.84        | 0.92       | 1.00       | 1.11   | 1.24   | 1.38   | 1.53   |
| European Union           | 0.22   | 0.26   | 0.26   | 0.27   | 0.29        | 0.30       | 0.32       | 0.35   | 0.38   | 0.41   | 0.44   |
| Indonesia                | 2.00   | 2.33   | 2.46   | 2.66   | 2.69        | 2.69       | 2.75       | 2.85   | 3.01   | 3.12   | 3.16   |
| Japan                    | 0.30   | 0.68   | 0.76   | 0.76   | 0.76        | 0.76       | 0.76       | 0.76   | 0.66   | 0.56   | 0.56   |
| Phillippines             | 1.50   | 1.33   | 1.47   | 1.62   | 1.76        | 1.82       | 1.87       | 1.89   | 1.96   | 2.03   | 2.08   |
| Saudi Arabia             | 0.75   | 0.79   | 0.81   | 0.83   | 0.85        | 0.87       | 0.90       | 0.92   | 0.95   | 0.97   | 1.00   |
| South Korea              | 0.13   | 0.10   | 0.10   | 0.13   | 0.15        | 0.18       | 0.21       | 0.21   | 0.21   | 0.21   | 0.21   |
| Rest of World            | 11.23  | 11.77  | 11.94  | 12.28  | 12.39       | 12.44      | 12.51      | 12.48  | 12.57  | 12.65  | 12.69  |
| Residual                 | 1.62   | 0.00   | 0.00   | 0.00   | 0.00        | 0.00       | 0.00       | 0.00   | 0.00   | 0.00   | 0.00   |
| Total Net Imports        | 18.74  | 18.31  | 18.70  | 19.34  | 19.72       | 19.98      | 20.30      | 20.57  | 20.96  | 21.32  | 21.68  |
| Rice Prices              |        |        |        |        | (U.S. Dolla | ars per Me | etric Ton) |        |        |        |        |
| FOB Bangkok 5% Parboiled | 295.00 | 294.85 | 297.38 | 301.97 | 304.93      | 311.44     | 314.11     | 319.67 | 322.97 | 325.58 | 329.84 |
| FOB U.S. Houston         | 384.93 | 367.73 | 370.60 | 376.33 | 379.64      | 388.23     | 390.88     | 398.60 | 401.90 | 405.65 | 410.94 |

#### World All-Cotton Trade

Net cotton trade fell considerably in 1998/99 to 3.73 mmt due to China's reduced imports and the continued economic difficulties in the rest of Asia.

The United States saw its share of world net trade fall by almost half as U.S. net exports fell from 1.63 mmt in 1997/98 to 0.86 mmt in 1998/99, one of the lowest numbers in recent times.

World cotton prices are down substantially from the 1997/98 level with the A-Index averaging \$1,278 per metric ton, a \$313 per metric ton reduction from just one year ago. Prices will modestly decline through 2000 and begin to rebound gradually in 2001/02.

Net exports by Africa continue to grow in 1998/99, reaching 961 tmt as a result of increased production from strong yields and record harvested area. Net exports will increase to 988 tmt by 2008/09.

A continued increase in Australian area and production, coupled with low domestic mill use, strengthens Australia's role in the world cotton market. Net exports reach 945 tmt by 2008/09.

Weaker cotton prices are expected to reduce cotton area in 1999. In the long run, India is expected to remain a net exporter, reaching a trade surplus of 100 tmt of cotton by 2008/09.

Reduced beginning stocks will limit supplies, in Pakistan, which will be a net importer of cotton in 1998/99. With limited growth in production, it is projected that Pakistan will remain a small net importer for most of the period.

Turkish domestic consumption and imports are projected to be down sharply from the 1997/98 levels. Economic problems in major export markets have hurt the Turkish textile industry. In the long run, growth in domestic use is expected to return, along with increased imports.

Continued strength in Brazilian area and improving yields have led to a small increase in production, reaching 392 tmt in 1998/99. Increases have led Brazilian production to a decrease in imports to 315 tmt in 1998/99. Production will fail to keep pace with domestic use and imports reach 458 tmt by 2008/09.

China changed its net trade position from importing 507 tmt in 1997/98 to exporting 26 tmt in 1998/99. In the long run, cotton will continue to lose area to feed grains and oilseeds, limiting production. As a result, China will return to a net importer in 1999/00.

Other Asian countries will continue to rely on other markets to meet its raw cotton needs. Net imports show modest growth over the period as consumption expands. Net imports are expected to expand from 1.07 mmt in 1998/99 to 1.15 mmt in 2008/09.

**All-Cotton Trade** 

|                           | 98/99 | 99/00 | 00/01 | 01/02 | 02/03       | 03/04      | 04/05     | 05/06 | 06/07 | 07/08 | 08/09 |
|---------------------------|-------|-------|-------|-------|-------------|------------|-----------|-------|-------|-------|-------|
| Net Exporters             |       |       |       |       | (Thousa     | and Metric | Tons)     |       |       |       |       |
| Africa                    | 961   | 978   | 971   | 954   | 954         | 960        | 965       | 971   | 975   | 982   | 988   |
| Argentina                 | 217   | 229   | 227   | 226   | 228         | 232        | 237       | 241   | 244   | 246   | 248   |
| Australia                 | 653   | 719   | 757   | 776   | 797         | 819        | 841       | 863   | 884   | 905   | 925   |
| India                     | 59    | 112   | 84    | 93    | 100         | 100        | 101       | 104   | 104   | 104   | 100   |
| Other Former Soviet Union | 245   | 232   | 228   | 223   | 222         | 223        | 225       | 227   | 228   | 229   | 230   |
| Other Latin America       | -160  | -168  | -174  | -181  | -186        | -188       | -189      | -190  | -191  | -193  | -196  |
| Other Middle East         | 238   | 221   | 214   | 212   | 213         | 215        | 215       | 216   | 216   | 216   | 216   |
| Pakistan                  | -21   | -15   | -17   | -16   | -13         | -9         | -6        | -3    | -1    | 0     | 38    |
| Turkey                    | -152  | -158  | -175  | -187  | -188        | -190       | -192      | -197  | -202  | -208  | -216  |
| Uzbekistan                | 826   | 843   | 835   | 825   | 822         | 823        | 824       | 824   | 824   | 824   | 824   |
| Total Non-U.S.            | 2,866 | 2,994 | 2,950 | 2,925 | 2,950       | 2,986      | 3,022     | 3,056 | 3,081 | 3,105 | 3,157 |
| United States             | 859   | 1,106 | 1,258 | 1,338 | 1,310       | 1,266      | 1,215     | 1,181 | 1,166 | 1,168 | 1,159 |
| Total Net Exports         | 3,726 | 4,100 | 4,208 | 4,264 | 4,260       | 4,253      | 4,237     | 4,236 | 4,248 | 4,273 | 4,315 |
| U.S. Trade Share of Net   | 23.1% | 27.0% | 29.9% | 31.4% | 30.8%       | 29.8%      | 28.7%     | 27.9% | 27.5% | 27.3% | 26.9% |
| Net Importers             |       |       |       |       |             |            |           |       |       |       |       |
| Brazil                    | 315   | 366   | 387   | 396   | 405         | 412        | 420       | 427   | 435   | 446   | 458   |
| Canada                    | 66    | 67    | 68    | 69    | 70          | 71         | 72        | 73    | 74    | 75    | 76    |
| China                     | -26   | 283   | 353   | 385   | 370         | 351        | 321       | 308   | 302   | 304   | 318   |
| Eastern Europe            | 284   | 295   | 296   | 292   | 291         | 292        | 293       | 295   | 297   | 299   | 303   |
| European Union            | 748   | 713   | 695   | 693   | 692         | 692        | 693       | 696   | 700   | 705   | 711   |
| Japan                     | 282   | 266   | 254   | 244   | 236         | 232        | 227       | 220   | 213   | 208   | 201   |
| Mexico                    | 283   | 321   | 354   | 385   | 403         | 412        | 419       | 425   | 431   | 435   | 439   |
| Other Asia                | 1,068 | 1,080 | 1,097 | 1,104 | 1,107       | 1,112      | 1,117     | 1,123 | 1,129 | 1,136 | 1,145 |
| Other Western Europe      | 33    | 33    | 33    | 32    | 32          | 31         | 31        | 30    | 30    | 29    | 29    |
| Russia                    | 184   | 176   | 172   | 169   | 167         | 166        | 167       | 170   | 174   | 179   | 185   |
| South Korea               | 278   | 282   | 283   | 279   | 274         | 268        | 263       | 258   | 253   | 248   | 243   |
| Taiwan                    | 271   | 268   | 265   | 264   | 264         | 263        | 262       | 261   | 260   | 259   | 258   |
| Residual                  | -60   | -50   | -50   | -50   | -50         | -50        | -50       | -50   | -50   | -50   | -50   |
| Total Net Imports         | 3,726 | 4,100 | 4,208 | 4,264 | 4,260       | 4,253      | 4,237     | 4,236 | 4,248 | 4,273 | 4,315 |
| Cotton Prices             |       |       |       |       |             |            |           |       |       |       |       |
| Cotlook A Index *         |       |       |       |       | (U.S. Dolla | ars per Me | tric Ton) |       |       |       |       |
| CIF Northern Europe       | 1,278 | 1,231 | 1,218 | 1,280 | 1,356       | 1,419      | 1,471     | 1,521 | 1,565 | 1,604 | 1,632 |
| U.S. Farm Price           | 1,378 | 1,201 | 1,170 | 1,218 | 1,278       | 1,327      | 1,368     | 1,406 | 1,441 | 1,471 | 1,493 |

<sup>\*</sup> The "A" index is the average of the five lowest CIF Northern European quotes of the following descriptions: (Middling 1-3/32"): Memphis; Calif./Ariz.; Mexican; Central American; Paraguayan; Turkish Izmir/Antalya; Central Asian; Pakistani 1503; Indian H-4; Chinese 329; African 'Franc Zone'; Tanzanian; Greek; and Australian. SOURCE: Cotlook, Ltd., Liverpool, England.

### **World Sugar Trade**

Higher world sugar production and flat import demand will decrease raw sugar price in 1998/99 by more than 35 percent. Sugar price is expected to rise steadily over the projection period, rising by approximately 50 percent, but still below the 1997/98 level. During the projection period, sugar trade is projected to increase by more than 4 mmt.

Brazilian sugar exports are projected to increase by 1 mmt between 1999/00 and 2008/09.

Although Australian sugar consumption is projected to rise slowly in the future, production will still exceed consumption, making Australia a larger exporter with exports rising from 4.4 to 5.3 mmt.

El Nino is also projected to adversely affect this year's Thai production, inducing further decline in exports. Assuming normal weather during the remaining projection period, raw sugar exports will increase by 0.7 mmt.

For the projection period, Cuban sugar exports are projected to reverse its downward trend and increase by more than 0.5 mmt.

Canadian domestic demand will be largely met from imported raw sugar, rising by 0.25 mmt during the projection period.

Transition economies, particularly the FSU, account for a large share of world sugar imports, where most of the growing demand will be met by additional imports, increasing from 5.1 to 5.75 mmt.

Both China and India are projected to be small importers of sugar during the projection period.

Japanese sugar imports are projected to continue to decline in the future because of declining per capita consumption and slower population growth.

South Korea appears to be expanding their imports throughout the next decade to meet rising domestic consumption.

Despite its mandatory sugar planting policy, Indonesia will be a growing sugar importer in the next decade. Imports are projected to grow from 1.2 mmt in 1999/00 to 1.55 mmt in 2008/09.

# Sugar Trade

|                     | 98/99  | 99/00  | 00/01  | 01/02  | 02/03       | 03/04      | 04/05      | 05/06  | 06/07  | 07/08  | 08/09  |
|---------------------|--------|--------|--------|--------|-------------|------------|------------|--------|--------|--------|--------|
| Net Exporters       |        |        |        |        | (Thousa     | and Metric | Tons)      |        |        |        |        |
| Australia           | 4,418  | 4,591  | 4,644  | 4,723  | 4,816       | 4,916      | 5,021      | 5,100  | 5,169  | 5,235  | 5,299  |
| Brazil              | 7,460  | 6,984  | 6,834  | 6,976  | 7,116       | 7,265      | 7,419      | 7,585  | 7,710  | 7,891  | 8,094  |
| Cuba                | 2,500  | 2,551  | 2,615  | 2,664  | 2,721       | 2,768      | 2,825      | 2,886  | 2,953  | 3,020  | 3,089  |
| European Union      | 3,768  | 3,584  | 3,753  | 3,822  | 3,837       | 3,828      | 3,831      | 3,837  | 3,845  | 3,854  | 3,867  |
| India               | -340   | -550   | -553   | -582   | -612        | -644       | -672       | -604   | -574   | -543   | -528   |
| Mexico              | 970    | 985    | 952    | 932    | 921         | 915        | 915        | 920    | 931    | 943    | 960    |
| South Africa        | 1,400  | 1,418  | 1,440  | 1,464  | 1,489       | 1,517      | 1,548      | 1,582  | 1,620  | 1,661  | 1,706  |
| Thailand            | 2,600  | 3,198  | 3,348  | 3,447  | 3,517       | 3,580      | 3,640      | 3,702  | 3,766  | 3,834  | 3,905  |
| Total Net Exports   | 23,116 | 23,310 | 23,586 | 24,029 | 24,417      | 24,789     | 25,199     | 25,613 | 25,993 | 26,439 | 26,919 |
| Net Importers       |        |        |        |        |             |            |            |        |        |        |        |
| Algeria             | 920    | 938    | 948    | 958    | 968         | 978        | 987        | 997    | 1,006  | 1,014  | 1,022  |
| Canada              | 1,195  | 1,205  | 1,222  | 1,246  | 1,273       | 1,301      | 1,330      | 1,358  | 1,385  | 1,411  | 1,436  |
| China               | 530    | 394    | 505    | 516    | 516         | 520        | 566        | 629    | 666    | 732    | 819    |
| Eastern Europe      | 477    | 553    | 473    | 458    | 458         | 460        | 460        | 460    | 453    | 448    | 442    |
| Egypt               | 600    | 692    | 688    | 679    | 675         | 675        | 677        | 683    | 688    | 707    | 727    |
| Former Soviet Union | 5,115  | 5,047  | 5,134  | 5,206  | 5,250       | 5,300      | 5,369      | 5,451  | 5,543  | 5,644  | 5,750  |
| Indonesia           | 1,600  | 1,226  | 1,274  | 1,339  | 1,417       | 1,466      | 1,494      | 1,517  | 1,529  | 1,535  | 1,541  |
| Japan               | 1,563  | 1,517  | 1,481  | 1,455  | 1,429       | 1,380      | 1,323      | 1,271  | 1,226  | 1,172  | 1,121  |
| South Korea         | 1,200  | 1,264  | 1,285  | 1,312  | 1,343       | 1,374      | 1,405      | 1,435  | 1,461  | 1,486  | 1,509  |
| Rest of World       | 4,261  | 4,589  | 4,753  | 4,881  | 4,970       | 5,059      | 5,255      | 5,459  | 5,622  | 5,805  | 5,978  |
| Total Non-U.S.      | 21,304 | 21,478 | 21,820 | 22,136 | 22,413      | 22,662     | 23,042     | 23,368 | 23,655 | 24,000 | 24,376 |
| United States       | 1,812  | 1,833  | 1,766  | 1,892  | 2,004       | 2,126      | 2,157      | 2,244  | 2,338  | 2,439  | 2,544  |
| Trade Share         | 7.8%   | 7.9%   | 7.5%   | 7.9%   | 8.2%        | 8.6%       | 8.6%       | 8.8%   | 9.0%   | 9.2%   | 9.4%   |
| Total Net Imports   | 23,116 | 23,310 | 23,586 | 24,029 | 24,417      | 24,789     | 25,199     | 25,613 | 25,993 | 26,439 | 26,919 |
| Sugar Prices        |        |        |        |        | (U.S. Dolla | ars per Me | etric Ton) |        |        |        |        |
| FOB Caribbean Price | 165    | 177    | 191    | 199    | 206         | 211        | 216        | 221    | 229    | 237    | 246    |
| New York Spot       | 485    | 475    | 482    | 486    | 488         | 491        | 492        | 494    | 496    | 498    | 500    |

#### **World Beef and Veal Trade**

The U.S. share of beef exports by modeled countries swells from 20.3 percent in 1998 to 35.0 percent in 2007. With the exception of Argentina and Canada, the shares of other major beef exporters decline.

Increased meat packing capacity in Canada reduces the number of slaughter cattle exported to the United States, leading to a 15 percent rise in the Canadian supply of beef for export.

Beef consumption in Mexico will outgrow production prompting an average increase in beef imports of 15 tmt each year.

FMD-free status is expected to increase Argentina's export demand, contributing to the incentives for producers to expand production and exports annually, by 1.4 and 3.7 percent, respectively.

WTO constraints on EU subsidized beef exports limit the share of excess supply that can be absorbed by exports; therefore, beef stocks rise more than 200 tmt each year, reaching 1.8 mmt by 2008.

EU beef exports are greatly affected by the Russian crisis. EU beef export levels fall 5 to 6 percent below the subsidized export limit in 1998 and 1999.

Russian imports continue to decline through 2000.

Korean beef imports are expected to fall short of their minimum access commitments.

Australian cattle exports will slowly recover to pre-Asian crisis levels by the end of the projection period.

### **Beef and Veal Trade**

|                           | 1998  | 1999  | 2000  | 2001  | 2002        | 2003       | 2004      | 2005  | 2006  | 2007  | 2008  |
|---------------------------|-------|-------|-------|-------|-------------|------------|-----------|-------|-------|-------|-------|
| Net Exporters             |       |       |       |       | (Thousa     | ınd Metric | Tons)     |       |       |       |       |
| Argentina                 | 240   | 310   | 353   | 392   | 428         | 452        | 461       | 447   | 439   | 435   | 440   |
| Australia                 | 1,187 | 1,188 | 1,172 | 1,156 | 1,148       | 1,137      | 1,133     | 1,135 | 1,139 | 1,145 | 1,149 |
| Brazil                    | 245   | 271   | 280   | 278   | 278         | 273        | 267       | 262   | 258   | 260   | 265   |
| Canada                    | 135   | 126   | 123   | 147   | 178         | 204        | 215       | 222   | 231   | 247   | 254   |
| China - Mainland          | 43    | 48    | 57    | 50    | 42          | 32         | 25        | 18    | 13    | 11    | 10    |
| Czech Republic            | 15    | 18    | 21    | 23    | 22          | 20         | 17        | 14    | 12    | 10    | 10    |
| European Union *          | 491   | 446   | 426   | 427   | 429         | 428        | 427       | 426   | 425   | 426   | 428   |
| Hungary                   | 7     | 7     | 7     | 7     | 7           | 7          | 6         | 6     | 6     | 5     | 5     |
| New Zealand               | 508   | 508   | 507   | 508   | 514         | 521        | 530       | 539   | 548   | 559   | 569   |
| Poland                    | 35    | 31    | 23    | 13    | 7           | -5         | -10       | -14   | -16   | -15   | -13   |
| Thailand                  | 0     | 0     | 0     | 0     | 0           | 0          | 0         | 0     | 0     | 0     | 0     |
| Ukraine                   | 48    | 33    | 19    | 10    | 9           | 6          | -1        | -7    | -10   | -10   | -10   |
| United States             | -205  | -249  | -194  | -124  | -37         | 103        | 245       | 426   | 578   | 600   | 543   |
| Total Net Exports         | 2,748 | 2,737 | 2,795 | 2,886 | 3,024       | 3,176      | 3,316     | 3,473 | 3,622 | 3,674 | 3,650 |
| Net Importers             |       |       |       |       |             |            |           |       |       |       |       |
| China - Hong Kong         | 52    | 51    | 51    | 53    | 54          | 55         | 58        | 60    | 62    | 63    | 64    |
| Indonesia                 | 1     | 1     | 1     | 1     | 1           | 1          | 1         | 1     | 1     | 1     | 1     |
| Japan                     | 964   | 928   | 904   | 901   | 907         | 954        | 1,019     | 1,088 | 1,149 | 1,172 | 1,188 |
| Mexico                    | 171   | 235   | 262   | 276   | 287         | 300        | 308       | 314   | 320   | 319   | 325   |
| Other Eastern Europe      | 44    | 45    | 47    | 48    | 50          | 51         | 51        | 50    | 47    | 39    | 32    |
| Other Former Soviet Union | -57   | -27   | 33    | 63    | 76          | 80         | 83        | 96    | 103   | 102   | 84    |
| Philippines               | 65    | 61    | 64    | 62    | 63          | 67         | 72        | 78    | 84    | 87    | 90    |
| Russia                    | 491   | 418   | 416   | 470   | 522         | 580        | 627       | 668   | 710   | 740   | 758   |
| South Korea               | 125   | 168   | 184   | 200   | 263         | 296        | 308       | 320   | 324   | 328   | 329   |
| Taiwan                    | 76    | 74    | 75    | 78    | 81          | 85         | 90        | 95    | 100   | 104   | 107   |
| Rest of World             | 816   | 784   | 758   | 735   | 721         | 707        | 699       | 704   | 722   | 718   | 673   |
| Total Net Imports         | 2,748 | 2,737 | 2,795 | 2,886 | 3,024       | 3,176      | 3,316     | 3,473 | 3,622 | 3,674 | 3,650 |
| Nebraska Direct           |       |       |       |       | (U.S. Dolla | ars per Me | tric Ton) |       |       |       |       |
| Fed Steer Price           | 1,355 | 1,449 | 1,528 | 1,605 | 1,665       | 1,644      | 1,613     | 1,563 | 1,530 | 1,569 | 1,644 |

<sup>\*</sup> Includes meat and meat equivalent of live cattle trade.

#### **World Pork Trade**

World pork output is projected to reach 84.3 mmt by 2008, an increase of 24.5 percent over 1998 levels. Nearly 80 percent of the total increase in world pork output is projected to occur in China.

World pork trade is projected to grow 36 percent in the next decade. Low-cost feed and capital inputs, coupled with high productivity, enable the United States to capture 76 percent of the growth in international markets. The U.S. share of total pork trade increases from 12 percent in 1998 to 32.6 percent in 2008.

New meat packing facilities in Canada siphon hogs away from live hog exports to the United States, decreasing Canadian live trade by 62 percent in the next 10 years. Consequently, Canadian pork exports increase as much as 17 percent above 1998 levels.

Total EU production increased 5 percent, causing the average producer price to drop 28 percent. EU pork production is expected to continue to grow at 0.5 percent annually during the next decade.

In 1998, 56 percent of the EU's pork exports were unsubsidized. As WTO limitations reduce subsidized exports, unsubsidized shipments grow slightly, enabling EU pork exports to remain near 1.1 mmt.

Polish pork exports dropped 15.5 percent in 1998. Economic recovery in Russia and other NIS boost the demand for Polish pork, keeping export levels in the new millennium above the 1997 high of 284 tmt.

Russian pork imports will drop an additional 45 tmt by 2000. Although Russian pork imports resume growing in the next century, they do not exceed 350 tmt.

Japanese pork imports will decline an additional 6.4 percent in the next two years. However, when economic growth in Japan resumes, pork imports increase 5 percent annually for the remainder of the projection period.

Hong Kong pork imports rise to 337 tmt by 2008; however, between 100 and 150 tmt will most likely be unofficially transshipped into Mainland China.

### **Pork Trade**

|                           | 1998  | 1999  | 2000  | 2001  | 2002        | 2003       | 2004      | 2005  | 2006  | 2007  | 2008  |
|---------------------------|-------|-------|-------|-------|-------------|------------|-----------|-------|-------|-------|-------|
| Net Exporters             |       |       |       |       | (Thousa     | nd Metric  | Tons)     |       |       |       |       |
| Australia                 | 6     | 11    | 17    | 17    | ` 15        | 9          | 12        | 13    | 11    | 8     | 9     |
| Brazil                    | 77    | 106   | 134   | 136   | 129         | 106        | 117       | 123   | 113   | 100   | 103   |
| Canada                    | 340   | 328   | 358   | 425   | 435         | 387        | 370       | 369   | 367   | 343   | 333   |
| China - Mainland          | 87    | 77    | 93    | 88    | 78          | 59         | 63        | 63    | 53    | 43    | 42    |
| Czech Republic            | 10    | 17    | 26    | 27    | 24          | 15         | 18        | 18    | 15    | 11    | 13    |
| European Union            | 1,040 | 1,059 | 1,082 | 1,082 | 1,068       | 1,016      | 1,047     | 1,061 | 1,040 | 1,012 | 1,023 |
| Hungary                   | 18    | 34    | 44    | 46    | 44          | 34         | 37        | 37    | 33    | 28    | 29    |
| Poland                    | 220   | 248   | 293   | 306   | 299         | 271        | 280       | 284   | 275   | 264   | 270   |
| Taiwan                    | -11   | -10   | -5    | 15    | 25          | 40         | 50        | 50    | 50    | 50    | 50    |
| Thailand                  | 0     | 0     | 0     | 0     | 0           | 0          | 0         | 0     | 0     | 0     | 0     |
| Ukraine                   | 5     | 11    | 13    | 5     | 3           | -3         | 1         | 2     | 0     | -4    | -3    |
| United States             | 244   | 324   | 379   | 423   | 539         | 584        | 626       | 701   | 780   | 836   | 902   |
| Total Net Exports         | 2,036 | 2,208 | 2,433 | 2,571 | 2,660       | 2,517      | 2,620     | 2,722 | 2,737 | 2,691 | 2,771 |
| Net Imports               |       |       |       |       |             |            |           |       |       |       |       |
| Argentina                 | 66    | 63    | 60    | 60    | 61          | 64         | 63        | 62    | 64    | 66    | 65    |
| China - Hong Kong         | 213   | 210   | 184   | 195   | 219         | 264        | 256       | 259   | 282   | 308   | 312   |
| Indonesia                 | 0     | 0     | 0     | 0     | 0           | 0          | 0         | 0     | 0     | 0     | 0     |
| Japan                     | 735   | 719   | 686   | 705   | 748         | 841        | 846       | 843   | 910   | 989   | 1,020 |
| Mexico                    | 40    | 32    | 24    | 24    | 31          | 50         | 45        | 43    | 52    | 63    | 64    |
| New Zealand               | 8     | 7     | 6     | 5     | 6           | 7          | 6         | 5     | 6     | 6     | 6     |
| Other Eastern Europe      | 116   | 113   | 111   | 108   | 106         | 109        | 102       | 94    | 90    | 87    | 83    |
| Other Former Soviet Union | -26   | -18   | 9     | 8     | 8           | 15         | 14        | 10    | 10    | 14    | 10    |
| Philippines               | 7     | 4     | 4     | 4     | 5           | 7          | 5         | 5     | 6     | 8     | 7     |
| Russia                    | 343   | 307   | 298   | 309   | 324         | 343        | 337       | 332   | 338   | 348   | 347   |
| South Korea               | -40   | -51   | -37   | -36   | -37         | -17        | -24       | -26   | -17   | -5    | -7    |
| Rest of World             | 573   | 823   | 1,088 | 1,188 | 1,190       | 834        | 970       | 1,094 | 996   | 809   | 863   |
| Total Net Imports         | 2,036 | 2,208 | 2,433 | 2,571 | 2,660       | 2,517      | 2,620     | 2,722 | 2,737 | 2,691 | 2,771 |
| Iowa-Southern Minnesota   |       |       |       | (     | (U.S. Dolla | ars per Me | tric Ton) |       |       |       |       |
| Barrow and Gilt Price     | 700   | 781   | 937   | 980   | 958         | 805        | 922       | 994   | 938   | 864   | 920   |

### **World Poultry Trade**

Over the next 10 years, world poultry production will grow briskly at 2.8 percent each year, and poultry exports increase 3.4 percent annually.

Broiler trade increases 40 percent from 1998 to 2008 for a total change of more than 1.3 mmt.

More than 55 percent of growth in net imports occurs in China and Japan, with additional imports by each country in excess of 335 tmt by 2008.

U.S. exporters capture most of the increase in world broiler imports over the next decade, and Brazil secures an additional 164 tmt of exports.

The complete liberalization of Mexico's broiler sector under NAFTA prompts net imports to nearly double in 2003. Mexican net imports of broiler meat continue to increase 5.3 percent annually until 2008.

Brazilian broiler exports expand an average of 16 tmt annually.

EU broiler consumption outpaces production, putting upward pressure on domestic prices and causing EU broiler exports to decline 1.7 percent annually.

Economic recovery, with Russian poultry imports rise 2.2 percent annually after the year 2000.

Depreciation of the Thai Baht strengthens Thailand's broiler exports in 1998 and 1999. In the long run, domestic consumption in Thailand reduces its exportable surplus of broiler meat and puts upward pressure on prices.

### **Broiler Meat Trade**

|                           | 1998  | 1999  | 2000  | 2001  | 2002       | 2003       | 2004           | 2005  | 2006  | 2007  | 2008  |
|---------------------------|-------|-------|-------|-------|------------|------------|----------------|-------|-------|-------|-------|
| Net Exporters             |       |       |       |       | (Thousa    | nd Metric  | Tons)          |       |       |       |       |
| Australia                 | 10    | 10    | 8     | 8     | . 8        | 7          | <sup>'</sup> 7 | 6     | 6     | 6     | 6     |
| Brazil                    | 570   | 617   | 630   | 643   | 654        | 669        | 682            | 696   | 709   | 719   | 734   |
| European Union            | 542   | 529   | 500   | 492   | 479        | 471        | 460            | 450   | 439   | 430   | 426   |
| Hungary                   | 68    | 72    | 66    | 64    | 60         | 57         | 53             | 50    | 47    | 45    | 44    |
| Other Former Soviet Union | 19    | 23    | 14    | 12    | 8          | 6          | 12             | 11    | 9     | 7     | 6     |
| Thailand                  | 240   | 231   | 217   | 214   | 210        | 206        | 203            | 199   | 196   | 193   | 192   |
| United States             | 2,024 | 1,987 | 2,270 | 2,365 | 2,522      | 2,779      | 2,936          | 3,077 | 3,228 | 3,362 | 3,451 |
| Total Net Exports         | 3,473 | 3,469 | 3,706 | 3,797 | 3,941      | 4,194      | 4,353          | 4,491 | 4,634 | 4,762 | 4,858 |
| Net Importers             |       |       |       |       |            |            |                |       |       |       |       |
| Argentina                 | 35    | 33    | 37    | 38    | 40         | 42         | 44             | 46    | 48    | 50    | 51    |
| Canada                    | 20    | 21    | 25    | 24    | 26         | 28         | 30             | 31    | 32    | 33    | 34    |
| China - Mainland          | 340   | 388   | 404   | 448   | 503        | 552        | 594            | 641   | 688   | 732   | 770   |
| China - Hong Kong         | 219   | 258   | 275   | 286   | 296        | 305        | 314            | 323   | 332   | 339   | 346   |
| Czech Republic            | 0     | 0     | 1     | 2     | 3          | 4          | 5              | 6     | 6     | 7     | 7     |
| Indonesia                 | 0     | 1     | 2     | 2     | 2          | 3          | 3              | 3     | 3     | 4     | 4     |
| Japan                     | 492   | 519   | 560   | 585   | 619        | 651        | 690            | 723   | 758   | 794   | 829   |
| Mexico                    | 128   | 124   | 137   | 140   | 146        | 290        | 315            | 332   | 349   | 364   | 375   |
| Other Eastern Europe      | 24    | 22    | 23    | 22    | 22         | 21         | 21             | 21    | 21    | 20    | 20    |
| Poland                    | 44    | 36    | 42    | 44    | 47         | 49         | 51             | 54    | 55    | 56    | 55    |
| Russia                    | 751   | 684   | 714   | 740   | 765        | 782        | 797            | 810   | 824   | 838   | 850   |
| Saudi Arabia              | 256   | 268   | 277   | 271   | 269        | 266        | 263            | 261   | 259   | 257   | 254   |
| South Korea               | 12    | 21    | 34    | 40    | 44         | 50         | 57             | 65    | 74    | 83    | 91    |
| Ukraine                   | 25    | 25    | 27    | 27    | 28         | 28         | 28             | 29    | 29    | 29    | 30    |
| Rest of World             | 1,126 | 1,070 | 1,147 | 1,128 | 1,131      | 1,126      | 1,140          | 1,145 | 1,155 | 1,158 | 1,143 |
| Total Net Imports         | 3,473 | 3,469 | 3,706 | 3,797 | 3,941      | 4,194      | 4,353          | 4,491 | 4,634 | 4,762 | 4,858 |
|                           |       |       |       | (     | U.S. Dolla | ars per Me | tric Ton)      |       |       |       |       |
| U.S. 12-City Price        | 1,391 | 1,310 | 1,242 | 1,258 | 1,252      | 1,256      | 1,253          | 1,248 | 1,240 | 1,239 | 1,254 |

# **World Dairy Trade**

Milk production in modeled countries increases 12.7 percent in the next decade, with India, the United States, Brazil, and China accounting for 31.5 mmt of the 45.8 mmt increase.

Cheese and butter production increase 1.6 and 1.3 percent, respectively, each year. Production of whole milk powder and nonfat dry milk grows at roughly half the rate of butter.

International prices for butter, WMP, and NFD are projected to decline between 5 and 12 percent over the next three years, as a consequence of weak import demand in Russia, Japan, and Brazil.

The FOB Northern European price for cheese, conversely, rises 5.7 percent over the same period due to strong demand in the United States and Japan and declining exports from the European Union.

The rising popularity of fast food restaurants and western-style foods in Asia is expected to increase the demand for imported cheese in the region from Australia and New Zealand.

The United States switched from being a small net exporter of butter in 1997 to a net importer of 16 tmt in

1998. The United States is projected to remain a small net importer of butter until 2004.

The weak economic situation in Russia will reduce world imports by 10 tmt in 1999. The resumption of stronger global economic growth by the end of the century prompts a modest 11.5 percent increase in world butter trade from 2000 to 2008. Exporters in Australia, New Zealand, and the European Union satisfy most of the growth in butter imports.

Rising incomes in Mexico and Brazil are expected to stimulate greater demand for all dairy products in these countries, which will be met by domestic production.

Demand for imported dry milk remains stable in Asia. In the long run, rising demand for NFD in Mexico and Asia outpaces domestic production, causing imports and international prices to creep upward.

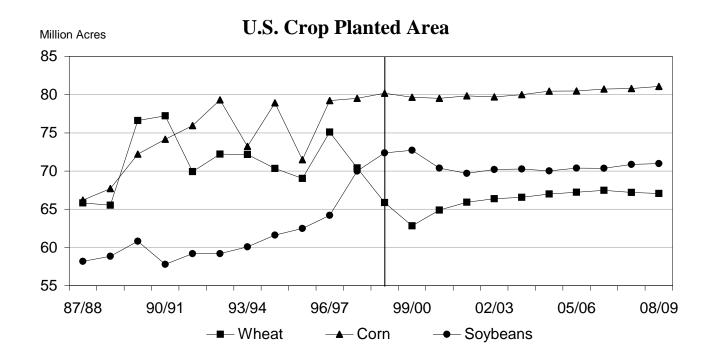
Whole milk powder trade is projected to grow a modest 4.5 percent over the next decade. Argentina, Australia, and New Zealand are able to supply the increase in WMP exports.

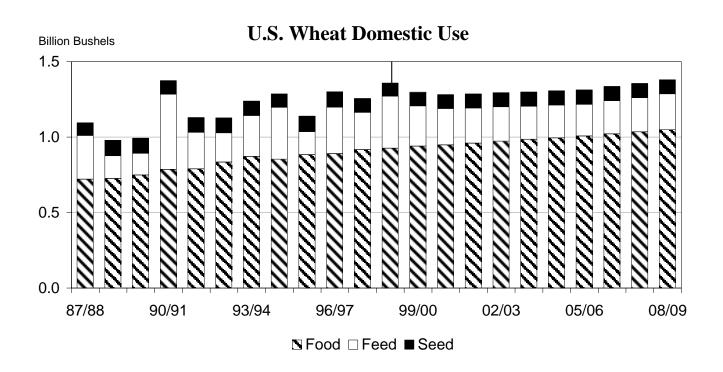
# **Dairy Product Trade**

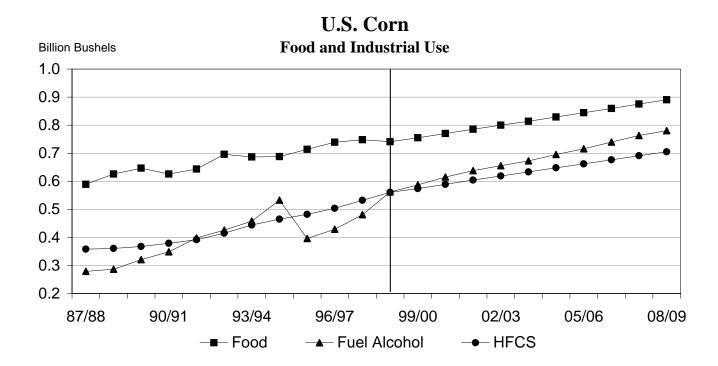
|                   | 1998 | 1999 | 2000 | 2001 | 2002 | 2003      | 2004  | 2005 | 2006 | 2007 | 2008 |
|-------------------|------|------|------|------|------|-----------|-------|------|------|------|------|
| Butter            |      |      |      |      |      |           |       |      |      |      |      |
| Net Exporters     |      |      |      |      |      | nd Metric | Tons) |      |      |      |      |
| Argentina         | 0    | 5    | 7    | 8    | 9    | 10        | 10    | 11   | 11   | 11   | 11   |
| Australia         | 99   | 104  | 104  | 105  | 108  | 111       | 114   | 117  | 120  | 124  | 127  |
| Canada            | 9    | 11   | 11   | 10   | 9    | 8         | 8     | 8    | 8    | 8    | 8    |
| European Union    | 114  | 80   | 115  | 121  | 125  | 128       | 130   | 132  | 133  | 134  | 135  |
| New Zealand       | 315  | 322  | 327  | 331  | 335  | 337       | 340   | 342  | 345  | 348  | 351  |
| Poland            | 2    | 3    | 0    | 0    | 1    | 2         | 3     | 5    | 5    | 5    | 5    |
| Ukraine           | 55   | 54   | 51   | 51   | 53   | 53        | 54    | 54   | 54   | 53   | 52   |
| United States     | -16  | -8   | -9   | -5   | -5   | -3        | 0     | 0    | 2    | 4    | 5    |
| Total Net Exports | 578  | 571  | 606  | 621  | 635  | 646       | 659   | 669  | 678  | 687  | 694  |
| Net Importers     |      |      |      |      |      |           |       |      |      |      |      |
| Brazil            | 6    | 4    | 5    | 4    | 3    | 2         | 2     | 2    | 3    | 4    | 5    |
| Egypt             | 40   | 41   | 41   | 42   | 43   | 44        | 44    | 45   | 46   | 47   | 48   |
| India             | 2    | 5    | 4    | 3    | 3    | 7         | 9     | 12   | 14   | 12   | 12   |
| Japan             | 1    | 0    | 0    | 1    | 3    | 6         | 8     | 9    | 10   | 10   | 10   |
| Mexico            | 15   | 14   | 17   | 16   | 16   | 16        | 16    | 16   | 17   | 18   | 18   |
| Romania           | 2    | 2    | 3    | 3    | 3    | 3         | 3     | 4    | 4    | 4    | 4    |
| Russia            | 193  | 175  | 189  | 199  | 207  | 213       | 219   | 225  | 228  | 227  | 223  |
| Switzerland       | 4    | 7    | 6    | 6    | 6    | 6         | 6     | 6    | 6    | 6    | 6    |
| Rest of World     | 316  | 324  | 340  | 348  | 351  | 351       | 352   | 351  | 354  | 361  | 370  |
| Total Net Imports | 578  | 571  | 606  | 621  | 635  | 646       | 659   | 669  | 678  | 687  | 694  |
| Cheese            |      |      |      |      |      |           |       |      |      |      |      |
| Net Exporters     |      |      |      |      |      |           |       |      |      |      |      |
| Argentina         | 15   | 21   | 28   | 32   | 35   | 37        | 40    | 41   | 41   | 42   | 43   |
| Australia         | 118  | 121  | 130  | 137  | 140  | 144       | 149   | 154  | 158  | 163  | 168  |
| European Union    | 330  | 316  | 304  | 304  | 305  | 307       | 310   | 311  | 313  | 316  | 318  |
| New Zealand       | 231  | 216  | 237  | 244  | 252  | 260       | 270   | 280  | 290  | 302  | 313  |
| Poland            | 15   | 15   | 12   | 13   | 15   | 23        | 27    | 32   | 34   | 35   | 37   |
| Switzerland       | 38   | 32   | 35   | 35   | 34   | 34        | 34    | 34   | 34   | 35   | 35   |
| Total Net Exports | 747  | 721  | 746  | 765  | 781  | 805       | 830   | 852  | 870  | 893  | 914  |
| Net Importers     |      |      |      |      |      |           |       |      |      |      |      |
| Brazil            | 21   | 15   | 20   | 17   | 13   | 12        | 11    | 13   | 15   | 18   | 20   |
| Canada            | 2    | 2    | 2    | 2    | 2    | 2         | 2     | 2    | 2    | 2    | 2    |
| Egypt             | 13   | 13   | 12   | 10   | 9    | 9         | 9     | 9    | 10   | 11   | 13   |
| Japan             | 180  | 192  | 196  | 204  | 214  | 225       | 238   | 251  | 264  | 278  | 292  |
| Mexico            | 30   | 28   | 30   | 30   | 32   | 35        | 37    | 39   | 42   | 44   | 46   |
| Romania           | 0    | 1    | 3    | 2    | 4    | 4         | 3     | 4    | 4    | 4    | 5    |
| Russia            | 247  | 230  | 243  | 259  | 268  | 276       | 285   | 288  | 285  | 286  | 282  |
| Ukraine           | 2    | 2    | 4    | 7    | 5    | 7         | 7     | 6    | 5    | 6    | 4    |
| United States     | 114  | 115  | 117  | 117  | 117  | 117       | 118   | 118  | 118  | 119  | 119  |
| Rest of World     | 138  | 123  | 120  | 117  | 117  | 118       | 120   | 122  | 125  | 126  | 128  |
| Total Net Imports | 747  | 721  | 746  | 765  | 781  | 805       | 830   | 852  | 870  | 893  | 914  |

### **Dairy Product Trade (continued)**

| Nonfat Dry Milk   Net Exporters   Chapter      |                            | 1998  | 1999  | 2000  | 2001  | 2002        | 2003       | 2004      | 2005  | 2006  | 2007  | 2008  |
|--|----------------------------|-------|-------|-------|-------|-------------|------------|-----------|-------|-------|-------|-------|
| Augentina 144 200 23 277 29 30 31 32 23 33 33 34 Australia 194 195 200 207 216 225 233 242 251 260 269 Canada 24 25 25 25 22 20 18 17 17 17 16 15 15 14 European Union 208 186 194 195 194 198 185 185 182 181 179 177 India 5 8 8 10 11 111 10 10 10 9 9 9 9 New Zealand 197 211 225 237 248 257 266 275 284 293 302 Poland 84 95 94 91 94 99 100 106 109 1112 115 Switzerland 7 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2  | Nonfat Dry Milk            |       |       |       |       |             |            |           |       |       |       |       |
| Australia  | Net Exporters              |       |       |       |       | (Thousa     | nd Metric  | Tons)     |       |       |       |       |
| Canada   | Argentina                  | 14    | 20    | 23    | 27    | 29          | 30         | 31        | 32    | 33    | 33    | 34    |
| European Union   | Australia                  | 194   | 195   | 200   | 207   | 216         | 225        | 233       | 242   | 251   | 260   | 269   |
| India  |                            |       |       |       |       |             |            |           |       |       |       |       |
| New Zealand  | •                          |       |       |       |       |             |            |           |       |       |       |       |
| Polanci  |                            |       |       |       |       |             |            |           |       |       |       |       |
| Switzerland         7         4         2 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>  |                            |       |       |       |       |             |            |           |       |       |       |       |
| Ulrianine   S  |                            |       |       |       |       |             |            |           |       |       |       |       |
| United States  |                            |       |       |       |       |             |            |           |       |       |       |       |
| Total Net Exports 839 859 881 873 887 904 920 940 959 976 995  Net Importers  Brazil 47 41 46 43 42 43 44 47 49 53 56 13pan 65 62 61 65 69 74 78 81 83 84 86 Mexico 130 132 134 130 131 134 137 141 145 150 154 Romania 10 10 10 10 10 10 10 10 10 10 10 10 10   |                            |       | · ·   |       |       |             |            |           |       |       |       |       |
| Net Importers Brazil   | United States              | 101   | 111   | 107   | 79    | 68          | 68         | 68        | 68    | 68    | 67    | 67    |
| Brazil         47         41         46         43         42         43         44         47         49         53         56           Japan         65         62         61         65         69         74         78         81         83         84         86           Mexico         130         132         134         130         131         134         137         141         145         150         154           Romania         10         10         10         10         10         10         10         10         10         10         11         11           Russia         37         5         3         4         4         6         7         7         8         11         14           Rest of World         559         617         637         632         632         638         645         663         669         675           Total Net Imports         848         867         891         884         888         905         921         940         958         978         996           White Exporters         45         493         488         488 <th< td=""><td>Total Net Exports</td><td>839</td><td>859</td><td>881</td><td>873</td><td>887</td><td>904</td><td>920</td><td>940</td><td>959</td><td>976</td><td>995</td></th<>   | Total Net Exports          | 839   | 859   | 881   | 873   | 887         | 904        | 920       | 940   | 959   | 976   | 995   |
| Japan  | Net Importers              |       |       |       |       |             |            |           |       |       |       |       |
| Mexico         130         132         134         130         131         134         137         141         145         150         154           Romania         10         10         10         10         10         10         10         10         10         11         11         11         Romania         10         10         10         10         10         10         10         11         11         11         Romania         137         5         3         4         4         6         7         7         8         11         11         14         Rest of World         559         617         637         632         632         638         645         663         669         675           Total Net Imports         848         867         891         884         888         905         921         940         958         978         996           Whole Milk Powder           Net Exportes         848         867         891         884         888         905         921         940         958         978         996           Argentina         79         93         97         100         10   | Brazil                     | 47    | 41    | 46    | 43    | 42          | 43         | 44        | 47    | 49    | 53    | 56    |
| Romania   10   10   10   10   10   10   10   1   |                            |       |       |       |       |             |            |           |       |       |       |       |
| Russia 37 5 3 4 4 4 6 7 7 7 8 11 14   Rest of World 559 617 637 632 632 638 645 654 663 669 675    Total Net Imports 848 867 891 884 888 905 921 940 958 978 996    Whole Milk Powder   Net Exporters   Argentina 79 93 97 100 102 105 108 110 112 115 117   Australia 107 111 117 122 129 134 139 144 149 155 161   European Union 519 483 450 438 436 434 432 429 427 425 422   New Zealand 359 336 362 367 370 375 381 388 396 404 412    Total Net Exports    Net Importers   Brazil 122 99 95 94 96 100 102 105 108 1,001 1,004 1,009 1,112    Net Importers   Brazil 122 99 95 94 96 100 102 1,007 1,0 |                            |       |       |       |       |             |            |           |       |       |       |       |
| Rest of World         559         617         637         632         632         638         645         654         663         669         675           Total Net Imports         848         867         891         884         888         905         921         940         958         978         996           Whole Milk Powder           Net Exporters         Argentina         79         93         97         100         102         105         108         110         112         115         117           Australia         107         111         117         122         129         134         139         144         149         155         161           European Union         519         483         450         438         436         434         432         429         427         425         422           New Zealand         359         336         362         367         370         375         381         388         396         404         412           Total Net Exports         1,064         1,023         1,026         1,027         1,037         1,048         1,060         1,071         1,084  |                            |       |       |       |       |             |            |           |       |       |       |       |
| Total Net Imports         848         867         891         884         888         905         921         940         958         978         996           Whole Milk Powder           Net Exporters           Argentina         79         93         97         100         102         105         108         110         112         115         117           Australia         107         111         117         122         129         134         139         144         149         155         161           European Union         519         483         450         438         436         434         432         429         427         425         422           New Zealand         359         336         362         367         370         375         381         388         396         404         412           Total Net Exports         1,064         1,023         1,026         1,027         1,037         1,048         1,060         1,071         1,084         1,099         1,112           Net Importers         Brazil         122         99         95         94         96         100         102         105 </td <td></td>  |                            |       |       |       |       |             |            |           |       |       |       |       |
| Whole Milk Powder           Net Exporters         Argentina         79         93         97         100         102         105         108         110         112         115         117           Australia         107         111         117         122         129         134         139         144         149         155         161           European Union         519         483         450         438         436         434         432         429         427         425         422           New Zealand         359         336         362         367         370         375         381         388         396         404         412           Total Net Exports         1,064         1,023         1,026         1,027         1,037         1,048         1,060         1,071         1,084         1,099         1,112           Net Importers           Brazil         122         99         95         94         96         100         102         105         108         111         114           Rest of World         942         925 <td< td=""><td>Rest of World</td><td>559</td><td>617</td><td>637</td><td>632</td><td>632</td><td>638</td><td>645</td><td>654</td><td>663</td><td>669</td><td>675</td></td<>   | Rest of World              | 559   | 617   | 637   | 632   | 632         | 638        | 645       | 654   | 663   | 669   | 675   |
| Net Exporters         Argentina         79         93         97         100         102         105         108         110         112         115         117           Australia         107         111         117         122         129         134         139         144         149         155         161           European Union         519         483         450         438         436         434         432         429         427         425         422           New Zealand         359         336         362         367         370         375         381         388         396         404         412           Total Net Exports         1,064         1,023         1,026         1,027         1,037         1,048         1,060         1,071         1,084         1,099         1,112           Net Importers         Brazil         122         99         95         94         96         100         102         105         108         111         114           Rest of World         942         925         931         933         941         949         957         966         976         987         998   | Total Net Imports          | 848   | 867   | 891   | 884   | 888         | 905        | 921       | 940   | 958   | 978   | 996   |
| Argentina       79       93       97       100       102       105       108       110       112       115       117         Australia       107       111       117       122       129       134       139       144       149       155       161         European Union       519       483       450       438       436       434       432       429       427       425       422         New Zealand       359       336       362       367       370       375       381       388       396       404       412         Total Net Exports       1,064       1,023       1,026       1,027       1,037       1,048       1,060       1,071       1,084       1,099       1,112         Net Importers         Brazil       122       99       95       94       96       100       102       105       108       111       114         Rest of World       942       925       931       933       941       949       957       966       976       987       998         Total Net Imports       1,064       1,024       1,026       1,027       1,037   | Whole Milk Powder          |       |       |       |       |             |            |           |       |       |       |       |
| Australia 107 111 117 122 129 134 139 144 149 155 161 European Union 519 483 450 438 436 434 432 429 427 425 422 New Zealand 359 336 362 367 370 375 381 388 396 404 412  Total Net Exports 1,064 1,023 1,026 1,027 1,037 1,048 1,060 1,071 1,084 1,099 1,112  Net Importers Brazil 122 99 95 94 96 100 102 105 108 111 114 Rest of World 942 925 931 933 941 949 957 966 976 987 998  Total Net Importes 1,064 1,024 1,026 1,027 1,037 1,049 1,059 1,071 1,084 1,098 1,112  FOB Price, Northern Europe (U.S. Dollars per Metric Ton)  Butter 1,853 1,798 1,761 1,778 1,801 1,826 1,848 1,875 1,886 1,882 1,875 Cheese 2,225 2,316 2,351 2,436 2,443 2,448 2,463 2,469 2,471 2,485 2,488 Nonfat Dry Milk 1,453 1,260 1,289 1,413 1,460 1,486 1,518 1,540 1,568 1,604 1,640   | Net Exporters              |       |       |       |       |             |            |           |       |       |       |       |
| European Union 519 483 450 438 436 434 432 429 427 425 422 New Zealand 359 336 362 367 370 375 381 388 396 404 412  Total Net Exports 1,064 1,023 1,026 1,027 1,037 1,048 1,060 1,071 1,084 1,099 1,112  Net Importers Brazil 122 99 95 94 96 100 102 105 108 111 114 Rest of World 942 925 931 933 941 949 957 966 976 987 998  Total Net Importers 1,064 1,024 1,026 1,027 1,037 1,049 1,059 1,071 1,084 1,098 1,112  FOB Price, Northern Europe (U.S. Dollars per Metric Ton)  Butter 1,853 1,798 1,761 1,778 1,801 1,826 1,848 1,875 1,886 1,882 1,875 Cheese 2,225 2,316 2,351 2,436 2,443 2,448 2,463 2,469 2,471 2,485 2,488 Nonfat Dry Milk 1,453 1,260 1,289 1,413 1,460 1,486 1,518 1,540 1,568 1,604 1,640  | •                          |       |       |       |       |             |            |           |       |       |       |       |
| New Zealand         359         336         362         367         370         375         381         388         396         404         412           Total Net Exports         1,064         1,023         1,026         1,027         1,037         1,048         1,060         1,071         1,084         1,099         1,112           Net Importers         Brazil         122         99         95         94         96         100         102         105         108         111         114           Rest of World         942         925         931         933         941         949         957         966         976         987         998           Total Net Imports         1,064         1,024         1,026         1,027         1,037         1,049         1,059         1,071         1,084         1,098         1,112           FOB Price, Northern Europe           Butter         1,853         1,798         1,761         1,778         1,801         1,826         1,848         1,875         1,886         1,882         1,875           Cheese         2,225         2,316         2,351         2,436         2,443         2,448         2,463  |                            |       |       |       |       |             |            |           |       |       |       |       |
| Total Net Exports 1,064 1,023 1,026 1,027 1,037 1,048 1,060 1,071 1,084 1,099 1,112  Net Importers Brazil 122 99 95 94 96 100 102 105 108 111 114 Rest of World 942 925 931 933 941 949 957 966 976 987 998  Total Net Imports 1,064 1,024 1,026 1,027 1,037 1,049 1,059 1,071 1,084 1,098 1,112  FOB Price, Northern Europe Butter 1,853 1,798 1,761 1,778 1,801 1,826 1,848 1,875 1,886 1,882 1,875 Cheese 2,225 2,316 2,351 2,436 2,443 2,448 2,463 2,469 2,471 2,485 2,488 Nonfat Dry Milk 1,453 1,260 1,289 1,413 1,460 1,486 1,518 1,540 1,568 1,604 1,640   | •                          |       |       |       |       |             |            |           |       |       |       |       |
| Net Importers           Brazil         122         99         95         94         96         100         102         105         108         111         114           Rest of World         942         925         931         933         941         949         957         966         976         987         998           Total Net Imports         1,064         1,024         1,026         1,027         1,037         1,049         1,059         1,071         1,084         1,098         1,112           FOB Price, Northern Europe           Butter         1,853         1,798         1,761         1,778         1,801         1,826         1,848         1,875         1,886         1,882         1,875           Cheese         2,225         2,316         2,351         2,436         2,443         2,448         2,463         2,469         2,471         2,485         2,488           Nonfat Dry Milk         1,453         1,260         1,289         1,413         1,460         1,486         1,518         1,540         1,568         1,604         1,640  | New Zealand                | 359   | 336   | 362   | 367   | 370         | 375        | 381       | 388   | 396   | 404   | 412   |
| Brazil         122         99         95         94         96         100         102         105         108         111         114           Rest of World         942         925         931         933         941         949         957         966         976         987         998           FOB Price, Northern Europe         (U.S. Dollars per Metric Ton)           Butter         1,853         1,798         1,761         1,778         1,801         1,826         1,848         1,875         1,886         1,882         1,875           Cheese         2,225         2,316         2,351         2,436         2,443         2,448         2,463         2,469         2,471         2,485         2,488           Nonfat Dry Milk         1,453         1,260         1,289         1,413         1,460         1,486         1,518         1,540         1,568         1,604         1,640  | Total Net Exports          | 1,064 | 1,023 | 1,026 | 1,027 | 1,037       | 1,048      | 1,060     | 1,071 | 1,084 | 1,099 | 1,112 |
| Rest of World         942         925         931         933         941         949         957         966         976         987         998           Total Net Imports         1,064         1,024         1,026         1,027         1,037         1,049         1,059         1,071         1,084         1,098         1,112           FOB Price, Northern Europe           Butter         1,853         1,798         1,761         1,778         1,801         1,826         1,848         1,875         1,886         1,882         1,875           Cheese         2,225         2,316         2,351         2,436         2,443         2,448         2,463         2,469         2,471         2,485         2,488           Nonfat Dry Milk         1,453         1,260         1,289         1,413         1,460         1,486         1,518         1,540         1,568         1,604         1,640   | Net Importers              |       |       |       |       |             |            |           |       |       |       |       |
| Total Net Imports 1,064 1,024 1,026 1,027 1,037 1,049 1,059 1,071 1,084 1,098 1,112  FOB Price, Northern Europe  Butter 1,853 1,798 1,761 1,778 1,801 1,826 1,848 1,875 1,886 1,882 1,875 Cheese 2,225 2,316 2,351 2,436 2,443 2,448 2,463 2,469 2,471 2,485 2,488 Nonfat Dry Milk 1,453 1,260 1,289 1,413 1,460 1,486 1,518 1,540 1,568 1,604 1,640   | Brazil                     | 122   | 99    | 95    | 94    | 96          | 100        | 102       | 105   | 108   | 111   | 114   |
| FOB Price, Northern Europe  Butter 1,853 1,798 1,761 1,778 1,801 1,801 1,826 1,848 1,875 1,886 1,882 1,875 Cheese 2,225 2,316 2,351 2,436 2,443 2,448 2,463 2,469 2,471 2,485 2,488 Nonfat Dry Milk 1,453 1,260 1,289 1,413 1,460 1,486 1,518 1,540 1,568 1,604 1,640  | Rest of World              | 942   | 925   | 931   | 933   | 941         | 949        | 957       | 966   | 976   | 987   | 998   |
| Butter       1,853       1,798       1,761       1,778       1,801       1,826       1,848       1,875       1,886       1,882       1,875         Cheese       2,225       2,316       2,351       2,436       2,443       2,448       2,463       2,469       2,471       2,485       2,488         Nonfat Dry Milk       1,453       1,260       1,289       1,413       1,460       1,486       1,518       1,540       1,568       1,604       1,640  | Total Net Imports          | 1,064 | 1,024 | 1,026 | 1,027 | 1,037       | 1,049      | 1,059     | 1,071 | 1,084 | 1,098 | 1,112 |
| Butter       1,853       1,798       1,761       1,778       1,801       1,826       1,848       1,875       1,886       1,882       1,875         Cheese       2,225       2,316       2,351       2,436       2,443       2,448       2,463       2,469       2,471       2,485       2,488         Nonfat Dry Milk       1,453       1,260       1,289       1,413       1,460       1,486       1,518       1,540       1,568       1,604       1,640  | FOB Price. Northern Europe |       |       |       |       | (U.S. Dolla | ars per Me | tric Ton) |       |       |       |       |
| Cheese       2,225       2,316       2,351       2,436       2,443       2,448       2,463       2,469       2,471       2,485       2,488         Nonfat Dry Milk       1,453       1,260       1,289       1,413       1,460       1,486       1,518       1,540       1,568       1,604       1,640   | •                          | 1.853 | 1.798 | 1.761 |       | •           | •          | ,         | 1.875 | 1.886 | 1.882 | 1.875 |
| Nonfat Dry Milk 1,453 1,260 1,289 1,413 1,460 1,486 1,518 1,540 1,568 1,604 1,640  |                            |       |       |       |       | ,           | ,          | ,         |       | ,     |       | ,     |
|  |                            |       |       |       |       |             |            |           |       |       |       |       |
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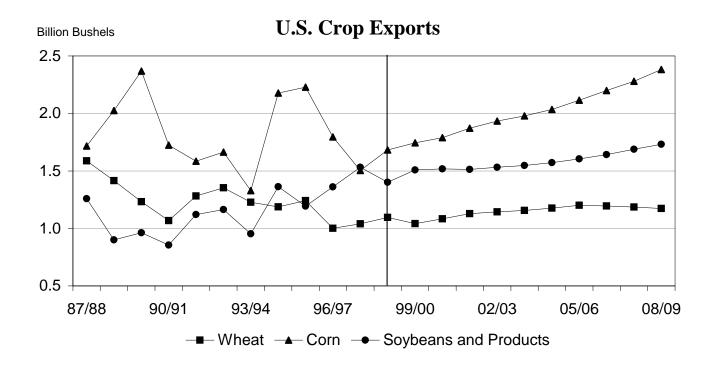


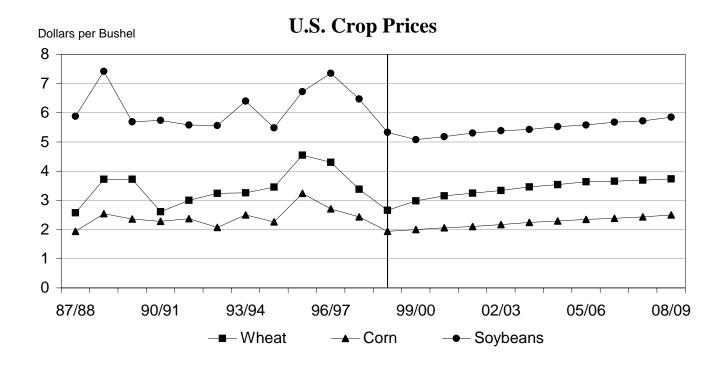


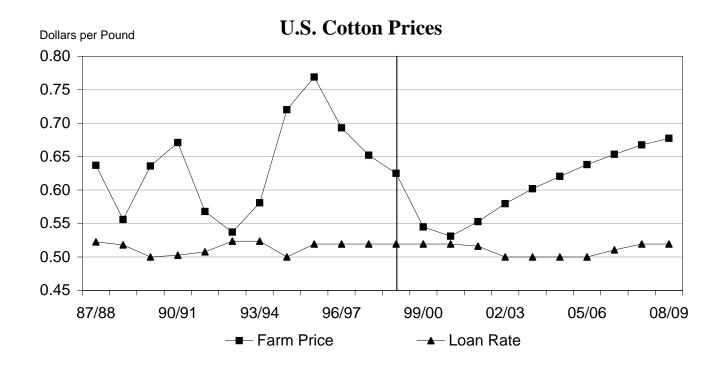


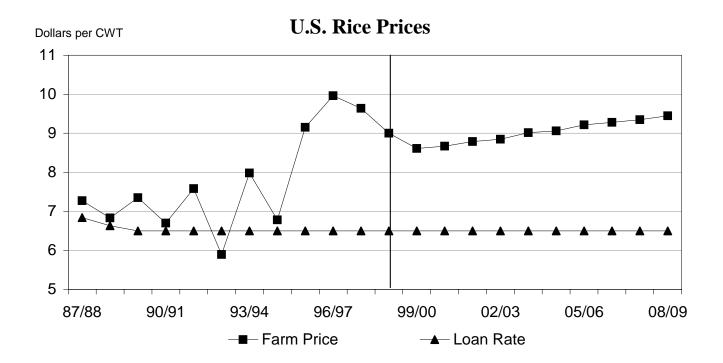












#### U.S. Wheat

Wheat planted area fell to 65.9 million acre in 1998/99. A further decline, down to 62.8 million acres, is expected for the 1999/00 crop. By 2008/09, wheat area planted is projected to grow to 67.1 million acres. Relative returns favor oilseeds and feedgrains, pushing area out of wheat and into crops such as soybeans, canola, and corn.

Wheat area enrolled in the Conservation Reserve Program totaled 10 million acres for the 1997/98 marketing year. As contracts expired in calendar year 1998, the total wheat enrollment fell to 9.5 million acres. New enrollment starts with the 1999/00 marketing year. By the final year of the baseline, wheat CRP area is 11.2 million acres.

A new record was set in 1998/99 for wheat yields as the national average hit 43.2 bushels per acre. For 1999/00, yields are projected to decrease to 38.5 bushels per acre and then increase to 41.1 bushels per acre by 2008/09.

Record yields and increased beginning stocks pushed 1998 wheat supplies sharply higher. Total all-wheat production hit 2.55 billion bushels. Available supply for the crop year totaled more than 3.3 billion bushels. Domestic use, plus exports for the year, is forecasted at 2.4 billion bushels. Assuming trend yields, lower production will occur in 1999 due to substantial declines in area.

Wheat feed and residual use is projected to increase to 346 million bushels in 1998/99. An ample supply of feed wheat keeps wheat in feed rations. Feed use falls in the last half of the baseline as wheat prices increase.

Feed use bottoms at 211 million bushels in the 2005/06 crop year.

Domestic food use is projected to continue to increase on a per-capita basis. Food use accounts for more than 1 billion bushels of disappearance by the 2005 crop year.

U.S. wheat exports in 1997/98 increased to 1.04 billion bushels and are projected to increase further in 1998/99 to 1.096 billion bushels. Action by the European Union impacts wheat exports greatly during the baseline. Exports build to 1.2 billion bushels by 2005. After that increase, exports by the EU dampen U.S. trade.

Ending stocks of wheat for 1998/99 increase to 909 million bushels. Stocks decline in each year of the baseline, hitting 642 million bushels at the end of the 2008 crop year.

Increased supplies and weak exports pressured prices dramatically lower in 1998. The large production in 1997 and 1998 caused a decrease in the lofty price levels seen just four years ago. The season-average farm price for 1998/99 is projected to be \$2.66 per bushel. Prices are projected to strengthen in 1999/00 due to reduced area.

Market net returns over variable production costs rise slowly throughout the projection period, as increases in market prices and yield are nearly offset by cost increases. In 1998/99, market net returns stand at \$46.15 per acre. By the end of the baseline, wheat returns rise to \$72.92 per acre.

U.S. Wheat Supply and Utilization

|                       | 98/99  | 99/00  | 00/01  | 01/02  | 02/03  | 03/04       | 04/05  | 05/06  | 06/07  | 07/08  | 08/09  |
|-----------------------|--------|--------|--------|--------|--------|-------------|--------|--------|--------|--------|--------|
| Area                  |        |        |        |        | (Mi    | Ilion Acres | s)     |        |        |        |        |
| Contract Area         | 78.4   | 78.9   | 78.8   | 78.7   | 78.6   | 78.6        | 78.6   | 78.6   | 78.6   | 78.6   | 78.6   |
| CRP Idled             | 9.5    | 9.8    | 10.4   | 10.7   | 10.9   | 11.0        | 11.0   | 11.1   | 11.2   | 11.2   | 11.2   |
| Planted Area          | 65.9   | 62.8   | 64.9   | 65.9   | 66.4   | 66.6        | 67.0   | 67.2   | 67.5   | 67.2   | 67.1   |
| Harvested Area        | 59.0   | 55.8   | 57.7   | 58.6   | 59.0   | 59.2        | 59.5   | 59.7   | 60.0   | 59.7   | 59.6   |
| Yield                 |        |        |        |        | (Bush  | nels per A  | cre)   |        |        |        |        |
| Actual                | 43.2   | 38.5   | 38.8   | 39.1   | 39.4   | 39.7        | 40.0   | 40.3   | 40.6   | 40.8   | 41.1   |
| Program               | 34.7   | 34.7   | 34.7   | 34.7   | 34.7   | 34.7        | 34.7   | 34.7   | 34.7   | 34.7   | 34.7   |
|                       |        |        |        |        | (Mill  | ion Bushe   | els)   |        |        |        |        |
| Supply                | 3,363  | 3,148  | 3,138  | 3,157  | 3,160  | 3,161       | 3,179  | 3,193  | 3,201  | 3,198  | 3,196  |
| Beginning Stocks      | 722    | 909    | 808    | 773    | 742    | 720         | 706    | 695    | 678    | 669    | 655    |
| Production            | 2,550  | 2,149  | 2,241  | 2,294  | 2,328  | 2,351       | 2,383  | 2,407  | 2,433  | 2,439  | 2,450  |
| Imports               | 90     | 90     | 90     | 90     | 90     | 90          | 90     | 90     | 90     | 90     | 90     |
| Domestic Use          | 1,358  | 1,299  | 1,283  | 1,286  | 1,295  | 1,299       | 1,307  | 1,313  | 1,336  | 1,356  | 1,381  |
| Feed, Residual        | 346    | 268    | 242    | 233    | 229    | 219         | 217    | 210    | 220    | 226    | 237    |
| Seed                  | 87     | 91     | 93     | 94     | 94     | 95          | 95     | 96     | 95     | 95     | 95     |
| Food, Other           | 926    | 940    | 948    | 960    | 972    | 985         | 995    | 1,007  | 1,021  | 1,035  | 1,049  |
| Exports               | 1,096  | 1,042  | 1,083  | 1,128  | 1,144  | 1,156       | 1,176  | 1,201  | 1,195  | 1,186  | 1,173  |
| Total Use             | 2,454  | 2,340  | 2,366  | 2,415  | 2,439  | 2,455       | 2,484  | 2,515  | 2,532  | 2,543  | 2,554  |
| Ending Stocks         | 909    | 808    | 773    | 742    | 720    | 706         | 695    | 678    | 669    | 655    | 642    |
| FOR, Special Program  | 0      | 0      | 0      | 0      | 0      | 0           | 0      | 0      | 0      | 0      | 0      |
| CCC Inventory         | 95     | 95     | 95     | 95     | 95     | 95          | 95     | 95     | 95     | 95     | 95     |
| 9-Month Loan          | 200    | 144    | 125    | 98     | 88     | 92          | 93     | 86     | 87     | 86     | 85     |
| "Free" Stocks         | 614    | 569    | 552    | 549    | 537    | 519         | 508    | 497    | 487    | 474    | 462    |
| Prices and Returns    |        |        |        |        | (U     | .S. Dollars | s)     |        |        |        |        |
| Farm Price/bu.        | 2.66   | 2.98   | 3.15   | 3.25   | 3.34   | 3.46        | 3.54   | 3.64   | 3.66   | 3.69   | 3.74   |
| Loan Rate/bu.         | 2.58   | 2.58   | 2.58   | 2.43   | 2.39   | 2.53        | 2.58   | 2.58   | 2.58   | 2.58   | 2.58   |
| Contract Payment/bu.  | 0.99   | 0.64   | 0.58   | 0.47   | 0.45   | 0.45        | 0.45   | 0.45   | 0.45   | 0.45   | 0.45   |
| Contract Payment/a.   | 29.11  | 18.79  | 17.10  | 13.78  | 13.38  | 13.39       | 13.39  | 13.39  | 13.40  | 13.40  | 13.40  |
| FOB Gulf Price/mt     | 120.54 | 134.69 | 141.93 | 145.98 | 149.92 | 155.20      | 158.66 | 162.80 | 163.71 | 165.32 | 167.11 |
| Variable Expenses/a.  | 76.04  | 74.69  | 76.16  | 77.75  | 78.63  | 79.69       | 80.81  | 81.91  | 83.07  | 84.25  | 85.45  |
| Market Net Returns/a. | 46.15  | 44.79  | 50.93  | 53.98  | 57.69  | 62.47       | 65.55  | 69.34  | 70.04  | 71.40  | 72.92  |

### U.S. Corn

U.S. corn farmers increased planted area to 80.2 million acres in 1998/99. Corn area is expected to fall in spring 1999 to 79.7 million acres. Corn is expected to gain from worldwide food demand during the baseline; by the 2008/09 crop year, FAPRI projects 81.1 million acres will be planted to corn. Corn's share of planted area in the United States rises during the baseline.

Corn area enrolled in the Conservation Reserve Program totaled 3.6 million acres for the 1997/98 marketing year. As contracts expired in calendar year 1998, the total corn enrollment fell to 3.1 million acres. By the final year of the baseline, corn CRP area stands at 3.6 million acres.

The national average corn yield rose to 134.4 bushels per acre in 1998/99. Assuming normal weather, corn yields come back down to the trendline level in 1999/00 of 129.9 bushels per acre. Corn yield is expected to grow at a rate of 1.3 percent per year. This growth rate assumes technological progress that can generate an increase of 1.7 bushels per acre per year.

Higher feed use is projected for the 1998/99 marketing year at 5.697 billion bushels. Feed usage should increase in 1999/00 to 5.812 billion bushels. Steady growth in several livestock categories and stable crop prices cause feed usage to rise during the baseline period, reaching 6.178 billion bushels in 2008/09.

Corn used for fuel alcohol production is projected to require 780 million bushels by 2008/09, up from the projected 1998/99 number of 562 million bushels.

Federal tax exemptions for ethanol are assumed to continue at the current level of \$0.54 per gallon. Growth in other domestic uses of corn, such as high fructose corn syrup, is modest.

U.S. corn exports in 1998/99 are projected to increase to 1.682 billion bushels. The previous year's decline was in response to the currency devaluation in Asia. Projected exports rise markedly throughout the remainder of the baseline. By the last year, U.S. corn exports are more than 2.3 billion bushels.

Corn ending stocks for the 1998/99 marketing year are projected to recover to 1.816 million bushels, an increase from the 1997/98 level of 1.308 million bushels. With a return to normal weather, ending stocks fall, slowly reaching 1.5 billion bushels by 2008/09. The quantity of stocks in the nine-month loan program at the end of each marketing year is modest, although higher levels during a given marketing year are possible.

Abundant supplies and rebuilding stocks in 1998/99 pressured corn prices. The farm price is projected to average \$1.94 per bushel. For 1999/00, the farm price is expected to rise to \$2.00 per bushel.

Market transition payments average \$0.28 per bushel during the baseline. On a per acre basis, the payments average \$24.21 during the baseline period. Market net returns over variable costs are projected to rise modestly during the baseline. The increases in yield offset higher production costs in each year. As prices strengthen, the returns rise.

U.S. Corn Supply and Utilization

|                       | 98/99  | 99/00  | 00/01  | 01/02  | 02/03  | 03/04       | 04/05  | 05/06  | 06/07  | 07/08  | 08/09  |
|-----------------------|--------|--------|--------|--------|--------|-------------|--------|--------|--------|--------|--------|
| Area                  |        |        |        |        | (Mi    | Ilion Acres | s)     |        |        |        |        |
| Contract Area         | 81.8   | 82.1   | 82.0   | 82.0   | 82.0   | 82.0        | 82.0   | 82.0   | 81.9   | 81.9   | 81.9   |
| CRP Idled             | 3.1    | 3.1    | 3.3    | 3.4    | 3.5    | 3.5         | 3.5    | 3.6    | 3.6    | 3.6    | 3.6    |
| Planted Area          | 80.2   | 79.7   | 79.5   | 79.8   | 79.7   | 80.0        | 80.5   | 80.5   | 80.7   | 80.8   | 81.1   |
| Harvested Area        | 72.6   | 73.2   | 73.2   | 73.5   | 73.5   | 73.8        | 74.3   | 74.4   | 74.6   | 74.8   | 75.1   |
| Yield                 |        |        |        |        | (Busl  | nels per A  | cre)   |        |        |        |        |
| Actual                | 134.4  | 129.9  | 131.7  | 133.5  | 135.3  | 137.0       | 138.7  | 140.4  | 142.1  | 143.8  | 145.5  |
| Program               | 102.8  | 102.8  | 102.8  | 102.8  | 102.8  | 102.8       | 102.8  | 102.8  | 102.8  | 102.8  | 102.8  |
|                       |        |        |        |        | `      | ion Bushe   | ,      |        |        |        |        |
| Supply                | 11,079 | 11,337 | 11,492 | 11,627 | 11,672 | 11,768      | 11,910 | 12,040 | 12,185 | 12,327 | 12,489 |
| Beginning Stocks      | 1,308  | 1,816  | 1,845  | 1,803  | 1,724  | 1,646       | 1,597  | 1,587  | 1,568  | 1,566  | 1,558  |
| Production            | 9,761  | 9,512  | 9,637  | 9,814  | 9,938  | 10,112      | 10,303 | 10,443 | 10,607 | 10,751 | 10,921 |
| Imports               | 10     | 10     | 10     | 10     | 10     | 10          | 10     | 10     | 10     | 10     | 10     |
| Domestic Use          | 7,582  | 7,749  | 7,900  | 8,031  | 8,093  | 8,191       | 8,289  | 8,357  | 8,420  | 8,490  | 8,575  |
| Feed, Residual        | 5,697  | 5,812  | 5,905  | 5,983  | 5,998  | 6,050       | 6,096  | 6,114  | 6,123  | 6,139  | 6,178  |
| Fuel Alcohol          | 562    | 587    | 615    | 638    | 656    | 673         | 695    | 716    | 740    | 763    | 780    |
| HFCS                  | 561    | 574    | 589    | 604    | 619    | 633         | 648    | 662    | 677    | 691    | 705    |
| Seed                  | 20     | 20     | 20     | 20     | 20     | 21          | 21     | 21     | 21     | 21     | 21     |
| Food, Other           | 741    | 755    | 770    | 785    | 800    | 814         | 829    | 844    | 860    | 875    | 890    |
| Exports               | 1,682  | 1,744  | 1,789  | 1,871  | 1,933  | 1,979       | 2,034  | 2,115  | 2,199  | 2,279  | 2,383  |
| Total Use             | 9,263  | 9,493  | 9,689  | 9,902  | 10,026 | 10,170      | 10,323 | 10,472 | 10,619 | 10,769 | 10,957 |
| Ending Stocks         | 1,816  | 1,845  | 1,803  | 1,724  | 1,646  | 1,597       | 1,587  | 1,568  | 1,566  | 1,558  | 1,532  |
| FOR, Special Program  | 0      | 0      | 0      | 0      | 0      | 0           | 0      | 0      | 0      | 0      | 0      |
| CCC Inventory         | 5      | 5      | 5      | 5      | 5      | 5           | 5      | 5      | 5      | 5      | 5      |
| 9-Month Loan          | 343    | 362    | 332    | 247    | 194    | 177         | 183    | 186    | 197    | 205    | 202    |
| "Free" Stocks         | 1,467  | 1,477  | 1,465  | 1,473  | 1,447  | 1,415       | 1,399  | 1,377  | 1,364  | 1,349  | 1,325  |
| Prices and Returns    |        |        |        |        | (U     | S. Dollars  | s)     |        |        |        |        |
| Farm Price/bu.        | 1.94   | 2.00   | 2.06   | 2.10   | 2.17   | 2.24        | 2.29   | 2.35   | 2.39   | 2.43   | 2.50   |
| Loan Rate/bu.         | 1.89   | 1.89   | 1.89   | 1.75   | 1.66   | 1.66        | 1.70   | 1.75   | 1.80   | 1.85   | 1.89   |
| Contract Payment/bu.  | 0.56   | 0.36   | 0.33   | 0.27   | 0.26   | 0.26        | 0.26   | 0.26   | 0.26   | 0.26   | 0.26   |
| Contract Payment/a.   | 49.04  | 31.72  | 28.91  | 23.28  | 22.60  | 22.60       | 22.60  | 22.60  | 22.61  | 22.61  | 22.61  |
| FOB Gulf Price/mt     | 93.80  | 96.54  | 99.05  | 100.80 | 103.61 | 106.83      | 108.85 | 111.32 | 112.96 | 114.90 | 117.95 |
| Variable Expenses/a.  | 169.93 | 167.70 | 170.84 | 174.47 | 176.86 | 179.58      | 182.40 | 185.21 | 188.11 | 191.05 | 194.02 |
| Market Net Returns/a. | 97.19  | 92.45  | 100.65 | 106.10 | 116.38 | 127.71      | 135.20 | 144.49 | 150.98 | 158.60 | 169.97 |

# U.S. Sorghum

Reduced area in the Central Plains states pushed total sorghum planted area lower in 1998, down to 9.6 million acres. Sorghum planted area rises to 10.0 million acres by 2008/09 as feedgrain demand pulls prices higher.

Sorghum area enrolled in the Conservation Reserve Program totaled 2.3 million acres for the 1997/98 marketing year. As contracts expired in calendar year 1998, the total sorghum enrollment fell to 2.2 million acres. By the final year of the baseline, sorghum CRP area stands at 2.5 million acres.

The U.S. average sorghum yield decreased to 66.3 bushels per acre in 1998/99. Sorghum yield is projected to reach 72.3 bushels per acre by 2008/09. Genetic improvement increases average sorghum yield 0.54 bushels per acre per year, an annual growth rate of 0.8 percent per year.

Sorghum feed use is projected to be 275 million bushels in 1998/99. The falling prices of alternative feeds explain the decline relative to the previous year. Feed use of sorghum rises during the baseline as animal numbers increase. In the last year of the baseline period, sorghum feed use totals 378 million bushels.

Exports of U.S. sorghum in 1998/99 are projected to be 191 million bushels. The volume of exports grows in

each year of the baseline, reaching 242 million bushels by 2008/09. Worldwide demand for feedgrains pulls the sorghum export figure higher.

Sorghum ending stocks decreased in 1998/99 to 57 million bushels, up from 49 million bushels the previous year. The FAIR Act eliminated the Farmer Owned Reserve (FOR) program, and the market is the only holder of stocks in the baseline. With a return to normal weather, ending stocks are generally expected to remain low at about 50 million bushels.

Despite smaller production in 1998/99, season-average sorghum farm prices fell to \$1.70 per bushel. Prices are projected to increase in 1999/00 as demand rebuilds. Sorghum prices will maintain a fairly constant relationship to corn prices, rising to \$2.38 per bushel by 2008/09.

Market net returns over variable costs fell to \$32.95 per acre in 1998/99 due to lower prices. In the future, net returns are projected to rise as the growth rate of yields and prices more than outpace the growth in costs. In the 2008/09 marketing year, market returns hit \$74.03. Wheat returns are competitive with this, as are cotton returns when adjusted for risk.

U.S. Sorghum Supply and Utilization

|                       | 98/99 | 99/00 | 00/01 | 01/02 | 02/03  | 03/04       | 04/05  | 05/06  | 06/07  | 07/08  | 08/09  |
|-----------------------|-------|-------|-------|-------|--------|-------------|--------|--------|--------|--------|--------|
| Area                  |       |       |       |       | (Mi    | llion Acres | s)     |        |        |        |        |
| Contract Area         | 13.5  | 13.6  | 13.6  | 13.5  | 13.5   | 13.5        | 13.5   | 13.5   | 13.5   | 13.5   | 13.5   |
| CRP Idled             | 2.2   | 2.2   | 2.3   | 2.4   | 2.4    | 2.4         | 2.4    | 2.5    | 2.5    | 2.5    | 2.5    |
| Planted Area          | 9.6   | 9.9   | 9.7   | 9.7   | 9.7    | 9.8         | 9.9    | 9.9    | 9.9    | 9.9    | 10.0   |
| Harvested Area        | 7.8   | 8.9   | 8.8   | 8.8   | 8.9    | 9.0         | 9.0    | 9.0    | 9.0    | 9.1    | 9.1    |
| Yield                 |       |       |       |       | (Bush  | els per Ad  | cre)   |        |        |        |        |
| Actual                | 66.3  | 67.5  | 68.1  | 68.7  | 69.2   | 69.8        | 70.3   | 70.8   | 71.3   | 71.8   | 72.3   |
| Program               | 57.3  | 57.3  | 57.3  | 57.3  | 57.3   | 57.3        | 57.3   | 57.3   | 57.3   | 57.3   | 57.3   |
|                       |       |       |       |       | (Milli | on Bushe    | ls)    |        |        |        |        |
| Supply                | 569   | 660   | 670   | 672   | 675    | 680         | 684    | 688    | 692    | 697    | 705    |
| Beginning Stocks      | 49    | 57    | 69    | 65    | 59     | 53          | 50     | 48     | 46     | 44     | 43     |
| Production            | 520   | 603   | 602   | 607   | 616    | 626         | 635    | 640    | 646    | 653    | 662    |
| Imports               | 0     | 0     | 0     | 0     | 0      | 0           | 0      | 0      | 0      | 0      | 0      |
| Domestic Use          | 321   | 378   | 382   | 386   | 393    | 399         | 405    | 410    | 410    | 416    | 425    |
| Feed, Residual        | 275   | 332   | 337   | 341   | 348    | 354         | 360    | 365    | 365    | 371    | 379    |
| Food, Seed, Ind.      | 45    | 45    | 45    | 45    | 45     | 45          | 45     | 45     | 45     | 45     | 45     |
| Exports               | 191   | 214   | 223   | 228   | 228    | 231         | 231    | 233    | 237    | 239    | 241    |
| Total Use             | 512   | 591   | 605   | 614   | 621    | 630         | 636    | 642    | 647    | 655    | 665    |
| Ending Stocks         | 57    | 69    | 65    | 59    | 53     | 50          | 48     | 46     | 44     | 43     | 39     |
| FOR, Special Program  | 0     | 0     | 0     | 0     | 0      | 0           | 0      | 0      | 0      | 0      | 0      |
| CCC Inventory         | 0     | 0     | 0     | 0     | 0      | 0           | 0      | 0      | 0      | 0      | 0      |
| 9-Month Loan          | 9     | 14    | 12    | 7     | 4      | 4           | 4      | 4      | 4      | 5      | 4      |
| "Free" Stocks         | 48    | 55    | 53    | 52    | 49     | 46          | 44     | 42     | 40     | 38     | 35     |
| Prices and Returns    |       |       |       |       | (U.    | S. Dollars  | )      |        |        |        |        |
| Farm Price/bu.        | 1.70  | 1.86  | 1.92  | 1.98  | 2.05   | 2.12        | 2.17   | 2.22   | 2.26   | 2.30   | 2.38   |
| Loan Rate/bu.         | 1.74  | 1.74  | 1.74  | 1.61  | 1.53   | 1.53        | 1.57   | 1.61   | 1.66   | 1.70   | 1.74   |
| Contract Payment/bu.  | 0.67  | 0.44  | 0.40  | 0.32  | 0.31   | 0.31        | 0.31   | 0.31   | 0.31   | 0.31   | 0.31   |
| Contract Payment/a.   | 32.77 | 21.19 | 19.33 | 15.58 | 15.13  | 15.13       | 15.13  | 15.14  | 15.14  | 15.14  | 15.14  |
| FOB Gulf Price/mt     | 86.05 | 93.04 | 95.73 | 98.38 | 101.53 | 104.69      | 106.76 | 109.00 | 110.80 | 112.95 | 116.34 |
| Variable Expenses/a.  | 88.12 | 86.66 | 88.24 | 89.82 | 90.80  | 91.98       | 93.18  | 94.35  | 95.58  | 96.83  | 98.08  |
| Market Net Returns/a. | 32.95 | 38.77 | 42.47 | 46.04 | 50.99  | 55.83       | 59.03  | 62.51  | 65.30  | 68.64  | 74.03  |

# U.S. Barley

Barley planted area is projected to fall for the 1999/00 season to 6.2 million acres. By marketing year 2008/09, barley planted area is projected to decline to 6.1 million acres. Barley loses some of its share of total U.S. crop land, continuing an ongoing trend. Land formerly devoted to barley production is planted to other crops, including soybeans and corn.

Barley CRP falls from 2.6 million acres in 1997/98 to 2.5 million acres in 1998/99. Thereafter, new CRP sign-ups are projected to add to barley CRP area. By the end of the projection period, barley CRP area increases to 3.1 million acres.

U.S. barley yield in 1998/99 was 58.9 bushels per acre. Barley yields go up slowly during the baseline period, reaching 66.5 bushels per acre by 2008/09. This assumes an annual growth rate of 0.8 percent.

Barley imports are projected be 30 million bushels in 1998/99. Import levels are not expected to increase above that level during the baseline.

Total domestic use for barley is projected to be relatively stable. Feed use, currently at 185 million bushels, will increase as prices for other feedgrains go up. By 2008/09, barley feed use hits 188 million bushels. Barley food uses will grow only modestly, from 172 million bushels in 1998/99, to 178 million bushels in 2008/09.

U.S. barley exports soared in 1997/98 to 74 million bushels, the highest amount since 1992/93. Export sales were boosted by a lack of malt-quality barley in the world market and increased trade of feed barley. Exports decline in 1998/99 to 28 million bushels due to replenished world supplies. Barley exports grow slowly during the rest of the baseline. The European Union increases its exports of barley during the baseline.

Barley ending stocks in 1997/98 stood at 119 million bushels, down from the previous year's level of 109 million bushels. The projection for 1998/99 is 117 million bushels. Stocks are projected to remain less than 120 million bushels during the baseline period.

The 1998/99 U.S. season-average barley farm price is projected at \$1.96 per bushel, down from \$2.38 per bushel in the prior year. Barley prices rise thereafter. Barley prices maintain a fairly constant relationship to other feedgrain prices. As corn prices rise in the end of the baseline, barley prices are pulled upward. By 2008/09, barley prices are projected to reach \$2.39 per bushel.

Market net returns over variable costs shrunk to \$50.47 per acre in 1997/98 due to lower prices, and fell again in 1998/99 to \$30.74. Yield increases more than offset cost-of-production increases through the remainder of the baseline, resulting in higher market net returns. Barley returns reach \$63.45 per acre in 2008/09.

U.S. Barley Supply and Utilization

|                       | 98/99  | 99/00  | 00/01  | 01/02  | 02/03  | 03/04       | 04/05  | 05/06  | 06/07  | 07/08  | 08/09  |
|-----------------------|--------|--------|--------|--------|--------|-------------|--------|--------|--------|--------|--------|
| Area                  |        |        |        |        | (Mi    | llion Acres | s)     |        |        |        |        |
| Contract Area         | 11.1   | 11.2   | 11.2   | 11.2   | 11.1   | 11.1        | 11.1   | 11.1   | 11.1   | 11.1   | 11.1   |
| CRP Idled             | 2.5    | 2.7    | 2.9    | 2.9    | 3.0    | 3.0         | 3.0    | 3.0    | 3.1    | 3.1    | 3.1    |
| Planted Area          | 6.3    | 6.2    | 6.0    | 6.1    | 6.0    | 6.1         | 6.1    | 6.1    | 6.1    | 6.1    | 6.1    |
| Harvested Area        | 6.0    | 5.8    | 5.7    | 5.7    | 5.7    | 5.7         | 5.7    | 5.7    | 5.7    | 5.7    | 5.8    |
| Yield                 |        |        |        |        | (Bush  | nels per A  | cre)   |        |        |        |        |
| Actual                | 58.9   | 61.6   | 62.3   | 62.6   | 63.2   | 63.8        | 64.3   | 64.9   | 65.4   | 66.0   | 66.5   |
| Program               | 47.2   | 47.2   | 47.2   | 47.2   | 47.2   | 47.2        | 47.2   | 47.2   | 47.2   | 47.2   | 47.2   |
|                       |        |        |        |        | (Milli | ion Bushe   | ls)    |        |        |        |        |
| Supply                | 502    | 503    | 507    | 509    | 505    | 507         | 508    | 510    | 512    | 516    | 521    |
| Beginning Stocks      | 119    | 117    | 124    | 121    | 117    | 112         | 110    | 109    | 109    | 108    | 108    |
| Production            | 352    | 356    | 353    | 358    | 359    | 365         | 368    | 371    | 373    | 378    | 383    |
| Imports               | 30     | 30     | 30     | 30     | 30     | 30          | 30     | 30     | 30     | 30     | 30     |
| Domestic Use          | 357    | 346    | 350    | 355    | 355    | 356         | 357    | 358    | 358    | 362    | 366    |
| Feed, Residual        | 185    | 173    | 176    | 181    | 181    | 181         | 181    | 181    | 181    | 184    | 188    |
| Food, Seed, Ind.      | 172    | 173    | 174    | 174    | 174    | 175         | 175    | 176    | 177    | 178    | 178    |
| Exports               | 28     | 33     | 35     | 37     | 38     | 40          | 42     | 44     | 46     | 47     | 49     |
| Total Use             | 385    | 379    | 385    | 392    | 393    | 397         | 399    | 402    | 404    | 409    | 415    |
| Ending Stocks         | 117    | 124    | 121    | 117    | 112    | 110         | 109    | 109    | 108    | 108    | 106    |
| FOR, Special Program  | 0      | 0      | 0      | 0      | 0      | 0           | 0      | 0      | 0      | 0      | 0      |
| CCC Inventory         | 0      | 0      | 0      | 0      | 0      | 0           | 0      | 0      | 0      | 0      | 0      |
| 9-Month Loan          | 23     | 25     | 23     | 18     | 14     | 13          | 14     | 14     | 15     | 16     | 16     |
| "Free" Stocks         | 94     | 99     | 98     | 99     | 98     | 97          | 96     | 94     | 93     | 92     | 91     |
| Prices and Returns    |        |        |        |        | (U.    | S. Dollars  | 5)     |        |        |        |        |
| Farm Price/bu.        | 1.96   | 1.99   | 2.03   | 2.06   | 2.13   | 2.18        | 2.22   | 2.26   | 2.29   | 2.33   | 2.39   |
| Loan Rate/bu.         | 1.56   | 1.56   | 1.56   | 1.44   | 1.37   | 1.37        | 1.41   | 1.45   | 1.49   | 1.53   | 1.56   |
| Contract Payment/bu.  | 0.42   | 0.27   | 0.25   | 0.20   | 0.19   | 0.19        | 0.19   | 0.19   | 0.19   | 0.19   | 0.19   |
| Contract Payment/ac.  | 16.96  | 10.87  | 9.92   | 8.00   | 7.77   | 7.77        | 7.78   | 7.78   | 7.79   | 7.79   | 7.79   |
| Portland/mt           | 108.16 | 109.71 | 111.49 | 112.83 | 116.04 | 118.79      | 120.69 | 122.57 | 124.06 | 125.88 | 128.69 |
| Variable Expenses/a.  | 88.93  | 86.93  | 88.43  | 90.14  | 91.16  | 92.43       | 93.74  | 95.00  | 96.34  | 97.69  | 99.08  |
| Market Net Returns/a. | 30.74  | 40.02  | 42.07  | 42.80  | 47.18  | 50.71       | 53.11  | 55.58  | 57.47  | 59.78  | 63.45  |

### U.S. Oats

Oats area planted decreased in 1998/99, down to 4.9 million acres. Planted area is projected to decrease again in 1999/00 because of lower prices. In the longer term, oats continue to lose area to other feedgrains and oilseeds. In the last year of the baseline, oats planted area has fallen to 4.3 million acres.

Harvested area in 1998/99 was unchanged from a year ago at 2.8 million acres. Declining area devoted to oats has been an ongoing trend, and by the last year of the baseline, harvested area is projected to have fallen to 2.4 million acres. Oat CRP area in 1998 stood at 1.2 million acres. Oats gain to 1.3 million acres by the last year of the baseline

Oat yields increased to 60.4 bushels per acre harvested in 1998/99. Yields show little growth in the baseline. Trend yield generates an annual increase of 0.3 bushels per acre, just over 0.5 percent.

Net imports of oats are projected to fall to 98 million bushels in 1999/00. Oat exports are projected to be 2 million bushels per year. Net imports remain between 96 and 97 million bushels over the baseline period.

Oat feed use is projected to be 165 million bushels in 1998/99 and then decrease as oat prices increase. At the

end of the baseline, oat feed use will have fallen to 149 million bushels. This feed use path couples with slowly growing food use to produce flat total use.

Food use of oats continues the trend of the past four years and does not increase significantly during the baseline. Total oat food use is approximately 100 million bushels.

Oat ending stocks are projected to climb to 80 million bushels for the 1998/99 marketing year, weighing heavily on prices. Stocks decline during the baseline, down to 60 million bushels by the last year.

Oat prices are projected weaker in 1998/99 due to weak overall commodity prices, falling to \$1.07 per bushel. As prices of other feedgrains rise during the baseline, oat prices are pulled along reaching \$1.48 per bushel in 2008/09. Oat contract payments average \$0.02 per bushel during the baseline.

Market net returns over variable costs in 1998/99 are projected at \$43.59 per acre, the lowest since 1991. Net returns are projected to rise throughout most of the projection period. Rising prices in the latter years of the baseline help offset rising costs and flat yields. By 2008/09, per acre net returns for oats rise to \$56.41.

U.S. Oat Supply and Utilization

|                       | 98/99 | 99/00 | 00/01 | 01/02 | 02/03  | 03/04      | 04/05 | 05/06 | 06/07 | 07/08 | 08/09 |
|-----------------------|-------|-------|-------|-------|--------|------------|-------|-------|-------|-------|-------|
| Area                  |       |       |       |       | (Mil   | lion Acres | )     |       |       |       |       |
| Contract Area         | 6.7   | 6.9   | 6.9   | 6.9   | 6.9    | 6.9        | 6.9   | 6.9   | 6.9   | 6.9   | 6.9   |
| CRP Idled             | 1.2   | 1.2   | 1.2   | 1.3   | 1.3    | 1.3        | 1.3   | 1.3   | 1.3   | 1.3   | 1.3   |
| Planted Area          | 4.9   | 4.6   | 4.4   | 4.4   | 4.4    | 4.4        | 4.4   | 4.4   | 4.4   | 4.4   | 4.3   |
| Harvested Area        | 2.8   | 2.6   | 2.5   | 2.5   | 2.5    | 2.5        | 2.5   | 2.5   | 2.4   | 2.4   | 2.4   |
| Yield                 |       |       |       |       | (Bush  | els per Ac | re)   |       |       |       |       |
| Actual                | 60.4  | 59.9  | 60.3  | 60.6  | 61.0   | 61.3       | 61.6  | 62.0  | 62.3  | 62.6  | 62.9  |
| Program               | 50.8  | 50.8  | 50.8  | 50.8  | 50.8   | 50.8       | 50.8  | 50.8  | 50.8  | 50.8  | 50.8  |
|                       |       |       |       |       | (Milli | on Bushel  | s)    |       |       |       |       |
| Supply                | 341   | 334   | 322   | 317   | 316    | 315        | 314   | 313   | 312   | 312   | 311   |
| Beginning Stocks      | 74    | 80    | 72    | 67    | 64     | 63         | 62    | 62    | 61    | 60    | 60    |
| Production            | 167   | 156   | 150   | 150   | 152    | 153        | 153   | 153   | 152   | 153   | 152   |
| Imports               | 100   | 98    | 100   | 99    | 99     | 99         | 99    | 99    | 99    | 99    | 99    |
| Domestic Use          | 259   | 260   | 253   | 250   | 250    | 251        | 251   | 250   | 250   | 250   | 250   |
| Feed, Residual        | 165   | 165   | 157   | 154   | 153    | 153        | 152   | 151   | 150   | 150   | 149   |
| Food, Seed, Ind.      | 95    | 95    | 96    | 96    | 97     | 98         | 98    | 99    | 100   | 100   | 101   |
| Exports               | 2     | 2     | 2     | 2     | 2      | 2          | 2     | 2     | 2     | 2     | 2     |
| Total Use             | 261   | 262   | 255   | 252   | 252    | 253        | 253   | 252   | 252   | 252   | 252   |
| Ending Stocks         | 80    | 72    | 67    | 64    | 63     | 62         | 62    | 61    | 60    | 60    | 60    |
| FOR, Special Program  | 0     | 0     | 0     | 0     | 0      | 0          | 0     | 0     | 0     | 0     | 0     |
| CCC Inventory         | 0     | 0     | 0     | 0     | 0      | 0          | 0     | 0     | 0     | 0     | 0     |
| 9-Month Loan          | 1     | 1     | 1     | 1     | 1      | 1          | 1     | 1     | 1     | 1     | 1     |
| "Free" Stocks         | 79    | 71    | 66    | 63    | 62     | 61         | 61    | 60    | 59    | 59    | 59    |
| Prices and Returns    |       |       |       |       | (U.    | S. Dollars | )     |       |       |       |       |
| Farm Price/bu.        | 1.07  | 1.12  | 1.22  | 1.27  | 1.31   | 1.36       | 1.39  | 1.42  | 1.44  | 1.45  | 1.48  |
| Loan Rate/bu.         | 1.11  | 1.11  | 1.11  | 1.03  | 0.97   | 0.97       | 1.00  | 1.03  | 1.06  | 1.09  | 1.11  |
| Contract Payment/bu.  | 0.05  | 0.03  | 0.03  | 0.02  | 0.02   | 0.02       | 0.02  | 0.02  | 0.02  | 0.02  | 0.02  |
| Contract Payment/a.   | 1.99  | 1.30  | 1.11  | 0.89  | 0.87   | 0.87       | 0.87  | 0.87  | 0.87  | 0.87  | 0.87  |
| Variable Expenses/a.  | 57.42 | 56.15 | 57.11 | 58.07 | 58.64  | 59.36      | 60.11 | 60.83 | 61.61 | 62.39 | 63.18 |
| Market Net Returns/a. | 43.59 | 43.80 | 46.13 | 48.49 | 50.41  | 52.35      | 53.36 | 54.64 | 55.22 | 55.53 | 56.41 |

# U.S. Hay

Hay area harvested fell to 60.0 million acres in 1998/99. The beef cycle and beef prices play an important part in determining hay area harvested. As beef cow numbers change in the next four years, hay area declines during most years of the baseline. Area harvested bottoms in 2003/04 at 59.9 million acres and rises to 60.3 million acres by 2008/09.

Hay yields rose in 1998/99 to 2.52 tons per acre. Yields are projected to increase at a rate of less than 1 percent per year. This assumes normal weather.

Hay disappearance is projected to decrease in 1998/99 to 146.8 million tons. Use increases to 154 million tons in 1999/00 and then shows modest growth every year of the baseline. In the last year of the projections period, hay domestic use has risen to 161.3 million tons.

Hay ending stocks in 1998/99 rose to 21.9 million tons. Ending stocks remain near 22 million tons throughout the baseline.

The U.S. average all-hay price rose to \$102.50 per ton in 1997/98, but is projected to fall for 1998/99, to a season-average farm price of \$86.21 per ton.

The U.S. average alfalfa hay price rose to \$111.58 per ton in 1997/98. For the 1998/99 crop year, alfalfa prices are expected to fall to \$95.55 per ton. The alfalfa hay price averages more than \$4.80 higher than all-hay prices.

U.S. Hay Supply and Utilization

|                         | 98/99 | 99/00 | 00/01 | 01/02 | 02/03 | 03/04       | 04/05 | 05/06 | 06/07 | 07/08 | 08/09 |
|-------------------------|-------|-------|-------|-------|-------|-------------|-------|-------|-------|-------|-------|
|                         |       |       |       |       | (Mil  | lion Acres  | )     |       |       |       |       |
| Area                    | 60.0  | 60.4  | 60.1  | 60.0  | 59.9  | 59.9        | 60.0  | 60.0  | 60.1  | 60.2  | 60.3  |
|                         |       |       |       |       | (Tor  | s per Acre  | e)    |       |       |       |       |
| Yield                   | 2.52  | 2.56  | 2.58  | 2.59  | 2.60  | 2.62        | 2.63  | 2.64  | 2.65  | 2.67  | 2.68  |
|                         |       |       |       |       | (Mi   | llion Tons) | )     |       |       |       |       |
| Supply                  | 168.8 | 176.8 | 177.6 | 178.2 | 178.9 | 179.6       | 180.3 | 181.1 | 181.8 | 182.5 | 183.3 |
| Production              | 151.3 | 154.9 | 154.8 | 155.3 | 156.0 | 156.7       | 157.6 | 158.6 | 159.6 | 160.5 | 161.3 |
| Beginning Stocks        | 17.4  | 21.9  | 22.8  | 22.9  | 23.0  | 22.9        | 22.7  | 22.5  | 22.2  | 22.0  | 22.0  |
| Disappearance           | 146.8 | 154.0 | 154.7 | 155.3 | 156.0 | 156.9       | 157.8 | 158.8 | 159.8 | 160.6 | 161.3 |
| Ending Stocks           | 21.9  | 22.8  | 22.9  | 23.0  | 22.9  | 22.7        | 22.5  | 22.2  | 22.0  | 22.0  | 22.0  |
| Prices                  |       |       |       |       | (U.   | S. Dollars  | )     |       |       |       |       |
| All-Hay (crop year)     | 86.21 | 83.95 | 83.91 | 84.00 | 84.33 | 85.21       | 86.15 | 87.25 | 88.16 | 88.53 | 88.64 |
| Alfalfa (calendar year) | 95.55 | 89.12 | 88.00 | 88.04 | 88.33 | 89.13       | 90.24 | 91.50 | 92.69 | 93.40 | 93.66 |

# U.S. Peanuts

The U.S. quota poundage increased to 2.334 billion pounds for the 1998/99 crop year. Increases in domestic food use during the baseline period cause the quota to grow 10 million pounds per year.

Planted area is projected to shrink to 1.46 million acres in 1999/00 as producers respond to weaker price signals. As prices recover and the quota expands, area is projected to recover to 1.52 million acres by the end of the baseline.

The U.S. average peanut yield rose to 2,683 pounds per acre for the 1998/99 crop, a record yield. Using the assumption of trend yields, peanut yields are

projected to grow from 2,538 pounds in 1999 to 2,583 pounds by 2008.

Domestic use of peanuts is projected to grow from 3.24 billion pounds in 1999/00 to 3.39 billion pounds in 2008/09. Food use of peanuts contributes the majority of the growth. However, the growth only keeps pace with the growth in population.

Increased supplies pressured the farm price of peanuts down to \$0.25 per pound in 1998/99. As supplies shrink, prices are expected to strengthen in 1999/00. Modest improvement in prices is expected over the projection period.

U.S. Peanut Supply and Utilization

|                        | 98/99  | 99/00  | 00/01  | 01/02  | 02/03  | 03/04        | 04/05  | 05/06  | 06/07  | 07/08  | 08/09  |
|------------------------|--------|--------|--------|--------|--------|--------------|--------|--------|--------|--------|--------|
| Program                |        |        |        |        | (Mil   | lion Pound   | ds)    |        |        |        |        |
| Quota Poundage         | 2,334  | 2,360  | 2,370  | 2,380  | 2,390  | 2,400        | 2,410  | 2,420  | 2,430  | 2,440  | 2,450  |
| Area                   |        |        |        |        | (M     | lillion Acre | e)     |        |        |        |        |
| Planted Area           | 1,511  | 1,460  | 1,498  | 1,514  | 1,51S  | 1,520        | 1,511  | 1,516  | 1,517  | 1,518  | 1,520  |
| Harvested Area         | 1,466  | 1,441  | 1,478  | 1,494  | 1,494  | 1,499        | 1,490  | 1,495  | 1,496  | 1,498  | 1,500  |
|                        |        |        |        |        | (Pou   | nds per A    | cre)   |        |        |        |        |
| Yield                  | 2,683  | 2,538  | 2,538  | 2,542  | 2,548  | 2,553        | 2,560  | 2,566  | 2,571  | 2,577  | 2,583  |
|                        |        |        |        |        | (Mil   | lion Pound   | ds)    |        |        |        |        |
| Supply                 | 4,931  | 4,771  | 4,764  | 4,793  | 4,804  | 4,820        | 4,813  | 4,825  | 4,834  | 4,844  | 4,855  |
| Beginning Stocks       | 848    | 950    | 848    | 831    | 833    | 828          | 833    | 825    | 823    | 820    | 816    |
| Production             | 3,931  | 3,656  | 3,752  | 3,797  | 3,807  | 3,827        | 3,816  | 3,836  | 3,847  | 3,860  | 3,874  |
| Imports                | 152    | 165    | 165    | 165    | 165    | 165          | 165    | 165    | 165    | 165    | 165    |
| Domestic Use           | 3,231  | 3,241  | 3,252  | 3,276  | 3,298  | 3,307        | 3,318  | 3,334  | 3,350  | 3,368  | 3,385  |
| Food                   | 2,135  | 2,199  | 2,213  | 2,231  | 2,253  | 2,251        | 2,263  | 2,276  | 2,289  | 2,304  | 2,318  |
| Crush                  | 775    | 732    | 729    | 735    | 736    | 746          | 745    | 748    | 751    | 754    | 756    |
| Seed, Feed, & Residual | 321    | 310    | 310    | 310    | 310    | 310          | 310    | 310    | 310    | 310    | 310    |
| Exports                | 750    | 683    | 682    | 684    | 678    | 680          | 671    | 669    | 665    | 661    | 657    |
| Total Use              | 3,981  | 3,924  | 3,934  | 3,960  | 3,977  | 3,987        | 3,989  | 4,003  | 4,015  | 4,028  | 4,041  |
| Ending Stocks          | 950    | 848    | 831    | 833    | 828    | 833          | 825    | 823    | 820    | 816    | 814    |
| Prices and Returns     |        |        |        |        | (U     | .S. Dollars  | s)     |        |        |        |        |
| Season Avg. Price/lb.  | 0.250  | 0.266  | 0.273  | 0.274  | 0.276  | 0.273        | 0.276  | 0.276  | 0.278  | 0.279  | 0.280  |
| Quota Loan Rate/lb.    | 0.305  | 0.305  | 0.305  | 0.305  | 0.305  | 0.305        | 0.305  | 0.305  | 0.305  | 0.305  | 0.305  |
| Variable Expenses/a    | 401.58 | 396.29 | 403.72 | 412.31 | 417.95 | 424.38       | 431.05 | 437.67 | 444.53 | 451.48 | 458.50 |
| Average Net Returns/a  | 269.11 | 277.59 | 290.20 | 283.51 | 285.82 | 272.81       | 274.34 | 271.32 | 269.22 | 267.11 | 264.49 |

# **U.S. Soybeans and Soybean Products**

Soybean planted area rose in 1998/99 to 72.4 million acres. Despite lower prices, soybean planted area is expected to expand in 1999 as net returns per acre still compare favorably with competing crops. Longer term, soybean plantings range between 70 and 71 million acres.

Soybean area enrolled in the Conservation Reserve Program totaled 3.5 million acres for the 1997/98 marketing year. As contracts expired in calendar year 1998, total soybean enrollment fell to 2.8 million acres. By the final year of the baseline, soybean CRP area is again at 3.5 million acres.

Soybean yields remained at 38.9 bushels per acre for 1998/99. Assuming average rainfall and temperatures during the baseline period, soybean yields grow to 44.5 bushels per acre by 2008/09. This is a growth rate of almost 1.5 percent per year.

Production in 1998/99 came in at 2.757 billion bushels, a new record. The high area and high yield combined to give the large crop. Production is projected to increase to 2.805 billion bushels in 1999/00. In 2008/09, the United States is expected to produce 3.111 billion bushels.

High product demand and ample supplies of soybeans caused crush use to rise to 1.597 billion bushels in 1997/98, and the strong demand is projected to continue. Steady domestic use and export demand for soybean products cause crush to increase steadily in every year of the baseline period, reaching 1.927 billion bushels by the last year of the baseline. For the 1998/99 marketing year, crush is projected to be 1.593 billion bushels. Over the baseline, crush expands at an average annual rate of 1.8 percent.

Soybean oil domestic use increased in 1997/98 exceeding 15.2 billion pounds. For the coming marketing year,

domestic use is projected at almost 15.9 billion pounds. With slow growth assumed for many competing fats and oils, domestic use continues to increase though 2008/09, topping 18.3 billion pounds.

Domestic soybean meal use rose in 1997/98 to 28.8 million tons and rose again in 1998/99 to 29.55 million tons. Increases in livestock numbers during the projection period keep soybean meal uses rising during the baseline period. Meal domestic use rises above 36 million tons in the last year of the baseline.

Exports of soybeans increase at an average rate of 1 percent per year. For the 1999/00 crop year, exports of soybeans are projected to be 954 million bushels. In the final year of the baseline, exports are projected to be 1,040 million bushels.

The soybeans season—average farm price moved sharply lower in 1998, on the heels of large crops in the United States and South America. The 1999/00 price is projected to be lower at \$5.08 per bushel. The potential for LDPs continues. Assuming trend yields, soybean prices are expected to average below the loan rate in 1999 and 2000. The soybean loan rate is projected to be lowered by \$0.01 for the 2000/01 crop year, and lowered further in the 2001/02 crop year, down to the minimum of \$4.92 per bushel.

Soybean net returns over variable costs remain strong throughout the projection period as price and yield increases more than offset rising costs of production. Soybeans remain competitive with cotton in the Southeast and Delta, and with wheat in the Northern Plains and Lake States, but soybeans have difficulty competing with other crops in the Midwest.

U.S. Soybean Supply and Utilization

|                       | 98/99  | 99/00  | 00/01  | 01/02  | 02/03  | 03/04        | 04/05  | 05/06  | 06/07  | 07/08  | 08/09  |
|-----------------------|--------|--------|--------|--------|--------|--------------|--------|--------|--------|--------|--------|
| Area                  |        |        |        |        | (Mi    | illion Acres | s)     |        |        |        |        |
| CRP Idled             | 2.8    | 3.0    | 3.2    | 3.3    | 3.4    | 3.4          | 3.4    | 3.5    | 3.5    | 3.5    | 3.5    |
| Planted Area          | 72.4   | 72.7   | 70.4   | 69.7   | 70.2   | 70.3         | 70.0   | 70.4   | 70.4   | 70.9   | 71.0   |
| Harvested Area        | 70.8   | 71.7   | 69.4   | 68.7   | 69.2   | 69.3         | 69.0   | 69.4   | 69.3   | 69.8   | 69.9   |
|                       |        |        |        |        | ,      | hels per A   | ,      |        |        |        |        |
| Yield                 | 38.9   | 39.1   | 39.8   | 40.5   | 41.0   | 41.6         | 42.2   | 42.8   | 43.4   | 43.9   | 44.5   |
|                       |        |        |        |        | `      | ion Bushe    | ,      |        |        |        |        |
| Supply                | 2,963  | 3,217  | 3,244  | 3,252  | 3,289  | 3,326        | 3,354  | 3,399  | 3,434  | 3,483  | 3,524  |
| Beginning Stocks      | 200    | 407    | 480    | 467    | 446    | 439          | 434    | 425    | 420    | 411    | 408    |
| Production            | 2,757  | 2,805  | 2,759  | 2,779  | 2,838  | 2,882        | 2,915  | 2,969  | 3,008  | 3,066  | 3,111  |
| Imports               | 6      | 5      | 5      | 5      | 5      | 5            | 5      | 5      | 5      | 5      | 5      |
| Domestic Use          | 1,741  | 1,783  | 1,812  | 1,839  | 1,874  | 1,906        | 1,938  | 1,974  | 2,009  | 2,047  | 2,086  |
| Crush                 | 1,593  | 1,635  | 1,665  | 1,691  | 1,725  | 1,755        | 1,785  | 1,820  | 1,853  | 1,889  | 1,927  |
| Seed, Residual        | 148    | 148    | 147    | 148    | 150    | 151          | 153    | 154    | 156    | 158    | 159    |
| Exports               | 815    | 954    | 965    | 967    | 976    | 985          | 992    | 1,004  | 1,013  | 1,028  | 1,040  |
| Total Use             | 2,556  | 2,737  | 2,776  | 2,806  | 2,850  | 2,891        | 2,930  | 2,978  | 3,022  | 3,075  | 3,126  |
| Ending Stocks         | 407    | 480    | 467    | 446    | 439    | 434          | 425    | 420    | 411    | 408    | 398    |
| CCC Inventory         | 0      | 0      | 0      | 0      | 0      | 0            | 0      | 0      | 0      | 0      | 0      |
| 9-Month Loan          | 81     | 110    | 97     | 63     | 60     | 58           | 54     | 53     | 49     | 49     | 45     |
| "Free" Stocks         | 325    | 370    | 371    | 383    | 379    | 376          | 371    | 368    | 362    | 359    | 353    |
| Prices and Returns    |        |        |        |        | (U     | .S. Dollars  | s)     |        |        |        |        |
| Farm Price/bu.        | 5.33   | 5.08   | 5.18   | 5.30   | 5.39   | 5.43         | 5.53   | 5.58   | 5.68   | 5.72   | 5.85   |
| Loan Rate/bu.         | 5.26   | 5.26   | 5.25   | 4.92   | 4.92   | 4.92         | 4.92   | 4.92   | 4.92   | 4.92   | 4.92   |
| FOB Gulf Price/mt     | 212.74 | 203.45 | 207.17 | 211.76 | 214.84 | 216.40       | 220.16 | 222.18 | 225.97 | 227.49 | 232.28 |
| Bean/Corn Ratio       | 2.75   | 2.54   | 2.51   | 2.52   | 2.48   | 2.42         | 2.41   | 2.38   | 2.38   | 2.35   | 2.34   |
| Variable Expenses/a.  | 93.55  | 92.77  | 94.32  | 96.19  | 97.65  | 99.24        | 100.83 | 102.42 | 104.05 | 105.70 | 107.40 |
| Market Net Returns/a. | 121.61 | 123.06 | 124.66 | 118.39 | 123.22 | 126.59       | 132.62 | 136.36 | 142.37 | 145.45 | 152.60 |
| 48% Meal Price/ton    | 143.58 | 141.75 | 147.90 | 154.43 | 160.75 | 164.79       | 169.42 | 173.38 | 177.48 | 179.35 | 184.45 |
| Oil Price/cwt         | 24.57  | 24.51  | 24.44  | 24.07  | 23.57  | 23.14        | 23.10  | 22.98  | 23.17  | 23.43  | 23.86  |
| Crushing Margin/bu.   | 0.65   | 0.70   | 0.74   | 0.75   | 0.77   | 0.78         | 0.79   | 0.82   | 0.85   | 0.89   | 0.94   |

U.S. Soybean Meal Supply and Utilization

|                     | 98/99          | 99/00  | 00/01  | 01/02  | 02/03  | 03/04    | 04/05  | 05/06  | 06/07  | 07/08  | 08/09  |
|---------------------|----------------|--------|--------|--------|--------|----------|--------|--------|--------|--------|--------|
|                     |                |        |        |        | (The   | usand To | ns)    |        |        |        |        |
| Supply              | 38,031         | 39,110 | 39,817 | 40,428 | 41,224 | 41,937   | 42,648 | 43,484 | 44,260 | 45,123 | 46,021 |
| Beginning Stocks    | 218            | 227    | 220    | 216    | 214    | 209      | 206    | 204    | 203    | 202    | 204    |
| Production          | 37,763         | 38,833 | 39,547 | 40,162 | 40,960 | 41,678   | 42,392 | 43,230 | 44,007 | 44,871 | 45,767 |
| Imports             | 50             | 50     | 50     | 50     | 50     | 50       | 50     | 50     | 50     | 50     | 50     |
| Domestic Use        | 29,551         | 30,852 | 31,586 | 32,277 | 32,972 | 33,665   | 34,156 | 34,765 | 35,222 | 35,718 | 36,346 |
| Exports             | 8,253          | 8,038  | 8,015  | 7,937  | 8,043  | 8,066    | 8,287  | 8,517  | 8,837  | 9,201  | 9,472  |
| Total Use           | 37,804         | 38,890 | 39,601 | 40,214 | 41,016 | 41,731   | 42,443 | 43,282 | 44,058 | 44,919 | 45,819 |
| Ending Stocks       | 227            | 220    | 216    | 214    | 209    | 206      | 204    | 203    | 202    | 204    | 202    |
| Prices, 48% Protein | (U.S. Dollars) |        |        |        |        |          |        |        |        |        |        |
| Decatur/ton         | 143.58         | 141.75 | 147.90 | 154.43 | 160.75 | 164.79   | 169.42 | 173.38 | 177.48 | 179.35 | 184.45 |
| Decatur/mt          | 158.27         | 156.25 | 163.03 | 170.23 | 177.19 | 181.65   | 186.76 | 191.11 | 195.63 | 197.70 | 203.32 |

U.S. Soybean Oil Supply and Utilization

|                  | 98/99          | 99/00  | 00/01  | 01/02  | 02/03  | 03/04      | 04/05       | 05/06  | 06/07  | 07/08  | 08/09  |
|------------------|----------------|--------|--------|--------|--------|------------|-------------|--------|--------|--------|--------|
|                  |                |        |        |        | (Mil   | lion Pound | ds)         |        |        |        |        |
| Supply           | 19,489         | 19,640 | 19,975 | 20,334 | 20,813 | 21,264     | ,<br>21,701 | 22,174 | 22,624 | 23,094 | 23,572 |
| Beginning Stocks | 1,382          | 1,351  | 1,342  | 1,404  | 1,499  | 1,603      | 1,696       | 1,765  | 1,840  | 1,894  | 1,939  |
| Production       | 18,049         | 18,239 | 18,583 | 18,880 | 19,264 | 19,611     | 19,955      | 20,359 | 20,734 | 21,151 | 21,583 |
| Imports          | 58             | 50     | 50     | 50     | 50     | 50         | 50          | 50     | 50     | 50     | 50     |
| Domestic Use     | 15,443         | 15,898 | 16,165 | 16,461 | 16,773 | 17,083     | 17,345      | 17,623 | 17,862 | 18,095 | 18,307 |
| Exports          | 2,696          | 2,400  | 2,406  | 2,374  | 2,437  | 2,485      | 2,591       | 2,711  | 2,869  | 3,060  | 3,283  |
| Total Use        | 18,138         | 18,298 | 18,571 | 18,835 | 19,210 | 19,568     | 19,936      | 20,335 | 20,730 | 21,155 | 21,590 |
| Ending Stocks    | 1,351          | 1,342  | 1,404  | 1,499  | 1,603  | 1,696      | 1,765       | 1,840  | 1,894  | 1,939  | 1,982  |
| Prices           | (U.S. Dollars) |        |        |        |        |            |             |        |        |        |        |
| Decatur/cwt      | 24.57          | 24.51  | 24.44  | 24.07  | 23.57  | 23.14      | 23.10       | 22.98  | 23.17  | 23.43  | 23.86  |
| Decatur/mt       | 541.57         | 540.41 | 538.81 | 530.64 | 519.65 | 510.21     | 509.36      | 506.61 | 510.85 | 516.55 | 526.06 |

# U.S. Rice

U.S. rice planted area expanded to 3.35 million acres in 1998/99, up from 3.13 million acres in 1997/98. Lower returns for competing crops push more acres into rice in 1999/00. Total planted area is projected to rise to 3.45 million acres. Consequently, prices for the 1999 crop year fall. Rice area falls during the baseline to 3.28 million acres.

Rice yields fell in 1998/99 to 5,669 pounds per acre. Yields are projected to show growth throughout the projection period, reaching 6,323 pounds per acre in 2008/09. The decrease in planted area aids this growth.

Assuming trend yields, increased area will push 1999 rice production above 200 million cwt, breaking the record set in 1994. Production is projected to reach 205 million cwt by the end of the baseline.

Imports are expected to continue to increase over the projection period. For the 1998/99 marketing year, 9 million hundredweight are expected to be imported. By 2008/09, 14.1 million cwt per year will be imported.

While both food use and brewing use are projected to increase throughout the projection period, the majority

of the increase is in the food category, with brewing flat on a per capita basis. Increases in domestic use exceed the growth in production, limiting U.S. exports.

Ending stocks of rice for 1998/99 are projected to increase to 29 million cwt. Stock levels and stocks-to-use remain near their present values during the baseline.

The U.S. average farm price is projected to decrease to \$9.00 per cwt for marketing year 1998/99 due to larger supplies. Prices weaken to \$8.61 per cwt by 1999/00 as production increases again. Longer term, rice prices increase, reaching \$9.45 by the end of the projection period.

Weak market prices have pushed net returns lower the last two years. Market net returns over variable production costs increase during the baseline as prices increase. Despite these rising returns, rice loses area to other uses. Other crops gain an edge, because returns of competing crops are believed to be higher in most rice growing areas. By the last year of the baseline, rice net returns reach \$156 per acre. Assuming some softening in prices, net returns will decline, but remain relatively competitive with other crops.

U.S. Rice Supply and Utilization

|                          | 98/99  | 99/00  | 00/01  | 01/02  | 02/03    | 03/04       | 04/05   | 05/06  | 06/07  | 07/08  | 08/09  |
|--------------------------|--------|--------|--------|--------|----------|-------------|---------|--------|--------|--------|--------|
| Area                     |        |        |        |        | (Mi      | Ilion Acres | s)      |        |        |        |        |
| Contract Area            | 4.16   | 4.16   | 4.16   | 4.16   | 4.16     | 4.16        | 4.16    | 4.16   | 4.16   | 4.16   | 4.16   |
| CRP Idled                | 0.01   | 0.01   | 0.01   | 0.01   | 0.01     | 0.01        | 0.01    | 0.01   | 0.01   | 0.01   | 0.01   |
| Planted Area             | 3.35   | 3.45   | 3.39   | 3.36   | 3.36     | 3.34        | 3.34    | 3.32   | 3.31   | 3.29   | 3.28   |
| Harvested Area           | 3.32   | 3.42   | 3.36   | 3.34   | 3.33     | 3.31        | 3.31    | 3.29   | 3.28   | 3.26   | 3.25   |
| Yield                    |        |        |        |        | (Pou     | nds per A   | cre)    |        |        |        |        |
| Actual                   | 5,669  | 5,949  | 5,988  | 6,031  | 6,073    | 6,118       | 6,155   | 6,200  | 6,239  | 6,283  | 6,323  |
| Program                  | 4,817  | 4,817  | 4,817  | 4,817  | 4,817    | 4,817       | 4,817   | 4,817  | 4,817  | 4,817  | 4,817  |
|                          |        |        |        |        | (Million | Hundredw    | veight) |        |        |        |        |
| Supply                   | 224.8  | 242.4  | 243.0  | 244.0  | 245.9    | 246.9       | 248.8   | 249.6  | 251.1  | 252.2  | 253.6  |
| Beginning Stocks         | 27.7   | 29.0   | 32.0   | 32.2   | 32.3     | 32.7        | 32.7    | 33.2   | 33.1   | 33.5   | 33.8   |
| Production               | 188.1  | 203.7  | 200.9  | 201.2  | 202.4    | 202.5       | 204.0   | 203.8  | 204.8  | 205.0  | 205.6  |
| Imports                  | 9.0    | 9.6    | 10.2   | 10.7   | 11.2     | 11.7        | 12.2    | 12.6   | 13.2   | 13.7   | 14.1   |
| Domestic Use             | 108.9  | 112.6  | 115.0  | 117.2  | 119.5    | 121.6       | 123.8   | 126.0  | 128.2  | 130.3  | 132.5  |
| Food                     | 83.5   | 86.7   | 88.9   | 91.1   | 93.3     | 95.4        | 97.5    | 99.6   | 101.7  | 103.8  | 105.8  |
| Seed                     | 4.5    | 4.4    | 4.4    | 4.4    | 4.3      | 4.3         | 4.3     | 4.3    | 4.2    | 4.2    | 4.2    |
| Brewing                  | 15.4   | 15.6   | 15.7   | 15.8   | 15.9     | 15.9        | 16.0    | 16.1   | 16.2   | 16.3   | 16.4   |
| Residual                 | 5.5    | 6.0    | 6.0    | 6.0    | 6.0      | 6.0         | 6.0     | 6.0    | 6.0    | 6.0    | 6.0    |
| Exports                  | 86.9   | 97.8   | 95.9   | 94.5   | 93.6     | 92.6        | 91.8    | 90.5   | 89.4   | 88.0   | 87.0   |
| Total Use                | 195.8  | 210.4  | 210.9  | 211.7  | 213.1    | 214.2       | 215.6   | 216.5  | 217.6  | 218.4  | 219.5  |
| Ending Stocks            | 29.0   | 32.0   | 32.2   | 32.3   | 32.7     | 32.7        | 33.2    | 33.1   | 33.5   | 33.8   | 34.1   |
| CCC Inventory            | 0.0    | 0.0    | 0.0    | 0.0    | 0.0      | 0.0         | 0.0     | 0.0    | 0.0    | 0.0    | 0.0    |
| "Free" Stocks            | 29.0   | 32.0   | 32.2   | 32.3   | 32.7     | 32.7        | 33.2    | 33.1   | 33.5   | 33.8   | 34.1   |
| Prices and Returns       |        |        |        |        | (U       | .S. Dollars | s)      |        |        |        |        |
| Season Avg. Price/cwt    | 9.00   | 8.61   | 8.67   | 8.79   | 8.85     | 9.02        | 9.06    | 9.22   | 9.28   | 9.35   | 9.45   |
| Loan Rate/cwt            | 6.50   | 6.50   | 6.50   | 6.50   | 6.50     | 6.50        | 6.50    | 6.50   | 6.50   | 6.50   | 6.50   |
| Contract Payment/cwt     | 4.35   | 2.82   | 2.60   | 2.11   | 2.04     | 2.04        | 2.04    | 2.04   | 2.04   | 2.04   | 2.04   |
| Contract Payment/a.      | 177.97 | 115.46 | 106.57 | 86.19  | 83.71    | 83.71       | 83.71   | 83.71  | 83.71  | 83.71  | 83.71  |
| FOB Houston/cwt          | 17.46  | 16.68  | 16.81  | 17.07  | 17.22    | 17.61       | 17.73   | 18.08  | 18.23  | 18.40  | 18.64  |
| Adjusted World Price/cwt | 8.00   | 7.37   | 7.42   | 7.54   | 7.60     | 7.77        | 7.81    | 7.97   | 8.03   | 8.10   | 8.20   |
| Variable Expenses/a      | 388.50 | 386.01 | 391.99 | 398.59 | 403.85   | 409.32      | 415.30  | 421.28 | 427.73 | 434.26 | 441.16 |
| Market Net Returns/a.    | 121.73 | 126.21 | 127.12 | 131.42 | 133.45   | 142.34      | 142.39  | 150.11 | 151.10 | 153.06 | 156.14 |

# **U.S. Upland Cotton**

Farmers seeded 13.09 million acres to cotton in 1998. For the 1999/00 marketing year, planted area is expected to rise to 13.21 million acres planted due to weaker competition from other crops. Longer term, cotton area declines as returns lag behind corn and soybeans. Planted area is expected to decline, reaching 11.99 million acres by the last year of the baseline. The decoupled payment plan of the FAIR Act, as well as competition from corn in the Southeast and soybeans in the Delta, cause the fall.

The national average cotton yield fell to 612 pounds per acre in 1998. Poor yields in the west were a major cause of the decline. Longer term, cotton yields grow, but at a rate of less than 1 percent per year. In the last year of the baseline, the national average cotton yield is projected to be 708 pounds per acre.

U.S. imports of upland cotton totaled 0.35 million bales during the 1998/99 crop year. The level of imports is projected to be lower, at 0.30 million bales, for 1999/00 and then fall further to 0.05 million bales during the rest of the baseline.

Increased textile imports pressured mill use lower in 1998. Modest growth is projected over the baseline. Mill use in 1999/00 is projected to recover to 10.64 million bales. As consumer demand remains strong, mill use should continue to increase throughout the projection period. In 2008/09, projected mill use is 12.02 million bales. This implies a slight per capita increase.

Weaker global demand and the absence of Step 2 payments limit cotton exports. For the 1998/99 crop year, only 3.97 million bales of upland cotton are projected to be exported. Longer term, increase competition from African countries and Australia limit U.S. exports of cotton. Exports are projected to be 4.93 million bales by 2008/09.

Reflecting weaker demand and an increase in stocks, cotton prices are projected to average sharply lower in 1999 and 2000. A lower AWP will lead to significant loan deficiency payments over the 1999 to 2001 period.

U.S. Upland Cotton Supply and Utilization

|                          | 98/99  | 99/00  | 00/01  | 01/02  | 02/03  | 03/04        | 04/05  | 05/06  | 06/07  | 07/08  | 08/09  |
|--------------------------|--------|--------|--------|--------|--------|--------------|--------|--------|--------|--------|--------|
| Area                     |        |        |        |        | (M     | illion Acre  | s)     |        |        |        |        |
| Contract Area            | 16.26  | 16.33  | 16.31  | 16.30  | 16.29  | 16.29        | 16.29  | 16.28  | 16.28  | 16.28  | 16.28  |
| CRP Idled                | 1.24   | 1.27   | 1.36   | 1.41   | 1.43   | 1.44         | 1.45   | 1.46   | 1.47   | 1.47   | 1.47   |
| Planted Area             | 13.09  | 13.21  | 12.71  | 12.44  | 12.16  | 12.06        | 11.94  | 11.87  | 11.89  | 11.95  | 11.99  |
| Harvested Area           | 10.49  | 12.54  | 12.08  | 11.83  | 11.56  | 11.46        | 11.35  | 11.29  | 11.30  | 11.36  | 11.40  |
| Yield                    |        |        |        |        | (Pou   | nds per A    | cre)   |        |        |        |        |
| Actual                   | 612    | 660    | 667    | 672    | 676    | 681          | 686    | 691    | 697    | 702    | 708    |
| Program                  | 608    | 608    | 608    | 608    | 608    | 608          | 608    | 608    | 608    | 608    | 608    |
|                          |        |        |        |        | (M     | illion Bale: | s)     |        |        |        |        |
| Supply                   | 17.54  | 20.88  | 22.13  | 22.35  | 21.87  | 21.40        | 20.98  | 20.68  | 20.55  | 20.55  | 20.58  |
| Beginning Stocks         | 3.82   | 3.33   | 5.24   | 5.75   | 5.53   | 5.08         | 4.70   | 4.37   | 4.09   | 3.88   | 3.72   |
| Production               | 13.37  | 17.25  | 16.79  | 16.55  | 16.29  | 16.28        | 16.23  | 16.26  | 16.41  | 16.62  | 16.81  |
| Imports                  | 0.35   | 0.30   | 0.10   | 0.05   | 0.05   | 0.05         | 0.05   | 0.05   | 0.05   | 0.05   | 0.05   |
| Domestic Use             |        |        |        |        |        |              |        |        |        |        |        |
| Mill Use                 | 10.22  | 10.64  | 10.89  | 11.02  | 11.13  | 11.25        | 11.39  | 11.54  | 11.69  | 11.85  | 12.02  |
| Exports                  | 3.97   | 4.99   | 5.48   | 5.79   | 5.65   | 5.45         | 5.20   | 5.04   | 4.97   | 4.97   | 4.93   |
| Total Use                | 14.18  | 15.63  | 16.37  | 16.81  | 16.78  | 16.70        | 16.59  | 16.58  | 16.66  | 16.82  | 16.95  |
| Unaccounted              | -0.02  | -0.01  | -0.01  | -0.01  | -0.01  | -0.01        | -0.01  | -0.01  | -0.01  | -0.01  | -0.01  |
| Ending Stocks            | 3.33   | 5.24   | 5.75   | 5.53   | 5.08   | 4.70         | 4.37   | 4.09   | 3.88   | 3.72   | 3.62   |
| CCC Inventory            | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00         | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   |
| "Free" Stocks            | 3.33   | 5.24   | 5.75   | 5.53   | 5.08   | 4.70         | 4.37   | 4.09   | 3.88   | 3.72   | 3.62   |
| Prices and Returns       |        |        |        |        | (U     | .S. Dollars  | s)     |        |        |        |        |
| Season Avg. Price/lb.    | 0.625  | 0.545  | 0.531  | 0.553  | 0.580  | 0.602        | 0.620  | 0.638  | 0.654  | 0.667  | 0.677  |
| Calendar Avg. Price/lb.  | 0.660  | 0.577  | 0.537  | 0.546  | 0.571  | 0.595        | 0.615  | 0.633  | 0.649  | 0.664  | 0.675  |
| Loan Rate/lb.            | 0.519  | 0.519  | 0.519  | 0.516  | 0.500  | 0.500        | 0.500  | 0.500  | 0.511  | 0.519  | 0.519  |
| Contract Payment/lb.     | 0.122  | 0.079  | 0.071  | 0.057  | 0.055  | 0.055        | 0.055  | 0.055  | 0.055  | 0.055  | 0.055  |
| Contract Payment/a.      | 63.08  | 40.72  | 36.59  | 29.48  | 28.61  | 28.62        | 28.62  | 28.63  | 28.63  | 28.63  | 28.63  |
| Cotlook A Index/lb.      | 0.580  | 0.558  | 0.552  | 0.580  | 0.615  | 0.644        | 0.667  | 0.690  | 0.710  | 0.728  | 0.740  |
| Adjusted World Price/lb. | 0.440  | 0.423  | 0.418  | 0.442  | 0.472  | 0.497        | 0.518  | 0.538  | 0.555  | 0.571  | 0.582  |
| Variable Expenses/a.     | 327.28 | 330.06 | 335.50 | 342.55 | 348.30 | 354.13       | 360.39 | 366.61 | 373.07 | 379.62 | 386.28 |
| Market Net Returns/a.    | 179.93 | 164.42 | 156.47 | 149.38 | 135.09 | 132.09       | 129.71 | 134.62 | 144.00 | 151.92 | 158.17 |

U.S. Cottonseed Supply and Utilization

|                     | 98/99           | 99/00  | 00/01  | 01/02  | 02/03  | 03/04       | 04/05  | 05/06  | 06/07  | 07/08  | 08/09  |  |  |
|---------------------|-----------------|--------|--------|--------|--------|-------------|--------|--------|--------|--------|--------|--|--|
|                     | (Thousand Tons) |        |        |        |        |             |        |        |        |        |        |  |  |
| Supply              | 5,945           | 7,073  | 7,037  | 7,091  | 6,989  | 6,981       | 6,963  | 6,973  | 7,030  | 7,114  | 7,186  |  |  |
| Beginning Stocks    | 563             | 200    | 350    | 500    | 500    | 500         | 500    | 500    | 500    | 500    | 500    |  |  |
| Production          | 5,182           | 6,773  | 6,587  | 6,491  | 6,389  | 6,381       | 6,363  | 6,373  | 6,430  | 6,514  | 6,586  |  |  |
| Imports             | 200             | 100    | 100    | 100    | 100    | 100         | 100    | 100    | 100    | 100    | 100    |  |  |
| Domestic Use        | 5,670           | 6,598  | 6,412  | 6,466  | 6,364  | 6,356       | 6,338  | 6,348  | 6,405  | 6,489  | 6,561  |  |  |
| Crush               | 2,663           | 3,533  | 3,390  | 3,316  | 3,247  | 3,239       | 3,238  | 3,247  | 3,291  | 3,345  | 3,404  |  |  |
| Other               | 3,007           | 3,065  | 3,022  | 3,150  | 3,117  | 3,117       | 3,100  | 3,100  | 3,114  | 3,144  | 3,157  |  |  |
| Exports             | 75              | 125    | 125    | 125    | 125    | 125         | 125    | 125    | 125    | 125    | 125    |  |  |
| Total Use           | 5,745           | 6,723  | 6,537  | 6,591  | 6,489  | 6,481       | 6,463  | 6,473  | 6,530  | 6,614  | 6,686  |  |  |
| Ending Stocks       | 200             | 350    | 500    | 500    | 500    | 500         | 500    | 500    | 500    | 500    | 500    |  |  |
| Prices and Returns  |                 |        |        |        | (U     | .S. Dollars | ;)     |        |        |        |        |  |  |
| Farm Price/ton      | 127.27          | 105.91 | 103.26 | 102.31 | 102.64 | 102.97      | 105.18 | 106.45 | 108.49 | 109.47 | 112.74 |  |  |
| Meal Price/ton      | 109.67          | 106.13 | 112.93 | 119.31 | 125.57 | 129.09      | 133.21 | 136.51 | 139.54 | 140.44 | 144.20 |  |  |
| Oil Price/cwt       | 33.04           | 30.05  | 27.99  | 26.60  | 25.58  | 25.12       | 25.08  | 24.95  | 25.15  | 25.42  | 25.87  |  |  |
| Crushing Margin/ton | 27.96           | 38.14  | 37.25  | 36.64  | 35.86  | 35.66       | 35.17  | 34.96  | 34.92  | 35.21  | 35.08  |  |  |

U.S. Cottonseed Meal Supply and Utilization

|                  | 98/99           | 99/00  | 00/01  | 01/02  | 02/03  | 03/04  | 04/05  | 05/06  | 06/07  | 07/08  | 08/09  |  |  |
|------------------|-----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--|--|
|                  | (Thousand Tons) |        |        |        |        |        |        |        |        |        |        |  |  |
| Supply           | 1,288           | 1,614  | 1,572  | 1,536  | 1,502  | 1,497  | 1,495  | 1,499  | 1,518  | 1,542  | 1,570  |  |  |
| Beginning Stocks | 88              | 22     | 44     | 42     | 39     | 37     | 36     | 35     | 35     | 35     | 36     |  |  |
| Production       | 1,200           | 1,592  | 1,528  | 1,494  | 1,463  | 1,460  | 1,459  | 1,463  | 1,483  | 1,508  | 1,534  |  |  |
| Imports          | 0               | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      |  |  |
| Domestic Use     | 1,256           | 1,520  | 1,430  | 1,397  | 1,366  | 1,361  | 1,360  | 1,364  | 1,383  | 1,407  | 1,434  |  |  |
| Exports          | 10              | 50     | 100    | 100    | 100    | 100    | 100    | 100    | 100    | 100    | 100    |  |  |
| Total Use        | 1,266           | 1,570  | 1,530  | 1,497  | 1,466  | 1,461  | 1,460  | 1,464  | 1,483  | 1,507  | 1,534  |  |  |
| Ending Stocks    | 22              | 44     | 42     | 39     | 37     | 36     | 35     | 35     | 35     | 36     | 36     |  |  |
| Prices           | (U.S. Dollars)  |        |        |        |        |        |        |        |        |        |        |  |  |
| Memphis/ton      | 109.67          | 106.13 | 112.93 | 119.31 | 125.57 | 129.09 | 133.21 | 136.51 | 139.54 | 140.44 | 144.20 |  |  |
| Memphis/mt       | 120.89          | 116.99 | 124.48 | 131.51 | 138.41 | 142.30 | 146.83 | 150.47 | 153.81 | 154.81 | 158.95 |  |  |

# U.S. Cottonseed Oil Supply and Utilization

|                   | 98/99            | 99/00  | 00/01  | 01/02  | 02/03  | 03/04       | 04/05  | 05/06  | 06/07  | 07/08  | 08/09  |  |  |
|-------------------|------------------|--------|--------|--------|--------|-------------|--------|--------|--------|--------|--------|--|--|
|                   | (Million Pounds) |        |        |        |        |             |        |        |        |        |        |  |  |
| Supply            | 998              | 1,177  | 1,150  | 1,127  | 1,105  | 1,103       | 1,103  | 1,106  | 1,120  | 1,138  | 1,157  |  |  |
| Beginning Stocks  | 79               | 45     | 64     | 65     | 65     | 65          | 65     | 65     | 66     | 66     | 66     |  |  |
| Production        | 853              | 1,132  | 1,086  | 1,062  | 1,040  | 1,037       | 1,037  | 1,040  | 1,054  | 1,071  | 1,090  |  |  |
| Imports           | 66               | 0      | 0      | 0      | 0      | 0           | 0      | 0      | 0      | 0      | 0      |  |  |
| Domestic Use      | 853              | 912    | 886    | 862    | 840    | 837         | 837    | 840    | 854    | 871    | 890    |  |  |
| Exports           | 100              | 200    | 200    | 200    | 200    | 200         | 200    | 200    | 200    | 200    | 200    |  |  |
| Total Use         | 953              | 1,112  | 1,086  | 1,062  | 1,040  | 1,037       | 1,037  | 1,040  | 1,054  | 1,071  | 1,090  |  |  |
| Ending Stocks     | 45               | 64     | 65     | 65     | 65     | 65          | 65     | 66     | 66     | 66     | 67     |  |  |
| Prices            |                  |        |        |        | (U     | .S. Dollars | s)     |        |        |        |        |  |  |
| Valley Points/cwt | 33.04            | 30.05  | 27.99  | 26.60  | 25.58  | 25.12       | 25.08  | 24.95  | 25.15  | 25.42  | 25.87  |  |  |
| Valley Points/mt  | 728.39           | 662.40 | 616.99 | 586.43 | 563.90 | 553.84      | 552.96 | 550.00 | 554.40 | 560.30 | 570.30 |  |  |

# U.S. Sugar and High-Fructose Corn Syrup

With weaker prices of competing crops, sugar beet harvested area is expected to increase to almost 1.5 million acres in 1999. Cane area should also show a modest increase. After 1999, beet area is projected to remain relatively stable with modest expansion in cane area expected.

With growth in domestic use expected to exceed production, additional imports will be required. Total imports for 1999 are projected at 2.2 million tons. By 2008, imports are projected to rise to 3 million tons.

Sugar domestic disappearance is projected to continue to increase on a per capita basis. Over the projection

period, total domestic use expands from 10 million tons in 1999 to 11 million tons in 2008.

Ending stocks are expected to reach 19 percent of domestic use by the end of fiscal year 1999 due to increased production. Stocks show a gradual decline thereafter, falling to 15 percent of disappearance by 2008.

Raw sugar prices are expected to average \$0.215 per pound in 1999. Some recovery is expected in the long run, but in general prices range between \$0.22 and \$0.23 per pound.

# **U.S. Sugar Crop Production**

|                       | 98/99  | 99/00  | 00/01  | 01/02  | 02/03  | 03/04  | 04/05  | 05/06  | 06/07  | 07/08  | 08/09  |
|-----------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Sugar Beets           |        |        |        |        |        |        |        |        |        |        |        |
| Harv. Area (1,000 a.) | 1,456  | 1,495  | 1,492  | 1,493  | 1,494  | 1,497  | 1,498  | 1,500  | 1,502  | 1,505  | 1,510  |
| Yield (tons/a.)       | 22.43  | 20.81  | 20.83  | 20.86  | 20.89  | 20.91  | 20.94  | 20.97  | 20.99  | 21.02  | 21.04  |
| Prod. (1,000 tons)    | 32,660 | 31,108 | 31,091 | 31,137 | 31,215 | 31,298 | 31,364 | 31,442 | 31,519 | 31,641 | 31,765 |
| Sugarcane             |        |        |        |        |        |        |        |        |        |        |        |
| Harv. Area (1,000 a.) | 935    | 941    | 945    | 949    | 952    | 955    | 958    | 961    | 964    | 967    | 969    |
| Yield (tons/a.)       | 33.39  | 33.25  | 33.25  | 33.26  | 33.26  | 33.27  | 33.27  | 33.27  | 33.28  | 33.28  | 33.29  |
| Prod. (1,000 tons)    | 31,199 | 31,294 | 31,427 | 31,555 | 31,668 | 31,776 | 31,878 | 31,976 | 32,072 | 32,168 | 32,264 |

# U.S. Sugar Supply and Utilization

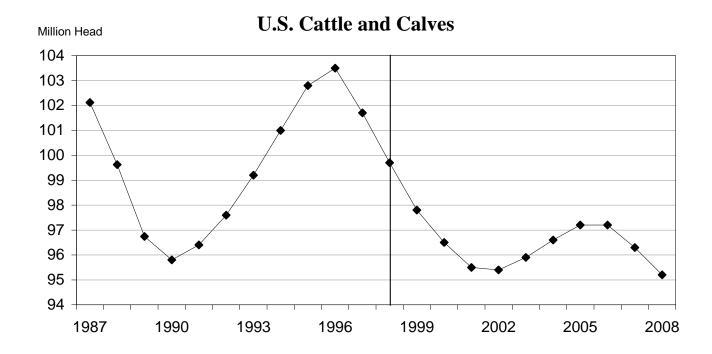
|                     | 1998  | 1999   | 2000   | 2001   | 2002       | 2003      | 2004       | 2005   | 2006   | 2007   | 2008   |  |  |
|---------------------|---|--------|--------|--------|------------|-----------|------------|--------|--------|--------|--------|--|--|
|                     | (Thousand Short Tons, Raw Value, Fiscal Year) |        |        |        |            |           |            |        |        |        |        |  |  |
| Supply              | 11,684  | 12,124 | 12,080 | 12,142 | 12,242     | 12,379    | 12,426     | 12,535 | 12,655 | 12,784 | 12,924 |  |  |
| Beginning Stocks    | 1,488   | 1,679  | 1,914  | 1,819  | 1,770      | 1,744     | 1,727      | 1,714  | 1,704  | 1,694  | 1,685  |  |  |
| Production          | 8,020   | 8,250  | 8,044  | 8,062  | 8,088      | 8,117     | 8,146      | 8,172  | 8,199  | 8,227  | 8,260  |  |  |
| Imports             | 2,176   | 2,195  | 2,122  | 2,261  | 2,384      | 2,519     | 2,553      | 2,649  | 2,752  | 2,863  | 2,979  |  |  |
| Quota               | 1,742   | 1,750  | 1,677  | 1,816  | 1,939      | 2,074     | 2,108      | 2,204  | 2,307  | 2,418  | 2,534  |  |  |
| Non-Quota           | 434   | 445    | 445    | 445    | 445        | 445       | 445        | 445    | 445    | 445    | 445    |  |  |
| Utilization         | 10,007  | 10,210 | 10,262 | 10,371 | 10,498     | 10,653    | 10,711     | 10,831 | 10,961 | 11,099 | 11,248 |  |  |
| Disappearance       | 9,828   | 10,035 | 10,087 | 10,196 | 10,323     | 10,478    | 10,536     | 10,656 | 10,786 | 10,924 | 11,073 |  |  |
| Exports             | 179   | 175    | 175    | 175    | 175        | 175       | 175        | 175    | 175    | 175    | 175    |  |  |
| Error Adjustment    | -2  | 0      | 0      | 0      | 0          | 0         | 0          | 0      | 0      | 0      | 0      |  |  |
| Ending Stocks       | 1,679   | 1,914  | 1,819  | 1,770  | 1,744      | 1,727     | 1,714      | 1,704  | 1,694  | 1,685  | 1,676  |  |  |
| Prices              |   |        |        | (U.S   | S. Cents p | er Pound, | Fiscal Yea | ar)    |        |        |        |  |  |
| N.Y. Spot Raw Sugar | 22.01   | 21.54  | 21.87  | 22.03  | 22.15      | 22.26     | 22.32      | 22.40  | 22.48  | 22.57  | 22.66  |  |  |
| Cane Loan Rate      | 18.00   | 18.00  | 18.00  | 18.00  | 18.00      | 18.00     | 18.00      | 18.00  | 18.00  | 18.00  | 18.00  |  |  |

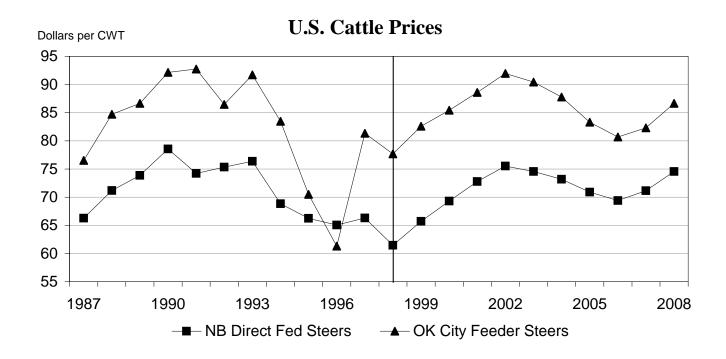
U.S. High-Fructose Corn Syrup Supply and Utilization

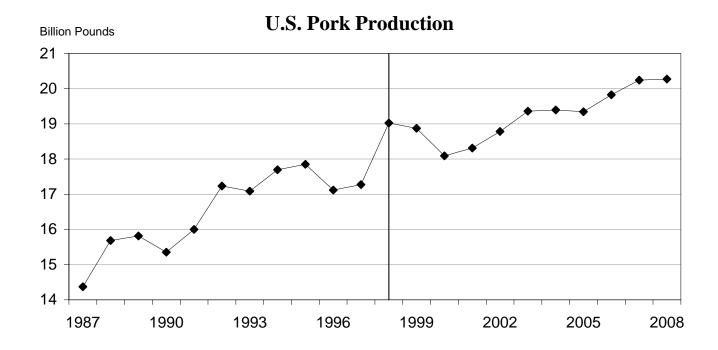
| 1998  | 1999                                    | 2000  | 2001  | 2002   | 2003   | 2004  | 2005   | 2006   | 2007   | 2008  |  |  |  |
|---|---|---|---|--|--|---|--|--|--|---|--|--|--|
| (Thousand Short Tons, Raw Value, Calendar Year) |   |   |   |  |  |   |  |  |  |   |  |  |  |
| 9,147   | 9,565                                   | 9,818   | 10,089  | 10,354   | 10,612   | 10,869  | 11,127   | 11,383   | 11,640   | 11,894  |  |  |  |
| 9,017   | 9,435                                   | 9,688   | 9,959   | 10,224   | 10,482   | 10,739  | 10,997   | 11,253   | 11,510   | 11,764  |  |  |  |
| 130   | 130                                     | 130   | 130   | 130  | 130  | 130   | 130  | 130  | 130  | 130   |  |  |  |
| 9,147   | 9,565                                   | 9,818   | 10,089  | 10,354   | 10,612   | 10,869  | 11,127   | 11,383   | 11,640   | 11,894  |  |  |  |
| 8,897   | 9,310                                   | 9,558   | 9,824   | 10,084   | 10,337   | 10,589  | 10,842   | 11,093   | 11,345   | 11,594  |  |  |  |
| 250   | 255                                     | 260   | 265   | 270  | 275  | 280   | 285  | 290  | 295  | 300   |  |  |  |
|   | 9,147<br>9,017<br>130<br>9,147<br>8,897 | 9,147 9,565<br>9,017 9,435<br>130 130<br>9,147 9,565<br>8,897 9,310 | 9,147 9,565 9,818<br>9,017 9,435 9,688<br>130 130 130<br>9,147 9,565 9,818<br>8,897 9,310 9,558 | (Thousand<br>9,147 9,565 9,818 10,089<br>9,017 9,435 9,688 9,959<br>130 130 130 130<br>9,147 9,565 9,818 10,089<br>8,897 9,310 9,558 9,824 | (Thousand Short Ton<br>9,147 9,565 9,818 10,089 10,354<br>9,017 9,435 9,688 9,959 10,224<br>130 130 130 130 130 130<br>9,147 9,565 9,818 10,089 10,354<br>8,897 9,310 9,558 9,824 10,084 | (Thousand Short Tons, Raw Va<br>9,147 9,565 9,818 10,089 10,354 10,612<br>9,017 9,435 9,688 9,959 10,224 10,482<br>130 130 130 130 130 130<br>9,147 9,565 9,818 10,089 10,354 10,612<br>8,897 9,310 9,558 9,824 10,084 10,337 | (Thousand Short Tons, Raw Value, Caler 9,147 9,565 9,818 10,089 10,354 10,612 10,869 9,017 9,435 9,688 9,959 10,224 10,482 10,739 130 130 130 130 130 130 130 130 130 9,147 9,565 9,818 10,089 10,354 10,612 10,869 8,897 9,310 9,558 9,824 10,084 10,337 10,589 | (Thousand Short Tons, Raw Value, Calendar Year) 9,147 9,565 9,818 10,089 10,354 10,612 10,869 11,127 9,017 9,435 9,688 9,959 10,224 10,482 10,739 10,997 130 130 130 130 130 130 130 130 130  9,147 9,565 9,818 10,089 10,354 10,612 10,869 11,127 8,897 9,310 9,558 9,824 10,084 10,337 10,589 10,842 | (Thousand Short Tons, Raw Value, Calendar Year) 9,147 9,565 9,818 10,089 10,354 10,612 10,869 11,127 11,383 9,017 9,435 9,688 9,959 10,224 10,482 10,739 10,997 11,253 130 130 130 130 130 130 130 130 130 130  9,147 9,565 9,818 10,089 10,354 10,612 10,869 11,127 11,383 8,897 9,310 9,558 9,824 10,084 10,337 10,589 10,842 11,093 | (Thousand Short Tons, Raw Value, Calendar Year)  9,147 9,565 9,818 10,089 10,354 10,612 10,869 11,127 11,383 11,640  9,017 9,435 9,688 9,959 10,224 10,482 10,739 10,997 11,253 11,510  130 130 130 130 130 130 130 130 130 130 |  |  |  |

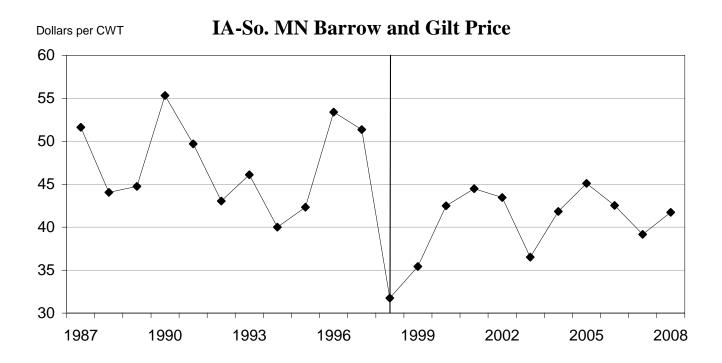
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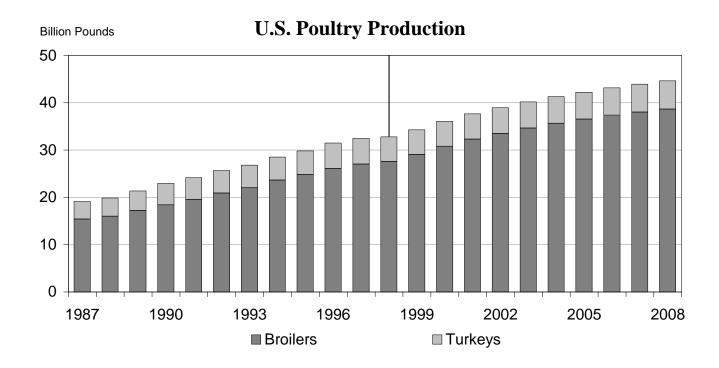
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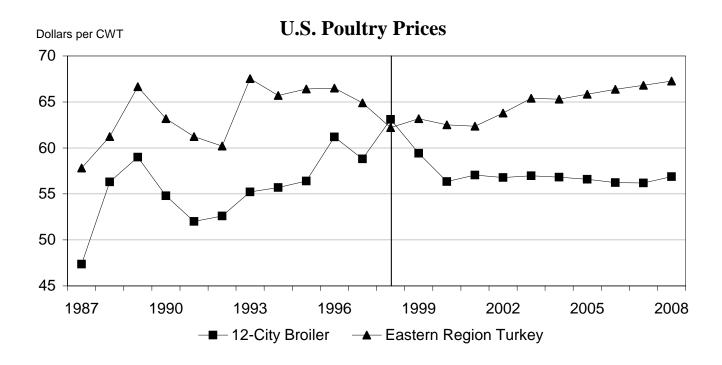


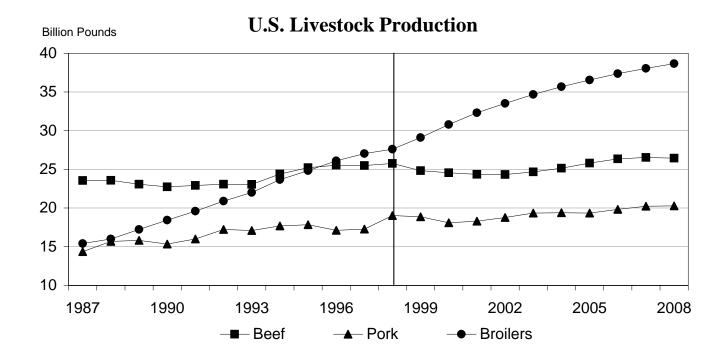


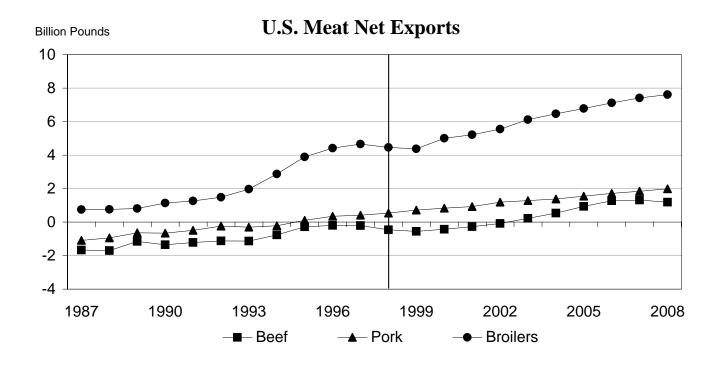


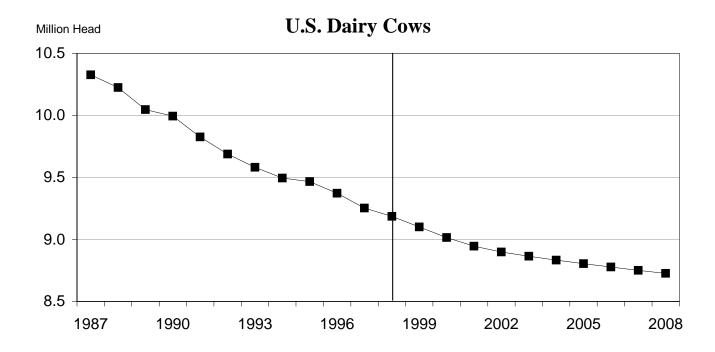


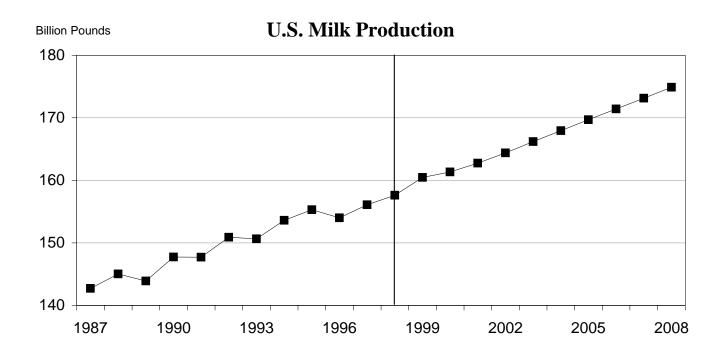


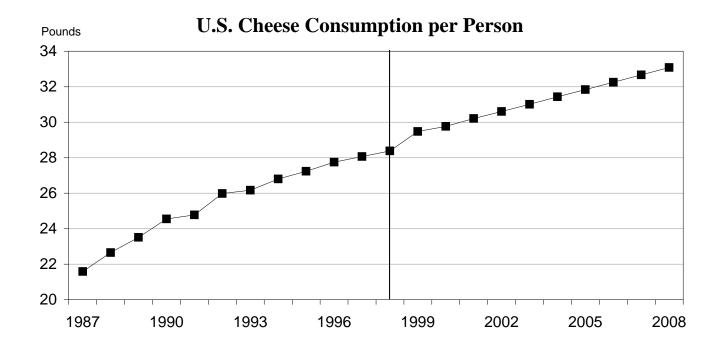


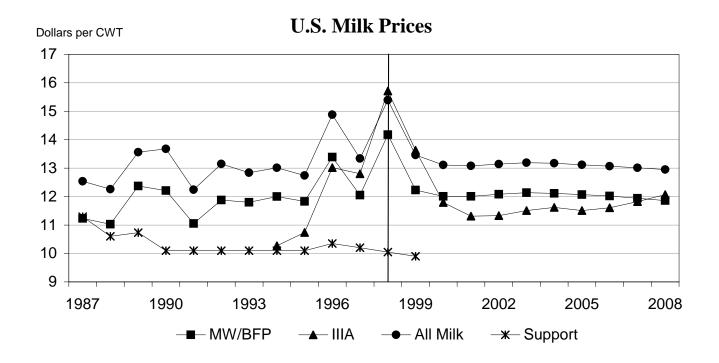












# U.S. Beef

For 1999, the liquidation phase continues as January 1 cattle and calf inventories fell to 97.8 million head. Declining numbers are expected to continue through 2002 with inventories reaching a low of 95.4 million head. Stronger price signals encourage expansion after 2002 with a peak of 97.2 million in 2006. This peak is 6 million below the most recent high in 1996.

The cow herd is projected to bottom in 2001 at 32.5 million head, down 500 thousand from the 1999 level. Longer term, the herd size recovers, reaching a peak of 33.5 million in 2006.

Despite lower slaughter numbers, beef production increased in 1998 as slaughter weights rose. For 1999, production is expected to fall to 24.8 billion pounds, down 900 million from the previous year. Production declines to 24.3 billion pounds by 2002 before recovering to 26.5 billion pounds at the end of the projection period.

Domestic beef consumption parallels the production cycle with a continual decline from 1998 levels of 26.3 billion pounds to 24.4 billion pounds in 2002. On a per capita basis, beef consumption generally declines throughout the baseline, reaching a low of 59.9 pounds in 2008.

Exports are expected to provide the only optimism for beef demand. However, the growth in U.S. exports will be modest in 1999, as demand from many Asian countries remains limited. With imports into the United States projected to remain relatively stable and exports growing, the United States is projected to be a net exporter of beef by 2003. Total exports are projected to reach 4 billion pounds by the end of the period.

Increased production and weak export demand were the primary factors leading to a \$5 decline in the Nebraska direct 1,100-1,300 pound fed-steer price in 1998. As production falls in 1999, fed-steer prices are projected to rise to \$65.71 per cwt. As the cattle industry continues to contract, prices strengthen, peaking at \$75.52 in 2002. Nebraska fed-steer prices range between \$69 and \$75 per cwt after 2002.

The Oklahoma City 600-700 pound feeder-steer price is projected to increase to \$82.59 per cwt in 1999. Movements in the feeder-steer price parallel fed-steer prices; however, the margin narrows in the latter years with higher feed costs and larger slaughter numbers.

Retail beef prices generally move with fed-steer prices, but the percentage changes are usually smaller. From 1999 to 2008, retail prices rise much less than the projected general inflation rate. Further weakening in beef demand is evident as both real prices and per capita consumption decline over the projection period.

U.S. Beef Supply and Utilization

|                             | 1998             | 1999    | 2000   | 2001   | 2002        | 2003         | 2004    | 2005    | 2006    | 2007    | 2008    |  |  |
|-----------------------------|------------------|---------|--------|--------|-------------|--------------|---------|---------|---------|---------|---------|--|--|
|                             | (Million Head)   |         |        |        |             |              |         |         |         |         |         |  |  |
| Cattle and Calves (Jan. 1)  | 99.7             | 97.8    | 96.5   | 95.5   | 95.4        | 95.9         | 96.6    | 97.2    | 97.2    | 96.3    | 95.2    |  |  |
| Beef Cows (Jan. 1)          | 33.9             | 33.0    | 32.6   | 32.5   | 32.7        | 32.9         | 33.2    | 33.5    | 33.5    | 33.4    | 33.1    |  |  |
| Total Cattle Slaughter      | 35.7             | 34.7    | 34.4   | 33.9   | 33.7        | 33.9         | 34.3    | 35.0    | 35.6    | 35.5    | 35.0    |  |  |
|                             | (Million Pounds) |         |        |        |             |              |         |         |         |         |         |  |  |
| Supply                      | 28,848           | 28,025  | 27,862 | 27,655 | 27,576      | 27,836       | 28,228  | 28,865  | 29,468  | 29,691  | 29,641  |  |  |
| Beginning Stocks            | 465              | 400     | 387    | 385    | 384         | 385          | 390     | 394     | 400     | 403     | 403     |  |  |
| Imports                     | 2,611            | 2,790   | 2,910  | 2,910  | 2,860       | 2,779        | 2,698   | 2,671   | 2,721   | 2,760   | 2,793   |  |  |
| Production                  | 25,772           | 24,835  | 24,565 | 24,360 | 24,332      | 24,672       | 25,140  | 25,800  | 26,347  | 26,529  | 26,446  |  |  |
| Disappearance               | 28,448           | 27,638  | 27,477 | 27,271 | 27,191      | 27,446       | 27,834  | 28,465  | 29,066  | 29,289  | 29,241  |  |  |
| Domestic Use                | 26,290           | 25,396  | 24,995 | 24,635 | 24,413      | 24,440       | 24,596  | 24,855  | 25,070  | 25,207  | 25,251  |  |  |
| Exports                     | 2,158            | 2,242   | 2,482  | 2,636  | 2,778       | 3,006        | 3,238   | 3,610   | 3,996   | 4,082   | 3,990   |  |  |
| Ending Stocks               | 400              | 387     | 385    | 384    | 385         | 390          | 394     | 400     | 403     | 403     | 400     |  |  |
| Per Capita Consumption      |                  |         |        |        |             | (Pounds)     |         |         |         |         |         |  |  |
| Carcass Weight              | 97.3             | 93.3    | 91.1   | 89.0   | 87.5        | 86.9         | 86.7    | 87.0    | 87.0    | 86.8    | 86.2    |  |  |
| Retail Weight               | 68.1             | 64.8    | 63.3   | 61.9   | 60.8        | 60.4         | 60.3    | 60.4    | 60.5    | 60.3    | 59.9    |  |  |
| Change                      | 1.8%             | -4.8%   | -2.4%  | -2.2%  | -1.7%       | -0.7%        | -0.2%   | 0.2%    | 0.1%    | -0.3%   | -0.6%   |  |  |
| Prices                      |                  |         |        |        |             |              |         |         |         |         |         |  |  |
| 1100-1300 lb.               | 24.42            | 0==1    |        | •      | .S. Dollars | •            | •       | ,       | 00.40   |         |         |  |  |
| Nebraska Direct Steers      | 61.48            | 65.71   | 69.30  | 72.78  | 75.52       | 74.56        | 73.18   | 70.91   | 69.42   | 71.17   | 74.57   |  |  |
| Change<br>600-700 lb.       | -7.3%            | 6.9%    | 5.5%   | 5.0%   | 3.8%        | -1.3%        | -1.8%   | -3.1%   | -2.1%   | 2.5%    | 4.8%    |  |  |
| Oklahoma City Feeder Steers | 77.70            | 82.59   | 85.45  | 88.60  | 91.98       | 90.44        | 87.78   | 83.30   | 80.70   | 82.31   | 86.67   |  |  |
| Change                      | -4.5%            | 6.3%    | 3.5%   | 3.7%   | 3.8%        | -1.7%        | -2.9%   | -5.1%   | -3.1%   | 2.0%    | 5.3%    |  |  |
| Utility Cows, Sioux Falls   | 36.19            | 38.59   | 40.37  | 41.97  | 43.08       | 41.86        | 40.27   | 37.83   | 36.38   | 37.33   | 39.87   |  |  |
| Change                      | 5.6%             | 6.6%    | 4.6%   | 4.0%   | 2.6%        | -2.8%        | -3.8%   | -6.1%   | -3.9%   | 2.6%    | 6.8%    |  |  |
|                             |                  |         |        |        | (U.S. Do    | ollars per f | Pound)  |         |         |         |         |  |  |
| Beef Retail                 | 2.77             | 2.84    | 2.91   | 2.98   | 3.03        | 3.03         | 3.03    | 3.00    | 3.00    | 3.02    | 3.08    |  |  |
| Change                      | -0.9%            | 2.6%    | 2.5%   | 2.4%   | 1.7%        | 0.1%         | -0.2%   | -0.8%   | -0.1%   | 0.8%    | 2.0%    |  |  |
| Net Returns                 |                  |         |        |        | ,           | ollars per   | ,       |         |         |         |         |  |  |
| Cow - Calf                  | -127.93          | -102.25 | -93.64 | -84.83 | -75.15      | -88.80       | -107.07 | -133.89 | -151.99 | -149.23 | -133.49 |  |  |

### U.S. Pork

Record low hog prices in 1998 have led to substantial economic hardships in the pork industry. As a result, the breeding herd fell to 6.67 million head on December 1, 1998. With only modest improvement in prices, the herd is projected to contract further, reaching 6.38 million head by December 1999. Stronger prices will allow some recovery longer term, but breeding inventories never reach the level seen in 1997.

The larger breeding herd in 1997 led to additional animals slaughtered in 1998, with total slaughter reaching 101 million head. As the industry contracts, slaughter declines to 95.4 million head by 2000, but then generally increases thereafter.

Pork production topped 19 billion pounds in 1998. For 1999, only a modest decline is expected as production is pegged at 18.9 billion pounds. Larger declines are expected for 2000 as hog slaughter falls. After 2000, production generally increases, reaching 20.3 billion pounds by 2008. The growth in production suggests that there will be a need for additional processing capacity longer term.

Domestic consumption of pork follows closely with production. On a per capita basis, consumption is

projected to fall to 51.9 pounds in 1999, down from 52.8 pounds a year earlier. Reduced supplies and higher prices are projected to reduce consumption to 48.8 pounds in 2000. Thereafter, consumption remains relatively flat on a per capita basis.

International markets have represented a growing source of demand for U.S. pork in recent years. For 1999, exports are projected at 1.4 billion pounds. Steady growth is projected over the baseline with exports reaching 2.5 billion pounds by 2008.

Capacity constraints in the processing sector pressured Iowa-Southern Minnesota 230-250 pound barrow and gilt prices below \$10 per cwt at the end of 1998. For the year, prices averaged \$31.74, a decline of 38 percent from 1997. Lower production will allow prices to recover in 1999 with an annual average of \$35.41 per cwt. After 1999, prices move opposite of the production cycle and range between \$36 and \$45 per cwt.

Despite the substantial decline in farmgate prices, retail prices fell by only 0.9 percent in 1998. For the projection period, retail prices remain relatively stable, ranging between \$2.30 and \$2.42 per pound.

U.S. Pork Supply and Utilization

|                                | 1998   | 1999   | 2000   | 2001   | 2002        | 2003         | 2004       | 2005   | 2006   | 2007   | 2008   |
|--------------------------------|--------|--------|--------|--------|-------------|--------------|------------|--------|--------|--------|--------|
| Hogs on Farms                  |        |        |        |        | (M          | illion Head  | d)         |        |        |        |        |
| Market (Dec. 1)                | 55.5   | 52.8   | 53.9   | 54.5   | 55.5        | 57.0         | 56.8       | 56.7   | 56.4   | 56.7   | 57.4   |
| Breeding (Dec. 1)              | 6.67   | 6.38   | 6.45   | 6.47   | 6.58        | 6.63         | 6.55       | 6.52   | 6.65   | 6.76   | 6.68   |
| Total Hog Slaughter            | 101.0  | 100.0  | 95.4   | 96.2   | 98.3        | 101.0        | 100.8      | 100.1  | 102.2  | 104.0  | 103.7  |
|                                |        |        |        |        | (Mil        | lion Pound   | ds)        |        |        |        |        |
| Supply                         | 20,125 | 20,074 | 19,180 | 19,369 | 19,782      | 20,402       | 20,469     | 20,373 | 20,818 | 21,276 | 21,326 |
| Beginning Stocks               | 408    | 500    | 440    | 426    | 451         | 465          | 486        | 476    | 475    | 496    | 509    |
| Imports                        | 695    | 700    | 650    | 630    | 549         | 578          | 589        | 551    | 513    | 535    | 544    |
| Production                     | 19,022 | 18,874 | 18,090 | 18,312 | 18,782      | 19,359       | 19,394     | 19,346 | 19,829 | 20,245 | 20,274 |
| Disappearance                  | 19,625 | 19,634 | 18,753 | 18,918 | 19,317      | 19,916       | 19,993     | 19,897 | 20,322 | 20,767 | 20,820 |
| Domestic Use                   | 18,393 | 18,219 | 17,268 | 17,356 | 17,579      | 18,051       | 18,024     | 17,800 | 18,088 | 18,389 | 18,287 |
| Exports                        | 1,232  | 1,415  | 1,485  | 1,562  | 1,738       | 1,865        | 1,969      | 2,097  | 2,234  | 2,379  | 2,533  |
| Ending Stocks                  | 500    | 440    | 426    | 451    | 465         | 486          | 476        | 475    | 496    | 509    | 506    |
| Per Capita Consumption         |        |        |        |        |             |              |            |        |        |        |        |
| Carcass Weight                 | 68.1   | 66.9   | 62.9   | 62.7   | 63.0        | 64.2         | 63.6       | 62.3   | 62.8   | 63.3   | 62.4   |
| Retail Weight                  | 52.8   | 51.9   | 48.8   | 48.6   | 48.9        | 49.8         | 49.3       | 48.3   | 48.7   | 49.1   | 48.4   |
| Change                         | 8.4%   | -1.7%  | -6.0%  | -0.3%  | 0.5%        | 1.9%         | -0.9%      | -2.0%  | 0.8%   | 0.8%   | -1.4%  |
| Prices                         |        |        |        |        |             |              |            |        |        |        |        |
| 230-250 lb., Barrows and Gilts |        |        |        | (U     | .S. Dollars | s per Hund   | dredweight | i)     |        |        |        |
| Iowa-Southern Minnesota        | 31.74  | 35.41  | 42.49  | 44.47  | 43.44       | 36.52        | 41.82      | 45.09  | 42.53  | 39.17  | 41.72  |
| Change                         | -38.2% | 11.6%  | 20.0%  | 4.7%   | -2.3%       | -15.9%       | 14.5%      | 7.8%   | -5.7%  | -7.9%  | 6.5%   |
| 6 Market Sows                  | 24.28  | 28.02  | 33.05  | 34.14  | 33.89       | 31.39        | 34.68      | 36.89  | 35.82  | 34.88  | 36.24  |
| Change                         | -45.5% | 15.4%  | 17.9%  | 3.3%   | -0.7%       | -7.4%        | 10.5%      | 6.4%   | -2.9%  | -2.6%  | 3.9%   |
|                                |        |        |        |        | (U.S. Do    | ollars per F | Pound)     |        |        |        |        |
| Pork Retail                    | 2.29   | 2.30   | 2.38   | 2.42   | 2.41        | 2.35         | 2.38       | 2.41   | 2.40   | 2.35   | 2.36   |
| Change                         | -0.9%  | 0.3%   | 3.5%   | 1.4%   | -0.1%       | -2.6%        | 1.2%       | 1.4%   | -0.4%  | -2.1%  | 0.4%   |
| Net Returns                    |        |        |        | (U     | .S. Dollars | s per Hund   | dredweight | :)     |        |        |        |
| Farrow - Finish                | -4.88  | -0.28  | 5.87   | 6.89   | 5.11        | -2.42        | 1.74       | 4.09   | 0.91   | -2.95  | -1.25  |

# **U.S. Poultry**

Disease problems in the broiler flock limited growth in production to 2.1 percent in 1998. Assuming those problems do not persist, production is expected to expand by 5.4 percent in 1999. With average growth of 3.2 percent over the projection period, production reaches 38 billion pounds by 2007.

In the face of lower prices, turkey production fell by 4.4 percent in 1998. For 1999, production is expected to increase by less than 1 percent. Thereafter, turkey production expands at an annual rate of 1.6 percent, substantially slower than what was observed in the early 1990s.

Domestic consumption of broilers is projected to continue to show steady growth, although at slower rates than what was observed in recent history. On a per capita basis, consumption expands from 78.7 pounds in 1999 to 92.1 pounds in 2008. The outlook for turkey consumption is less optimistic with per capita disappearance having been flat for several years. This trend is projected to continue over the baseline.

The export market has turned into an important source of demand for U.S. broilers. After strong growth during the early 1990s, the current economic turmoil in Russia has limited exports in 1998 and 1999. Growth is projected to return in 2000 and continue as exports reach 7.6 billion pounds by 2008.

With a limited increase in production, wholesale broiler prices rose 7.3 percent in 1998. Prices are projected to fall to \$0.594 per pound in 1999 as supplies recover. Additional price weakness is expected in 2000 with prices averaging \$0.564 per pound. Eastern Region turkey prices are projected to range between \$0.62 and \$0.63 per pound through 2001, with some strengthening longer term.

Egg production is projected to climb to 6.8 billion dozen in 1999 due to a larger number of hens and further technological advancements. Over the baseline, production is expected to grow at annual rate of 0.9 percent.

Total egg disappearance mirrors production; however, the individual demand categories exhibit very different trends. Shell egg disappearance is projected to remain relatively stable, while breaking eggs account for the growth in demand.

In 1999, the wholesale egg price is projected to decline to \$0.726 per dozen with a retail price of \$0.988 per dozen. Wholesale prices are expected to remain stable throughout the baseline with modest growth occurring in retail prices.

U.S. Broiler Supply and Utilization

|                             | 1998   | 1999   | 2000   | 2001   | 2002    | 2003       | 2004   | 2005   | 2006   | 2007   | 2008   |
|-----------------------------|--------|--------|--------|--------|---------|------------|--------|--------|--------|--------|--------|
|                             |        |        |        |        | (Mil    | lion Pound | ds)    |        |        |        |        |
| Supply                      | 28,220 | 29,797 | 31,540 | 33,124 | 34,356  | 35,536     | 36,579 | 37,484 | 38,322 | 39,027 | 39,663 |
| Beginning Stocks            | 607    | 700    | 757    | 806    | 840     | 864        | 907    | 943    | 971    | 991    | 1,006  |
| Production                  | 27,613 | 29,097 | 30,784 | 32,317 | 33,516  | 34,672     | 35,672 | 36,540 | 37,351 | 38,036 | 38,657 |
| Disappearance               | 27,525 | 29,040 | 30,734 | 32,284 | 33,492  | 34,628     | 35,636 | 36,513 | 37,331 | 38,021 | 38,646 |
| Domestic Use                | 23,059 | 24,660 | 25,730 | 27,070 | 27,933  | 28,502     | 29,164 | 29,730 | 30,215 | 30,609 | 31,037 |
| Exports                     | 4,466  | 4,380  | 5,004  | 5,214  | 5,559   | 6,126      | 6,472  | 6,783  | 7,116  | 7,412  | 7,609  |
| Ending Stocks               | 700    | 757    | 806    | 840    | 864     | 907        | 943    | 971    | 991    | 1,006  | 1,017  |
| Per Capita Consumption      |        |        |        |        |         | (Pounds)   |        |        |        |        |        |
| Retail Weight               | 85.4   | 90.6   | 93.7   | 97.8   | 100.1   | 101.3      | 102.8  | 104.0  | 104.9  | 105.4  | 106.0  |
| Retail Weight less Pet Food | 74.2   | 78.7   | 81.4   | 84.9   | 86.9    | 88.0       | 89.3   | 90.3   | 91.1   | 91.5   | 92.1   |
| Change                      | 2.1%   | 6.0%   | 3.5%   | 4.3%   | 2.4%    | 1.2%       | 1.5%   | 1.1%   | 0.8%   | 0.5%   | 0.6%   |
| Prices                      |        |        |        |        | (U.S. C | ents per F | ound)  |        |        |        |        |
| 12-City Wholesale           | 63.10  | 59.42  | 56.35  | 57.06  | 56.79   | 56.97      | 56.83  | 56.59  | 56.23  | 56.20  | 56.88  |
| Change                      | 7.3%   | -5.8%  | -5.2%  | 1.2%   | -0.5%   | 0.3%       | -0.3%  | -0.4%  | -0.6%  | -0.1%  | 1.2%   |
| Broiler Retail              | 154.28 | 150.62 | 148.96 | 148.69 | 150.18  | 152.23     | 153.50 | 154.17 | 154.01 | 154.37 | 156.30 |
| Change                      | 1.8%   | -2.4%  | -1.1%  | -0.2%  | 1.0%    | 1.4%       | 0.8%   | 0.4%   | -0.1%  | 0.2%   | 1.2%   |
| Net Returns                 | 13.61  | 11.84  | 8.31   | 8.34   | 7.43    | 6.91       | 6.11   | 5.27   | 4.31   | 3.73   | 3.85   |

**U.S. Turkey Supply and Utilization** 

|                          | 1998  | 1999   | 2000   | 2001   | 2002    | 2003       | 2004   | 2005   | 2006   | 2007   | 2008   |
|--------------------------|-------|--------|--------|--------|---------|------------|--------|--------|--------|--------|--------|
|                          |       |        |        |        | (Mil    | lion Pound | ds)    |        |        |        |        |
| Supply                   | 5,589 | 5,482  | 5,542  | 5,624  | 5,704   | 5,792      | 5,888  | 5,984  | 6,079  | 6,181  | 6,287  |
| Beginning Stocks         | 415   | 275    | 256    | 262    | 263     | 263        | 267    | 273    | 276    | 280    | 285    |
| Production               | 5,174 | 5,207  | 5,286  | 5,363  | 5,441   | 5,529      | 5,621  | 5,711  | 5,803  | 5,901  | 6,003  |
| Disappearance            | 5,314 | 5,226  | 5,280  | 5,361  | 5,441   | 5,526      | 5,614  | 5,708  | 5,799  | 5,896  | 5,998  |
| Domestic Use             | 4,886 | 4,796  | 4,789  | 4,849  | 4,895   | 4,924      | 4,979  | 5,042  | 5,101  | 5,169  | 5,251  |
| Exports                  | 428   | 430    | 491    | 512    | 546     | 601        | 635    | 666    | 699    | 728    | 747    |
| Ending Stocks            | 275   | 256    | 262    | 263    | 263     | 267        | 273    | 276    | 280    | 285    | 289    |
|                          |       |        |        |        |         | (Pounds)   |        |        |        |        |        |
| Per Capita Consumption   | 18.1  | 17.6   | 17.4   | 17.5   | 17.5    | 17.5       | 17.6   | 17.6   | 17.7   | 17.8   | 17.9   |
| Change                   | 2.8%  | -2.7%  | -1.0%  | 0.4%   | 0.1%    | -0.2%      | 0.3%   | 0.5%   | 0.4%   | 0.5%   | 0.8%   |
| Prices                   |       |        |        |        | (U.S. C | ents per F | ound)  |        |        |        |        |
| Eastern Region Wholesale | 62.20 | 63.19  | 62.51  | 62.37  | 63.79   | 65.40      | 65.29  | 65.84  | 66.37  | 66.81  | 67.27  |
| Change                   | -4.2% | 1.6%   | -1.1%  | -0.2%  | 2.3%    | 2.5%       | -0.2%  | 0.0%   | 0.8%   | 0.7%   | 0.7%   |
| Retail                   | 99.85 | 102.28 | 101.29 | 101.16 | 103.85  | 106.35     | 105.76 | 106.36 | 106.89 | 107.26 | 107.64 |
| Change                   | -5.0% | 2.4%   | -1.0%  | -0.1%  | 2.7%    | 2.4%       | -0.6%  | 0.6%   | 0.5%   | 0.3%   | 0.4%   |
| Net Returns              | -1.18 | 3.35   | 2.31   | 1.47   | 2.22    | 3.09       | 2.33   | 2.30   | 2.25   | 2.22   | 2.19   |

U.S. Egg Supply and Utilization

|                            | 1998   | 1999  | 2000  | 2001  | 2002    | 2003        | 2004   | 2005   | 2006   | 2007   | 2008   |
|----------------------------|--------|-------|-------|-------|---------|-------------|--------|--------|--------|--------|--------|
|                            |        |       |       |       | (Mil    | llion Dozer | n)     |        |        |        |        |
| Supply                     | 6,644  | 6,809 | 6,923 | 6,997 | 7,061   | 7,121       | 7,177  | 7,230  | 7,284  | 7,340  | 7,395  |
| Beginning Stocks           | 7      | 5     | 5     | 5     | 5       | 5           | 5      | 5      | 5      | 5      | 5      |
| Production                 | 6,631  | 6,800 | 6,914 | 6,988 | 7,052   | 7,112       | 7,168  | 7,221  | 7,275  | 7,331  | 7,386  |
| Imports                    | 6      | 4     | 4     | 4     | 4       | 4           | 4      | 4      | 4      | 4      | 4      |
| Disappearance              | 6,639  | 6,804 | 6,918 | 6,992 | 7,056   | 7,116       | 7,172  | 7,225  | 7,279  | 7,335  | 7,390  |
| Civilian Disappearance     | 2.000  | 2.050 | 2.000 | 2.057 | 2.040   | 2.020       | 2.000  | 2.040  | 2 000  | 2 000  | 2 005  |
| Shell Egg                  | 3,926  | 3,950 | 3,966 | 3,957 | 3,948   | 3,936       | 3,928  | 3,918  | 3,909  | 3,902  | 3,895  |
| Breaking Egg               | 1,565  | 1,631 | 1,683 | 1,727 | 1,772   | 1,818       | 1,861  | 1,906  | 1,955  | 2,006  | 2,059  |
| Hatching Egg               | 922    | 980   | 1,024 | 1,060 | 1,086   | 1,109       | 1,128  | 1,143  | 1,154  | 1,163  | 1,171  |
| Exports                    | 226    | 243   | 245   | 248   | 250     | 253         | 255    | 258    | 261    | 263    | 266    |
| Ending Stock               | 5      | 5     | 5     | 5     | 5       | 5           | 5      | 5      | 5      | 5      | 5      |
| Per Capita Consumption     |        |       |       |       |         | (Eggs)      |        |        |        |        |        |
| Shell Egg                  | 174.6  | 174.1 | 173.4 | 171.6 | 169.8   | 167.9       | 166.2  | 164.5  | 162.8  | 161.2  | 159.6  |
| Change                     | 0.4%   | -0.3% | -0.5% | -1.0% | -1.0%   | -1.1%       | -1.0%  | -1.1%  | -1.0%  | -1.0%  | -1.0%  |
| Breaking Egg               | 69.6   | 71.9  | 73.6  | 74.9  | 76.2    | 77.5        | 78.7   | 80.0   | 81.4   | 82.9   | 84.4   |
| Change                     | 6.0%   | 3.3%  | 2.4%  | 1.7%  | 1.8%    | 1.8%        | 1.5%   | 1.6%   | 1.7%   | 1.8%   | 1.8%   |
| Total                      | 244.1  | 246.0 | 246.9 | 246.4 | 246.0   | 245.4       | 245.0  | 244.5  | 244.2  | 244.1  | 244.0  |
| Prices                     |        |       |       |       | (U.S. C | ents per D  | lozen) |        |        |        |        |
| N.Y. Grade A Lg. Wholesale | 76.09  | 72.56 | 70.79 | 71.70 | 72.42   | 73.60       | 73.43  | 73.89  | 73.72  | 73.09  | 72.14  |
| Change                     | -6.3%  | -4.6% | -2.4% | 1.3%  | 1.0%    | 1.6%        | -0.2%  | 0.6%   | -0.2%  | -0.8%  | -1.3%  |
| Shell Egg Retail           | 102.64 | 98.77 | 97.19 | 98.53 | 99.68   | 101.36      | 101.56 | 102.42 | 102.64 | 102.39 | 101.81 |
| Change                     | -3.0%  | -3.8% | -1.6% | 1.4%  | 1.2%    | 1.7%        | 0.2%   | 0.9%   | 0.2%   | -0.2%  | -0.6%  |
| Net Returns                | 9.61   | 9.49  | 7.36  | 7.69  | 7.87    | 8.40        | 7.66   | 7.63   | 6.98   | 5.97   | 4.60   |

## U.S. Dairy

Milk production is projected to surpass 160 billion pounds in 1999 after the modest increase experienced in 1998. The annual growth in milk production is projected to average 1 percent over the baseline.

The growth in production comes as productivity gains more than offsets the decline in cow numbers. Per cow production is projected to grow from 17.6 thousand pounds in 1999 to 20 thousand pounds in 2008. The decline in cow numbers will continue throughout the baseline, although at a slower rate than what has been observed in recent years. Total cow numbers are projected to decline to 9.1 million head in 1999. By 2008, the herd is expected to contract to 8.7 million.

Total utilization of milk for 1998 stood at 157.7 billion pounds. Use is projected to steadily grow to 175

billion pounds by 2008. Manufactured uses of milk account for the vast majority of growth in total utilization. Fluid use does expand in total, but at a slower rate than the growth in population.

Strong butter prices pushed milk prices substantially higher in 1999. For 1999, the all-milk price is projected to average \$13.46 per cwt, a decline of nearly \$2 from the 1998 level. All-milk prices are expected to average \$13.08 per cwt over the 2000 to 2008 period.

As legislated in the 1996 Farm Bill, the dairy support prices are eliminated beginning in 2000. All government activity after 1999 is associated with the Dairy Export Incentive Program (DEIP). The baseline does not incorporate a reduction in the number of federal milk marketing orders.

# U.S. Milk Supply and Utilization

|                              | 1998    | 1999    | 2000    | 2001    | 2002        | 2003        | 2004       | 2005    | 2006    | 2007    | 2008    |
|------------------------------|---------|---------|---------|---------|-------------|-------------|------------|---------|---------|---------|---------|
|                              |         |         |         | (1      | Million Pou | ınds Milk I | Equivalent | )       |         |         |         |
| Supply                       | 157,747 | 160,596 | 161,476 | 162,887 | 164,546     | 166,342     | 168,094    | 169,829 | 171,561 | 173,296 | 175,039 |
| Milk Production              | 157,604 | 160,453 | 161,333 | 162,744 | 164,403     | 166,199     | 167,951    | 169,686 | 171,418 | 173,153 | 174,896 |
| Per Cow (Pounds)             | 17,159  | 17,633  | 17,897  | 18,192  | 18,476      | 18,750      | 19,013     | 19,273  | 19,531  | 19,787  | 20,043  |
| No. Cows (1,000)             | 9,185   | 9,100   | 9,015   | 8,946   | 8,898       | 8,864       | 8,833      | 8,804   | 8,777   | 8,751   | 8,726   |
| Net Imports                  | 143     | 143     | 143     | 143     | 143         | 143         | 143        | 143     | 143     | 143     | 143     |
| Net Change in Stocks         | 0       | 0       | 0       | 0       | 0           | 0           | 0          | 0       | 0       | 0       | 0       |
| Utilization                  | 157,748 | 160,596 | 161,476 | 162,887 | 164,546     | 166,342     | 168,094    | 169,829 | 171,561 | 173,296 | 175,039 |
| On-Farm Use                  | 1,339   | 1,294   | 1,254   | 1,223   | 1,204       | 1,191       | 1,180      | 1,168   | 1,159   | 1,151   | 1,145   |
| Fed to Calves                | 1,129   | 1,108   | 1,090   | 1,075   | 1,065       | 1,058       | 1,051      | 1,045   | 1,039   | 1,034   | 1,029   |
| Farm-churned Butter          | 210     | 186     | 164     | 147     | 138         | 133         | 128        | 123     | 120     | 117     | 116     |
| Fluid Product Use            | 56,590  | 57,328  | 57,727  | 58,090  | 58,409      | 58,768      | 59,077     | 59,354  | 59,633  | 59,913  | 60,187  |
| Whole Milk Per Capita (lb.)  | 73      | 73      | 73      | 72      | 71          | 70          | 69         | 68      | 67      | 66      | 65      |
| Lowfat Milk Per Capita (lb.) | 135     | 136     | 136     | 136     | 137         | 137         | 138        | 138     | 138     | 139     | 139     |
| Manufactured Use             | 93,239  | 95,894  | 96,816  | 98,295  | 99,653      | 101,103     | 102,557    | 104,026 | 105,489 | 106,952 | 108,427 |
| Creamery Butter              | 23,296  | 23,529  | 23,329  | 23,402  | 23,442      | 23,513      | 23,558     | 23,616  | 23,648  | 23,645  | 23,636  |
| Whey Cream                   | 5,053   | 5,280   | 5,385   | 5,525   | 5,656       | 5,791       | 5,929      | 6,068   | 6,208   | 6,351   | 6,497   |
| Net Creamery Butter          | 18,243  | 18,249  | 17,944  | 17,877  | 17,786      | 17,722      | 17,629     | 17,548  | 17,440  | 17,293  | 17,140  |
| Cheese                       | 57,827  | 60,073  | 61,170  | 62,632  | 64,000      | 65,415      | 66,861     | 68,308  | 69,775  | 71,276  | 72,796  |
| Evaporated and Condensed     | 1,483   | 1,689   | 1,666   | 1,615   | 1,552       | 1,496       | 1,447      | 1,399   | 1,353   | 1,310   | 1,269   |
| Frozen Dairy Products        | 14,085  | 14,268  | 14,404  | 14,523  | 14,650      | 14,788      | 14,922     | 15,055  | 15,189  | 15,323  | 15,456  |
| Other Manufactured Products  | 1,600   | 1,616   | 1,632   | 1,648   | 1,665       | 1,681       | 1,698      | 1,715   | 1,732   | 1,750   | 1,767   |
| Residual                     | 6,580   | 6,080   | 5,680   | 5,280   | 5,280       | 5,280       | 5,280      | 5,280   | 5,280   | 5,280   | 5,280   |
| Removals (TMSB)              | 2,116   | 2,044   | 1,320   | 1,408   | 1,408       | 1,464       | 1,464      | 1,464   | 1,464   | 1,464   | 1,464   |
| Butter                       | 9       | 88      | 88      | 176     | 176         | 220         | 237        | 237     | 264     | 281     | 281     |
| Cheese                       | 58      | 48      | 39      | 39      | 39          | 39          | 39         | 39      | 39      | 39      | 39      |
| Nonfat Dry Milk              | 1,980   | 1,839   | 1,124   | 1,124   | 1,124       | 1,124       | 1,124      | 1,124   | 1,124   | 1,124   | 1,124   |
| Farm Prices and Returns      |         |         |         | (L      | J.S. Dollar | s per Hun   | dredweigh  | t)      |         |         |         |
| Minnesota-Wisconsin          | 14.18   | 12.23   | 12.01   | 12.01   | 12.08       | 12.14       | 12.11      | 12.07   | 12.02   | 11.94   | 11.86   |
| Manufacturing Grade          | 14.31   | 12.42   | 12.19   | 12.19   | 12.27       | 12.32       | 12.29      | 12.25   | 12.20   | 12.12   | 12.04   |
| III-A Milk Price             | 15.71   | 13.63   | 11.79   | 11.31   | 11.33       | 11.51       | 11.62      | 11.51   | 11.61   | 11.82   | 12.07   |
| Fluid Grade                  | 15.41   | 13.56   | 13.23   | 13.23   | 13.30       | 13.36       | 13.33      | 13.29   | 13.24   | 13.16   | 13.08   |
| All Milk                     | 15.39   | 13.46   | 13.11   | 13.08   | 13.14       | 13.19       | 13.17      | 13.12   | 13.07   | 13.01   | 12.95   |
| Support Price                | 10.05   | 9.90    | 0.00    | 0.00    | 0.00        | 0.00        | 0.00       | 0.00    | 0.00    | 0.00    | 0.00    |

## **State-level Dairy Supply**

In 1998, California surpassed Wisconsin as the leading state in terms of dairy cow numbers. Further expansion of the California herd is expected over the baseline, but at a slower rate than what has occurred in recent years. The herd is expected to grow from 1.44 million head in 1998 to 1.66 million head in 2008. In contrast, Wisconsin is projected to lose 100 thousand dairy cows during 1998 to 2008 period.

Growth in dairy cows is generally concentrated in several states in the western United States Dairy cow numbers in Idaho are projected to grow from 292 thousand in 1998 to 398 thousand in 2008. New Mexico is also expected to continue to expand invento-

ries with the herd growing from 216 thousand in 1998 to 331 thousand in 2008.

Although herd sizes in California and Wisconsin were approximately the same in 1998, total milk production differed substantially due to differences in productivity. The differences in productivity provide some indication as to the likely shifts in milk production.

By 2008, California is projected to account for 21 percent of U.S. production, up from 17.4 percent in 1998. Idaho and New Mexico also expand their shares of total milk production.

**U.S. Dairy Cows by State** 

|                | 1998  | 1999  | 2000  | 2001  | 2002  | 2003      | 2004     | 2005  | 2006  | 2007     | 2008  |
|----------------|-------|-------|-------|-------|-------|-----------|----------|-------|-------|----------|-------|
|                |       |       |       |       | (Tho  | usand Hea | ad)      |       |       |          |       |
| Alabama        | 28    | 26    | 24    | 24    | 24    | 24        | 24       | 24    | 24    | 24       | 24    |
| Alaska         | 1     | 1     | 1     | 1     | 1     | 1         | 1        | 1     | 1     | 1        | 1     |
| Arizona        | 130   | 132   | 134   | 136   | 137   | 139       | 141      | 142   | 144   | 146      | 147   |
| Arkansas       | 52    | 51    | 50    | 48    | 47    | 46        | 45       | 44    | 43    | 42       | 41    |
| California     | 1,440 | 1,477 | 1,509 | 1,537 | 1,563 | 1,586     | 1,605    | 1,622 | 1,636 | 1,648    | 1,657 |
| Colorado       | 83    | 81    | 79    | 78    | 77    | 76        | 75       | 75    | 74    | 74       | 74    |
| Connecticut    | 30    | 31    | 31    | 31    | 31    | 31        | 31       | 31    | 31    | 31       | 30    |
| Delaware       | 11    | 11    | 12    | 12    | 12    | 12        | 12       | 12    | 13    | 13       | 13    |
| Florida        | 159   | 157   | 155   | 153   | 152   | 151       | 149      | 148   | 147   | 146      | 145   |
| Georgia        | 94    | 90    | 87    | 85    | 82    | 80        | 79       | 77    | 76    | 75       | 74    |
| Hawaii         | 9     | 9     | 9     | 9     | 8     | 8         | 8        | 8     | 7     | 7        | 7     |
| Idaho          | 292   | 312   | 329   | 343   | 356   | 366       | 375      | 383   | 389   | 394      | 398   |
| Illinois       | 128   | 122   | 118   | 115   | 112   | 110       | 109      | 107   | 106   | 105      | 105   |
| Indiana        | 137   | 137   | 136   | 135   | 133   | 132       | 130      | 129   | 127   | 125      | 123   |
| Iowa           | 225   | 220   | 214   | 210   | 207   | 204       | 202      | 200   | 197   | 195      | 193   |
| Kansas         | 81    | 80    | 79    | 78    | 78    | 78        | 78       | 78    | 79    | 79       | 79    |
| Kentucky       | 138   | 128   | 119   | 111   | 104   | 97        | 92       | 87    | 83    | 80       | 77    |
| Louisiana      | 60    | 55    | 52    | 50    | 48    | 47        | 46       | 44    | 44    | 43       | 42    |
| Maine          | 42    | 42    | 42    | 42    | 43    | 43        | 43       | 43    | 43    | 43       | 44    |
| Maryland       | 86    | 86    | 85    | 85    | 85    | 85        | 85       | 86    | 86    | 86       | 86    |
| Massachusetts  | 25    | 25    | 24    | 24    | 23    | 23        | 23       | 22    | 22    | 22       | 22    |
| Michigan       | 299   | 291   | 283   | 276   | 269   | 264       | 259      | 254   | 250   | 246      | 243   |
| Minnesota      | 551   | 530   | 511   | 494   | 483   | 474       | 468      | 462   | 458   | 456      | 454   |
|                | 42    | 39    | 37    | 35    | 34    | 32        | 32       | 31    | 30    | 29       | 29    |
| Mississippi    | 169   | 160   | 152   | 145   | 138   |           | 127      | 122   | 118   | 114      | 111   |
| Missouri       | 18    |       | 17    |       | 150   | 132       | 15       | 14    | 116   | 114      |       |
| Montana        |       | 17    |       | 16    |       | 15        |          |       |       |          | 14    |
| Nebraska       | 70    | 71    | 71    | 72    | 72    | 72        | 72<br>27 | 72    | 72    | 72<br>27 | 72    |
| Nevada         | 26    | 26    | 26    | 26    | 26    | 26        | 27       | 27    | 27    | 27       | 28    |
| New Hampshire  | 20    | 19    | 19    | 18    | 18    | 18        | 17       | 17    | 17    | 16       | 16    |
| New Jersey     | 19    | 18    | 16    | 15    | 14    | 13        | 12       | 11    | 11    | 10       | 10    |
| New Mexico     | 216   | 232   | 248   | 262   | 274   | 286       | 297      | 306   | 315   | 323      | 331   |
| New York       | 700   | 699   | 697   | 696   | 695   | 694       | 693      | 692   | 691   | 690      | 689   |
| North Carolina | 76    | 73    | 70    | 67    | 64    | 61        | 58       | 55    | 53    | 50       | 48    |
| North Dakota   | 51    | 45    | 40    | 36    | 32    | 28        | 25       | 22    | 19    | 17       | 15    |
| Ohio           | 260   | 250   | 242   | 235   | 230   | 226       | 223      | 220   | 217   | 214      | 212   |
| Oklahoma       | 90    | 89    | 88    | 87    | 86    | 85        | 85       | 84    | 84    | 84       | 83    |
| Oregon         | 88    | 86    | 84    | 82    | 80    | 79        | 78       | 76    | 75    | 74       | 74    |
| Pennsylvania   | 624   | 618   | 612   | 607   | 604   | 602       | 600      | 598   | 597   | 596      | 595   |
| Rhode Island   | 2     | 2     | 2     | 2     | 2     | 2         | 2        | 2     | 2     | 2        | 2     |
| South Carolina | 24    | 22    | 21    | 21    | 20    | 20        | 20       | 20    | 19    | 19       | 19    |
| South Dakota   | 102   | 98    | 94    | 90    | 86    | 83        | 79       | 76    | 73    | 71       | 68    |
| Tennessee      | 105   | 97    | 88    | 80    | 73    | 66        | 60       | 55    | 50    | 46       | 42    |
| Texas          | 364   | 353   | 344   | 336   | 331   | 328       | 324      | 321   | 317   | 313      | 309   |
| Utah           | 90    | 88    | 87    | 85    | 85    | 85        | 85       | 85    | 85    | 85       | 85    |
| Vermont        | 161   | 162   | 161   | 161   | 160   | 160       | 160      | 160   | 160   | 159      | 159   |
| Virginia       | 123   | 120   | 118   | 115   | 113   | 110       | 108      | 106   | 104   | 102      | 100   |
| Washington     | 250   | 249   | 249   | 249   | 250   | 250       | 251      | 251   | 252   | 253      | 254   |
| West Virginia  | 18    | 17    | 17    | 16    | 16    | 15        | 15       | 14    | 14    | 13       | 12    |
| Wisconsin      | 1,368 | 1,346 | 1,327 | 1,312 | 1,301 | 1,293     | 1,286    | 1,281 | 1,276 | 1,273    | 1,270 |
| Wyoming        | 6     | 6     | 5     | 5     | 5     | 4         | 4        | 4     | 4     | 4        | 4     |
| United States  | 9,185 | 9,100 | 9,015 | 8,946 | 8,898 | 8,864     | 8,833    | 8,804 | 8,777 | 8,751    | 8,726 |

**U.S. Milk Production by State** 

|                | 1998    | 1999    | 2000    | 2001    | 2002    | 2003        | 2004    | 2005    | 2006    | 2007    | 2008    |
|----------------|---------|---------|---------|---------|---------|-------------|---------|---------|---------|---------|---------|
|                |         |         |         |         | (Mi     | llion Pound | ds)     |         |         |         |         |
| Alabama        | 388     | 368     | 355     | 353     | 364     | 373         | 380     | 385     | 389     | 392     | 394     |
| Alaska         | 14      | 15      | 15      | 15      | 15      | 15          | 15      | 15      | 16      | 16      | 16      |
| Arizona        | 2,685   | 2,753   | 2,814   | 2,881   | 2,952   | 3,024       | 3,094   | 3,163   | 3,233   | 3,303   | 3,373   |
| Arkansas       | 683     | 678     | 668     | 659     | 651     | 642         | 634     | 625     | 617     | 608     | 599     |
| California     | 27,485  | 29,564  | 30,550  | 31,532  | 32,461  | 33,329      | 34,119  | 34,853  | 35,533  | 36,160  | 36,741  |
| Colorado       | 1,686   | 1,676   | 1,659   | 1,652   | 1,651   | 1,657       | 1,664   | 1,673   | 1,684   | 1,699   | 1,716   |
| Connecticut    | 525     | 546     | 552     | 561     | 570     | 577         | 583     | 588     | 591     | 594     | 595     |
| Delaware       | 173     | 185     | 194     | 202     | 208     | 213         | 217     | 221     | 225     | 228     | 231     |
| Florida        | 2,343   | 2,429   | 2,425   | 2,427   | 2,434   | 2,443       | 2,450   | 2,458   | 2,465   | 2,473   | 2,481   |
| Georgia        | 1,436   | 1,404   | 1,365   | 1,331   | 1,303   | 1,278       | 1,257   | 1,239   | 1,224   | 1,212   | 1,204   |
| Hawaii         | 128     | 131     | 132     | 131     | 129     | 127         | 124     | 121     | 117     | 112     | 107     |
| Idaho          | 5,773   | 6,307   | 6,736   | 7,135   | 7,501   | 7,837       | 8,141   | 8,416   | 8,669   | 8,902   | 9,119   |
| Illinois       | 2,193   | 2,143   | 2,098   | 2,072   | 2,059   | 2,055       | 2,056   | 2,060   | 2,068   | 2,078   | 2,089   |
| Indiana        | 2,241   | 2,266   | 2,279   | 2,293   | 2,304   | 2,311       | 2,313   | 2,311   | 2,306   | 2,296   | 2,284   |
| Iowa           | 3,707   | 3,668   | 3,616   | 3,590   | 3,582   | 3,581       | 3,581   | 3,579   | 3,577   | 3,575   | 3,573   |
| Kansas         | 1,288   | 1,297   | 1,297   | 1,308   | 1,326   | 1,348       | 1,370   | 1,394   | 1,417   | 1,442   | 1,467   |
| Kentucky       | 1,703   | 1,622   | 1,530   | 1,448   | 1,376   | 1,312       | 1,257   | 1,210   | 1,171   | 1,140   | 1,117   |
| Louisiana      | 743     | 705     | 673     | 655     | 641     | 630         | 620     | 613     | 607     | 603     | 600     |
| Maine          | 669     | 695     | 703     | 715     | 727     | 739         | 751     | 763     | 775     | 787     | 799     |
| Maryland       | 1,396   | 1,417   | 1,425   | 1,437   | 1,452   | 1,469       | 1,486   | 1,503   | 1,522   | 1,541   | 1,560   |
| Massachusetts  | 426     | 432     | 424     | 421     | 419     | 420         | 422     | 425     | 429     | 434     | 440     |
| Michigan       | 5,374   | 5,341   | 5,265   | 5,204   | 5,154   | 5,114       | 5,081   | 5,055   | 5,036   | 5,023   | 5,016   |
| Minnesota      | 9,254   | 9,112   | 8,914   | 8,781   | 8,710   | 8,693       | 8,700   | 8,729   | 8,779   | 8,849   | 8,939   |
| Mississippi    | 580     | 543     | 522     | 507     | 496     | 487         | 480     | 475     | 470     | 467     | 464     |
| Missouri       | 2,324   | 2,224   | 2,122   | 2,034   | 1,956   | 1,886       | 1,822   | 1,765   | 1,716   | 1,673   | 1,638   |
| Montana        | 2,324   | 2,224   | 2,122   | 2,034   | 260     | 256         | 253     | 250     | 249     | 247     | 246     |
| Nebraska       | 1,112   | 1,143   | 1,165   | 1,188   | 1,211   | 1,232       | 1,251   | 1,269   | 1,285   | 1,300   | 1,315   |
|                | 502     | 508     | 513     | 521     | 530     | 540         | 551     | 561     | 572     | 584     | 595     |
| Nevada         |         |         |         |         |         |             |         |         |         |         |         |
| New Hampshire  | 321     | 325     | 319     | 315     | 313     | 311         | 308     | 306     | 304     | 302     | 300     |
| New Jersey     | 292     | 273     | 253     | 236     | 220     | 207         | 196     | 186     | 178     | 172     | 168     |
| New Mexico     | 4,350   | 4,786   | 5,163   | 5,531   | 5,880   | 6,212       | 6,527   | 6,826   | 7,111   | 7,385   | 7,647   |
| New York       | 11,699  | 11,957  | 12,093  | 12,241  | 12,386  | 12,533      | 12,677  | 12,819  | 12,960  | 13,100  | 13,241  |
| North Carolina | 1,253   | 1,225   | 1,184   | 1,143   | 1,102   | 1,062       | 1,021   | 981     | 941     | 902     | 863     |
| North Dakota   | 694     | 631     | 569     | 511     | 459     | 412         | 368     | 327     | 291     | 258     | 230     |
| Ohio           | 4,428   | 4,345   | 4,251   | 4,185   | 4,141   | 4,112       | 4,092   | 4,077   | 4,066   | 4,058   | 4,052   |
| Oklahoma       | 1,221   | 1,223   | 1,214   | 1,211   | 1,210   | 1,211       | 1,214   | 1,216   | 1,220   | 1,224   | 1,228   |
| Oregon         | 1,629   | 1,614   | 1,582   | 1,557   | 1,539   | 1,524       | 1,511   | 1,499   | 1,489   | 1,482   | 1,476   |
| Pennsylvania   | 10,953  | 11,074  | 11,122  | 11,202  | 11,298  | 11,408      | 11,525  | 11,646  | 11,774  | 11,906  | 12,044  |
| Rhode Island   | 31      | 32      | 31      | 32      | 32      | 32          | 32      | 32      | 32      | 32      | 32      |
| South Carolina | 374     | 355     | 341     | 335     | 337     | 338         | 339     | 339     | 338     | 337     | 336     |
| South Dakota   | 1,439   | 1,412   | 1,370   | 1,333   | 1,298   | 1,265       | 1,234   | 1,203   | 1,174   | 1,146   | 1,120   |
| Tennessee      | 1,516   | 1,410   | 1,297   | 1,193   | 1,099   | 1,013       | 932     | 858     | 789     | 726     | 669     |
| Texas          | 5,609   | 5,501   | 5,394   | 5,330   | 5,298   | 5,298       | 5,291   | 5,277   | 5,261   | 5,240   | 5,217   |
| Utah           | 1,517   | 1,499   | 1,477   | 1,468   | 1,469   | 1,475       | 1,482   | 1,491   | 1,501   | 1,513   | 1,526   |
| Vermont        | 2,684   | 2,768   | 2,792   | 2,830   | 2,870   | 2,910       | 2,949   | 2,987   | 3,024   | 3,060   | 3,097   |
| Virginia       | 1,847   | 1,831   | 1,809   | 1,791   | 1,776   | 1,761       | 1,746   | 1,732   | 1,718   | 1,703   | 1,690   |
| Washington     | 5,332   | 5,404   | 5,448   | 5,505   | 5,568   | 5,636       | 5,705   | 5,774   | 5,847   | 5,925   | 6,006   |
| West Virginia  | 278     | 277     | 273     | 268     | 263     | 258         | 252     | 245     | 239     | 231     | 224     |
| Wisconsin      | 22,932  | 22,981  | 23,001  | 23,142  | 23,341  | 23,572      | 23,820  | 24,085  | 24,364  | 24,657  | 24,959  |
| Wyoming        | 80      | 75      | 70      | 66      | 63      | 61          | 60      | 59      | 57      | 56      | 56      |
| United States  | 157,604 | 160,453 | 161,333 | 162,744 | 164,403 | 166,199     | 167,951 | 169,686 | 171,419 | 173,154 | 174,897 |

## **State Level All Milk Prices**

|                        | 1998  | 1999           | 2000  | 2001           | 2002           | 2003           | 2004           | 2005           | 2006           | 2007           | 2008           |
|------------------------|-------|----------------|-------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
|                        |       |                |       |                | (Dollars pe    | er Hundred     | dweight)       |                |                |                |                |
| Alabama                | 16.64 | 14.69          | 14.40 | 14.39          | 14.46          | 14.52          | 14.50          | 14.45          | 14.41          | 14.34          | 14.27          |
| Alaska                 | 20.35 | 20.40          | 20.45 | 20.50          | 20.55          | 20.60          | 20.65          | 20.70          | 20.75          | 20.80          | 20.85          |
| Arizona                | 14.76 | 12.79          | 12.39 | 12.34          | 12.40          | 12.46          | 12.44          | 12.39          | 12.35          | 12.30          | 12.25          |
| Arkansas               | 15.86 | 13.91          | 13.62 | 13.61          | 13.68          | 13.74          | 13.71          | 13.67          | 13.63          | 13.56          | 13.49          |
| California             | 14.99 | 13.04          | 12.82 | 12.82          | 12.89          | 12.95          | 12.92          | 12.88          | 12.83          | 12.75          | 12.67          |
| Colorado               | 15.08 | 13.12          | 12.76 | 12.72          | 12.79          | 12.86          | 12.84          | 12.79          | 12.76          | 12.71          | 12.65          |
| Connecticut            | 16.14 | 15.11          | 13.97 | 13.94          | 14.01          | 14.07          | 14.05          | 14.00          | 13.97          | 13.91          | 13.84          |
| Delaware               | 15.85 | 13.89          | 13.57 | 13.54          | 13.61          | 13.67          | 13.65          | 13.61          | 13.57          | 13.51          | 13.45          |
| Florida                | 18.18 | 16.23          | 16.00 | 16.00          | 16.06          | 16.12          | 16.09          | 16.05          | 16.01          | 15.93          | 15.85          |
| Georgia                | 16.43 | 14.48          | 14.23 | 14.22          | 14.29          | 14.35          | 14.32          | 14.28          | 14.23          | 14.16          | 14.09          |
| Hawaii                 | 25.76 | 26.81          | 27.88 | 28.96          | 30.05          | 31.15          | 32.26          | 33.39          | 34.52          | 35.66          | 36.82          |
| Idaho                  | 14.52 | 12.54          | 11.96 | 11.86          | 11.92          | 12.00          | 12.00          | 11.94          | 11.93          | 11.92          | 11.91          |
| Illinois               | 14.86 | 12.91          | 12.63 | 12.62          | 12.69          | 12.75          | 12.72          | 12.68          | 12.64          | 12.57          | 12.50          |
| Indiana                | 14.84 | 12.89          | 12.65 | 12.65          | 12.72          | 12.78          | 12.75          | 12.71          | 12.66          | 12.59          | 12.51          |
| Iowa                   | 14.70 | 12.74          | 12.38 | 12.35          | 12.41          | 12.48          | 12.46          | 12.41          | 12.38          | 12.33          | 12.27          |
| Kansas                 | 14.78 | 12.82          | 12.51 | 12.49          | 12.55          | 12.62          | 12.59          | 12.55          | 12.51          | 12.45          | 12.38          |
| Kentucky               | 15.54 | 13.59          | 13.32 | 13.31          | 13.38          | 13.44          | 13.41          | 13.37          | 13.32          | 13.26          | 13.18          |
| Louisiana              | 16.30 | 14.35          | 14.06 | 14.05          | 14.12          | 14.18          | 14.15          | 14.11          | 14.07          | 14.00          | 13.93          |
| Maine                  | 16.27 | 15.23          | 14.09 | 14.07          | 14.14          | 14.20          | 14.18          | 14.13          | 14.09          | 14.03          | 13.97          |
| Maryland               | 15.81 | 13.85          | 13.53 | 13.51          | 13.57          | 13.64          | 13.62          | 13.57          | 13.53          | 13.47          | 13.41          |
| Massachusetts          | 16.24 | 15.21          | 14.07 | 14.04          | 14.11          | 14.17          | 14.15          | 14.10          | 14.07          | 14.01          | 13.94          |
| Michigan               | 15.38 | 13.43          | 13.18 | 13.17          | 13.24          | 13.30          | 13.27          | 13.23          | 13.19          | 13.12          | 13.04          |
| Minnesota              | 15.59 | 13.63          | 13.32 | 13.30          | 13.37          | 13.43          | 13.41          | 13.36          | 13.32          | 13.26          | 13.20          |
| Mississippi            | 16.33 | 14.37          | 14.09 | 14.07          | 14.14          | 14.20          | 14.18          | 14.13          | 14.09          | 14.03          | 13.95          |
| Missouri               | 15.45 | 13.50          | 13.21 | 13.20          | 13.27          | 13.33          | 13.30          | 13.26          | 13.22          | 13.15          | 13.08          |
| Montana                | 15.38 | 13.24          | 12.62 | 12.51          | 12.57          | 12.66          | 12.66          | 12.60          | 12.58          | 12.57          | 12.56          |
| Nebraska               | 14.71 | 12.75          | 12.41 | 12.39          | 12.45          | 12.52          | 12.50          | 12.45          | 12.41          | 12.36          | 12.30          |
| Nevada                 | 14.07 | 12.10          | 11.66 | 11.60          | 11.67          | 11.74          | 11.73          | 11.68          | 11.65          | 11.61          | 11.57          |
| New Hampshire          | 16.37 | 15.33          | 14.19 | 14.17          | 14.24          | 14.30          | 14.28          | 14.23          | 14.19          | 14.13          | 14.07          |
| New Jersey             | 15.79 | 13.83          | 13.49 | 13.46          | 13.52          | 13.59          | 13.57          | 13.52          | 13.49          | 13.43          | 13.37          |
| New Mexico             | 14.60 | 12.63          | 12.14 | 12.07          | 12.13          | 12.20          | 12.20          | 12.14          | 12.12          | 12.09          | 12.06          |
| New York               | 15.32 | 13.36          | 13.01 | 12.98          | 13.05          | 13.11          | 13.09          | 13.05          | 13.01          | 12.96          | 12.90          |
| North Carolina         | 17.08 | 15.13          | 14.89 | 14.89          | 14.96          | 15.01          | 14.99          | 14.94          | 14.90          | 14.82          | 14.74          |
| North Dakota           | 14.15 | 12.20          | 11.88 | 11.86          | 11.93          | 11.99          | 11.97          | 11.92          | 11.88          | 11.82          | 11.76          |
| Ohio                   | 15.33 | 13.38          | 13.13 | 13.12          | 13.19          | 13.25          | 13.22          | 13.18          | 13.14          | 13.06          | 12.98          |
| Oklahoma               | 15.55 | 13.59          | 13.13 | 13.12          | 13.19          | 13.32          | 13.31          | 13.16          | 13.14          | 13.19          | 13.13          |
|                        | 15.54 | 13.57          | 12.99 | 12.89          | 12.95          | 13.04          | 13.04          | 12.98          | 12.96          | 12.95          | 12.94          |
| Oregon<br>Pennsylvania | 15.98 | 14.02          | 13.68 | 13.65          | 13.71          | 13.77          | 13.75          | 13.70          | 13.66          | 13.60          | 13.53          |
| Rhode Island           | 16.24 | 15.21          | 14.07 | 14.04          | 14.11          | 14.17          | 14.15          | 14.10          | 14.07          | 14.01          | 13.94          |
| South Carolina         | 16.49 | 14.54          | 14.07 | 14.04          | 14.11          | 14.17          | 14.13          | 14.10          | 14.07          | 14.01          | 14.16          |
|                        | 15.09 |                | 12.82 |                |                |                |                |                |                |                |                |
| South Dakota           | 15.09 | 13.14<br>13.97 | 13.71 | 12.80<br>13.70 | 12.87<br>13.77 | 12.93<br>13.83 | 12.91<br>13.80 | 12.87<br>13.76 | 12.83<br>13.71 | 12.77<br>13.64 | 12.70<br>13.57 |
| Tennessee              |       |                |       |                |                |                |                |                |                |                |                |
| Texas                  | 15.66 | 13.70          | 13.36 | 13.33          | 13.39          | 13.46          | 13.44          | 13.39          | 13.36          | 13.30          | 13.24          |
| Utah                   | 14.46 | 12.50          | 12.11 | 12.07          | 12.13          | 12.20          | 12.18          | 12.13          | 12.10          | 12.06          | 12.00          |
| Vermont                | 16.07 | 15.03          | 13.89 | 13.87          | 13.94          | 14.00          | 13.98          | 13.93          | 13.89          | 13.83          | 13.77          |
| Virginia               | 15.88 | 13.93          | 13.69 | 13.69          | 13.76          | 13.81          | 13.79          | 13.74          | 13.70          | 13.62          | 13.54          |
| Washington             | 15.45 | 13.47          | 12.90 | 12.80          | 12.86          | 12.95          | 12.95          | 12.89          | 12.87          | 12.86          | 12.85          |
| West Virginia          | 15.53 | 13.58          | 13.33 | 13.32          | 13.39          | 13.45          | 13.42          | 13.38          | 13.34          | 13.26          | 13.18          |
| Wisconsin              | 15.54 | 13.58          | 13.28 | 13.26          | 13.33          | 13.39          | 13.37          | 13.32          | 13.28          | 13.22          | 13.15          |
| Wyoming                | 13.81 | 11.85          | 11.51 | 11.49          | 11.55          | 11.62          | 11.60          | 11.55          | 11.51          | 11.46          | 11.40          |
| United States          | 15.39 | 13.46          | 13.11 | 13.08          | 13.14          | 13.19          | 13.17          | 13.12          | 13.07          | 13.01          | 12.95          |

## **U.S. Dairy Products**

The U.S. dairy sector is dependent on the performance of domestic cheese demand. To meet the growing demand, cheese production is projected to grow from 7.8 billion pounds in 1999 to 9.6 billion pounds by 2008, an annual growth rate of 2.2 percent.

Per capita cheese consumption is projected to grow by another 3.6 pounds during 1999 to 2008 period. The growth is expected to remain in line with what has been observed in recent years.

Wholesale cheese prices averaged \$1.54 per pound in 1998. Additional supplies are expected to pressure prices lower in 1999, with an annual average price projected at \$1.35 per pound. After 1999, prices range between \$1.31 and \$1.34 per pound.

For 1998, wholesale butter prices averaged \$1.78 per pound, a 53 percent increase from the previous year. Butter prices are expected to fall in 1999 but still remain high, relative to the levels observed in the early

1990s. Longer term, butter prices range between \$1.23 and \$1.32 per pound.

Per capita consumption of butter is expected to continue to decline over the baseline period. Consumption is projected at 3.5 pounds per person by 2008, down from 3.9 pounds in 1998.

Domestic use of nonfat dry milk is projected to increase in total, but remain flat on a per capita basis. The United States is not expected to be a commercial exporter of nonfat dry milk over the baseline period. However, the baseline assumes that the United States will use the DEIP at WTO maximum levels. This translates into shipments of 159 million pounds.

After averaging \$1.09 per pound in 1998, the whole-sale price of nonfat dry milk is projected to fall to \$1.02 per pound in 1999. Further weakening is expected in 2000 with prices averaging \$0.91 per pound for the 2000 to 2008 period.

U.S. Total Cheese Supply and Utilization

|                        | 1998   | 1999   | 2000   | 2001   | 2002     | 2003       | 2004   | 2005   | 2006   | 2007   | 2008   |
|------------------------|--------|--------|--------|--------|----------|------------|--------|--------|--------|--------|--------|
|                        |        |        |        |        | (Mill    | ion Pound  | s)     |        |        |        |        |
| Supply                 | 8,281  | 8,647  | 8,797  | 8,991  | 9,172    | 9,360      | 9,552  | 9,745  | 9,940  | 10,139 | 10,341 |
| Beginning Stocks       | 490    | 500    | 501    | 501    | 502      | 502        | 503    | 503    | 504    | 504    | 505    |
| Production             | 7,460  | 7,810  | 7,952  | 8,142  | 8,320    | 8,504      | 8,692  | 8,880  | 9,071  | 9,266  | 9,463  |
| Imports                | 331    | 337    | 344    | 347    | 351      | 354        | 358    | 362    | 365    | 369    | 373    |
| Utilization            | 7,780  | 8,146  | 8,296  | 8,489  | 8,670    | 8,858      | 9,049  | 9,241  | 9,436  | 9,634  | 9,836  |
| Foreign Use            | 119    | 122    | 125    | 128    | 131      | 134        | 137    | 140    | 143    | 146    | 149    |
| Exports                | 80     | 83     | 86     | 89     | 92       | 95         | 98     | 101    | 104    | 107    | 110    |
| Shipments              | 39     | 39     | 39     | 39     | 39       | 39         | 39     | 39     | 39     | 39     | 39     |
| Domestic Use           | 7,661  | 8,024  | 8,170  | 8,361  | 8,539    | 8,724      | 8,912  | 9,101  | 9,292  | 9,488  | 9,686  |
| Commercial             | 7,661  | 8,024  | 8,170  | 8,361  | 8,539    | 8,724      | 8,912  | 9,101  | 9,292  | 9,488  | 9,686  |
| Government Donations   | 0      | 0      | 0      | 0      | 0        | 0          | 0      | 0      | 0      | 0      | 0      |
| Ending Stocks          | 500    | 501    | 501    | 502    | 502      | 503        | 503    | 504    | 504    | 505    | 505    |
| Commercial             | 500    | 501    | 501    | 502    | 502      | 503        | 503    | 504    | 504    | 505    | 505    |
| Government             | 0      | 0      | 0      | 0      | 0        | 0          | 0      | 0      | 0      | 0      | 0      |
| DEIP                   | 6      | 5      | 4      | 4      | 4        | 4          | 4      | 4      | 4      | 4      | 4      |
|                        |        |        |        |        | (        | Pounds)    |        |        |        |        |        |
| Per Capita Consumption | 28.4   | 29.5   | 29.8   | 30.2   | 30.6     | 31.0       | 31.4   | 31.8   | 32.2   | 32.7   | 33.1   |
| Prices                 |        |        |        |        | (U.S. Ce | ents per P | ound)  |        |        |        |        |
| Wholesale 40 lb. Block | 154.08 | 135.17 | 132.45 | 132.49 | 133.18   | 133.74     | 133.44 | 133.03 | 132.56 | 131.82 | 130.98 |
| CCC Price              | 111.53 | 110.05 | 0.00   | 0.00   | 0.00     | 0.00       | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   |
|                        |        |        |        |        | (Dolla   | rs per Pou | ınd)   |        |        |        |        |
| Retail                 | 3.59   | 3.46   | 3.51   | 3.53   | 3.57     | 3.61       | 3.62   | 3.63   | 3.64   | 3.65   | 3.65   |

U.S. Butter Supply and Utilization

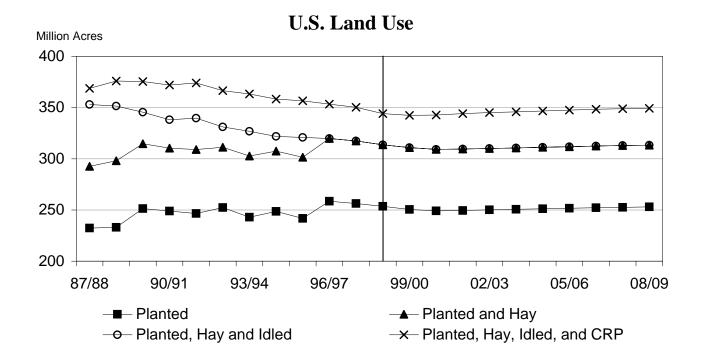
|                        | 1998   | 1999   | 2000   | 2001   | 2002     | 2003         | 2004   | 2005   | 2006   | 2007   | 2008   |
|------------------------|--------|--------|--------|--------|----------|--------------|--------|--------|--------|--------|--------|
|                        |        |        |        |        | (Mill    | ion Pound    | s)     |        |        |        |        |
| Supply                 | 1,107  | 1,106  | 1,101  | 1,107  | 1,113    | 1,116        | 1,118  | 1,120  | 1,121  | 1,121  | 1,121  |
| Beginning Stocks       | 21     | 35     | 37     | 39     | 41       | 43           | 45     | 47     | 49     | 51     | 53     |
| Production             | 1,040  | 1,041  | 1,032  | 1,035  | 1,037    | 1,040        | 1,042  | 1,045  | 1,046  | 1,046  | 1,046  |
| Imports                | 46     | 30     | 31     | 33     | 34       | 32           | 30     | 28     | 26     | 24     | 22     |
| Utilization            | 1,071  | 1,069  | 1,062  | 1,066  | 1,070    | 1,071        | 1,071  | 1,071  | 1,070  | 1,068  | 1,066  |
| Total Foreign Use      | 12     | 14     | 14     | 23     | 24       | 28           | 31     | 31     | 33     | 34     | 35     |
| Exports                | 10     | 12     | 12     | 21     | 22       | 26           | 29     | 29     | 31     | 32     | 33     |
| Shipments              | 2      | 2      | 2      | 2      | 2        | 2            | 2      | 2      | 2      | 2      | 2      |
| Domestic Use           | 1,059  | 1,055  | 1,048  | 1,043  | 1,046    | 1,043        | 1,040  | 1,040  | 1,037  | 1,034  | 1,031  |
| Commercial             | 1,059  | 1,055  | 1,048  | 1,043  | 1,046    | 1,043        | 1,040  | 1,040  | 1,037  | 1,034  | 1,031  |
| Government Donations   | 0      | 0      | 0      | 0      | 0        | 0            | 0      | 0      | 0      | 0      | 0      |
| Ending Stocks          | 35     | 37     | 39     | 41     | 43       | 45           | 47     | 49     | 51     | 53     | 55     |
| Commercial             | 35     | 37     | 39     | 41     | 43       | 45           | 47     | 49     | 51     | 53     | 55     |
| Government             | 0      | 0      | 0      | 0      | 0        | 0            | 0      | 0      | 0      | 0      | 0      |
| DEIP                   | 1      | 10     | 10     | 20     | 20       | 25           | 27     | 27     | 30     | 32     | 32     |
|                        |        |        |        |        | (        | Pounds)      |        |        |        |        |        |
| Per Capita Consumption | 3.92   | 3.88   | 3.82   | 3.77   | 3.75     | 3.71         | 3.67   | 3.64   | 3.60   | 3.56   | 3.52   |
| Prices                 |        |        |        |        | (U.S. Ce | ents per P   | ound)  |        |        |        |        |
| Wholesale              | 178.09 | 147.58 | 133.10 | 124.80 | 122.98   | 125.32       | 127.41 | 126.24 | 127.65 | 129.51 | 131.51 |
| CCC Price              | 65.00  | 65.00  | 0.00   | 0.00   | 0.00     | 0.00         | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   |
|                        |        |        |        |        | (U.S. Do | ollars per F | ound)  |        |        |        |        |
| Retail                 | 2.86   | 2.53   | 2.39   | 2.43   | 2.40     | 2.43         | 2.47   | 2.45   | 2.47   | 2.50   | 2.53   |

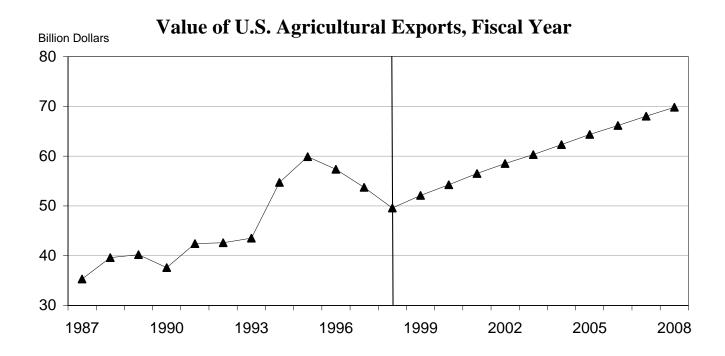
U.S. Nonfat Dry Milk Supply and Utilization

|                        | 1998   | 1999   | 2000  | 2001  | 2002     | 2003       | 2004  | 2005  | 2006  | 2007  | 2008  |
|------------------------|--------|--------|-------|-------|----------|------------|-------|-------|-------|-------|-------|
|                        |        |        |       |       | (Milli   | ion Pound  | s)    |       |       |       |       |
| Supply                 | 1,243  | 1,350  | 1,355 | 1,276 | 1,233    | 1,232      | 1,228 | 1,226 | 1,222 | 1,214 | 1,206 |
| Beginning Stocks       | 125    | 209    | 210   | 134   | 97       | 97         | 98    | 98    | 99    | 99    | 100   |
| Production             | 1,114  | 1,135  | 1,133 | 1,130 | 1,125    | 1,122      | 1,118 | 1,114 | 1,109 | 1,100 | 1,091 |
| Imports                | 4      | 6      | 12    | 12    | 12       | 12         | 13    | 14    | 14    | 15    | 16    |
| Utilization            | 1,034  | 1,140  | 1,221 | 1,179 | 1,136    | 1,134      | 1,130 | 1,128 | 1,123 | 1,115 | 1,106 |
| Foreign Use            | 227    | 251    | 248   | 187   | 164      | 164        | 164   | 164   | 164   | 164   | 164   |
| Exports                | 226    | 250    | 247   | 186   | 163      | 163        | 163   | 163   | 163   | 163   | 163   |
| Shipments              | 1      | 1      | 1     | 1     | 1        | 1          | 1     | 1     | 1     | 1     | 1     |
| Domestic Use           | 803    | 885    | 969   | 988   | 968      | 966        | 962   | 960   | 955   | 947   | 938   |
| Commercial             | 783    | 865    | 949   | 968   | 968      | 966        | 962   | 960   | 955   | 947   | 938   |
| Government Donations   | 20     | 20     | 20    | 20    | 0        | 0          | 0     | 0     | 0     | 0     | 0     |
| Feed and Waste         | 4      | 4      | 4     | 4     | 4        | 4          | 4     | 4     | 4     | 4     | 4     |
| Ending Stocks          | 209    | 210    | 134   | 97    | 97       | 98         | 98    | 99    | 99    | 100   | 100   |
| Commercial             | 95     | 96     | 96    | 97    | 97       | 98         | 98    | 99    | 99    | 100   | 100   |
| Government             | 114    | 114    | 38    | 0     | 0        | 0          | 0     | 0     | 0     | 0     | 0     |
| DEIP                   | 168    | 190    | 159   | 159   | 159      | 159        | 159   | 159   | 159   | 159   | 159   |
|                        |        |        |       |       | (        | Pounds)    |       |       |       |       |       |
| Per Capita Consumption | 2.90   | 3.18   | 3.46  | 3.50  | 3.47     | 3.43       | 3.39  | 3.36  | 3.31  | 3.26  | 3.20  |
| Prices                 |        |        |       |       | (U.S. Ce | ents per P | ound) |       |       |       |       |
| Wholesale              | 109.19 | 102.43 | 89.63 | 88.74 | 89.97    | 90.70      | 90.80 | 90.19 | 90.54 | 91.92 | 93.61 |
| CCC Price              | 102.78 | 100.93 | 0.00  | 0.00  | 0.00     | 0.00       | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  |

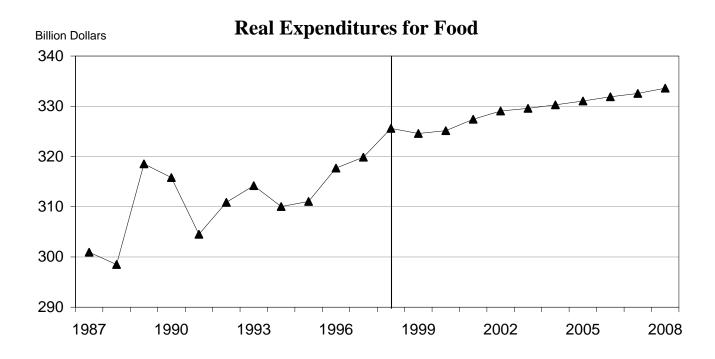
# AGGREGATE

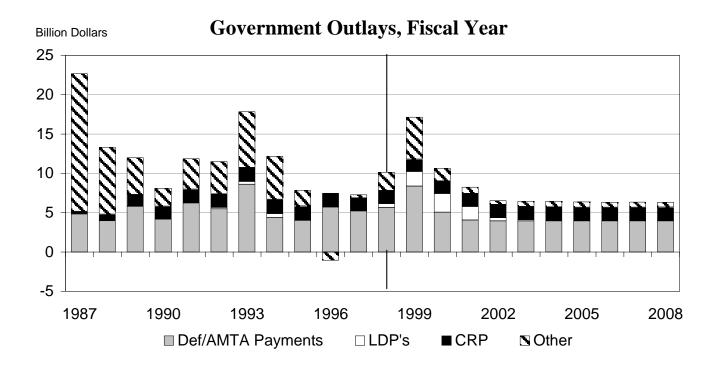
MEASURES

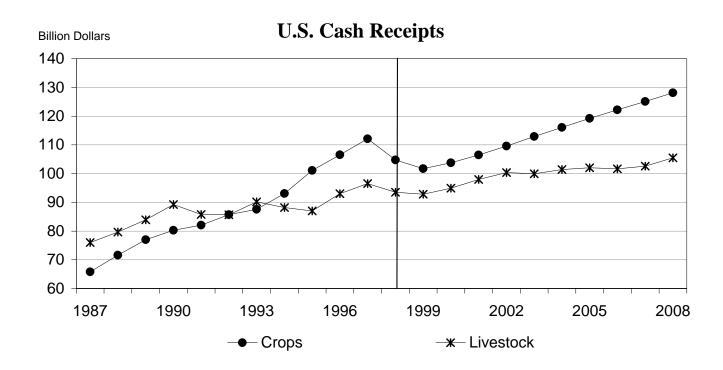


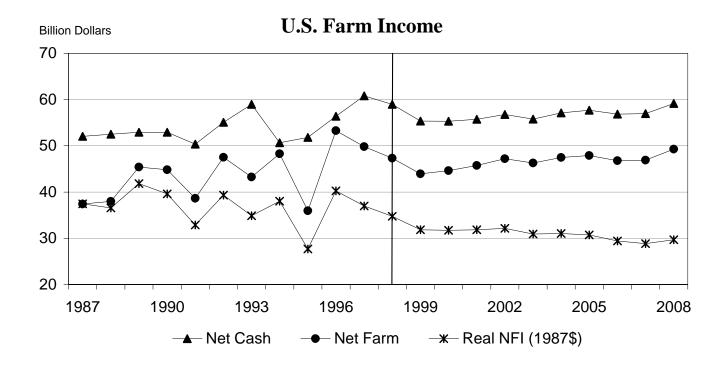


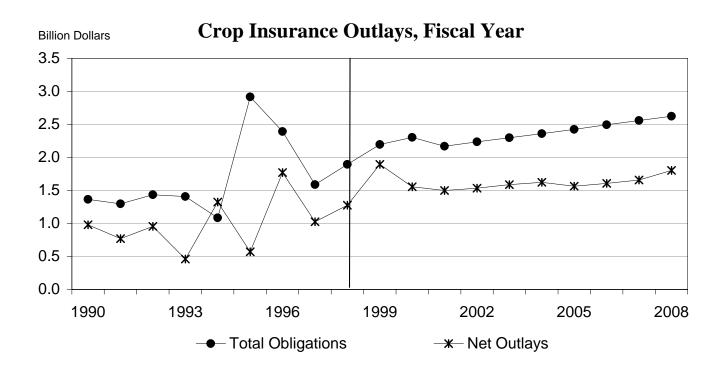












### U.S. Land Use

Under the provisions of the FAIR Act, CRP enrollment is capped at 36.4 million acres. Through 1998, CRP enrollment stood at 30.5 million acres.

CRP contracts began to expire in 1997/98, and total CRP area fell to 30.5 million acres by 1998/99, as some contracts are not immediately extended. It is assumed that contract holders may re-bid their land and that new land may also be bid into the CRP. While not all bids will be accepted and some current contracts will not be extended, the net effect is an increase in CRP area starting in 1999/00. Area in the program reaches 36 million acres by 2006/07.

Given the price paths of program crops, the planting flexibility provisions of the FAIR Act allow feedgrain and oilseed area to expand at the cost of cotton and rice area. This shifting is a continuation of the changes occurring while normal flex acres existed.

The 0-85 and 50-85 programs, formerly 0-92 and 50-92, were eliminated by the FAIR Act. A portion of the land idled under such program will remain unplanted and will receive payments for production flexibility contracts. Historically, these programs have idled more than 10 million acres of program crop area each year.

Total area planted to 15 principal crops decreased in 1997/98 due to lower prices for a few key commodities. Area fell again in 1998/99 by 1.8 million acres. For the 1999 crop year, planted area of the 15 crops is projected to total 259.6 million acres. The higher commodity prices in the last years of the baseline pull land back into production. By 2008/09, planted area reaches 262.1 million acres.

U.S. Planted and Idled Area

|                     | 98/99     | 99/00     | 00/01     | 01/02     | 02/03     | 03/04       | 04/05     | 05/06     | 06/07     | 07/08     | 08/09     |
|---------------------|-----------|-----------|-----------|-----------|-----------|-------------|-----------|-----------|-----------|-----------|-----------|
|                     |           |           |           |           | (Mi       | Ilion Acres | )         |           |           |           |           |
| 15-Crop Total Area  | 293.2     | 291.0     | 291.5     | 292.9     | 294.0     | 294.9       | 295.7     | 296.5     | 297.3     | 297.7     | 298.1     |
| Planted             | 262.8     | 259.6     | 258.0     | 258.4     | 259.0     | 259.6       | 260.2     | 260.8     | 261.3     | 261.7     | 262.1     |
| Annual Idled        | NA        | NA        | NA        | NA        | NA        | NA          | NA        | NA        | NA        | NA        | NA        |
| CRP                 | 30.5      | 31.4      | 33.5      | 34.5      | 35.0      | 35.3        | 35.5      | 35.8      | 36.0      | 36.0      | 36.0      |
| Wheat Total Area    | 75.3      | 72.6      | 75.3      | 76.7      | 77.3      | 77.5        | 78.0      | 78.3      | 78.7      | 78.4      | 78.3      |
| Planted             | 65.9      | 62.8      | 64.9      | 65.9      | 66.4      | 66.6        | 67.0      | 67.2      | 67.5      | 67.2      | 67.1      |
| Annual Idled        | NA        | NA        | NA        | NA        | NA        | NA          | NA        | NA        | NA        | NA        | NA        |
| CRP                 | 9.5       | 9.8       | 10.4      | 10.7      | 10.9      | 11.0        | 11.0      | 11.1      | 11.2      | 11.2      | 11.2      |
| Corn Total Area     | 83.3      | 82.8      | 82.9      | 83.3      | 83.2      | 83.5        | 84.0      | 84.1      | 84.3      | 84.4      | 84.7      |
| Planted             | 80.2      | 79.7      | 79.5      | 79.8      | 79.7      | 80.0        | 80.5      | 80.5      | 80.7      | 80.8      | 81.1      |
| Annual Idled        | NA        | NA        | NA        | NA        | NA        | NA          | NA        | NA        | NA        | NA        | NA        |
| CRP                 | 3.1       | 3.1       | 3.3       | 3.4       | 3.5       | 3.5         | 3.5       | 3.6       | 3.6       | 3.6       | 3.6       |
| Sorghum Total Area  | 11.8      | 12.1      | 12.0      | 12.1      | 12.2      | 12.3        | 12.3      | 12.4      | 12.4      | 12.4      | 12.5      |
| Planted             | 9.6       | 9.9       | 9.7       | 9.7       | 9.7       | 9.8         | 9.9       | 9.9       | 9.9       | 9.9       | 10.0      |
| Annual Idled        | NA        | NA        | NA        | NA        | NA        | NA          | NA        | NA        | NA        | NA        | NA        |
| CRP                 | 2.2       | 2.2       | 2.3       | 2.4       | 2.4       | 2.4         | 2.4       | 2.5       | 2.5       | 2.5       | 2.5       |
|                     |           |           |           |           |           |             |           |           |           |           |           |
| Barley Total Area   | 8.9       | 8.8       | 8.9       | 9.0       | 9.0       | 9.1         | 9.1       | 9.1       | 9.1       | 9.2       | 9.2       |
| Planted             | 6.3       | 6.2       | 6.0       | 6.1       | 6.0       | 6.1         | 6.1       | 6.1       | 6.1       | 6.1       | 6.1       |
| Annual Idled        | NA<br>0.5 | NA        | NA        | NA        | NA        | NA          | NA        | NA        | NA        | NA        | NA        |
| CRP                 | 2.5       | 2.7       | 2.9       | 2.9       | 3.0       | 3.0         | 3.0       | 3.0       | 3.1       | 3.1       | 3.1       |
| Oats Total Area     | 6.1       | 5.7       | 5.7       | 5.7       | 5.7       | 5.7         | 5.7       | 5.7       | 5.7       | 5.7       | 5.7       |
| Planted             | 4.9       | 4.6       | 4.4       | 4.4       | 4.4       | 4.4         | 4.4       | 4.4       | 4.4       | 4.4       | 4.3       |
| Annual Idled        | NA        | NA        | NA        | NA        | NA        | NA          | NA        | NA        | NA        | NA        | NA        |
| CRP                 | 1.2       | 1.2       | 1.2       | 1.3       | 1.3       | 1.3         | 1.3       | 1.3       | 1.3       | 1.3       | 1.3       |
| Soybean Total Area  | 75.2      | 75.7      | 73.6      | 73.0      | 73.6      | 73.7        | 73.5      | 73.9      | 73.9      | 74.4      | 74.5      |
| Planted             | 72.4      | 72.7      | 70.4      | 69.7      | 70.2      | 70.3        | 70.0      | 70.4      | 70.4      | 70.9      | 71.0      |
| CRP                 | 2.8       | 3.0       | 3.2       | 3.3       | 3.4       | 3.4         | 3.4       | 3.5       | 3.5       | 3.5       | 3.5       |
| Cotton Total Area   | 14.3      | 14.5      | 14.1      | 13.8      | 13.6      | 13.5        | 13.4      | 13.3      | 13.4      | 13.4      | 13.5      |
| Planted             | 13.1      | 13.2      | 12.7      | 12.4      | 12.2      | 12.1        | 11.9      | 11.9      | 11.9      | 12.0      | 12.0      |
| Annual Idled        | NA        | NA        | NA        | NA        | NA        | NA          | NA        | NA        | NA        | NA        | NA        |
| CRP                 | 1.2       | 1.3       | 1.4       | 1.4       | 1.4       | 1.4         | 1.4       | 1.5       | 1.5       | 1.5       | 1.5       |
|                     |           |           |           |           |           |             |           |           |           |           |           |
| Rice Total Area     | 3.4       | 3.5       | 3.4       | 3.4       | 3.4       | 3.4         | 3.4       | 3.3       | 3.3       | 3.3       | 3.3       |
| Planted             | 3.3       | 3.5       | 3.4       | 3.4       | 3.4       | 3.3         | 3.3       | 3.3       | 3.3       | 3.3       | 3.3       |
| Annual Idled<br>CRP | NA<br>0.0 | NA<br>0.0 | NA<br>0.0 | NA<br>0.0 | NA<br>0.0 | NA<br>0.0   | NA<br>0.0 | NA<br>0.0 | NA<br>0.0 | NA<br>0.0 | NA<br>0.0 |
|                     |           | 0.0       |           | 0.0       | 0.0       | 0.0         |           | 0.0       | 0.0       |           |           |
| Sugar Harvested     | 2.4       | 2.4       | 2.4       | 2.4       | 2.4       | 2.5         | 2.5       | 2.5       | 2.5       | 2.5       | 2.5       |
| Peanuts Planted     | 1.5       | 1.5       | 1.5       | 1.5       | 1.5       | 1.5         | 1.5       | 1.5       | 1.5       | 1.5       | 1.5       |
| 5 Other Crops*      | 7.0       | 7.0       | 6.9       | 7.0       | 7.0       | 7.0         | 7.1       | 7.1       | 7.1       | 7.1       | 7.2       |
| Other CRP Area      | 8.0       | 8.2       | 8.8       | 9.0       | 9.1       | 9.2         | 9.2       | 9.3       | 9.4       | 9.4       | 9.4       |
| Hay Harvested       | 60.0      | 60.4      | 60.1      | 60.0      | 59.9      | 59.9        | 60.0      | 60.0      | 60.1      | 60.2      | 60.3      |
| 15 Crops + Hay      | 353.3     | 351.4     | 351.6     | 352.9     | 354.0     | 354.8       | 355.7     | 356.6     | 357.4     | 357.9     | 358.3     |
| Planted             | 322.8     | 319.9     | 318.1     | 318.4     | 319.0     | 319.5       | 320.2     | 320.8     | 321.4     | 321.9     | 322.3     |
| Annual Idled        | NA        | NA        | NA        | NA        | NA        | NA          | NA        | NA        | NA        | NA        | NA        |
| CRP                 | 30.5      | 31.4      | 33.5      | 34.5      | 35.0      | 35.3        | 35.5      | 35.8      | 36.0      | 36.0      | 36.0      |

<sup>\*</sup> Planted area of sunflowers, edible beans, and flaxseed. Harvested area for tobacco and rye.

**U.S.** Wheat Production

|                             | 98/99        | 99/00        | 00/01        | 01/02        | 02/03        | 03/04              | 04/05        | 05/06        | 06/07        | 07/08        | 08/09        |
|-----------------------------|--------------|--------------|--------------|--------------|--------------|--------------------|--------------|--------------|--------------|--------------|--------------|
|                             |              |              |              |              | (Mil         | lion Acres         | )            |              |              |              |              |
| CRP Idled                   | 9.45         | 9.76         | 10.42        | 10.74        | 10.89        | 10.97              | 11.04        | 11.12        | 11.19        | 11.19        | 11.19        |
| Corn Belt                   | 0.63         | 0.64         | 0.66         | 0.67         | 0.67         | 0.67               | 0.68         | 0.68         | 0.68         | 0.68         | 0.68         |
| Central Plains              | 2.16         | 2.24         | 2.41         | 2.48         | 2.52         | 2.54               | 2.56         | 2.57         | 2.59         | 2.59         | 2.59         |
| Delta States                | 0.22         | 0.21         | 0.23         | 0.23         | 0.24         | 0.24               | 0.24         | 0.24         | 0.24         | 0.24         | 0.24         |
| Far West                    | 0.87         | 0.93         | 1.00         | 1.04         | 1.05         | 1.06               | 1.07         | 1.07         | 1.08         | 1.08         | 1.08         |
| Lake States                 | 0.28         | 0.32         | 0.34         | 0.35         | 0.36         | 0.36               | 0.36         | 0.36         | 0.37         | 0.37         | 0.37         |
| Northeast                   | 0.01         | 0.01         | 0.01         | 0.01         | 0.01         | 0.01               | 0.01         | 0.01         | 0.01         | 0.01         | 0.01         |
| Northern Plains             | 2.88         | 2.96         | 3.17         | 3.26         | 3.31         | 3.33               | 3.36         | 3.38         | 3.40         | 3.40         | 3.40         |
| Southeast                   | 0.38         | 0.35         | 0.37         | 0.38         | 0.38         | 0.38               | 0.39         | 0.39         | 0.39         | 0.39         | 0.39         |
| Southern Plains             | 2.03         | 2.09         | 2.24         | 2.32         | 2.35         | 2.37               | 2.38         | 2.40         | 2.42         | 2.42         | 2.42         |
| Planted Area                | 65.87        | 62.84        | 64.89        | 65.92        | 66.38        | 66.57              | 67.01        | 67.22        | 67.47        | 67.20        | 67.07        |
| Corn Belt                   | 4.54         | 3.70         | 4.07         | 4.21         | 4.24         | 4.26               | 4.31         | 4.32         | 4.35         | 4.30         | 4.27         |
| Central Plains              | 15.41        | 14.65        | 15.19        | 15.37        | 15.39        | 15.39              | 15.44        | 15.44        | 15.47        | 15.38        | 15.32        |
| Delta States                | 1.24         | 1.19         | 1.17         | 1.23         | 1.30         | 1.33               | 1.36         | 1.40         | 1.42         | 1.44         | 1.45         |
| Far West                    | 5.96         | 5.53         | 5.72         | 5.85         | 5.95         | 6.01               | 6.10         | 6.17         | 6.24         | 6.26         | 6.30         |
| Lake States                 | 2.76         | 2.75         | 2.86         | 2.95         | 2.98         | 3.00               | 3.03         | 3.05         | 3.08         | 3.07         | 3.07         |
| Northeast                   | 0.69         | 0.67         | 0.71         | 0.72         | 0.72         | 0.73               | 0.73         | 0.73         | 0.74         | 0.73         | 0.73         |
| Northern Plains             | 19.13        | 18.60        | 19.01        | 19.20        | 19.25        | 19.24              | 19.31        | 19.32        | 19.36        | 19.26        | 19.20        |
| Southeast                   | 3.02         | 2.71         | 2.91         | 2.95         | 2.99         | 2.99               | 2.99         | 3.00         | 2.99         | 2.98         | 2.96         |
| Southern Plains             | 13.12        | 13.04        | 13.25        | 13.44        | 13.56        | 13.62              | 13.72        | 13.78        | 13.83        | 13.79        | 13.77        |
| Harvested Area              | 59.00        | 55.84        | 57.69        | 58.60        | 59.00        | 59.16              | 59.54        | 59.73        | 59.95        | 59.71        | 59.60        |
| Corn Belt                   | 4.29         | 3.46         | 3.81         | 3.94         | 3.97         | 3.98               | 4.04         | 4.05         | 4.07         | 4.02         | 4.00         |
| Central Plains              | 14.51        | 13.78        | 14.24        | 14.40        | 14.42        | 14.41              | 14.46        | 14.46        | 14.48        | 14.40        | 14.35        |
| Delta States                | 1.14         | 1.09         | 1.07         | 1.13         | 1.19         | 1.23               | 1.25         | 1.29         | 1.31         | 1.32         | 1.34         |
| Far West                    | 5.62         | 5.24         | 5.42         | 5.54         | 5.63         | 5.69               | 5.77         | 5.83         | 5.89         | 5.91         | 5.95         |
| Lake States                 | 2.69         | 2.67         | 2.77         | 2.85         | 2.88         | 2.90               | 2.94         | 2.95         | 2.98         | 2.97         | 2.97         |
| Northeast                   | 0.66         | 0.64         | 0.68         | 0.69         | 0.69         | 0.70               | 0.70         | 0.70         | 0.71         | 0.70         | 0.70         |
| Northern Plains             | 18.39        | 17.73        | 18.13        | 18.31        | 18.36        | 18.35              | 18.42        | 18.43        | 18.46        | 18.37        | 18.31        |
| Southeast                   | 2.42         | 2.18         | 2.38         | 2.42         | 2.46         | 2.46               | 2.46         | 2.47         | 2.46         | 2.45         | 2.43         |
| Southern Plains             | 9.27         | 9.05         | 9.19         | 9.32         | 9.40         | 9.44               | 9.51         | 9.55         | 9.58         | 9.56         | 9.55         |
| Viala                       | 40.0         | 20.5         | 20.0         | 20.4         | •            | els per Ac         | •            | 40.0         | 40.0         | 40.0         | 44.4         |
| Yield<br>Corp Bolt          | 43.2         | 38.5         | 38.8         | 39.1         | 39.4         | 39.7               | 40.0         | 40.3         | 40.6         | 40.8         | 41.1         |
| Corn Belt                   | 52.7         | 52.4         | 52.7         | 53.1         | 53.4         | 53.8               | 54.1         | 54.5         | 54.8         | 55.2         | 55.5         |
| Central Plains Delta States | 47.0<br>49.7 | 35.6<br>47.0 | 35.8<br>47.6 | 36.0<br>48.2 | 36.1<br>48.8 | 36.3<br>49.4       | 36.5<br>50.0 | 36.7<br>50.5 | 36.9<br>51.1 | 37.2<br>51.7 | 37.4<br>52.2 |
| Far West                    | 67.9         | 68.5         | 69.0         | 69.5         | 70.1         | 70.6               | 71.1         | 71.7         | 72.2         | 72.7         | 73.2         |
| Lake States                 | 44.1         | 40.7         | 40.8         | 40.9         | 41.0         | 41.1               | 41.2         | 41.3         | 41.4         | 41.5         | 41.6         |
| Northeast                   | 51.4         | 57.4         | 58.3         | 59.2         | 60.0         | 60.9               | 61.7         | 62.5         | 63.3         | 64.1         | 64.8         |
| Northern Plains             | 33.0         | 31.4         | 31.5         | 31.6         | 31.8         | 31.9               | 32.0         | 32.2         | 32.3         | 32.4         | 32.6         |
| Southeast                   | 41.7         | 48.6         | 49.4         | 50.2         | 51.0         | 51.8               | 52.6         | 53.4         | 54.2         | 54.9         | 55.6         |
| Southern Plains             | 37.1         | 28.6         | 28.8         | 28.9         | 29.1         | 29.2               | 29.4         | 29.5         | 29.7         | 29.8         | 30.0         |
|                             | 07.1         | 20.0         | 20.0         | 20.0         |              |                    |              | 20.0         | 20.1         | 20.0         | 00.0         |
| Production                  | 2,550        | 2,149        | 2,241        | 2,294        | 2,328        | on Bushel<br>2,351 | s)<br>2,383  | 2,407        | 2,433        | 2,439        | 2,450        |
| Corn Belt                   | 226          | 181          | 201          | 209          | 212          | 214                | 219          | 220          | 223          | 222          | 222          |
| Central Plains              | 681          | 491          | 509          | 518          | 521          | 524                | 528          | 531          | 535          | 535          | 536          |
| Delta States                | 57           | 51           | 51           | 55           | 58           | 61                 | 63           | 65           | 67           | 68           | 70           |
| Far West                    | 382          | 359          | 374          | 385          | 394          | 402                | 410          | 418          | 425          | 430          | 435          |
| Lake States                 | 119          | 109          | 113          | 117          | 118          | 119                | 121          | 122          | 123          | 123          | 124          |
| Northeast                   | 34           | 37           | 40           | 41           | 42           | 42                 | 43           | 44           | 45           | 45           | 46           |
| Northern Plains             | 607          | 557          | 571          | 579          | 583          | 585                | 590          | 593          | 596          | 596          | 596          |
| Southeast                   | 101          | 106          | 118          | 121          | 126          | 128                | 130          | 132          | 133          | 134          | 135          |
| Southern Plains             | 343          | 259          | 265          | 270          | 273          | 276                | 279          | 282          | 285          | 285          | 287          |

**U.S. Corn Production** 

|                 | 98/99 | 99/00 | 00/01 | 01/02 | 02/03  | 03/04      | 04/05  | 05/06  | 06/07  | 07/08  | 08/09  |
|-----------------|-------|-------|-------|-------|--------|------------|--------|--------|--------|--------|--------|
|                 |       |       |       |       | (Mil   | lion Acres | )      |        |        |        |        |
| CRP Idled       | 3.12  | 3.13  | 3.33  | 3.43  | 3.48   | 3.51       | 3.54   | 3.57   | 3.60   | 3.60   | 3.60   |
| Corn Belt       | 1.48  | 1.46  | 1.56  | 1.61  | 1.64   | 1.65       | 1.67   | 1.69   | 1.70   | 1.70   | 1.70   |
| Central Plains  | 0.34  | 0.34  | 0.36  | 0.37  | 0.38   | 0.38       | 0.38   | 0.38   | 0.39   | 0.39   | 0.39   |
| Delta States    | 0.03  | 0.03  | 0.03  | 0.04  | 0.04   | 0.04       | 0.04   | 0.04   | 0.04   | 0.04   | 0.04   |
| Far West        | 0.01  | 0.01  | 0.01  | 0.01  | 0.01   | 0.01       | 0.01   | 0.01   | 0.01   | 0.01   | 0.01   |
| Lake States     | 0.56  | 0.62  | 0.65  | 0.67  | 0.68   | 0.68       | 0.69   | 0.69   | 0.70   | 0.70   | 0.70   |
| Northeast       | 0.04  | 0.05  | 0.05  | 0.05  | 0.05   | 0.05       | 0.05   | 0.05   | 0.05   | 0.05   | 0.05   |
| Northern Plains | 0.30  | 0.29  | 0.31  | 0.31  | 0.32   | 0.32       | 0.32   | 0.33   | 0.33   | 0.33   | 0.33   |
| Southeast       | 0.28  | 0.26  | 0.27  | 0.28  | 0.29   | 0.29       | 0.29   | 0.29   | 0.29   | 0.29   | 0.29   |
| Southern Plains | 0.08  | 0.08  | 0.09  | 0.09  | 0.09   | 0.09       | 0.09   | 0.09   | 0.09   | 0.09   | 0.09   |
| Planted Area    | 80.19 | 79.67 | 79.53 | 79.85 | 79.71  | 80.02      | 80.47  | 80.50  | 80.74  | 80.80  | 81.09  |
| Corn Belt       | 35.10 | 35.30 | 35.66 | 35.84 | 35.69  | 35.78      | 35.97  | 35.90  | 35.97  | 35.87  | 35.92  |
| Central Plains  | 12.98 | 12.95 | 12.63 | 12.62 | 12.61  | 12.65      | 12.70  | 12.72  | 12.76  | 12.81  | 12.87  |
| Delta States    | 1.49  | 1.30  | 1.37  | 1.39  | 1.40   | 1.42       | 1.45   | 1.46   | 1.48   | 1.49   | 1.51   |
| Far West        | 1.09  | 1.12  | 1.10  | 1.11  | 1.12   | 1.13       | 1.14   | 1.15   | 1.16   | 1.17   | 1.18   |
| Lake States     | 13.30 | 13.12 | 13.10 | 13.18 | 13.17  | 13.23      | 13.31  | 13.33  | 13.38  | 13.40  | 13.45  |
| Northeast       | 3.73  | 3.65  | 3.65  | 3.65  | 3.64   | 3.65       | 3.66   | 3.67   | 3.67   | 3.68   | 3.69   |
| Northern Plains | 5.03  | 5.06  | 4.86  | 4.86  | 4.87   | 4.90       | 4.93   | 4.96   | 4.98   | 5.03   | 5.07   |
| Southeast       | 4.67  | 4.54  | 4.61  | 4.66  | 4.68   | 4.72       | 4.77   | 4.78   | 4.81   | 4.82   | 4.85   |
| Southern Plains | 2.81  | 2.63  | 2.55  | 2.54  | 2.54   | 2.54       | 2.54   | 2.54   | 2.53   | 2.54   | 2.55   |
| Harvested Area  | 72.60 | 73.22 | 73.16 | 73.52 | 73.45  | 73.79      | 74.28  | 74.36  | 74.63  | 74.75  | 75.07  |
| Corn Belt       | 34.04 | 34.34 | 34.71 | 34.91 | 34.78  | 34.88      | 35.09  | 35.04  | 35.12  | 35.05  | 35.12  |
| Central Plains  | 12.47 | 12.37 | 12.06 | 12.06 | 12.04  | 12.09      | 12.13  | 12.15  | 12.19  | 12.24  | 12.29  |
| Delta States    | 1.26  | 1.23  | 1.29  | 1.31  | 1.32   | 1.34       | 1.37   | 1.38   | 1.40   | 1.41   | 1.43   |
| Far West        | 0.50  | 0.58  | 0.57  | 0.57  | 0.58   | 0.59       | 0.60   | 0.61   | 0.61   | 0.62   | 0.63   |
| Lake States     | 11.75 | 11.54 | 11.55 | 11.64 | 11.66  | 11.73      | 11.83  | 11.87  | 11.94  | 11.98  | 12.05  |
| Northeast       | 2.32  | 2.43  | 2.44  | 2.43  | 2.43   | 2.44       | 2.45   | 2.45   | 2.45   | 2.45   | 2.46   |
| Northern Plains | 4.45  | 4.42  | 4.24  | 4.25  | 4.27   | 4.31       | 4.34   | 4.37   | 4.40   | 4.45   | 4.50   |
| Southeast       | 3.67  | 3.96  | 4.02  | 4.08  | 4.10   | 4.15       | 4.20   | 4.22   | 4.25   | 4.27   | 4.31   |
| Southern Plains | 2.16  | 2.35  | 2.28  | 2.27  | 2.27   | 2.27       | 2.27   | 2.27   | 2.27   | 2.27   | 2.28   |
|                 |       |       |       |       |        | els per Ac |        |        |        |        |        |
| Yield           | 134.4 | 129.9 | 131.7 | 133.5 | 135.3  | 137.0      | 138.7  | 140.4  | 142.1  | 143.8  | 145.5  |
| Corn Belt       | 139.8 | 135.7 | 137.5 | 139.3 | 141.3  | 143.1      | 144.9  | 146.8  | 148.6  | 150.4  | 152.2  |
| Central Plains  | 145.5 | 140.8 | 143.0 | 144.9 | 146.9  | 148.8      | 150.6  | 152.5  | 154.3  | 156.1  | 157.9  |
| Delta States    | 86.2  | 114.4 | 116.4 | 118.4 | 120.3  | 122.2      | 124.0  | 125.9  | 127.7  | 129.4  | 131.2  |
| Far West        | 166.9 | 175.1 | 177.2 | 179.2 | 181.1  | 183.0      | 184.9  | 186.7  | 188.5  | 190.2  | 192.0  |
| Lake States     | 141.7 | 122.5 | 123.9 | 125.2 | 126.5  | 127.8      | 129.0  | 130.3  | 131.5  | 132.7  | 134.0  |
| Northeast       | 109.4 | 113.7 | 115.0 | 116.3 | 117.6  | 118.9      | 120.1  | 121.4  | 122.6  | 123.8  | 125.0  |
| Northern Plains | 118.5 | 102.6 | 104.8 | 106.8 | 108.7  | 110.6      | 112.4  | 114.3  | 116.1  | 117.8  | 119.6  |
| Southeast       | 88.4  | 109.6 | 112.0 | 114.2 | 116.5  | 118.8      | 121.0  | 123.2  | 125.4  | 127.6  | 129.8  |
| Southern Plains | 105.6 | 123.3 | 124.7 | 125.9 | 127.2  | 128.4      | 129.6  | 130.8  | 131.9  | 133.1  | 134.2  |
|                 |       |       |       |       | (Milli | on Bushel  | s)     |        |        |        |        |
| Production      | 9,761 | 9,512 | 9,637 | 9,814 | 9,938  | 10,112     | 10,303 | 10,443 | 10,607 | 10,751 | 10,921 |
| Corn Belt       | 4,759 | 4,660 | 4,771 | 4,863 | 4,914  | 4,992      | 5,085  | 5,143  | 5,219  | 5,272  | 5,345  |
| Central Plains  | 1,814 | 1,742 | 1,725 | 1,747 | 1,769  | 1,798      | 1,827  | 1,853  | 1,880  | 1,911  | 1,942  |
| Delta States    | 108   | 140   | 150   | 155   | 159    | 164        | 170    | 174    | 178    | 182    | 187    |
| Far West        | 83    | 102   | 101   | 103   | 105    | 108        | 111    | 113    | 116    | 119    | 122    |
| Lake States     | 1,664 | 1,414 | 1,431 | 1,457 | 1,474  | 1,499      | 1,526  | 1,546  | 1,570  | 1,590  | 1,614  |
| Northeast       | 254   | 276   | 280   | 283   | 286    | 290        | 294    | 297    | 301    | 304    | 308    |
| Northern Plains | 528   | 453   | 445   | 454   | 464    | 476        | 488    | 499    | 511    | 525    | 538    |
| Southeast       | 324   | 434   | 451   | 466   | 478    | 493        | 509    | 521    | 534    | 545    | 560    |
|                 |       |       |       |       | 289    | 292        | 294    | 297    | 299    |        |        |

**U.S. Sorghum Production** 

|                 | 98/99 | 99/00 | 00/01 | 01/02 | 02/03 | 03/04      | 04/05 | 05/06 | 06/07 | 07/08 | 08/09 |
|-----------------|-------|-------|-------|-------|-------|------------|-------|-------|-------|-------|-------|
|                 |       |       |       |       | (Mil  | lion Acres | )     |       |       |       |       |
| CRP Idled       | 2.18  | 2.21  | 2.33  | 2.39  | 2.42  | 2.44       | 2.45  | 2.46  | 2.48  | 2.48  | 2.48  |
| Corn Belt       | 0.16  | 0.16  | 0.16  | 0.16  | 0.17  | 0.17       | 0.17  | 0.17  | 0.17  | 0.17  | 0.17  |
| Central Plains  | 0.87  | 0.89  | 0.94  | 0.97  | 0.98  | 0.99       | 0.99  | 1.00  | 1.01  | 1.01  | 1.01  |
| Delta States    | 0.11  | 0.11  | 0.12  | 0.12  | 0.12  | 0.12       | 0.12  | 0.12  | 0.13  | 0.13  | 0.13  |
| Far West        | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00       | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  |
| Lake States     | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00       | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  |
| Northeast       | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00       | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  |
| Northern Plains | 0.09  | 0.08  | 0.08  | 0.08  | 0.09  | 0.09       | 0.09  | 0.09  | 0.09  | 0.09  | 0.09  |
| Southeast       | 0.08  | 0.08  | 0.08  | 0.09  | 0.09  | 0.09       | 0.09  | 0.09  | 0.09  | 0.09  | 0.09  |
| Southern Plains | 0.87  | 0.89  | 0.94  | 0.97  | 0.98  | 0.98       | 0.99  | 1.00  | 1.00  | 1.00  | 1.00  |
| Planted Area    | 9.63  | 9.90  | 9.66  | 9.67  | 9.73  | 9.82       | 9.88  | 9.89  | 9.90  | 9.95  | 10.01 |
| Corn Belt       | 0.44  | 0.49  | 0.51  | 0.51  | 0.52  | 0.52       | 0.52  | 0.52  | 0.52  | 0.52  | 0.53  |
| Central Plains  | 4.40  | 4.55  | 4.32  | 4.31  | 4.31  | 4.34       | 4.35  | 4.34  | 4.33  | 4.33  | 4.35  |
| Delta States    | 0.31  | 0.28  | 0.30  | 0.31  | 0.31  | 0.32       | 0.33  | 0.33  | 0.33  | 0.33  | 0.34  |
| Northern Plains | 0.20  | 0.19  | 0.18  | 0.18  | 0.18  | 0.18       | 0.18  | 0.19  | 0.19  | 0.19  | 0.19  |
| Southeast       | 0.12  | 0.13  | 0.11  | 0.11  | 0.11  | 0.12       | 0.12  | 0.12  | 0.11  | 0.11  | 0.11  |
| Southern Plains | 0.20  | 4.26  | 4.23  | 4.25  | 4.30  | 4.34       | 4.38  | 4.40  | 4.42  | 4.45  | 4.49  |
| Harvested Area  | 7.84  | 8.93  | 8.83  | 8.84  | 8.90  | 8.98       | 9.03  | 9.04  | 9.05  | 9.09  | 9.15  |
| Corn Belt       | 0.43  | 0.46  | 0.48  | 0.48  | 0.49  | 0.49       | 0.50  | 0.49  | 0.50  | 0.50  | 0.50  |
| Central Plains  | 4.20  | 4.12  | 4.03  | 4.01  | 4.02  | 4.04       | 4.05  | 4.04  | 4.03  | 4.04  | 4.05  |
| Delta States    | 0.29  | 0.27  | 0.28  | 0.29  | 0.29  | 0.30       | 0.30  | 0.31  | 0.31  | 0.31  | 0.32  |
| Northern Plains | 0.14  | 0.12  | 0.11  | 0.11  | 0.11  | 0.12       | 0.12  | 0.12  | 0.12  | 0.12  | 0.12  |
| Southeast       | 0.08  | 0.08  | 0.07  | 0.07  | 0.07  | 0.07       | 0.07  | 0.07  | 0.07  | 0.07  | 0.07  |
| Southern Plains | 2.71  | 3.88  | 3.86  | 3.87  | 3.92  | 3.96       | 3.99  | 4.01  | 4.02  | 4.05  | 4.09  |
|                 |       |       |       |       | (Bush | els per Ac | re)   |       |       |       |       |
| Yield           | 66.3  | 67.5  | 68.1  | 68.7  | 69.2  | 69.8       | 70.3  | 70.8  | 71.3  | 71.8  | 72.3  |
| Corn Belt       | 80.7  | 86.4  | 87.0  | 87.6  | 88.2  | 88.8       | 89.3  | 89.9  | 90.4  | 90.9  | 91.4  |
| Central Plains  | 78.8  | 75.7  | 76.6  | 77.4  | 78.2  | 79.0       | 79.7  | 80.5  | 81.2  | 82.0  | 82.7  |
| Delta States    | 57.5  | 73.0  | 73.8  | 74.6  | 75.4  | 76.2       | 76.9  | 77.7  | 78.4  | 79.2  | 79.9  |
| Northern Plains | 71.0  | 57.8  | 58.9  | 60.0  | 61.2  | 62.3       | 63.4  | 64.4  | 65.5  | 66.6  | 67.7  |
| Southeast       | 50.9  | 64.3  | 65.3  | 66.2  | 67.2  | 68.2       | 69.1  | 70.0  | 71.0  | 71.9  | 72.8  |
| Southern Plains | 45.9  | 56.5  | 56.8  | 57.1  | 57.4  | 57.8       | 58.1  | 58.4  | 58.7  | 59.0  | 59.3  |
|                 |       |       |       |       | ,     | on Bushel  | ,     |       |       |       |       |
| Production      | 520   | 603   | 602   | 607   | 616   | 626        | 635   | 640   | 646   | 653   | 662   |
| Corn Belt       | 34    | 40    | 42    | 42    | 43    | 44         | 44    | 44    | 45    | 45    | 46    |
| Central Plains  | 331   | 312   | 309   | 311   | 314   | 319        | 323   | 325   | 328   | 331   | 335   |
| Delta States    | 17    | 19    | 21    | 21    | 22    | 23         | 23    | 24    | 24    | 25    | 25    |
| Northern Plains | 10    | 7     | 7     | 7     | 7     | 7          | 7     | 8     | 8     | 8     | 8     |
| Southeast       | 4     | 5     | 5     | 5     | 5     | 5          | 5     | 5     | 5     | 5     | 5     |
| Southern Plains | 124   | 219   | 219   | 221   | 225   | 229        | 232   | 234   | 236   | 239   | 243   |

**U.S. Barley Production** 

|                 | 98/99 | 99/00 | 00/01 | 01/02 | 02/03  | 03/04      | 04/05 | 05/06 | 06/07 | 07/08 | 08/09 |
|-----------------|-------|-------|-------|-------|--------|------------|-------|-------|-------|-------|-------|
|                 |       |       |       |       | (Mil   | lion Acres | )     |       |       |       |       |
| CRP Idled       | 2.52  | 2.67  | 2.85  | 2.94  | 2.98   | 3.01       | 3.03  | 3.05  | 3.07  | 3.07  | 3.07  |
| Corn Belt       | 0.00  | 0.00  | 0.00  | 0.00  | 0.00   | 0.00       | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  |
| Central Plains  | 0.18  | 0.19  | 0.20  | 0.21  | 0.21   | 0.21       | 0.21  | 0.21  | 0.21  | 0.21  | 0.21  |
| Delta States    | 0.00  | 0.00  | 0.00  | 0.00  | 0.00   | 0.00       | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  |
| Far West        | 0.60  | 0.63  | 0.68  | 0.70  | 0.71   | 0.72       | 0.72  | 0.73  | 0.73  | 0.73  | 0.73  |
| Lake States     | 0.15  | 0.17  | 0.18  | 0.18  | 0.19   | 0.19       | 0.19  | 0.19  | 0.19  | 0.19  | 0.19  |
| Northeast       | 0.00  | 0.00  | 0.00  | 0.00  | 0.00   | 0.00       | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  |
| Northern Plains | 1.55  | 1.62  | 1.74  | 1.79  | 1.81   | 1.83       | 1.84  | 1.85  | 1.87  | 1.87  | 1.87  |
| Southeast       | 0.02  | 0.02  | 0.02  | 0.02  | 0.02   | 0.02       | 0.02  | 0.02  | 0.02  | 0.02  | 0.02  |
| Southern Plains | 0.03  | 0.03  | 0.03  | 0.03  | 0.03   | 0.03       | 0.03  | 0.03  | 0.04  | 0.04  | 0.04  |
| Planted Area    | 6.34  | 6.15  | 6.04  | 6.09  | 6.05   | 6.09       | 6.10  | 6.10  | 6.08  | 6.11  | 6.15  |
| Central Plains  | 0.11  | 0.10  | 0.10  | 0.09  | 0.09   | 0.09       | 0.09  | 0.09  | 0.09  | 0.09  | 0.10  |
| Far West        | 1.79  | 1.75  | 1.75  | 1.72  | 1.71   | 1.73       | 1.73  | 1.74  | 1.73  | 1.74  | 1.76  |
| Lake States     | 0.55  | 0.56  | 0.53  | 0.53  | 0.52   | 0.53       | 0.53  | 0.52  | 0.52  | 0.52  | 0.52  |
| Northeast       | 0.18  | 0.17  | 0.17  | 0.17  | 0.17   | 0.17       | 0.17  | 0.17  | 0.17  | 0.18  | 0.18  |
| Northern Plains | 3.57  | 3.43  | 3.36  | 3.44  | 3.41   | 3.44       | 3.44  | 3.43  | 3.42  | 3.44  | 3.46  |
| Southeast       | 0.13  | 0.12  | 0.12  | 0.12  | 0.12   | 0.12       | 0.12  | 0.12  | 0.12  | 0.12  | 0.12  |
| Southern Plains | 0.02  | 0.02  | 0.01  | 0.01  | 0.01   | 0.01       | 0.01  | 0.01  | 0.01  | 0.01  | 0.01  |
| Harvested Area  | 5.98  | 5.77  | 5.67  | 5.71  | 5.67   | 5.72       | 5.72  | 5.72  | 5.70  | 5.73  | 5.77  |
| Central Plains  | 0.10  | 0.09  | 0.09  | 0.09  | 0.08   | 0.09       | 0.09  | 0.09  | 0.09  | 0.09  | 0.09  |
| Far West        | 1.68  | 1.65  | 1.65  | 1.62  | 1.62   | 1.63       | 1.63  | 1.64  | 1.63  | 1.64  | 1.66  |
| Lake States     | 0.51  | 0.51  | 0.49  | 0.49  | 0.48   | 0.48       | 0.48  | 0.48  | 0.48  | 0.48  | 0.48  |
| Northeast       | 0.16  | 0.15  | 0.16  | 0.16  | 0.16   | 0.16       | 0.16  | 0.16  | 0.16  | 0.16  | 0.16  |
| Northern Plains | 3.43  | 3.25  | 3.19  | 3.26  | 3.23   | 3.25       | 3.25  | 3.25  | 3.24  | 3.26  | 3.28  |
| Southeast       | 0.10  | 0.10  | 0.10  | 0.10  | 0.10   | 0.10       | 0.10  | 0.10  | 0.10  | 0.10  | 0.10  |
| Southern Plains | 0.01  | 0.01  | 0.01  | 0.01  | 0.01   | 0.01       | 0.01  | 0.01  | 0.01  | 0.01  | 0.01  |
|                 |       |       |       |       | (Bush  | els per Ac | re)   |       |       |       |       |
| Yield           | 58.9  | 61.6  | 62.3  | 62.6  | 63.2   | 63.8       | 64.3  | 64.9  | 65.4  | 66.0  | 66.5  |
| Central Plains  | 103.2 | 100.5 | 102.3 | 104.0 | 105.7  | 107.4      | 109.0 | 110.6 | 112.2 | 113.7 | 115.2 |
| Far West        | 72.8  | 76.7  | 77.4  | 78.1  | 78.7   | 79.3       | 80.0  | 80.6  | 81.2  | 81.7  | 82.3  |
| Lake States     | 54.4  | 58.1  | 58.4  | 58.7  | 59.0   | 59.3       | 59.6  | 59.9  | 60.2  | 60.5  | 60.8  |
| Northeast       | 64.5  | 75.5  | 76.6  | 77.7  | 78.8   | 79.8       | 80.8  | 81.9  | 82.9  | 83.9  | 84.8  |
| Northern Plains | 51.2  | 52.2  | 52.8  | 53.2  | 53.7   | 54.2       | 54.6  | 55.1  | 55.6  | 56.0  | 56.5  |
| Southeast       | 59.9  | 77.3  | 78.6  | 80.0  | 81.3   | 82.6       | 83.8  | 85.1  | 86.3  | 87.5  | 88.7  |
| Southern Plains | 45.0  | 40.0  | 40.1  | 40.2  | 40.3   | 40.4       | 40.5  | 40.6  | 40.7  | 40.8  | 40.9  |
|                 |       |       |       |       | (Milli | on Bushel  | s)    |       |       |       |       |
| Production      | 352   | 356   | 353   | 358   | 359    | 365        | 368   | 371   | 373   | 378   | 383   |
| Central Plains  | 10    | 9     | 9     | 9     | 9      | 9          | 9     | 10    | 10    | 10    | 10    |
| Far West        | 122   | 127   | 127   | 127   | 127    | 129        | 131   | 132   | 133   | 134   | 136   |
| Lake States     | 28    | 30    | 29    | 29    | 28     | 29         | 29    | 29    | 29    | 29    | 29    |
| Northeast       | 11    | 12    | 12    | 12    | 12     | 13         | 13    | 13    | 13    | 13    | 13    |
| Northern Plains | 176   | 170   | 168   | 173   | 174    | 176        | 178   | 179   | 180   | 182   | 185   |
| Southeast       | 6     | 8     | 8     | 8     | 8      | 8          | 8     | 8     | 9     | 9     | ç     |
| Southern Plains | 0     | 0     | 0     | 0     | 0      | 0          | 0     | 0     | 0     | 0     | (     |

**U.S. Oat Production** 

|                              | 98/99        | 99/00        | 00/01        | 01/02        | 02/03         | 03/04            | 04/05        | 05/06        | 06/07        | 07/08        | 08/09        |
|------------------------------|--------------|--------------|--------------|--------------|---------------|------------------|--------------|--------------|--------------|--------------|--------------|
|                              |              |              |              |              | (Mil          | lion Acres       | )            |              |              |              |              |
| CRP Idled                    | 1.16         | 1.17         | 1.23         | 1.26         | 1.28          | 1.29             | 1.30         | 1.30         | 1.31         | 1.31         | 1.31         |
| Corn Belt                    | 0.15         | 0.15         | 0.15         | 0.15         | 0.15          | 0.15             | 0.15         | 0.15         | 0.15         | 0.15         | 0.15         |
| Central Plains               | 0.13         | 0.14         | 0.15         | 0.15         | 0.15          | 0.15             | 0.15         | 0.16         | 0.16         | 0.16         | 0.16         |
| Delta States                 | 0.01         | 0.01         | 0.01         | 0.01         | 0.01          | 0.01             | 0.01         | 0.01         | 0.01         | 0.01         | 0.01         |
| Far West                     | 0.01         | 0.01         | 0.02         | 0.02         | 0.02          | 0.02             | 0.02         | 0.02         | 0.02         | 0.02         | 0.02         |
| Lake States                  | 0.19         | 0.21         | 0.23         | 0.23         | 0.23          | 0.24             | 0.24         | 0.24         | 0.24         | 0.24         | 0.24         |
| Northeast                    | 0.02         | 0.02         | 0.02         | 0.02         | 0.02          | 0.02             | 0.02         | 0.02         | 0.02         | 0.02         | 0.02         |
| Northern Plains              | 0.56         | 0.54         | 0.58         | 0.60         | 0.60          | 0.61             | 0.61         | 0.62         | 0.62         | 0.62         | 0.62         |
| Southeast<br>Southern Plains | 0.03<br>0.06 | 0.03<br>0.06 | 0.03         | 0.03<br>0.06 | 0.03          | 0.03<br>0.06     | 0.03         | 0.03<br>0.07 | 0.03<br>0.07 | 0.03<br>0.07 | 0.03<br>0.07 |
|                              |              |              | 0.06         |              | 0.06          |                  | 0.06         |              |              |              |              |
| Planted Area                 | 4.90         | 4.58         | 4.42         | 4.42         | 4.44          | 4.44             | 4.42         | 4.40         | 4.38         | 4.37         | 4.35         |
| Corn Belt                    | 0.56         | 0.52         | 0.51         | 0.52         | 0.53          | 0.53             | 0.53         | 0.52         | 0.52         | 0.51         | 0.50         |
| Central Plains               | 0.37         | 0.32         | 0.29         | 0.29         | 0.29          | 0.29             | 0.29         | 0.29         | 0.29         | 0.29         | 0.29         |
| Delta States                 | 0.01         | 0.01         | 0.01         | 0.01         | 0.01          | 0.01             | 0.01         | 0.01         | 0.01         | 0.01         | 0.01         |
| Far West                     | 0.55         | 0.54         | 0.54         | 0.54         | 0.54          | 0.54             | 0.54         | 0.54         | 0.54         | 0.54         | 0.54         |
| Lake States                  | 0.90         | 0.90         | 0.88         | 0.88         | 0.88          | 0.86             | 0.85         | 0.84         | 0.82         | 0.81         | 0.80         |
| Northeast                    | 0.35         | 0.33         | 0.33         | 0.33         | 0.33          | 0.33             | 0.33         | 0.33         | 0.33         | 0.32         | 0.32         |
| Northern Plains              | 1.35         | 1.17         | 1.10         | 1.10         | 1.11          | 1.12             | 1.12         | 1.12         | 1.12         | 1.13         | 1.13         |
| Southeast<br>Southern Plains | 0.17<br>0.66 | 0.14<br>0.64 | 0.13<br>0.62 | 0.13<br>0.62 | 0.13<br>0.62  | 0.13<br>0.62     | 0.13<br>0.62 | 0.13<br>0.62 | 0.13<br>0.62 | 0.13<br>0.62 | 0.13<br>0.62 |
|                              |              |              |              |              |               |                  |              |              |              |              |              |
| Harvested Area               | 2.77         | 2.60         | 2.48         | 2.48         | 2.50          | 2.49             | 2.48         | 2.46         | 2.45         | 2.44         | 2.42         |
| Corn Belt                    | 0.40         | 0.37         | 0.36         | 0.37         | 0.37          | 0.37             | 0.37         | 0.37         | 0.37         | 0.36         | 0.36         |
| Central Plains               | 0.18         | 0.17         | 0.15         | 0.15         | 0.15          | 0.15             | 0.15         | 0.15         | 0.15         | 0.15         | 0.15         |
| Delta States                 | 0.01         | 0.01         | 0.01         | 0.01         | 0.01          | 0.01             | 0.01         | 0.01         | 0.01         | 0.01         | 0.01         |
| Far West                     | 0.12         | 0.11         | 0.11         | 0.11         | 0.11          | 0.11             | 0.11         | 0.11         | 0.11         | 0.11         | 0.11         |
| Lake States                  | 0.72         | 0.67         | 0.66         | 0.66         | 0.66          | 0.64             | 0.63         | 0.62         | 0.61         | 0.59         | 0.58         |
| Northeast<br>Northern Plains | 0.30<br>0.80 | 0.28<br>0.76 | 0.28<br>0.69 | 0.28<br>0.69 | 0.28<br>0.70  | 0.28<br>0.71     | 0.28<br>0.71 | 0.28<br>0.71 | 0.28<br>0.71 | 0.28<br>0.72 | 0.28<br>0.72 |
| Southeast                    | 0.09         | 0.78         | 0.08         | 0.08         | 0.70          | 0.71             | 0.71         | 0.71         | 0.71         | 0.72         | 0.72         |
| Southern Plains              | 0.16         | 0.08         | 0.08         | 0.08         | 0.08          | 0.08             | 0.00         | 0.08         | 0.08         | 0.08         | 0.08         |
| Council Figure               | 0.10         | 0.14         | 0.14         | 0.14         |               |                  |              | 0.14         | 0.14         | 0.14         | 0.14         |
| Wald                         | 00.4         | 50.0         | 00.0         | 00.0         |               | els per Ac       | •            | 00.0         | 00.0         | 00.0         | 00.0         |
| Yield                        | 60.4         | 59.9         | 60.3         | 60.6         | 61.0          | 61.3             | 61.6         | 62.0         | 62.3         | 62.6         | 62.9         |
| Corn Belt                    | 58.9         | 64.6         | 64.7         | 64.8         | 64.9          | 65.0             | 65.2         | 65.3         | 65.4         | 65.5         | 65.5         |
| Central Plains               | 54.3         | 57.7         | 58.4         | 59.1         | 59.7          | 60.4             | 61.0         | 61.6         | 62.3         | 62.9         | 63.5         |
| Delta States<br>Far West     | 80.0<br>84.9 | 78.5<br>84.8 | 79.2<br>85.6 | 79.8<br>86.3 | 80.5<br>86.9  | 81.1<br>87.6     | 81.8<br>88.3 | 82.4<br>88.9 | 83.1<br>89.5 | 83.7<br>90.1 | 84.3<br>90.8 |
| Lake States                  | 62.0         | 59.3         | 59.5         | 59.6         | 59.8          | 59.9             | 60.0         | 60.1         | 60.2         | 60.3         | 60.4         |
| Northeast                    | 57.6         | 60.4         | 60.5         | 60.6         | 60.6          | 60.7             | 60.7         | 60.8         | 60.8         | 60.9         | 61.0         |
| Northern Plains              | 69.3         | 57.4         | 58.1         | 58.8         | 59.4          | 60.1             | 60.8         | 61.4         | 62.1         | 62.7         | 63.4         |
| Southeast                    | 50.9         | 60.1         | 60.4         | 60.6         | 60.9          | 61.1             | 61.4         | 61.6         | 61.8         | 62.1         | 62.3         |
| Southern Plains              | 51.1         | 44.0         | 44.1         | 44.3         | 44.5          | 44.7             | 44.9         | 45.1         | 45.2         | 45.4         | 45.6         |
|                              |              |              |              |              |               |                  |              |              |              |              |              |
| Production                   | 167          | 156          | 150          | 150          | (MIIII<br>152 | on Bushel<br>153 | s)<br>153    | 153          | 152          | 153          | 152          |
| Corn Belt                    | 23           | 24           | 24           | 24           | 24            | 24               | 24           | 24           | 24           | 24           | 24           |
| Central Plains               | 23<br>10     | 10           | 9            | 9            | 9             | 9                | 9            | 9            | 9            | 9            | 9            |
| Delta States                 | 10           | 10           | 1            | 1            | 1             | 1                | 1            | 1            | 1            | 1            | 1            |
| Far West                     | 10           | 10           | 9            | 9            | 9             | 9                | 9            | 10           | 10           | 10           | 10           |
| Lake States                  | 44           | 40           | 39           | 39           | 39            | 39               | 38           | 37           | 37           | 36           | 35           |
| Northeast                    | 17           | 17           | 17           | 17           | 17            | 17               | 17           | 17           | 17           | 17           | 17           |
| Northern Plains              | 56           | 43           | 40           | 40           | 42            | 42               | 43           | 44           | 44           | 45           | 46           |
| Southeast                    | 4            | 5            | 5            | 5            | 5             | 5                | 5            | 5            | 5            | 5            | 5            |
| Southern Plains              | 8            | 6            | 6            | 6            | 6             | 6                | 6            | 6            | 6            | 6            | 6            |

**U.S. Hay Production** 

|                 | 98/99 | 99/00 | 00/01 | 01/02 | 02/03 | 03/04      | 04/05              | 05/06 | 06/07 | 07/08 | 08/09 |
|-----------------|-------|-------|-------|-------|-------|------------|--------------------|-------|-------|-------|-------|
|                 |       |       |       |       | (Mil  | lion Acres | )                  |       |       |       |       |
| Harvested Area  | 60.02 | 60.40 | 60.12 | 60.00 | 59.93 | 59.91      | <sup>′</sup> 59.96 | 60.03 | 60.14 | 60.23 | 60.26 |
| Corn Belt       | 8.25  | 8.24  | 8.16  | 8.13  | 8.12  | 8.12       | 8.13               | 8.14  | 8.16  | 8.18  | 8.18  |
| Central Plains  | 7.51  | 7.52  | 7.51  | 7.49  | 7.48  | 7.47       | 7.46               | 7.45  | 7.45  | 7.44  | 7.44  |
| Delta States    | 2.30  | 2.34  | 2.30  | 2.30  | 2.30  | 2.31       | 2.32               | 2.32  | 2.33  | 2.34  | 2.34  |
| Far West        | 6.16  | 6.24  | 6.15  | 6.12  | 6.11  | 6.11       | 6.10               | 6.10  | 6.10  | 6.09  | 6.09  |
| Lake States     | 6.05  | 6.03  | 5.95  | 5.90  | 5.86  | 5.82       | 5.79               | 5.76  | 5.74  | 5.72  | 5.69  |
| Northeast       | 4.80  | 4.70  | 4.60  | 4.56  | 4.55  | 4.54       | 4.54               | 4.54  | 4.54  | 4.55  | 4.55  |
| Northern Plains | 10.29 | 10.50 | 10.56 | 10.56 | 10.55 | 10.54      | 10.55              | 10.56 | 10.57 | 10.58 | 10.59 |
| Southeast       | 8.02  | 8.19  | 8.10  | 8.06  | 8.06  | 8.08       | 8.11               | 8.16  | 8.21  | 8.26  | 8.29  |
| Southern Plains | 6.65  | 6.63  | 6.80  | 6.87  | 6.90  | 6.93       | 6.97               | 7.00  | 7.04  | 7.07  | 7.09  |
|                 |       |       |       |       | (Tor  | s per Acre | e)                 |       |       |       |       |
| Yield           | 2.52  | 2.56  | 2.58  | 2.59  | 2.60  | 2.62       | 2.63               | 2.64  | 2.65  | 2.67  | 2.68  |
| Corn Belt       | 2.79  | 2.68  | 2.69  | 2.70  | 2.71  | 2.71       | 2.72               | 2.73  | 2.74  | 2.75  | 2.76  |
| Central Plains  | 2.70  | 2.54  | 2.56  | 2.58  | 2.61  | 2.63       | 2.65               | 2.67  | 2.69  | 2.71  | 2.74  |
| Delta States    | 2.05  | 2.32  | 2.33  | 2.34  | 2.35  | 2.36       | 2.37               | 2.38  | 2.39  | 2.40  | 2.41  |
| Far West        | 4.27  | 4.24  | 4.28  | 4.32  | 4.36  | 4.39       | 4.43               | 4.46  | 4.49  | 4.53  | 4.56  |
| Lake States     | 2.82  | 2.88  | 2.88  | 2.88  | 2.88  | 2.88       | 2.88               | 2.88  | 2.88  | 2.88  | 2.88  |
| Northeast       | 2.16  | 2.26  | 2.26  | 2.27  | 2.28  | 2.28       | 2.29               | 2.29  | 2.30  | 2.30  | 2.31  |
| Northern Plains | 1.93  | 1.89  | 1.90  | 1.91  | 1.92  | 1.93       | 1.94               | 1.94  | 1.95  | 1.96  | 1.97  |
| Southeast       | 2.25  | 2.29  | 2.32  | 2.35  | 2.38  | 2.40       | 2.43               | 2.45  | 2.48  | 2.50  | 2.52  |
| Southern Plains | 1.77  | 2.30  | 2.30  | 2.30  | 2.30  | 2.30       | 2.30               | 2.31  | 2.31  | 2.31  | 2.31  |
|                 |       |       |       |       | (Mi   | llion Tons | )                  |       |       |       |       |
| Production      | 151.3 | 154.9 | 154.8 | 155.3 | 156.0 | 156.7      | 157.6              | 158.6 | 159.6 | 160.5 | 161.3 |
| Corn Belt       | 23.0  | 22.1  | 21.9  | 21.9  | 22.0  | 22.0       | 22.1               | 22.2  | 22.4  | 22.5  | 22.6  |
| Central Plains  | 20.3  | 19.1  | 19.2  | 19.3  | 19.5  | 19.6       | 19.8               | 19.9  | 20.1  | 20.2  | 20.3  |
| Delta States    | 4.7   | 5.4   | 5.4   | 5.4   | 5.4   | 5.5        | 5.5                | 5.5   | 5.6   | 5.6   | 5.6   |
| Far West        | 26.3  | 26.5  | 26.3  | 26.4  | 26.6  | 26.8       | 27.0               | 27.2  | 27.4  | 27.6  | 27.8  |
| Lake States     | 17.0  | 17.3  | 17.1  | 17.0  | 16.9  | 16.8       | 16.7               | 16.6  | 16.5  | 16.5  | 16.4  |
| Northeast       | 10.4  | 10.6  | 10.4  | 10.4  | 10.3  | 10.3       | 10.4               | 10.4  | 10.4  | 10.5  | 10.5  |
| Northern Plains | 19.8  | 19.8  | 20.0  | 20.1  | 20.2  | 20.3       | 20.4               | 20.5  | 20.6  | 20.8  | 20.9  |
| Southeast       | 18.0  | 18.8  | 18.8  | 18.9  | 19.2  | 19.4       | 19.7               | 20.0  | 20.3  | 20.6  | 20.9  |
| Southern Plains | 11.8  | 15.3  | 15.6  | 15.8  | 15.9  | 16.0       | 16.1               | 16.1  | 16.2  | 16.3  | 16.4  |

**U.S. Soybean Production** 

|                 | 98/99 | 99/00 | 00/01 | 01/02 | 02/03  | 03/04       | 04/05 | 05/06 | 06/07 | 07/08 | 08/09 |
|-----------------|-------|-------|-------|-------|--------|-------------|-------|-------|-------|-------|-------|
|                 |       |       |       |       | (Mil   | llion Acres | )     |       |       |       |       |
| CRP Idled       | 2.82  | 2.97  | 3.20  | 3.31  | 3.38   | 3.41        | 3.44  | 3.48  | 3.51  | 3.51  | 3.51  |
| Corn Belt       | 1.60  | 1.75  | 1.85  | 1.90  | 1.93   | 1.95        | 1.96  | 1.98  | 1.99  | 1.99  | 1.99  |
| Central Plains  | 0.11  | 0.11  | 0.13  | 0.14  | 0.15   | 0.15        | 0.16  | 0.16  | 0.16  | 0.16  | 0.16  |
| Delta States    | 0.36  | 0.37  | 0.40  | 0.41  | 0.42   | 0.42        | 0.42  | 0.43  | 0.43  | 0.43  | 0.43  |
| Far West        | 0.00  | 0.00  | 0.00  | 0.00  | 0.00   | 0.00        | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  |
| Lake States     | 0.36  | 0.41  | 0.44  | 0.45  | 0.46   | 0.46        | 0.47  | 0.47  | 0.48  | 0.48  | 0.48  |
| Northeast       | 0.04  | 0.04  | 0.04  | 0.04  | 0.04   | 0.04        | 0.04  | 0.04  | 0.04  | 0.04  | 0.04  |
| Northern Plains | 0.19  | 0.18  | 0.20  | 0.20  | 0.21   | 0.21        | 0.21  | 0.21  | 0.22  | 0.22  | 0.22  |
| Southeast       | 0.11  | 0.07  | 0.11  | 0.12  | 0.13   | 0.14        | 0.14  | 0.14  | 0.15  | 0.15  | 0.15  |
| Southern Plains | 0.04  | 0.04  | 0.04  | 0.04  | 0.04   | 0.04        | 0.04  | 0.04  | 0.04  | 0.04  | 0.04  |
| Planted Area    | 72.38 | 72.72 | 70.39 | 69.71 | 70.20  | 70.27       | 70.02 | 70.39 | 70.36 | 70.86 | 70.98 |
| Corn Belt       | 36.40 | 36.30 | 35.35 | 34.97 | 35.14  | 35.09       | 34.86 | 34.98 | 34.90 | 35.11 | 35.11 |
| Central Plains  | 6.35  | 6.53  | 6.23  | 6.15  | 6.26   | 6.35        | 6.40  | 6.52  | 6.60  | 6.74  | 6.83  |
| Delta States    | 6.80  | 6.67  | 6.39  | 6.47  | 6.58   | 6.64        | 6.67  | 6.74  | 6.76  | 6.81  | 6.84  |
| Lake States     | 9.95  | 10.10 | 9.76  | 9.60  | 9.63   | 9.61        | 9.54  | 9.56  | 9.53  | 9.57  | 9.57  |
| Northeast       | 1.31  | 1.30  | 1.24  | 1.23  | 1.23   | 1.23        | 1.21  | 1.21  | 1.20  | 1.21  | 1.20  |
| Northern Plains | 5.00  | 5.25  | 5.01  | 4.88  | 4.87   | 4.88        | 4.87  | 4.89  | 4.89  | 4.94  | 4.96  |
| Southeast       | 5.66  | 5.68  | 5.54  | 5.56  | 5.62   | 5.62        | 5.61  | 5.63  | 5.62  | 5.62  | 5.61  |
| Southern Plains | 0.91  | 0.89  | 0.87  | 0.86  | 0.86   | 0.86        | 0.85  | 0.86  | 0.86  | 0.86  | 0.86  |
| Harvested Area  | 70.81 | 71.67 | 69.38 | 68.71 | 69.19  | 69.26       | 69.00 | 69.37 | 69.34 | 69.83 | 69.95 |
| Corn Belt       | 36.19 | 36.01 | 35.07 | 34.70 | 34.87  | 34.81       | 34.58 | 34.70 | 34.63 | 34.83 | 34.83 |
| Central Plains  | 6.25  | 6.41  | 6.12  | 6.05  | 6.16   | 6.24        | 6.29  | 6.40  | 6.48  | 6.62  | 6.71  |
| Delta States    | 6.47  | 6.53  | 6.26  | 6.34  | 6.44   | 6.50        | 6.53  | 6.60  | 6.62  | 6.67  | 6.70  |
| Lake States     | 9.79  | 9.95  | 9.62  | 9.45  | 9.48   | 9.46        | 9.39  | 9.41  | 9.38  | 9.43  | 9.42  |
| Northeast       | 1.18  | 1.28  | 1.22  | 1.21  | 1.21   | 1.21        | 1.19  | 1.19  | 1.18  | 1.18  | 1.18  |
| Northern Plains | 4.95  | 5.17  | 4.94  | 4.81  | 4.80   | 4.81        | 4.80  | 4.82  | 4.82  | 4.87  | 4.89  |
| Southeast       | 5.38  | 5.48  | 5.35  | 5.36  | 5.42   | 5.43        | 5.42  | 5.44  | 5.43  | 5.43  | 5.41  |
| Southern Plains | 0.61  | 0.83  | 0.81  | 0.80  | 0.80   | 0.80        | 0.80  | 0.80  | 0.80  | 0.80  | 0.80  |
|                 |       |       |       |       | (Bush  | els per Ac  | re)   |       |       |       |       |
| Yield           | 38.9  | 39.1  | 39.8  | 40.5  | 41.0   | 41.6        | 42.2  | 42.8  | 43.4  | 43.9  | 44.5  |
| Corn Belt       | 43.5  | 43.2  | 43.9  | 44.7  | 45.4   | 46.2        | 47.0  | 47.6  | 48.3  | 48.9  | 49.6  |
| Central Plains  | 38.4  | 39.7  | 40.4  | 41.1  | 41.7   | 42.4        | 43.1  | 43.7  | 44.4  | 45.0  | 45.6  |
| Delta States    | 24.0  | 30.4  | 30.8  | 31.1  | 31.4   | 31.7        | 32.0  | 32.2  | 32.5  | 32.8  | 33.0  |
| Lake States     | 42.0  | 38.7  | 39.2  | 39.7  | 40.0   | 40.4        | 40.8  | 41.2  | 41.5  | 41.8  | 42.2  |
| Northeast       | 34.1  | 35.2  | 35.7  | 36.1  | 36.5   | 36.9        | 37.4  | 37.8  | 38.2  | 38.6  | 39.0  |
| Northern Plains | 36.8  | 32.5  | 33.1  | 33.7  | 34.2   | 34.7        | 35.2  | 35.7  | 36.2  | 36.7  | 37.1  |
| Southeast       | 26.6  | 31.7  | 32.5  | 33.2  | 33.8   | 34.5        | 35.2  | 35.8  | 36.5  | 37.2  | 37.8  |
| Southern Plains | 19.8  | 28.0  | 28.3  | 28.7  | 29.1   | 29.4        | 29.8  | 30.1  | 30.5  | 30.8  | 31.2  |
|                 |       |       |       |       | (Milli | ion Bushel  | s)    |       |       |       |       |
| Production      | 2,757 | 2,805 | 2,759 | 2,779 | 2,838  | 2,882       | 2,915 | 2,969 | 3,008 | 3,066 | 3,111 |
| Corn Belt       | 1,573 | 1,556 | 1,538 | 1,553 | 1,583  | 1,607       | 1,624 | 1,652 | 1,674 | 1,705 | 1,729 |
| Central Plains  | 240   | 255   | 247   | 248   | 257    | 265         | 271   | 280   | 288   | 298   | 306   |
| Delta States    | 155   | 199   | 193   | 197   | 202    | 206         | 209   | 213   | 215   | 219   | 221   |
| Lake States     | 411   | 385   | 377   | 375   | 380    | 382         | 383   | 387   | 390   | 394   | 397   |
| Northeast       | 40    | 45    | 43    | 44    | 44     | 45          | 45    | 45    | 45    | 46    | 46    |
| Northern Plains | 182   | 168   | 163   | 162   | 164    | 167         | 169   | 172   | 175   | 178   | 182   |
| Southeast       | 143   | 174   | 174   | 178   | 183    | 187         | 191   | 195   | 198   | 202   | 205   |
| Southern Plains | 12    | 23    | 23    | 23    | 23     | 23          | 24    | 24    | 24    | 25    | 25    |

**U.S. Rice Production** 

|                | 98/99 | 99/00 | 00/01 | 01/02 | 02/03 | 03/04      | 04/05 | 05/06 | 06/07 | 07/08 | 08/09 |
|----------------|-------|-------|-------|-------|-------|------------|-------|-------|-------|-------|-------|
|                |       |       |       |       | (Mil  | lion Acres | )     |       |       |       |       |
| CRP Idled      | 0.013 | 0.013 | 0.013 | 0.014 | 0.014 | 0.014      | 0.014 | 0.014 | 0.014 | 0.014 | 0.014 |
| Arkansas       | 0.007 | 0.007 | 0.007 | 0.007 | 0.007 | 0.008      | 0.008 | 0.008 | 0.008 | 0.008 | 0.008 |
| California     | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000      | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Louisiana      | 0.003 | 0.003 | 0.004 | 0.004 | 0.004 | 0.004      | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 |
| Mississippi    | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002      | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 |
| Missouri       | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000      | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Texas          | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000      | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Planted Area   | 3.345 | 3.455 | 3.385 | 3.365 | 3.362 | 3.339      | 3.343 | 3.315 | 3.311 | 3.291 | 3.279 |
| Arkansas       | 1.540 | 1.600 | 1.591 | 1.583 | 1.579 | 1.567      | 1.569 | 1.553 | 1.550 | 1.536 | 1.529 |
| California     | 0.480 | 0.495 | 0.467 | 0.462 | 0.465 | 0.463      | 0.464 | 0.463 | 0.465 | 0.469 | 0.471 |
| Louisiana      | 0.625 | 0.640 | 0.635 | 0.631 | 0.630 | 0.626      | 0.627 | 0.621 | 0.619 | 0.614 | 0.612 |
| Mississippi    | 0.270 | 0.290 | 0.276 | 0.275 | 0.275 | 0.273      | 0.273 | 0.271 | 0.271 | 0.269 | 0.268 |
| Missouri       | 0.145 | 0.155 | 0.152 | 0.151 | 0.150 | 0.149      | 0.150 | 0.148 | 0.148 | 0.147 | 0.147 |
| Texas          | 0.285 | 0.275 | 0.264 | 0.263 | 0.263 | 0.261      | 0.261 | 0.258 | 0.258 | 0.255 | 0.253 |
| Harvested Area | 3.317 | 3.424 | 3.355 | 3.335 | 3.333 | 3.310      | 3.314 | 3.287 | 3.283 | 3.263 | 3.252 |
| Arkansas       | 1.525 | 1.585 | 1.577 | 1.568 | 1.565 | 1.553      | 1.555 | 1.540 | 1.536 | 1.523 | 1.516 |
| California     | 0.478 | 0.493 | 0.465 | 0.461 | 0.463 | 0.461      | 0.462 | 0.461 | 0.463 | 0.467 | 0.469 |
| Louisiana      | 0.620 | 0.636 | 0.631 | 0.628 | 0.627 | 0.622      | 0.623 | 0.617 | 0.616 | 0.611 | 0.608 |
| Mississippi    | 0.268 | 0.288 | 0.274 | 0.273 | 0.272 | 0.270      | 0.271 | 0.269 | 0.269 | 0.267 | 0.265 |
| Missouri       | 0.143 | 0.149 | 0.146 | 0.145 | 0.144 | 0.143      | 0.144 | 0.142 | 0.142 | 0.142 | 0.141 |
| Texas          | 0.283 | 0.274 | 0.263 | 0.262 | 0.262 | 0.259      | 0.260 | 0.257 | 0.256 | 0.254 | 0.252 |
|                |       |       |       |       | ,     | nds per Ac | ,     |       |       |       |       |
| Yield          | 5,669 | 5,949 | 5,988 | 6,031 | 6,073 | 6,118      | 6,155 | 6,200 | 6,239 | 6,283 | 6,323 |
| Arkansas       | 5,798 | 5,797 | 5,854 | 5,910 | 5,962 | 6,018      | 6,065 | 6,120 | 6,169 | 6,221 | 6,270 |
| California     | 6,841 | 8,276 | 8,395 | 8,459 | 8,507 | 8,562      | 8,611 | 8,661 | 8,705 | 8,743 | 8,782 |
| Louisiana      | 4,533 | 4,723 | 4,749 | 4,774 | 4,798 | 4,822      | 4,844 | 4,868 | 4,890 | 4,914 | 4,936 |
| Mississippi    | 5,800 | 5,870 | 5,916 | 5,955 | 5,993 | 6,030      | 6,066 | 6,102 | 6,136 | 6,171 | 6,205 |
| Missouri       | 5,200 | 5,337 | 5,364 | 5,389 | 5,413 | 5,437      | 5,460 | 5,483 | 5,505 | 5,527 | 5,549 |
| Texas          | 5,599 | 5,907 | 5,927 | 5,932 | 5,936 | 5,943      | 5,947 | 5,955 | 5,959 | 5,967 | 5,974 |
|                |       |       |       |       |       | Hundredwe  |       |       |       |       |       |
| Production     | 188.1 | 203.7 | 200.9 | 201.2 | 202.4 | 202.5      | 204.0 | 203.8 | 204.8 | 205.0 | 205.6 |
| Arkansas       | 88.4  | 91.9  | 92.3  | 92.7  | 93.3  | 93.5       | 94.3  | 94.2  | 94.8  | 94.8  | 95.1  |
| California     | 32.7  | 40.8  | 39.0  | 39.0  | 39.4  | 39.5       | 39.8  | 40.0  | 40.3  | 40.8  | 41.2  |
| Louisiana      | 28.1  | 30.1  | 30.0  | 30.0  | 30.1  | 30.0       | 30.2  | 30.0  | 30.1  | 30.0  | 30.0  |
| Mississippi    | 15.5  | 16.9  | 16.2  | 16.2  | 16.3  | 16.3       | 16.5  | 16.4  | 16.5  | 16.4  | 16.5  |
| Missouri       | 7.4   | 7.9   | 7.8   | 7.8   | 7.8   | 7.8        | 7.8   | 7.8   | 7.8   | 7.8   | 7.8   |
| Texas          | 15.8  | 16.2  | 15.6  | 15.5  | 15.5  | 15.4       | 15.4  | 15.3  | 15.3  | 15.2  | 15.0  |

**U.S. Upland Cotton Production** 

|                 | 98/99 | 99/00 | 00/01 | 01/02 | 02/03 | 03/04       | 04/05 | 05/06 | 06/07 | 07/08 | 08/09 |
|-----------------|-------|-------|-------|-------|-------|-------------|-------|-------|-------|-------|-------|
|                 |       |       |       |       | (Mil  | lion Acres  | )     |       |       |       |       |
| CRP Idled       | 1.24  | 1.27  | 1.36  | 1.41  | 1.43  | 1.44        | 1.45  | 1.46  | 1.47  | 1.47  | 1.47  |
| Corn Belt       | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00        | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  |
| Central Plains  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00        | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  |
| Delta States    | 0.06  | 0.06  | 0.07  | 0.07  | 0.07  | 0.07        | 0.07  | 0.07  | 0.07  | 0.07  | 0.07  |
| Far West        | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00        | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  |
| Lake States     | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00        | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  |
| Northeast       | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00        | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  |
| Northern Plains | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00        | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  |
| Southeast       | 0.05  | 0.05  | 0.05  | 0.05  | 0.05  | 0.05        | 0.05  | 0.05  | 0.05  | 0.05  | 0.05  |
| Southern Plains | 1.13  | 1.16  | 1.24  | 1.29  | 1.30  | 1.31        | 1.32  | 1.33  | 1.34  | 1.34  | 1.34  |
| Planted Area    | 13.09 | 13.21 | 12.71 | 12.44 | 12.16 | 12.06       | 11.94 | 11.87 | 11.89 | 11.95 | 11.99 |
| Corn Belt       | 0.37  | 0.39  | 0.36  | 0.35  | 0.33  | 0.33        | 0.33  | 0.32  | 0.33  | 0.33  | 0.34  |
| Central Plains  | 0.02  | 0.02  | 0.02  | 0.02  | 0.02  | 0.02        | 0.02  | 0.02  | 0.02  | 0.02  | 0.02  |
| Delta States    | 2.41  | 2.42  | 2.45  | 2.37  | 2.29  | 2.26        | 2.22  | 2.20  | 2.20  | 2.20  | 2.20  |
| Far West        | 0.90  | 1.00  | 0.93  | 0.88  | 0.84  | 0.82        | 0.80  | 0.79  | 0.79  | 0.80  | 0.80  |
| Southeast       | 3.53  | 3.64  | 3.48  | 3.45  | 3.39  | 3.37        | 3.35  | 3.34  | 3.34  | 3.36  | 3.38  |
| Southern Plains | 5.87  | 5.74  | 5.47  | 5.37  | 5.29  | 5.26        | 5.22  | 5.20  | 5.21  | 5.24  | 5.25  |
| Harvested Area  | 10.49 | 12.54 | 12.08 | 11.83 | 11.56 | 11.46       | 11.35 | 11.29 | 11.30 | 11.36 | 11.40 |
| Corn Belt       | 0.36  | 0.38  | 0.36  | 0.35  | 0.33  | 0.33        | 0.32  | 0.32  | 0.33  | 0.33  | 0.33  |
| Central Plains  | 0.02  | 0.02  | 0.02  | 0.02  | 0.02  | 0.02        | 0.02  | 0.02  | 0.02  | 0.02  | 0.02  |
| Delta States    | 2.37  | 2.39  | 2.42  | 2.34  | 2.26  | 2.23        | 2.20  | 2.17  | 2.17  | 2.17  | 2.17  |
| Far West        | 0.87  | 1.00  | 0.92  | 0.88  | 0.84  | 0.82        | 0.80  | 0.79  | 0.78  | 0.79  | 0.80  |
| Southeast       | 3.40  | 3.57  | 3.41  | 3.38  | 3.33  | 3.31        | 3.28  | 3.27  | 3.28  | 3.30  | 3.32  |
| Southern Plains | 3.48  | 5.18  | 4.95  | 4.86  | 4.79  | 4.76        | 4.73  | 4.72  | 4.73  | 4.75  | 4.76  |
|                 |       |       |       |       | (Pour | nds per Ac  | re)   |       |       |       |       |
| Yield           | 612   | 660   | 667   | 672   | 676   | 681         | 686   | 691   | 697   | 702   | 708   |
| Corn Belt       | 471   | 759   | 769   | 780   | 790   | 800         | 810   | 819   | 828   | 837   | 846   |
| Central Plains  | 402   | 431   | 439   | 447   | 455   | 463         | 470   | 478   | 485   | 492   | 498   |
| Delta States    | 673   | 781   | 786   | 793   | 800   | 806         | 811   | 817   | 822   | 827   | 832   |
| Far West        | 957   | 1,231 | 1,239 | 1,247 | 1,253 | 1,259       | 1,265 | 1,270 | 1,275 | 1,280 | 1,285 |
| Southeast       | 597   | 672   | 682   | 691   | 701   | 710         | 718   | 727   | 735   | 744   | 752   |
| Southern Plains | 515   | 480   | 485   | 489   | 493   | 497         | 501   | 505   | 508   | 511   | 515   |
|                 |       |       |       |       |       | llion Bales |       |       |       |       |       |
| Production      | 13.37 | 17.25 | 16.79 | 16.55 | 16.29 | 16.28       | 16.23 | 16.26 | 16.41 | 16.62 | 16.81 |
| Corn Belt       | 0.35  | 0.61  | 0.58  | 0.56  | 0.54  | 0.54        | 0.54  | 0.55  | 0.56  | 0.57  | 0.58  |
| Central Plains  | 0.01  | 0.02  | 0.02  | 0.02  | 0.02  | 0.02        | 0.02  | 0.02  | 0.02  | 0.02  | 0.02  |
| Delta States    | 3.32  | 3.89  | 3.96  | 3.87  | 3.76  | 3.74        | 3.71  | 3.69  | 3.72  | 3.74  | 3.77  |
| Far West        | 1.73  | 2.55  | 2.38  | 2.27  | 2.19  | 2.15        | 2.10  | 2.08  | 2.08  | 2.12  | 2.14  |
| Southeast       | 4.23  | 5.00  | 4.85  | 4.87  | 4.86  | 4.89        | 4.92  | 4.96  | 5.03  | 5.11  | 5.20  |
| Southern Plains | 3.73  | 5.18  | 5.00  | 4.96  | 4.92  | 4.94        | 4.94  | 4.96  | 5.00  | 5.06  | 5.10  |

## **U.S. Agricultural Exports**

- The value of U.S. agricultural exports reached a record level of \$60 billion in 1995/96 and since then, both the quantity and value of agricultural exports have been declining, mainly in response to large global supplies and weak import demand.
- The value of agricultural exports, projected to fall below \$50 billion in 1998/99, is likely to bottom out this year. Over the next 10 years, the value of agricultural exports are projected to increase by more than 40 percent, reaching \$70 billion by 2008/09.
- High-value products account for about 60 percent of the total increase in value of agricultural exports, and the remaining 40 percent is accounted for by bulk commodities such as grains and oilseeds. Within high-

- value products, the export value of animal and animal products is projected to rise by more than 60 percent during the projection period.
- The quantity of U.S. agricultural exports is projected to increase by more than 34 mmt during the projection period with feed grain and oilseeds accounting for most of the increase. In addition, the quantity of animal and animal products is also projected to increase by more than 30 percent in the next decade.
- Feed grain exports are expected to increase by 19 mmt, with corn accounting for a major share. Similarly, exports of oilseeds and oilseed products are projected to rise by more than 22 percent during the projection period.

# Quantity of U.S. Agricultural Exports, Fiscal Year

|                             | 98/99   | 99/00   | 00/01   | 01/02   | 02/03   | 03/04      | 04/05   | 05/06   | 06/07   | 07/08   | 08/09   |
|-----------------------------|---------|---------|---------|---------|---------|------------|---------|---------|---------|---------|---------|
|                             |         |         |         |         | (Thous  | and Metric | : Tons) |         |         |         |         |
| Animals and Animal Products | 6,324   | 6,450   | 6,577   | 6,756   | 7,027   | 7,265      | 7,497   | 7,747   | 7,973   | 8,130   | 8,123   |
| Grains and Feeds            | 92,086  | 94,427  | 97,398  | 100,926 | 103,187 | 105,216    | 107,587 | 110,470 | 112,862 | 114,987 | 117,785 |
| Wheat (Unmilled and Flour)  | 26,866  | 26,258  | 27,441  | 28,416  | 28,809  | 29,211     | 29,809  | 30,198  | 29,984  | 29,687  | 29,425  |
| Rice (Paddy Milled)         | 3,436   | 3,733   | 3,670   | 3,623   | 3,590   | 3,556      | 3,525   | 3,480   | 3,438   | 3,391   | 3,348   |
| Feed Grains and Products    | 48,421  | 50,632  | 52,112  | 54,375  | 55,968  | 57,282     | 58,756  | 60,920  | 63,201  | 65,348  | 67,959  |
| Other Grains and Feeds      | 13,362  | 13,804  | 14,176  | 14,512  | 14,820  | 15,166     | 15,497  | 15,872  | 16,238  | 16,562  | 17,053  |
| Oilseeds and Products       | 33,933  | 37,519  | 37,784  | 37,755  | 38,132  | 38,446     | 38,893  | 39,498  | 40,141  | 40,969  | 41,667  |
| Cotton (excl. Linters)      | 977     | 1,192   | 1,294   | 1,360   | 1,332   | 1,288      | 1,237   | 1,203   | 1,188   | 1,189   | 1,179   |
| Other Products              | 8,040   | 8,353   | 8,647   | 8,974   | 9,240   | 9,485      | 9,760   | 10,079  | 10,368  | 10,652  | 10,917  |
| Total                       | 141,360 | 147,940 | 151,701 | 155,770 | 158,918 | 161,700    | 164,975 | 168,997 | 172,533 | 175,928 | 179,671 |

## Value of U.S. Agricultural Exports, Fiscal Year

|                                 | 98/99                  | 99/00  | 00/01  | 01/02  | 02/03  | 03/04  | 04/05  | 05/06  | 06/07  | 07/08  | 08/09  |
|---------------------------------|------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|                                 | (Million U.S. Dollars) |        |        |        |        |        |        |        |        |        |        |
| Bulk Commodities *              | 17,522                 | 18,925 | 19,789 | 20,675 | 21,477 | 22,206 | 22,907 | 23,661 | 24,201 | 24,731 | 25,467 |
| High-value Products †           | 32,059                 | 33,199 | 34,463 | 35,844 | 37,051 | 38,126 | 39,433 | 40,715 | 41,966 | 43,285 | 44,362 |
| Animals and Animal Products     | 10,646                 | 11,253 | 11,867 | 12,573 | 13,171 | 13,737 | 14,475 | 15,157 | 15,737 | 16,350 | 16,624 |
| Meat and Meat Products          | 4,383                  | 4,785  | 5,142  | 5,479  | 5,690  | 5,890  | 6,271  | 6,561  | 6,693  | 6,836  | 7,131  |
| Poultry and Poultry Products    | 2,650                  | 2,757  | 2,837  | 3,014  | 3,246  | 3,440  | 3,608  | 3,782  | 3,948  | 4,097  | 4,233  |
| Dairy Products                  | 700                    | 690    | 690    | 694    | 700    | 707    | 714    | 719    | 723    | 727    | 585    |
| Hides and Skins                 | 1,441                  | 1,524  | 1,665  | 1,807  | 1,923  | 2,059  | 2,195  | 2,371  | 2,599  | 2,854  | 3,057  |
| Other Animal Products           | 1,423                  | 1,497  | 1,534  | 1,579  | 1,612  | 1,641  | 1,686  | 1,725  | 1,773  | 1,835  | 1,617  |
| Grains and Feeds                | 12,637                 | 13,447 | 14,155 | 14,908 | 15,576 | 16,204 | 16,763 | 17,388 | 17,764 | 18,162 | 18,686 |
| Wheat (Unmilled and Flour)      | 3,234                  | 3,541  | 3,912  | 4,253  | 4,514  | 4,729  | 4,927  | 5,114  | 5,105  | 5,101  | 5,108  |
| Rice (Paddy Milled)             | 1,113                  | 1,176  | 1,169  | 1,174  | 1,179  | 1,194  | 1,197  | 1,205  | 1,205  | 1,205  | 1,207  |
| Coarse Grains                   | 4,663                  | 5,029  | 5,310  | 5,644  | 5,967  | 6,291  | 6,572  | 6,958  | 7,318  | 7,690  | 8,195  |
| Corn                            | 3,913                  | 4,182  | 4,413  | 4,702  | 5,001  | 5,289  | 5,548  | 5,909  | 6,241  | 6,591  | 7,071  |
| Other Feed Grains               | 750                    | 846    | 897    | 942    | 966    | 1,002  | 1,024  | 1,049  | 1,076  | 1,100  | 1,124  |
| Feeds and Fodders               | 3,628                  | 3,701  | 3,763  | 3,837  | 3,915  | 3,990  | 4,068  | 4,110  | 4,136  | 4,167  | 4,176  |
| Oilseeds and Products           | 9,212                  | 9,732  | 9,946  | 10,102 | 10,328 | 10,478 | 10,759 | 11,025 | 11,381 | 11,712 | 12,157 |
| Soybeans                        | 4,885                  | 5,478  | 5,634  | 5,767  | 5,901  | 6,001  | 6,144  | 6,273  | 6,437  | 6,569  | 6,781  |
| Soybean Meal                    | 1,562                  | 1,508  | 1,536  | 1,555  | 1,609  | 1,635  | 1,705  | 1,774  | 1,865  | 1,953  | 2,042  |
| Soybean Oil                     | 913                    | 830    | 833    | 818    | 828    | 833    | 866    | 902    | 959    | 1,029  | 1,118  |
| Other Oilseeds and Products     | 1,852                  | 1,917  | 1,943  | 1,962  | 1,990  | 2,009  | 2,043  | 2,076  | 2,120  | 2,161  | 2,216  |
| Tobacco, unmanufactured         | 1,516                  | 1,543  | 1,569  | 1,599  | 1,633  | 1,667  | 1,702  | 1,736  | 1,771  | 1,807  | 1,843  |
| Cotton and Linters              | 1,536                  | 1,696  | 1,808  | 1,955  | 1,981  | 1,970  | 1,934  | 1,920  | 1,931  | 1,963  | 1,967  |
| Horticulture and Other Products | 13,433                 | 13,953 | 14,784 | 15,381 | 15,838 | 16,276 | 16,709 | 17,148 | 17,583 | 18,023 | 18,552 |
| Total                           | 49,581                 | 52,124 | 54,251 | 56,519 | 58,528 | 60,331 | 62,341 | 64,376 | 66,167 | 68,017 | 69,829 |

<sup>\*</sup> Bulk Commodities include wheat, rice, coarse grains, soybeans, cotton, and tobacco.

<sup>†</sup> High-value is total exports minus bulk commodities.

## **U.S. Consumer Price Indexes for Food**

The consumer price index (CPI) for food is projected to grow by 1.1 percent in 1999. This growth is much less than what was observed during the early 1990s, reflecting weaker commodity prices and low inflation in general. Stronger growth is projected beginning in 2000, but still at lower rates relative to recent history. Over the projection period, average growth is projected at 2.1 percent.

Lower grain prices limit the growth in the 1999 CPI for cereal and bakery products to 2.1 percent. Over the baseline, stronger growth returns, with an average growth rate of 2.7 percent.

The CPI for total meats is projected to increase by 1.6 percent in 1999. Declines in poultry prices serve to partially offset growth in beef, pork, and fish. Further declines in poultry are projected for 2000, again limiting

the increase in the total meats CPI. Over the baseline, meat prices are projected to grow at an average rate of 2.3 percent.

Lower prices of milk and dairy products push the dairy CPI lower by 3.9 percent in 1999. After 1999, modest growth returns, with an average rate of 1.3 percent for the 2000 to 2008 period. In terms of the products, cheese is projected to show the strongest growth, with an average rate of 1.5 percent.

The price index for fruits and vegetables will show steady growth of 1.6 percent over the baseline. Stronger growth for sugar and sweets is expected over the projection period. Declining prices of raw vegetable oils are projected to limit the growth in the fats and oils CPI to 0.5 percent.

## **Consumer Price Indexes for Food**

|                           | 1998  | 1999  | 2000  | 2001  | 2002  | 2003      | 2004  | 2005  | 2006  | 2007  | 2008  |
|---------------------------|-------|-------|-------|-------|-------|-----------|-------|-------|-------|-------|-------|
|                           |       |       |       |       | (198  | 32-84=100 | ))    |       |       |       |       |
| FOOD                      | 160.8 | 162.6 | 166.2 | 170.2 | 174.0 | 177.1     | 180.6 | 184.2 | 187.7 | 191.3 | 195.4 |
| Food at Home              | 161.1 | 162.7 | 166.2 | 170.2 | 174.0 | 177.0     | 180.5 | 184.0 | 187.5 | 191.0 | 195.1 |
| Cereal and Bakery         | 181.1 | 184.8 | 190.9 | 197.9 | 202.8 | 206.7     | 212.4 | 218.4 | 224.3 | 230.0 | 235.7 |
| Meat                      | 147.1 | 149.5 | 153.5 | 158.1 | 162.6 | 165.3     | 168.6 | 172.0 | 175.0 | 178.0 | 182.9 |
| Beef                      | 136.5 | 142.2 | 147.9 | 153.5 | 158.0 | 159.9     | 161.3 | 161.6 | 163.1 | 166.1 | 171.3 |
| Pork                      | 148.5 | 151.1 | 159.2 | 165.7 | 169.6 | 169.0     | 175.2 | 181.8 | 185.0 | 185.3 | 190.1 |
| Poult                     | 157.2 | 152.8 | 148.7 | 148.5 | 154.0 | 160.0     | 162.3 | 166.6 | 171.0 | 175.8 | 180.9 |
| Eggs                      | 135.4 | 131.4 | 130.6 | 133.9 | 137.0 | 140.8     | 142.6 | 145.3 | 147.0 | 148.1 | 148.7 |
| Fish                      | 181.7 | 186.5 | 191.6 | 196.8 | 202.1 | 207.5     | 213.1 | 218.7 | 224.5 | 230.5 | 236.5 |
| Dairy                     | 150.8 | 145.0 | 146.3 | 148.6 | 151.2 | 153.8     | 155.8 | 157.7 | 159.6 | 161.4 | 163.1 |
| Milk                      | 150.7 | 142.9 | 143.4 | 145.9 | 148.5 | 151.0     | 153.2 | 155.2 | 157.3 | 159.2 | 161.1 |
| Cheese                    | 152.3 | 148.4 | 152.0 | 154.4 | 157.5 | 160.4     | 162.5 | 164.5 | 166.4 | 168.0 | 169.6 |
| Ice Cream                 | 155.5 | 149.5 | 149.5 | 151.5 | 153.6 | 155.7     | 157.3 | 158.9 | 160.5 | 161.9 | 163.3 |
| Other Dairy (inc. butter) | 182.2 | 181.9 | 182.7 | 184.5 | 186.0 | 187.8     | 189.5 | 191.0 | 192.7 | 194.4 | 196.1 |
| Fruit and Vegetables      | 198.8 | 202.2 | 205.2 | 208.3 | 211.6 | 215.0     | 218.5 | 222.2 | 225.9 | 229.8 | 233.8 |
| Other Food At Home        | 150.9 | 153.0 | 156.0 | 159.4 | 162.5 | 165.6     | 168.8 | 172.1 | 175.5 | 178.9 | 182.5 |
| Sugar and Sweets          | 150.2 | 149.3 | 153.2 | 157.8 | 161.2 | 164.6     | 168.3 | 172.0 | 175.8 | 179.7 | 183.6 |
| Fats and Oils             | 146.9 | 149.0 | 149.3 | 150.4 | 151.6 | 151.9     | 152.5 | 152.8 | 153.4 | 154.3 | 155.5 |
| Other Prepared Items      | 165.4 | 169.6 | 174.0 | 178.6 | 183.3 | 188.1     | 193.0 | 198.0 | 203.2 | 208.5 | 213.9 |
| Non-alc. Beverages        | 133.0 | 133.4 | 135.0 | 136.8 | 138.2 | 139.7     | 141.3 | 142.8 | 144.4 | 145.9 | 147.5 |
| Food Away From Home       | 161.1 | 163.1 | 166.7 | 170.8 | 174.6 | 177.8     | 181.4 | 185.1 | 188.7 | 192.3 | 196.5 |

### **U.S. Consumer Food Expenditures**

Per capita expenditures for food are projected to increase to \$1,991 in 1999, an increase of 1.1 percent from the 1998 level. As basic commodity prices strengthen, food expenditures exhibit stronger growth beginning in 2000, with an average growth of 1.9 percent. Over the baseline, per capita expenditures increase by approximately \$300 per person.

Expenditures for food at home account for the majority of growth in total food expenditures. For 1999, expenditures for food at home are projected at \$1,206, up from \$1,190 in 1998. By 2008, the costs of food at home rise to \$1,477. Expenditures for food away from home grow from \$785 in 1999 to \$879 by 2008.

Expenditures for cereal and bakery products are projected to grow at an average rate of 3.2 percent over the baseline. Growth is more modest in the early years of the projection period as grain prices remain at low levels. Longer term, increased grain prices, coupled with increased consumption, push expenditures higher.

Per capita meat expenditures are projected to grow from \$303 in 1999 to \$365 in 2008, for an annual growth rate of 2.1 percent. Poultry expenditures show the strongest growth, driven by increased consumption. Expenditures for beef rise at a modest pace, as declining consumption partially offsets the increase in beef prices.

Lower milk prices for 1999 will lead to a modest decline in dairy expenditures relative to 1998. With stable milk prices projected over the baseline, expenditures on milk show only modest growth. The growth in dairy expenditures is driven in large part by consumption of dairy products, particularly cheese.

Annual growth in fruit and vegetable expenditures is projected at 1.7 percent over the baseline. Expenditures for sugar and sweets show stronger growth, with an average rate of 3.0 percent.

### Average Annual Per Capita Expenditures of Urban U.S. Households

|                      | 1998  | 1999  | 2000  | 2001  | 2002    | 2003        | 2004    | 2005  | 2006  | 2007  | 2008  |
|----------------------|-------|-------|-------|-------|---------|-------------|---------|-------|-------|-------|-------|
|                      |       |       |       |       | (ILS Do | llars Per F | Person) |       |       |       |       |
| FOOD                 | 1,970 | 1,991 | 2,025 | 2,070 | 2,113   | 2,150       | 2,189   | 2,229 | 2,271 | 2,312 | 2,356 |
| Food at Home         | 1,190 | 1,206 | 1,229 | 1,263 | 1,295   | 1,323       | 1,352   | 1,382 | 1,413 | 1,444 | 1,477 |
| Cereal and Bakery    | 185   | 190   | 197   | 205   | 211     | 216         | 223     | 230   | 238   | 246   | 253   |
| Meat                 | 301   | 303   | 305   | 314   | 323     | 330         | 336     | 343   | 350   | 357   | 365   |
| Beef                 | 91    | 91    | 92    | 93    | 95      | 95          | 96      | 96    | 97    | 99    | 101   |
| Pork                 | 65    | 65    | 64    | 66    | 68      | 69          | 71      | 72    | 74    | 75    | 75    |
| Poult                | 60    | 61    | 61    | 63    | 67      | 70          | 73      | 75    | 78    | 81    | 84    |
| Eggs                 | 13    | 12    | 12    | 12    | 13      | 13          | 13      | 13    | 13    | 13    | 13    |
| Other Meat           | 73    | 75    | 77    | 79    | 82      | 83          | 85      | 87    | 88    | 90    | 93    |
| Dairy                | 134   | 131   | 133   | 136   | 139     | 142         | 145     | 147   | 150   | 152   | 155   |
| Milk                 | 53    | 50    | 50    | 51    | 52      | 53          | 54      | 54    | 55    | 55    | 56    |
| Other Dairy          | 81    | 81    | 82    | 84    | 87      | 89          | 91      | 93    | 95    | 97    | 99    |
| Fruit and Vegetables | 201   | 204   | 208   | 211   | 215     | 218         | 222     | 226   | 231   | 235   | 238   |
| Other Food At Home   | 370   | 378   | 387   | 398   | 408     | 417         | 426     | 436   | 445   | 455   | 466   |
| Sugar and Sweets     | 47    | 47    | 49    | 51    | 52      | 54          | 55      | 57    | 58    | 60    | 62    |
| Fats and Oils        | 34    | 34    | 34    | 34    | 35      | 35          | 35      | 35    | 35    | 35    | 36    |
| Misc.                | 164   | 165   | 168   | 172   | 175     | 177         | 180     | 184   | 187   | 190   | 193   |
| Trips                | 21    | 22    | 23    | 23    | 24      | 25          | 26      | 27    | 28    | 28    | 29    |
| Non-alc. Beverages   | 104   | 109   | 113   | 118   | 122     | 126         | 130     | 134   | 138   | 142   | 146   |
| Food Away From Home  | 780   | 785   | 796   | 807   | 818     | 827         | 837     | 847   | 857   | 867   | 879   |

#### **U.S. Government Costs**

The \$5.9 billion emergency spending package passed in 1998, together with increased LDPs, will push net CCC outlays to \$17.1 billion in 1999. This represents a \$7 billion increase from the 1998 level and is the highest since 1993. Longer term, outlays decline to \$6.3 billion as payment levels under the FAIR Act are reduced.

Feedgrain program costs are projected to rise to \$5.6 billion in 1999 with the bulk of the increase due to the additional payments of the spending package. With no assumption of additional aid packages and lower LDPs, program outlays fall to \$3.4 billion in 2000. Costs average \$2.1 billion in the latter half of the baseline.

Outlays for wheat are projected at \$2.9 billion in 1999, an increase of \$700 million from the 1998 level. In addition to the higher direct payments to producers, government purchases of wheat for food aid also add to program costs. Longer term, outlays average \$1.1 billion.

Sagging soybean prices are expected to lead to additional outlays as LDPs are made. For 1999, soybean program costs are projected at \$760 million, up from \$140 million in the previous year. Outlays are expected to reach \$1.4 billion in 2000 as market prices remain at or below the loan rate. As prices recover, soybean program costs fall to \$0 longer term.

Heavy use of the Step II program helped push cotton outlays above \$1.1 billion in 1998. Cotton program costs are projected to grow to \$1.8 billion in 1999 due to higher LDPs and the additional payments made under the emergency spending package. Longer term, outlays for cotton range between \$400 and \$500 million.

Given projected rice prices, no LDPs are expected over the projection period. As a result, costs associated with the rice program are due primarily to AMTA payments. For 1999, outlays are projected to reach \$720 million and then decline to \$470 in 2000. As contract payments fall, rice outlays decline to \$340 million in 2002.

The \$200 million in dairy payments authorized in the 1998 emergency spending package help push dairy outlays to \$420 million in 1999. Costs fall dramatically in 2000 in the absence of the additional payments. In addition, product purchases fall as the dairy support program is phased out. Longer term, dairy outlays are associated with the Export Incentive Program, which averages approximately \$70 million annually.

Outlays associated with the CRP are projected to average \$1.6 billion in 1999 and 2000. As acreage enrolled in the CRP is assumed to expand to 36 million acres, outlays grow to \$1.76 billion by 2008.

## **CCC Net Expenditures, by Program**

|                               | 1998  | 1999  | 2000  | 2001  | 2002         | 2003        | 2004       | 2005  | 2006  | 2007  | 2008  |
|-------------------------------|-------|-------|-------|-------|--------------|-------------|------------|-------|-------|-------|-------|
|                               |       |       |       | (Bi   | llion U.S. I | Dollars, Fi | scal Year) |       |       |       |       |
| Feed Grains                   | 3.35  | 5.56  | 3.37  | 2.43  | 2.06         | 2.09        | 2.12       | 2.13  | 2.13  | 2.14  | 2.13  |
| Corn                          | 2.87  | 4.79  | 2.91  | 2.10  | 1.77         | 1.80        | 1.83       | 1.84  | 1.84  | 1.84  | 1.84  |
| Sorghum                       | 0.30  | 0.48  | 0.27  | 0.21  | 0.20         | 0.20        | 0.20       | 0.20  | 0.20  | 0.20  | 0.20  |
| Barley                        | 0.17  | 0.25  | 0.17  | 0.12  | 0.09         | 0.08        | 0.09       | 0.09  | 0.09  | 0.09  | 0.09  |
| Oats                          | 0.02  | 0.03  | 0.02  | 0.01  | 0.01         | 0.01        | 0.01       | 0.01  | 0.01  | 0.01  | 0.01  |
| Wheat                         | 2.19  | 2.91  | 1.34  | 1.02  | 1.04         | 1.11        | 1.10       | 1.07  | 1.08  | 1.08  | 1.08  |
| Soybeans                      | 0.14  | 0.76  | 1.44  | 0.96  | -0.05        | -0.04       | 0.00       | -0.01 | 0.00  | 0.00  | 0.00  |
| Cotton                        | 1.13  | 1.79  | 1.47  | 1.30  | 1.05         | 0.72        | 0.58       | 0.48  | 0.44  | 0.45  | 0.44  |
| Rice                          | 0.49  | 0.72  | 0.47  | 0.35  | 0.34         | 0.34        | 0.34       | 0.34  | 0.34  | 0.34  | 0.34  |
| Sugar                         | -0.03 | -0.05 | -0.04 | -0.04 | -0.04        | -0.04       | -0.04      | -0.04 | -0.04 | -0.04 | -0.04 |
| Dairy                         | 0.29  | 0.42  | 0.12  | 0.08  | 0.08         | 0.08        | 0.08       | 0.08  | 0.08  | 0.08  | 0.08  |
| Export Programs               | 0.09  | 0.08  | 0.08  | 0.08  | 0.08         | 0.08        | 0.08       | 0.08  | 0.08  | 0.08  | 0.08  |
| Net Interest                  | 0.08  | 0.11  | 0.10  | 0.08  | 0.05         | 0.06        | 0.06       | 0.05  | 0.06  | 0.06  | 0.06  |
| Disaster Payments             | 0.03  | 2.28  | 0.09  | 0.09  | 0.09         | 0.09        | 0.09       | 0.09  | 0.09  | 0.09  | 0.09  |
| Conservation Reserve          | 1.69  | 1.58  | 1.63  | 1.66  | 1.67         | 1.68        | 1.70       | 1.72  | 1.74  | 1.75  | 1.76  |
| Other Conservation Prog.      | 0.20  | 0.31  | 0.37  | 0.29  | 0.22         | 0.23        | 0.24       | 0.24  | 0.24  | 0.24  | 0.24  |
| Other Net Costs               | 0.50  | 0.66  | 0.19  | -0.07 | -0.06        | 0.05        | 0.11       | 0.11  | 80.0  | 0.08  | 0.05  |
| Net CCC Outlays               | 10.14 | 17.13 | 10.63 | 8.25  | 6.53         | 6.45        | 6.45       | 6.35  | 6.32  | 6.34  | 6.32  |
| Conservation Reserve          | 0.00  | 0.00  | 0.00  | 0.00  | 0.00         | 0.00        | 0.00       | 0.00  | 0.00  | 0.00  | 0.00  |
| <b>Total Government Costs</b> | 10.14 | 17.13 | 10.63 | 8.25  | 6.53         | 6.45        | 6.45       | 6.35  | 6.32  | 6.34  | 6.32  |

## **CCC Net Expenditures, by Function**

|                        | 1998  | 1999  | 2000  | 2001 | 2002         | 2003         | 2004       | 2005 | 2006 | 2007 | 2008 |
|------------------------|-------|-------|-------|------|--------------|--------------|------------|------|------|------|------|
|                        |       |       |       | (Bi  | llion U.S. [ | Dollars, Fis | scal Year) |      |      |      |      |
| Deficiency Payments    | 0.47  | 1.85  | 2.37  | 1.72 | 0.42         | 0.17         | 0.08       | 0.02 | 0.00 | 0.00 | 0.00 |
| Diversion Payments     | 0.00  | 0.00  | 0.00  | 0.00 | 0.00         | 0.00         | 0.00       | 0.00 | 0.00 | 0.00 | 0.00 |
| Producer Storage       | 0.00  | 0.00  | 0.00  | 0.00 | 0.00         | 0.00         | 0.00       | 0.00 | 0.00 | 0.00 | 0.00 |
| Conservation Programs  | 1.89  | 1.89  | 2.00  | 1.96 | 1.89         | 1.90         | 1.94       | 1.96 | 1.98 | 1.99 | 2.00 |
| Disaster Payments      | 0.03  | 2.28  | 0.09  | 0.09 | 0.09         | 0.09         | 0.09       | 0.09 | 0.09 | 0.09 | 0.09 |
| Contract Payments      | 5.67  | 8.37  | 5.05  | 4.07 | 3.95         | 3.95         | 3.95       | 3.95 | 3.95 | 3.95 | 3.95 |
| Direct Payments        | 8.05  | 14.38 | 9.51  | 7.83 | 6.35         | 6.11         | 6.06       | 6.01 | 6.02 | 6.03 | 6.03 |
| Loans Made             | 6.14  | 7.24  | 7.61  | 7.30 | 6.32         | 5.84         | 5.75       | 5.76 | 5.81 | 5.93 | 6.07 |
| Loans Repaid           | 5.42  | 6.70  | 6.97  | 7.00 | 6.27         | 5.75         | 5.70       | 5.76 | 5.82 | 5.94 | 6.07 |
| Storage and Handling   | 0.03  | 0.04  | 0.03  | 0.03 | 0.03         | 0.03         | 0.03       | 0.03 | 0.03 | 0.03 | 0.03 |
| Net Dairy Purchases    | 0.15  | 0.09  | 0.03  | 0.01 | 0.01         | 0.01         | 0.01       | 0.01 | 0.01 | 0.01 | 0.01 |
| Net Stock Outlays      | 0.90  | 0.67  | 0.70  | 0.33 | 0.10         | 0.12         | 0.09       | 0.04 | 0.03 | 0.04 | 0.04 |
| Other Net Costs        | 1.19  | 2.07  | 0.42  | 0.08 | 0.08         | 0.22         | 0.31       | 0.30 | 0.27 | 0.28 | 0.25 |
| Total Government Costs | 10.14 | 17.13 | 10.63 | 8.25 | 6.53         | 6.45         | 6.45       | 6.35 | 6.32 | 6.34 | 6.32 |

### U.S. Cash Receipts from Farm Marketings

Total receipts from farm marketings fell to \$198.3 billion in 1998, a decline of more than \$10 billion from the record level of 1997. The crops sector accounted for \$7 billion of the decline as commodity prices fell dramatically. Receipts are projected to fall further in 1999, with the crops sector again contributing the majority of the decline. Not until 2002 do receipts recover to the levels observed in 1997.

Weaker prices are projected to lower feedgrain cash receipts to \$22.2 billion in 1999, the lowest level since 1994. This also represents a \$5 billion decline from the levels observed in 1996 and 1997. As production and prices increase, receipts steadily increase after 2000, growing to \$28.2 billion by 2008.

Wheat prices averaging below \$3.00 per bushel are the driving force behind lower foodgrain receipts. For 1999, total foodgrain receipts are projected at \$8.2 billion. Stronger prices push receipts above \$9 billion by 2001. By 2008, receipts are projected to reach \$11 billion with the majority of the growth occurring in wheat.

Oilseed cash receipts reflect the substantial weakening in soybean prices for 1999 and 2000. Receipts are expected to range between \$15.5 and \$15.8 billion for the 1999 to 2001 period, down from \$19.9 billion in 1997. As prices show some recovery and production expands, receipts grow to \$19.4 billion in 2008, still below the record level observed in 1997.

Weak demand is expected to contribute to lower cotton prices over the next few years. As a result, cotton cash receipts average between \$500 and \$550 million through 2003. Only in the latter half of the projection period do receipts show some recovery as prices strengthen.

Cash receipts for red meats are projected to recover to \$45 billion in 1999 with higher prices for cattle and hogs. For hogs, the recovery comes on the heels of a year that saw the lowest cash receipts since 1977. Longer term, cattle receipts reflect the cattle cycle with peaks in 2002 and 2008. Hog receipts peak at just under \$12 billion in 2005.

Strong milk prices pushed 1998 dairy receipts to the record level of \$24.3 billion. As prices soften, receipts are projected to decline to \$21.6 billion in 1998. Further declines are expected in 2000 as lower prices more than offset increased production. Longer term, receipts are projected to grow \$22.7 billion.

Receipts for poultry and eggs are projected to fall in 1999 due to lower prices for broilers and eggs. After 1999, stable prices and increased production lead to increased cash receipts, with annual growth projected at 2.3 percent during the 2000 to 2008 period.

**U.S. Cash Receipts from Farming** 

|                        | 1998   | 1999   | 2000   | 2001   | 2002    | 2003       | 2004   | 2005   | 2006   | 2007   | 2008   |
|------------------------|--------|--------|--------|--------|---------|------------|--------|--------|--------|--------|--------|
| Farm Marketings        |        |        |        |        | (Billio | n U.S. Dol | lars)  |        |        |        |        |
| and CCC Loans          | 198.25 | 194.56 | 198.70 | 204.43 | 209.98  | 212.81     | 217.52 | 221.24 | 223.89 | 227.68 | 233.61 |
| Crops                  | 104.76 | 101.72 | 103.78 | 106.49 | 109.61  | 112.90     | 116.08 | 119.22 | 122.20 | 125.10 | 128.12 |
| Feed Grains            | 24.00  | 22.22  | 22.55  | 23.14  | 23.77   | 24.55      | 25.37  | 26.10  | 26.79  | 27.43  | 28.17  |
| Corn                   | 17.86  | 16.37  | 16.62  | 17.16  | 17.71   | 18.37      | 19.08  | 19.70  | 20.29  | 20.83  | 21.48  |
| Sorghum                | 1.17   | 1.15   | 1.23   | 1.26   | 1.30    | 1.34       | 1.38   | 1.42   | 1.45   | 1.48   | 1.53   |
| Barley                 | 0.67   | 0.62   | 0.63   | 0.64   | 0.66    | 0.69       | 0.71   | 0.73   | 0.74   | 0.76   | 0.79   |
| Oats                   | 0.09   | 0.09   | 0.09   | 0.10   | 0.10    | 0.10       | 0.10   | 0.10   | 0.11   | 0.11   | 0.11   |
| Hay                    | 4.21   | 3.99   | 3.98   | 3.99   | 4.01    | 4.05       | 4.09   | 4.15   | 4.20   | 4.24   | 4.27   |
| Food Grains            | 8.70   | 8.16   | 8.68   | 9.10   | 9.45    | 9.84       | 10.17  | 10.51  | 10.70  | 10.84  | 11.00  |
| Wheat                  | 6.99   | 6.45   | 6.94   | 7.36   | 7.69    | 8.04       | 8.35   | 8.67   | 8.83   | 8.95   | 9.09   |
| Rice                   | 1.70   | 1.69   | 1.72   | 1.72   | 1.75    | 1.77       | 1.80   | 1.83   | 1.85   | 1.87   | 1.89   |
| Rye                    | 0.02   | 0.02   | 0.02   | 0.02   | 0.02    | 0.02       | 0.02   | 0.02   | 0.02   | 0.02   | 0.02   |
| Oilseeds               | 17.79  | 15.82  | 15.55  | 15.77  | 16.30   | 16.81      | 17.25  | 17.76  | 18.29  | 18.83  | 19.41  |
| Cotton                 | 5.30   | 5.08   | 5.08   | 5.08   | 5.22    | 5.40       | 5.55   | 5.70   | 5.87   | 6.06   | 6.22   |
| Sugar                  | 2.21   | 2.20   | 2.21   | 2.22   | 2.24    | 2.26       | 2.27   | 2.29   | 2.30   | 2.32   | 2.34   |
| Other Crops *          | 46.76  | 48.25  | 49.72  | 51.18  | 52.62   | 54.05      | 55.46  | 56.86  | 58.25  | 59.62  | 60.98  |
| Livestock and Products | 93.49  | 92.84  | 94.92  | 97.93  | 100.37  | 99.92      | 101.44 | 102.02 | 101.69 | 102.58 | 105.49 |
| Red Meats              | 42.88  | 45.03  | 47.52  | 49.27  | 50.63   | 48.92      | 49.69  | 49.59  | 48.70  | 49.05  | 51.20  |
| Cattle, Calves         | 33.68  | 34.94  | 36.17  | 37.46  | 38.77   | 38.37      | 37.89  | 37.09  | 36.58  | 37.54  | 39.10  |
| Hogs                   | 8.66   | 9.54   | 10.80  | 11.27  | 11.30   | 10.00      | 11.25  | 11.95  | 11.57  | 10.96  | 11.55  |
| Sheep, Lambs           | 0.54   | 0.55   | 0.55   | 0.55   | 0.55    | 0.55       | 0.55   | 0.55   | 0.55   | 0.55   | 0.55   |
| Dairy Products         | 24.27  | 21.62  | 21.17  | 21.30  | 21.61   | 21.95      | 22.13  | 22.27  | 22.43  | 22.55  | 22.66  |
| Poultry, Eggs          | 22.87  | 22.71  | 22.74  | 23.84  | 24.56   | 25.43      | 25.96  | 26.46  | 26.83  | 27.23  | 27.82  |
| Broilers               | 15.25  | 15.13  | 15.18  | 16.11  | 16.61   | 17.22      | 17.66  | 18.01  | 18.26  | 18.58  | 19.09  |
| Turkeys                | 2.63   | 2.69   | 2.70   | 2.74   | 2.85    | 2.97       | 3.02   | 3.10   | 3.17   | 3.25   | 3.33   |
| Chicken Eggs           | 4.35   | 4.26   | 4.23   | 4.32   | 4.41    | 4.51       | 4.54   | 4.60   | 4.62   | 4.62   | 4.59   |
| Other Poultry          | 0.64   | 0.63   | 0.63   | 0.67   | 0.69    | 0.72       | 0.74   | 0.76   | 0.77   | 0.78   | 0.80   |
| Other Livestock †      | 3.47   | 3.47   | 3.49   | 3.52   | 3.57    | 3.61       | 3.65   | 3.70   | 3.73   | 3.76   | 3.81   |
| Government Payments    | 12.81  | 10.98  | 8.83   | 6.96   | 6.09    | 5.96       | 5.93   | 5.91   | 5.93   | 5.94   | 5.94   |
| Total Cash Receipts    | 211.06 | 205.54 | 207.53 | 211.39 | 216.08  | 218.77     | 223.44 | 227.15 | 229.82 | 233.61 | 239.56 |

<sup>\*</sup> Includes tobacco, vegetables and melons, fruits and tree nuts, and other crops.

<sup>†</sup> Includes horses, mules, and aquaculture.

#### **U.S. Farm Production Expenses**

Lower expenses for farm-origin inputs are a reflection of reduced feed expenses for the livestock sector. For 1999, expenses for farm-origin inputs are projected to fall to \$42.6 billion, with feed accounting for the decline. As crop prices recover and livestock production increases, feed expenses are projected to grow by \$6 billion over the baseline.

The decline in oil prices drove expenses for manufactured inputs lower in 1998. Further declines are expected in 1999, before recovering in 2000. After 2000, input price inflation causes manufactured input expenses to grow at an annual rate of 2 percent.

Interest expenses are projected to fall to \$13 billion in 1999 with declines in both short-term and real estate interests. Modest growth is projected over the baseline period with total interest expenses reaching \$13.9 billion in 2008. The increased expenses are driven by increased production of crop and livestock commodities, rather than by increases in interest rates. Interest rates are projected to be relatively stable over the projection period.

Increased labor costs are projected to push other operating expenses up to \$60.9 billion in 1999. Miscellaneous expenses and labor costs are the primary growth drivers over the baseline period, with annual growth rates of 2.4 percent and 3.1 percent, respectively.

Other overhead expenses are projected to fall to \$39.4 billion in 1999, a drop of \$400 million from the previous year. The decline is due to lower expenses for capital consumption and rent. Rent to non-operator landlords is projected to decline due to the drop in market receipts for the major crops. Longer term, overhead expenses are projected to top \$44 billion, with rent expenses contributing most of the growth.

Total production expenses are projected to fall to \$183.5 billion in 1999. This represents a \$2 billion decline from the 1998 level and is \$5 billion less than the peak observed in 1997. Increased production levels and higher input prices cause expenses to begin rising in 2000. After 2000, production expenses grow at an annual rate of 2 percent.

**U.S. Farm Production Expenses** 

|  | 1998   | 1999   | 2000   | 2001   | 2002    | 2003      | 2004   | 2005   | 2006   | 2007   | 2008   |
|--|--------|--------|--------|--------|---------|-----------|--------|--------|--------|--------|--------|
|  |        |        |        |        | (Billio | n U.S. Do | llars) |        |        |        |        |
| Farm-Origin Inputs                     | 43.86  | 42.55  | 42.96  | 44.06  | 45.41   | 46.46     | 47.24  | 47.79  | 48.57  | 49.64  | 50.82  |
| Feed                                   | 23.91  | 22.39  | 22.46  | 23.09  | 23.85   | 24.82     | 25.64  | 26.42  | 27.24  | 27.84  | 28.25  |
| Purchased Livestock                    | 13.31  | 13.60  | 13.89  | 14.25  | 14.74   | 14.69     | 14.55  | 14.20  | 14.06  | 14.40  | 15.06  |
| Seed                                   | 6.64   | 6.55   | 6.61   | 6.72   | 6.82    | 6.94      | 7.06   | 7.17   | 7.28   | 7.39   | 7.51   |
| Manufactured Inputs                    | 28.08  | 27.71  | 27.92  | 28.59  | 29.14   | 29.76     | 30.42  | 31.05  | 31.74  | 32.43  | 33.11  |
| Fertilizer, Lime                       | 10.57  | 10.40  | 10.54  | 10.79  | 10.94   | 11.13     | 11.34  | 11.53  | 11.74  | 11.94  | 12.16  |
| Petroleum Fuel, Oils                   | 5.69   | 5.54   | 5.61   | 5.78   | 5.89    | 6.02      | 6.15   | 6.29   | 6.43   | 6.57   | 6.71   |
| Electricity                            | 2.89   | 2.84   | 2.86   | 2.93   | 3.00    | 3.08      | 3.15   | 3.23   | 3.31   | 3.39   | 3.46   |
| Pesticides                             | 8.94   | 8.92   | 8.93   | 9.09   | 9.31    | 9.54      | 9.77   | 10.01  | 10.25  | 10.52  | 10.78  |
| Interest Charges                       | 13.36  | 12.99  | 13.27  | 13.39  | 13.39   | 13.54     | 13.63  | 13.70  | 13.79  | 13.86  | 13.91  |
| Short-Term Interest                    | 6.94   | 6.76   | 6.90   | 6.95   | 6.96    | 7.03      | 7.08   | 7.11   | 7.15   | 7.19   | 7.21   |
| Real Estate Interest                   | 6.42   | 6.23   | 6.37   | 6.43   | 6.43    | 6.51      | 6.56   | 6.59   | 6.64   | 6.67   | 6.70   |
| Other Operating Exp. Repair, Operation | 60.33  | 60.88  | 61.85  | 63.37  | 64.92   | 66.61     | 68.24  | 69.89  | 71.60  | 73.27  | 74.84  |
| of Capital Items                       | 10.28  | 10.19  | 10.30  | 10.48  | 10.65   | 10.84     | 11.03  | 11.22  | 11.41  | 11.59  | 11.75  |
| Contract, Hired Labor<br>Machine Hire  | 19.36  | 20.03  | 20.56  | 21.27  | 21.98   | 22.73     | 23.46  | 24.20  | 24.96  | 25.70  | 26.40  |
| Custom Work Marketing, Storage,        | 4.73   | 4.70   | 4.73   | 4.80   | 4.85    | 4.90      | 4.95   | 5.01   | 5.07   | 5.13   | 5.19   |
| and Transportation                     | 7.09   | 7.20   | 7.32   | 7.45   | 7.55    | 7.67      | 7.80   | 7.93   | 8.07   | 8.21   | 8.34   |
| Miscellaneous                          | 18.88  | 18.75  | 18.94  | 19.38  | 19.89   | 20.47     | 21.00  | 21.53  | 22.09  | 22.64  | 23.15  |
| Other Overhead Exp.                    | 39.80  | 39.35  | 39.74  | 40.11  | 40.63   | 41.16     | 41.71  | 42.30  | 42.90  | 43.50  | 44.17  |
| Capital Consumption                    | 19.68  | 19.47  | 19.51  | 19.63  | 19.78   | 19.93     | 20.10  | 20.27  | 20.45  | 20.64  | 20.83  |
| Property Taxes                         | 6.99   | 7.09   | 7.14   | 7.25   | 7.35    | 7.45      | 7.56   | 7.69   | 7.85   | 8.00   | 8.15   |
| Rent to Nonoperators                   | 13.12  | 12.79  | 13.09  | 13.23  | 13.50   | 13.78     | 14.05  | 14.33  | 14.60  | 14.86  | 15.19  |
| Production Expenses                    | 185.43 | 183.47 | 185.74 | 189.52 | 193.49  | 197.53    | 201.24 | 204.72 | 208.61 | 212.69 | 216.83 |
| Noncash Expenses                       | 18.88  | 18.67  | 18.71  | 18.83  | 18.98   | 19.13     | 19.30  | 19.47  | 19.65  | 19.84  | 20.03  |
| Labor Perquisites                      | 0.60   | 0.60   | 0.60   | 0.60   | 0.60    | 0.60      | 0.60   | 0.60   | 0.60   | 0.60   | 0.60   |
| Net Cap Consumption                    | 18.28  | 18.07  | 18.11  | 18.23  | 18.38   | 18.53     | 18.70  | 18.87  | 19.05  | 19.24  | 19.43  |
| Op Dwelling Expenses                   | 2.68   | 2.75   | 2.78   | 2.81   | 2.84    | 2.87      | 2.90   | 2.93   | 2.96   | 2.99   | 3.02   |
| Cash Expenses                          | 163.86 | 162.05 | 164.25 | 167.88 | 171.67  | 175.53    | 179.04 | 182.32 | 186.00 | 189.86 | 193.78 |

#### **U.S. Net Farm Income**

After peaking at \$220.5 billion in 1997, total farm receipts are projected to decline to \$206.4 billion in 1999. Crop receipts contribute the majority of the decline. Farm receipts expand to \$247 billion by 2008.

Increased LDPs will keep direct government payments at \$11 billion for 1999, a decline of \$1.8 billion from the 1998 level. Farm receipts and government payments combine to give gross cash income of \$217.4 billion in 1999. Gross income grows to \$252.9 billion by 2008, as higher farm receipts more than offset lower government payments.

Non-money income comprises the value of home consumption of farm products and the imputed rental value of farm dwellings. With the average value of land and buildings projected to show a modest increase, non-money income is projected to grow from \$11.2 billion in 1999 to \$13.6 billion in 2008.

The value of inventory change is projected at -\$1.2 billion in 1999 due, in part, to reduced hog inventories. With trend yields and stable crop prices, the value of inventory change remains at relatively low levels throughout the baseline.

Net cash income is projected to decline to \$55.4 billion in 1999, as lower receipts more than offset lower cash expenses. Cash income remains flat through 2001, as higher receipts are offset by additional production expenses. Longer term, net cash income averages \$57 billion.

Accounting for the value of inventory change, non-money income, and total expenses, net farm income is projected to decline \$43.9 billion in 1999, a \$3.4 billion decline from the 1998 level. Lower production expenses soften the decline in net farm income as gross farm income falls by \$5.3 billion. Net farm income shows a modest increase over the baseline period as receipts grow slightly faster than expenses.

After accounting for inflation, real net farm income (in 1987 dollars) falls to \$31.9 billion in 1999, a decline of \$3 billion from the previous year. In general, real farm income declines over the projection period, reaching \$28.9 billion in 2007.

**U.S. Farm Income Statistics** 

|                                       | 1998   | 1999   | 2000   | 2001   | 2002    | 2003       | 2004   | 2005   | 2006   | 2007   | 2008   |
|---------------------------------------|--------|--------|--------|--------|---------|------------|--------|--------|--------|--------|--------|
|                                       |        |        |        |        | (Billio | n U.S. Dol | lars)  |        |        |        |        |
| 1. Farm Receipts                      | 210.02 | 206.44 | 210.73 | 216.64 | 222.36  | 225.36     | 230.23 | 234.12 | 236.94 | 240.89 | 246.99 |
| Crops                                 | 104.76 | 101.72 | 103.78 | 106.49 | 109.61  | 112.90     | 116.08 | 119.22 | 122.20 | 125.10 | 128.12 |
| Livestock                             | 93.49  | 92.84  | 94.92  | 97.93  | 100.37  | 99.92      | 101.44 | 102.02 | 101.69 | 102.58 | 105.49 |
| Farm-Related *                        | 11.77  | 11.88  | 12.03  | 12.22  | 12.38   | 12.54      | 12.72  | 12.88  | 13.05  | 13.21  | 13.37  |
| 2. Government Payments                | 12.81  | 10.98  | 8.83   | 6.96   | 6.09    | 5.96       | 5.93   | 5.91   | 5.93   | 5.94   | 5.94   |
| 3. Gross Cash Income (1 + 2)          | 222.83 | 217.42 | 219.56 | 223.60 | 228.45  | 231.32     | 236.16 | 240.03 | 242.87 | 246.83 | 252.93 |
| 4. Nonmoney Income                    | 10.99  | 11.20  | 11.54  | 11.87  | 12.15   | 12.32      | 12.54  | 12.77  | 12.98  | 13.25  | 13.59  |
| 5. Value of Inventory                 |        |        |        |        |         |            |        |        |        |        |        |
| Change                                | -1.08  | -1.22  | -0.70  | -0.21  | 0.09    | 0.20       | 0.04   | -0.18  | -0.44  | -0.50  | -0.40  |
| 6. Gross Farm Income (3 + 4 + 5)      | 232.74 | 227.40 | 230.40 | 235.26 | 240.69  | 243.84     | 248.74 | 252.62 | 255.41 | 259.58 | 266.12 |
| 7. Cash Expenses †                    | 163.86 | 162.05 | 164.25 | 167.88 | 171.67  | 175.53     | 179.04 | 182.32 | 186.00 | 189.86 | 193.78 |
| 8. Total Expenses                     | 185.43 | 183.47 | 185.74 | 189.52 | 193.49  | 197.53     | 201.24 | 204.72 | 208.61 | 212.69 | 216.83 |
| 9. Net Cash Income (3 - 7)            | 58.97  | 55.37  | 55.30  | 55.73  | 56.79   | 55.79      | 57.12  | 57.72  | 56.86  | 56.96  | 59.15  |
| 10. Realized Net Farm Inc (3 + 4 - 8) | 48.39  | 45.15  | 45.36  | 45.95  | 47.11   | 46.11      | 47.46  | 48.08  | 47.24  | 47.39  | 49.69  |
| 11. Net Farm Income<br>(6 - 8)        | 47.32  | 43.93  | 44.65  | 45.74  | 47.21   | 46.30      | 47.50  | 47.91  | 46.79  | 46.88  | 49.29  |
| Deflated (1987 \$) ‡                  | 34.76  | 31.85  | 31.71  | 31.82  | 32.16   | 30.90      | 31.05  | 30.72  | 29.40  | 28.85  | 29.69  |

<sup>\*</sup> Income from machine hire, custom work, sales of forest products, and other miscellaneouis cash sources.

 $<sup>\</sup>dagger$  Excludes capital consumption, perquisites to hired labor, and farm household expenses.

<sup>‡</sup> Deflated by the GNP price deflator, 1987=1

#### **Crop Insurance**

Net acres insured increase from 182 million acres in 1998 to 196 million acres in 1999 due, in part, to the provisions of the Crop Loss Disaster Assistance Program. After 2000, net acres insured falls back to near 1998 levels but then steadily climbs to near 195 million acres by 2008.

The Crop Loss Disaster Assistance Program requires producers who did not have crop insurance in 1998 and receive assistance under the program to purchase crop insurance for 1999 and 2000. Most of the acreage increase in 1999 is in buy-up coverage due to the temporary increases in premium subsidies on buy-up coverage for 1999. Much of this increase reverts back to catastrophic coverage in 2000.

Total premiums rise from \$1.88 billion in 1998 to \$1.96 billion in 1999. This increase arises from growth in overall participation and, particularly, in buy-up participation. In 2000, total premium levels fall to \$1.82 billion due to decreases in buy-up participation and low crop prices. Total premiums then trend upward reaching \$2.22 billion in 2008.

The impact of the \$400 million for temporary premium subsidies from the Crop Loss Disaster Assistance Program is evident from the producer-paid premiums and premium subsidies for 1999. Premium subsidies exceed \$1.3 billion in 1999. Following 1999, the division of premium payments returns to the normal pattern. After 2000, producer-paid premiums exceed

premium subsidies for the first time since 1994.

Total indemnities (insurance payments) follow a pattern similar to total premiums. Loss ratios around one indicate "actuarially fair" premiums are being charged for the insurance products. These projections show that, overall, federal crop insurance will meet the loss ratio targets set by Congress.

Total obligations represent the federal government's financial responsibility from crop insurance. They are the costs for crop insurance before taking any crop insurance revenues into account. Total obligations are equal to the sum of indemnities, delivery expenses, administrative and operating expenses, agent commissions, and other expenses. Over the projection period, total obligations exceed \$2 billion each year. By 2008, the federal government's total financial obligation from crop insurance reaches \$2.62 billion.

Net outlays take underwriting costs and crop insurance revenues into account. They are equal to the sum of total obligations and underwriting costs minus producer-paid premiums. Net outlays jump from \$1.27 billion in 1998 to \$1.89 billion in 1999. Most of this increase can be attributed to the temporary premium subsidies. In 2000, net outlays for crop insurance decline to \$1.55 billion.

# **Crop Insurance**

|                        | 1998   | 1999   | 2000   | 2001   | 2002       | 2003         | 2004      | 2005   | 2006   | 2007   | 2008   |
|------------------------|--------|--------|--------|--------|------------|--------------|-----------|--------|--------|--------|--------|
|                        |        |        |        |        | (M         | illion Acre  | s)        |        |        |        |        |
| Eligible Acres         | 267.69 | 264.46 | 262.88 | 263.33 | 263.95     | 264.55       | 265.15    | 265.69 | 266.16 | 266.59 | 266.97 |
| Net Acres Insured      | 181.80 | 196.12 | 195.87 | 181.48 | 183.61     | 185.79       | 187.99    | 190.15 | 192.29 | 193.50 | 194.70 |
| Crop Insurance         |        |        |        |        |            |              |           |        |        |        |        |
| Participation Rate     | 67.92% | 74.16% | 74.51% | 68.92% | 69.56%     | 70.23%       | 70.90%    | 71.57% | 72.25% | 72.58% | 72.93% |
|                        |        |        |        |        | (Bi        | llion Dollai | rs)       |        |        |        |        |
| Total Premiums         | 1.88   | 1.96   | 1.82   | 1.84   | 1.90       | 1.95         | 2.01      | 2.06   | 2.12   | 2.16   | 2.22   |
| Producer-Paid Premiums | 0.93   | 0.62   | 0.90   | 0.95   | 0.98       | 1.01         | 1.04      | 1.07   | 1.10   | 1.12   | 1.15   |
| Premium Subsidies      | 0.95   | 1.33   | 0.91   | 0.89   | 0.91       | 0.94         | 0.97      | 0.99   | 1.02   | 1.04   | 1.07   |
| Total Indemnities      | 1.65   | 1.99   | 1.76   | 1.82   | 1.87       | 1.92         | 1.97      | 2.03   | 2.09   | 2.14   | 2.20   |
| Loss Ratio             | 0.88   | 1.02   | 0.97   | 0.99   | 0.99       | 0.98         | 0.98      | 0.98   | 0.98   | 0.99   | 0.99   |
|                        |        |        |        |        | (Billion D | ollars, Fisc | cal Year) |        |        |        |        |
| Total Obligations      | 1.90   | 2.19   | 2.30   | 2.17   | 2.23       | 2.30         | 2.36      | 2.42   | 2.49   | 2.56   | 2.62   |
| Net Outlays            | 1.27   | 1.89   | 1.55   | 1.50   | 1.53       | 1.59         | 1.62      | 1.56   | 1.61   | 1.66   | 1.80   |