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Office of the  
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World Agricultural  
Outlook Board

Baseline Report  
OCE-2005-1

February 2005

# USDA Agricultural Baseline Projections to 2014

## Interagency Agricultural Projections Committee

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*USDA Baseline* 

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**USDA Agricultural Baseline Projections to 2014.** Office of the Chief Economist, World Agricultural Outlook Board, U.S. Department of Agriculture. Prepared by the Interagency Agricultural Projections Committee. Baseline Report OCE-2005-1, 116 pp.

### **Abstract**

This report provides longrun baseline projections for the agricultural sector through 2014. Projections cover agricultural commodities, agricultural trade, and aggregate indicators of the sector, such as farm income and food prices. The projections are based on specific assumptions regarding macroeconomic conditions, policy, weather, and international developments. The baseline assumes that there are no shocks due to abnormal weather or other factors affecting global supply and demand. The 2002 Farm Act is assumed to remain in effect throughout the baseline. The baseline projections presented are one representative scenario for the agricultural sector for the next decade. As such, the baseline provides a point of departure for discussion of alternative farm sector outcomes that could result under different assumptions. The projections in this report were prepared in October through December 2004, reflecting a composite of model results and judgment-based analysis.

Steady domestic and international economic growth and gains in population strengthen demand for food and agricultural products in the baseline, providing a favorable demand setting for the U.S. agricultural sector. The United States will remain competitive in global agricultural markets although trade competition will continue to be strong. Gains in global consumption, world trade, U.S. agricultural exports, and domestic demand for agricultural products result in rising farm commodity prices and cash receipts, which help to improve the financial condition of the U.S. agricultural sector. The U.S. agricultural trade balance is projected to return to a moderate surplus after 2005, but will remain smaller than in the past two decades.

Keywords: Projections, baseline, crops, livestock, trade, farm income, food prices.

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## **A Note to Users of USDA Baseline Projections**

USDA long-term agricultural baseline projections presented in this report are a Departmental consensus on a longrun scenario for the agricultural sector. These projections provide a starting point for discussion of alternative outcomes for the sector.

The scenario presented in this report is not a USDA forecast about the future. Instead, it is a conditional, longrun scenario about what would be expected to happen under a continuation of the 2002 Farm Act and specific assumptions about external conditions. The baseline includes short-term projections from the November 2004 *World Agricultural Supply and Demand Estimates* report. Trade projections in this report for 2005/06 incorporate long-term assumptions concerning weather, foreign trend yields, and foreign use and do not reflect short-term conditions that may affect trade that year.

Critical long-term assumptions are made for:

- U.S. and international macroeconomic conditions,
- U.S. and foreign agricultural and trade policies,
- Growth rates of agricultural productivity in the United States and abroad, and
- Weather.

Changes in assumptions for any of these items can significantly affect the baseline projections, and actual conditions that emerge will alter the outcomes.

The baseline projections analysis was conducted by interagency committees in USDA and reflects a composite of model results and judgment-based analysis. The Economic Research Service has the lead role in preparing the Departmental baseline report. The projections and the report were reviewed and cleared by the Interagency Agricultural Projections Committee, chaired by the World Agricultural Outlook Board. USDA participants in the baseline projections analysis and review include the World Agricultural Outlook Board, the Economic Research Service, the Farm Service Agency, the Foreign Agricultural Service, the Agricultural Marketing Service, the Office of the Chief Economist, the Office of Budget and Program Analysis, the Risk Management Agency, the Natural Resources Conservation Service, and the Cooperative State Research, Education, and Extension Service.

### **Baseline Projections on the Internet**

The new USDA baseline projections are available electronically on the Internet at:

<http://usda.mannlib.cornell.edu/data-sets/baseline/>

Also, the Economic Research Service has a briefing room for baseline projections at:

<http://www.ers.usda.gov/briefing/baseline/>

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### **Acknowledgments**

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# USDA Agricultural Baseline Projections to 2014

## Interagency Agricultural Projections Committee

### Introduction

This report provides longrun baseline projections for the agricultural sector through 2014. Projections cover agricultural commodities, agricultural trade, and aggregate indicators of the sector, such as farm income and food prices. The baseline identifies major forces and uncertainties affecting future agricultural markets; prospects for global long-term economic growth, consumption, and trade; and future price trends, trade flows, and U.S. exports of major farm commodities.

The projections are a conditional scenario with no shocks and are based on specific assumptions regarding the macroeconomy, agricultural policy, the weather, and international developments. The baseline assumes that current farm legislation, the Farm Security and Rural Investment Act of 2002 (the 2002 Farm Act), remains in effect through the projections period. The projections are not intended to be a Departmental forecast of what the future will be, but instead a description of what would be expected to happen under a continuation of the 2002 Farm Act, with very specific external circumstances. Thus, the baseline is a neutral backdrop, reference scenario that provides a point of departure for discussion of alternative farm sector outcomes that could result under different domestic or international assumptions.

The projections in this report were prepared in October through December 2004 in support of the fiscal year 2006 President's Budget Estimates. Projections reflect a composite of model results and judgment-based analysis. Normal weather is assumed. Short-term projections included in the baseline are from the November 2004 *World Agricultural Supply and Demand Estimates* report.

## Overview of Baseline Assumptions and Projections

**Key assumptions** underlying the baseline projections include the following:

### *Economic growth*

- World economic growth is projected to strengthen from the slow growth of 2001-03, averaging over 3 percent through 2014. The baseline assumes that growth in the U.S. gross domestic product (GDP) slows from the high recovery rate in 2004, and moves toward a sustainable longrun rate near 3 percent. Strong economic growth in developing countries of more than 5 percent annually is projected for 2006-14.

### *Population*

- Growth in global population is assumed to slow in the baseline, from an annual rate of 1.7 percent in the 1980s to an average of about 1.1 percent over the projection period. Nonetheless, world population increases by more than 700 million people between 2004 and 2014. Although slowing, population growth rates in developing countries remain above those in the rest of the world. As a consequence, the share of world population accounted for by developing countries increases from 80 percent in 2004 to 82 percent by 2014.

### *The value of the U.S. dollar*

- A continuing depreciation of the U.S. dollar is assumed through 2006. However, the dollar is projected to appreciate again starting in 2007. The strengthening of the U.S. dollar assumes that capital moves into the United States to take advantage of well-functioning financial markets and high expected long-term productivity growth.

### *Oil prices*

- From 2006 to 2009, real oil prices are projected to fall as supply and demand adjust to recent high prices and move the market to a more sustainable long-term balance. In subsequent years, crude oil prices are projected to rise slightly faster than the general inflation rate, as new oil discoveries as well as new technologies for extracting and refining oil allow for substantial demand growth with moderate energy price increases.

### *U.S. agricultural policy*

- The Farm Security and Rural Investment Act of 2002 (2002 Farm Act) is assumed to continue through the projections period.
- Area enrolled in the Conservation Reserve Program (CRP) is assumed to rise to 39.2 million acres from about 35 million acres currently.



- Tobacco projections reflect legislation enacted in October 2004 that ends the Federal tobacco marketing quota and price support loan program after the 2004 crop year and provides for buyout payments to tobacco quota holders and tobacco quota producers.

#### *Asian soybean rust*

- The baseline does not include potential effects of Asian soybean rust in the United States. The finding of U.S. cases of soybean rust occurred after the baseline commodity projections were completed (see box, page 24).

#### *Beef trade*

- The baseline assumes a gradual rebuilding of U.S. beef exports to Japan, reflecting the October 2004 U.S.-Japan beef trade framework agreement that will permit the resumption of beef trade between the two countries (see box, page 49). A gradual recovery in U.S. beef exports to South Korea is also assumed.
- The resumption of imports from Canada of slaughter cattle under 30 months of age and feeder cattle is assumed to begin in 2006. The baseline projections were prepared before the minimal risk rule was published, which is expected to allow that trade to begin, effective March 7, 2005.

#### *International policy*

- Baseline trade projections assume that all countries fully comply with all existing bilateral and multilateral agreements affecting agriculture and agricultural trade. The baseline incorporates effects of trade agreements and domestic policy reforms in place in November 2004, but does not incorporate any effects of agreements not formally ratified by that date.
- Domestic agricultural and trade policies in individual foreign countries are assumed to continue to evolve along their current path, based on the consensus judgment of USDA's regional and commodity analysts. In particular, economic and trade reform underway in many developing countries is assumed to continue.

**Key results** in the baseline projections include the following:

- Improved global economic performance and growth in population strengthen demand for food and agricultural products in the baseline, providing the foundation for gains in agricultural trade, U.S. exports, farm commodity prices, and cash receipts. Economic growth in developing countries is important for this result, because consumption and imports of food and feed are particularly responsive to income growth in those countries, with movement away from staple foods and increased diversification of diets.
- The United States will remain competitive in most global agricultural markets, although trade competition will continue to be strong. Expanding production in a number of countries, such as Brazil, Argentina, Canada, Ukraine, and Kazakhstan, provides competition to U.S. exports for some agricultural commodities. Additionally, a strengthening U.S. dollar assumed in the baseline starting in 2007 is a constraining factor for U.S. agricultural competitiveness and export growth in the longer run. Nonetheless, increases in exports contribute to gains in cash receipts to U.S. farmers and improvement in the financial condition of the U.S. agricultural sector.
- Overall meat exports benefit from stronger foreign economic growth in the baseline. Although U.S. beef exports to Japan and South Korea are projected to gradually rebuild, overall beef exports do not return to the levels attained prior to the U.S. case of bovine spongiform encephalopathy (BSE) in 2003.
- Canada continues to be a strong competitor with the United States in pork exports to Pacific Rim nations and Mexico. Canada is also the major supplier of live hog imports to the United States.
- Increased production of pork and poultry allow Brazil to become very competitive in world meat trade, enabling Brazil's pork and poultry exports to sustain strong growth.
- Domestic demand increases for meat, feeds, horticultural products, corn used in ethanol production, and food use of rice.
- Market prices and cash receipts rise, which helps to improve the economic and financial condition of the U.S. agricultural sector. Government payments become relatively less important over time as a greater share of gross cash income comes from the marketplace due to growing domestic and export demands. Increasing gross cash income assists in asset accumulation and debt management, raising farm equity and reducing the debt-to-asset ratio in the sector. Net farm income projections for the next decade average over \$60 billion, compared to \$47.7 billion in the 1990s.
- Consumer food prices are projected to rise less than the general inflation rate.
- Steady global economic growth and stronger global trade lead to gains for U.S. agricultural export volumes and higher commodity prices. Thus, the value of U.S. agricultural exports is projected to grow from \$56 billion in fiscal year 2005 to \$78.6 billion in 2014. High-

value product (HVP) exports continue to account for almost two-thirds of total U.S. exports. Much of the growth in HVP exports is for animal products and horticultural products. Most of the growth in the value of bulk commodity exports reflects expected price increases and gains in volume for grains.

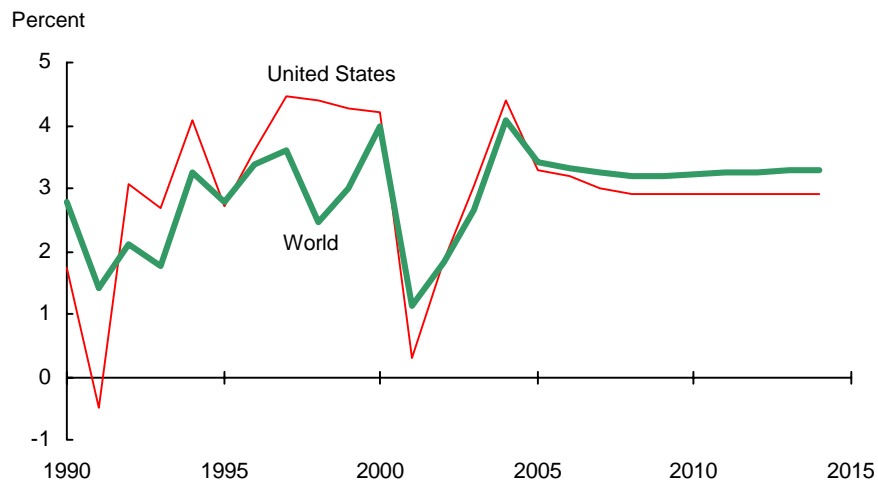
- Increases in U.S. consumer income and demand for a large variety of foods underlie growth in U.S. agricultural imports, which rise from \$56 billion in fiscal year 2005 to more than \$76 billion by 2014. Strong growth in horticultural product imports is assumed to continue in the projections, contributing much of the overall increase in agricultural imports. Processed foods are expected to account for a growing share of U.S. agricultural imports.
- China is projected to be a net importer of corn in the baseline starting in 2007/08, reflecting declining stocks of grain and increasing incomes which raise consumer demand for meat and derived demand for feed for a growing livestock sector.
- Brazil's rapidly increasing area planted to soybeans enables it to gain a larger share of world soybean and soybean meal exports, despite increasing domestic feed use. Its share of world exports of soybeans plus the soybean equivalent of soybean meal exports rises from about 35 percent in recent years to 45 percent by 2014.
- Kazakhstan and Ukraine are projected to have a growing importance in world wheat trade, reflecting low costs of production and continued investments in their agricultural sectors. Their share of world wheat exports is projected to increase from 4-6 percent in recent years to about 11 percent by the end of the period. However, high year-to-year volatility in these countries' production and trade can be expected.
- Removal of textile and apparel import quotas, resulting from the completion of the Multi-Fiber Arrangement (MFA) phaseout on December 31, 2004, is expected to have a major influence on world cotton production and trade. The MFA phaseout is expected to speed the transfer of raw cotton production to countries where resource endowments and technology result in the lowest production costs. Textile production and raw cotton consumption will increase in developing countries, such as China, India, and Pakistan, where labor costs are lowest. Countries in Europe and East Asia with higher cost labor markets will continue to reduce their cotton imports through the baseline.

## Macroeconomic Assumptions

Macroeconomic assumptions underlying the USDA baseline are characterized by above-trend growth in 2004 followed by steady growth at average historical levels beginning in 2005. Costs of energy and other raw materials and exchange rate developments are important uncertainties in the outlook. The baseline's macroeconomic assumptions were completed in October 2004.

The U.S. and world economies continue to become increasingly interdependent both through growing trade and through financial market integration. The United States maintains its global share of gross domestic product (GDP) at about 30 percent. With the largest GDP and capital market, the United States plays a large role in determining economic conditions around the world, although growing economic interdependence implies that international macroeconomic conditions also have important effects on the U.S. economy.

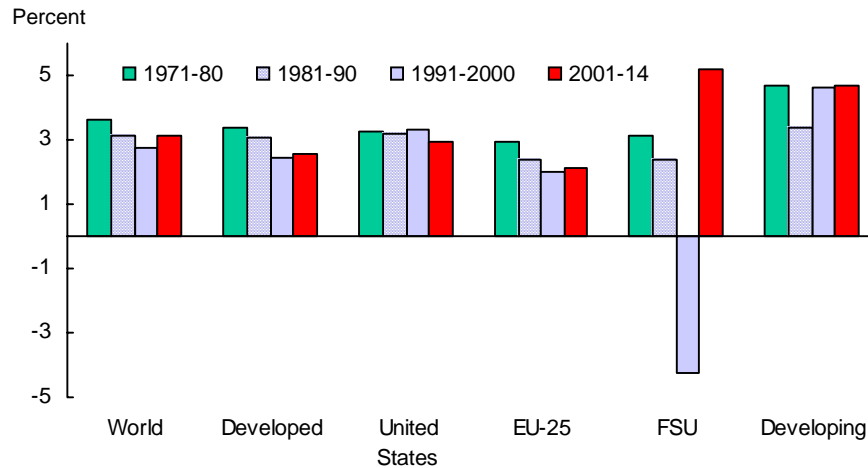
**U.S. and world gross domestic product (GDP) growth**



The baseline assumes that U.S. GDP growth moderates in the near term from the rapid growth in 2004 as the economy moves toward a longrun annual growth rate near 3 percent. Continuing U.S. technological advances associated with computing and telecommunications will provide support for worldwide productivity growth.

- Global economic growth is also projected to reflect steady gains as most countries of the world move close to longrun sustainable economic growth rates.
- Relatively high oil prices in 2004 and beyond will constrain Asia and its manufacturing sector, which is far more dependent on energy for GDP growth than are more developed economies.

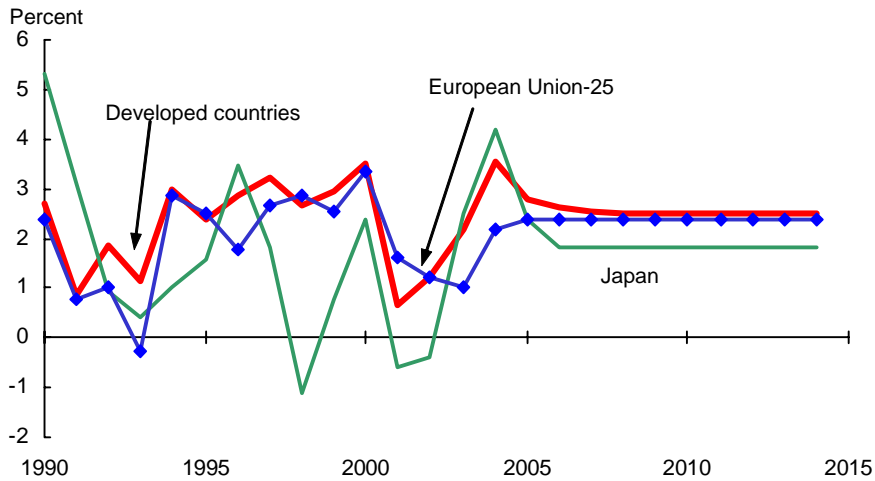
### World gross domestic product (GDP) growth rates, decade averages



World economic growth is projected to strengthen from the slow growth of 2001-03, averaging over 3 percent through 2014. Increased incomes and growth in population raise global food demand, leading to gains in agricultural trade and U.S. exports.

- Consumption and imports of food and feed in developing countries are particularly responsive to growth in income. As incomes rise in these countries, consumers generally diversify their diets, moving away from staple foods to include more meat, fruits, vegetables, and processed foods. These consumption shifts increase import demand for feedstuffs and high-value food products. Historically, this has included increases in U.S. exports of meat and processed foods.

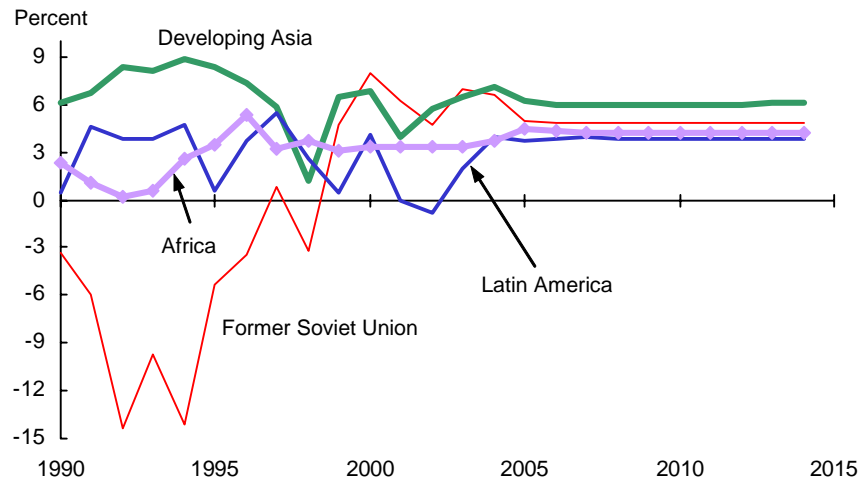
### GDP growth for developed countries, European Union-25, and Japan



Developed economies are projected to grow at rates similar to those of the 1990s, averaging 2.6 percent in 2006 and beyond.

- The adoption of the euro enhanced cross-border trade and investment within the European Union (EU). Enlargement of the EU to include countries of Central and Eastern Europe implies closer integration, creating more trade and investment opportunities.
- In spite of this, the EU does not grow as rapidly as the United States, reflecting smaller population growth and rigidities in labor markets that constrain economic gains.
- Japan continues to face significant economic challenges, largely the result of its unresolved banking problems and persistent deflation. Japan's share of world GDP is expected to decline to less than 13 percent by 2014, down from more than 17 percent in the early 1990s.

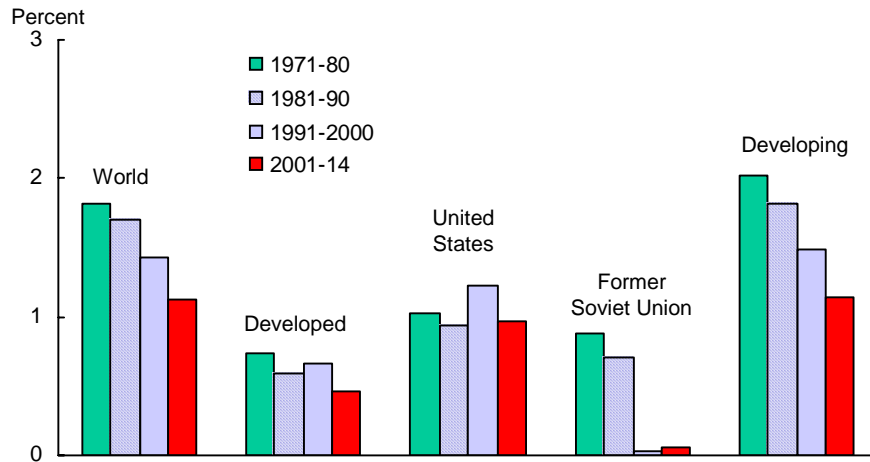
### GDP growth for developing economies and the former Soviet Union



Economic growth in developing countries is projected at a 5.1 percent average annual rate in 2006-14, while overall growth in the former Soviet Union (FSU) is projected to average slightly below 5 percent per year.

- Long-term growth near 4 percent is projected for Latin America. This will attract foreign capital inflows, sustaining growth.
- Growth in the developing economies of East and Southeast Asia is projected to be about 6 percent for the next decade, but still will be below the very strong average growth of over 7 percent in the 1990s.
- China's economic growth is consistently the strongest in Asia, and is expected to average above 7 percent over the next decade.
- Russia, Ukraine, and the other former Soviet Republics benefit from their shift to market economies, with GDP gains of 4-5 percent annually in these countries for the next decade.

## Population growth



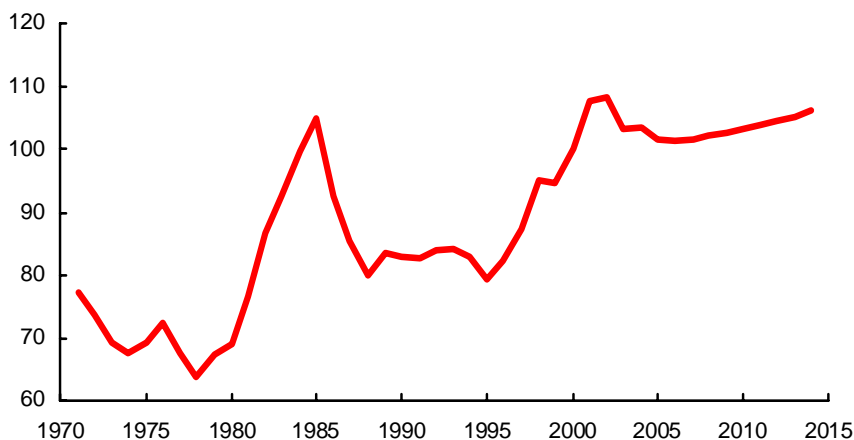
Global population growth is a major factor underlying agricultural demand and trade. Historically, about 70 percent of increases in food use have been related to population growth, leaving about 30 percent driven by increasing incomes and other factors. With population growth slowing in the baseline projections and income growth strengthening, population gains will become relatively less important in determining food and agricultural demand growth.

- World population growth declines from an annual rate of 1.7 percent in the 1980s to an average of about 1.1 percent annually during the projection period.
- Developed economies and the FSU have very low projected rates of population growth in the baseline, 0.4 and 0.1 percent respectively. The projected annual average population growth rate for the United States is the highest among developed countries, 0.9 percent, in part reflecting large immigration.
- Population growth rates in developing countries decline by almost half between the 1970s and the projection period, but remain above those in developed countries and the FSU. As a consequence, the share of world population accounted for by developing countries continues to increase, from 80 percent in 2004 to 82 percent by 2014.
- China's population growth rate slows from 1.5 percent per year in 1981-90 to 0.6 percent in 2005-14. The population growth rate in India, the world's second most populous nation, is projected to decline from 2.1 percent to 1.3 percent per year between the same periods. Nonetheless, this growth narrows the gap between its population and that of China.
- Brazil's population growth rate falls from 2.1 percent annually in 1981-90 to 1.0 percent in 2005-14. Sub-Saharan Africa's population growth rate declines from 2.9 percent to 1.9 percent per year for the same periods, still leaving Africa with the highest population growth rates of any region.



### U.S. agricultural trade-weighted dollar projected to strengthen 1/

Index values, 2000=100

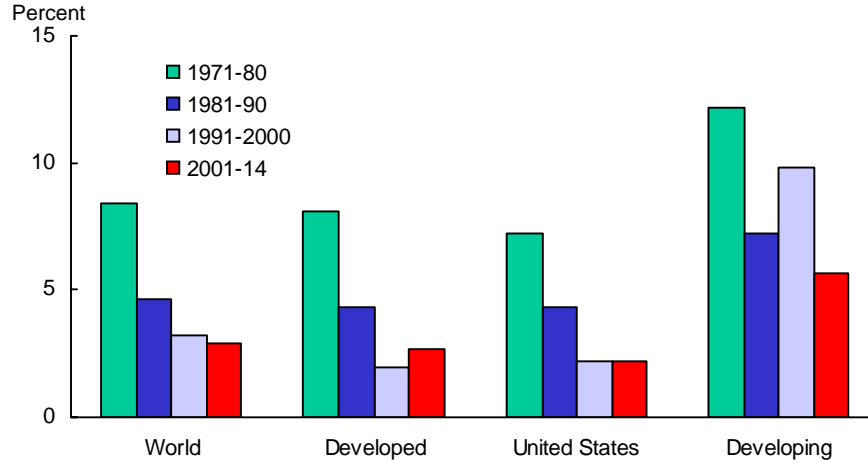


1/ Real U.S. agricultural trade-weighted dollar exchange rate, using U.S. agricultural export weights.

Exchange rates in the baseline are expressed as local currency per U.S. dollar, in real (inflation-adjusted) terms, thus reflecting nominal exchange rates and relative inflation rates. With this measure, a decrease in a country's exchange rate indicates an appreciation of its currency since fewer units of that currency are needed to equal the value of one U.S. dollar. Implications for the value of the U.S. dollar are then measured as weighted averages of individual country-specific exchange rates. For example, the U.S. dollar value index shown in the chart is a trade-weighted measure for U.S. agricultural markets, where the weights reflect relative U.S. agricultural exports to foreign countries. Alternative measures of the value of the U.S. dollar can be constructed using different weights, such as agricultural trade weights of competitors in global trade or U.S. exports weights for a specific commodity.

- While there is a depreciation of the U.S. dollar in the near term, the dollar is projected to appreciate again starting in 2007. The strengthening of the U.S. dollar assumes that capital moves into the United States to take advantage of well-functioning financial markets, transparent financial accounting standards, a relatively risk-free environment, and high expected long-term productivity growth and investor returns, which mitigates concerns with the budget and trade deficits. Nonetheless, high aggregate U.S. trade and budget deficits and a historically low domestic savings rate could make the near-term depreciation of the dollar sharper and longer than assumed in the baseline. If this were to occur, near-term U.S. and world economic growth would be weaker as well.
- A return to a strengthening dollar in the baseline reduces U.S. agricultural competitiveness and constrains growth in exports. This is partially offset by longer term global economic growth, which increases the demand for U.S. exports. U.S. exports of bulk commodities and horticultural products tend to be the agricultural products most sensitive to an appreciating U.S. dollar due to relatively stronger global trade competition in those markets.
- China is assumed to maintain a policy of a fixed nominal exchange rate relative to the U.S. dollar, keeping its currency at a level that several indicators suggest is significantly undervalued. This policy lowers prices for Chinese exports, thereby affecting both agricultural and nonagricultural trade. Even with a fixed nominal exchange rate, higher projected inflation in China than in the United States implies some real appreciation of the Chinese currency. However, an appreciation of the Chinese currency in nominal terms would make the real currency appreciation greater, which would tend to lower China's exports and raise the volume of its imports.

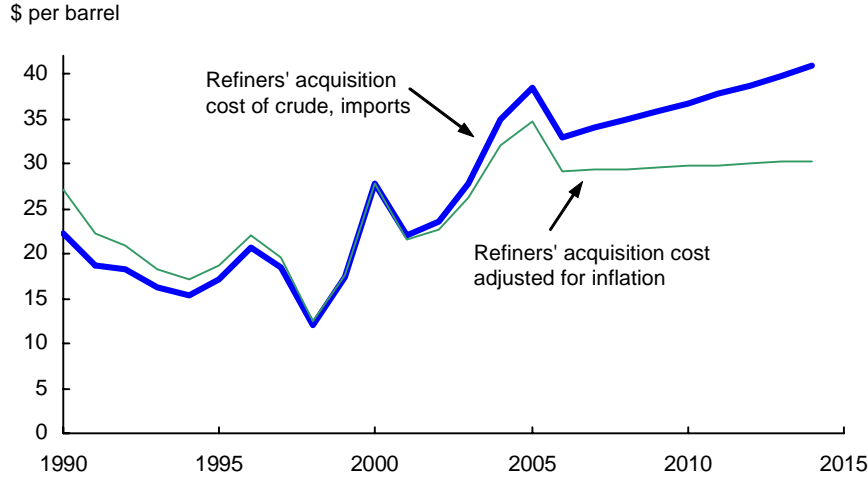
### Inflation rates



Inflation rates, which came down in the 1990s (except in the transition economies of the FSU), are projected to remain low through 2014.

- For developed countries and the world as a whole, inflation is projected to be below 3 percent.
- Inflation rates for countries of the FSU are sharply lower than the exceedingly high rates during the transition period for those economies in the 1990s.
- Inflation rates in developing countries are also projected to fall. Inflation in Asia declines to rates comparable to those in developed countries. Those in Latin America and Africa and the Middle East, while declining, will remain substantially above inflation rates in the rest of the world.
- As the U.S. and world economies move to longrun sustainable rates of economic growth, inflationary pressures will begin. In response, the Federal Reserve Board and central banks in other countries are assumed to raise short-term interest rates to limit price increases. In addition, as world economies grow, demand for credit rises and further boosts interest rates. Finally, a weaker U.S. dollar relative to the yen and the euro in the near term is expected to result in U.S. interest rates rising more than those in Japan and Europe to continue financing the U.S. budget and trade deficits. However, relatively low inflation rates will keep domestic interest rates from moving to the high levels seen in the 1980s.

## Crude oil prices



Oil prices increased in 2004 due to uncertainties in the international oil market that resulted from the unstable situation in the Middle East, supply problems from the Gulf of Mexico to Norway that lowered effective production capacity, and economic expansion in developing Asia (especially in China) that raised demand. Crude oil prices are projected to average somewhat higher in 2005 as continued (although slower) growth in the major Asian economies will keep oil demand strong, outpacing gains in new crude oil supplies.

- From 2006 to 2009, real oil prices are projected to fall as supply and demand adjust to recent high prices and move the market to a more sustainable long-term balance.
- From 2010 on, crude oil prices are projected to rise slightly faster than the general inflation rate. New oil discoveries, along with new technologies for finding, extracting, and refining oil, are assumed to allow for continued substantial growth in demand with modest relative energy price inflation. These projections are broadly consistent with the U.S. Department of Energy, Energy Information Administration's January 2005 *Annual Long-Term Outlook*.
- Most of the growth in world oil demand will be due to strong Asian GDP growth, which is highly dependent on energy availability. Higher oil prices could lower Asian and global GDP growth from rates projected in the baseline, although ensuing economic adjustments through adoption of existing energy-saving technologies common in developed economies make a sustained growth slowdown less likely (see box, page 14).
- Oil prices have historically affected prices of natural gas and supply conditions for nitrogen-based fertilizer. However, the links between the oil and natural gas markets have weakened significantly due to dramatic growth in the demand for natural gas and deregulation throughout the natural gas supply and demand system. As a result, prices for natural gas and fertilizer will continue to be volatile. U.S. imports of fertilizer will mitigate the impact of rising natural gas prices on farm operations in the United States (see box, page 15).

**Potential Risk to Macroeconomic Assumptions**  
***High Prices for Oil and Other Industrial Commodities***

Large increases in oil prices in 2004 were accompanied by sharp gains in prices for other industrial commodities. There is some risk that continued high prices could slow global economic growth from that assumed in the baseline.

- Much of the gain in oil prices reflects rapid economic growth in developing Asia. These economies tend to be highly energy intensive, taking more energy to generate a dollar increase in real GDP than in the United States and other developed countries. Thus, strong economic growth projected for these countries could be curtailed if high oil and industrial commodity prices persist.
- However, recent evidence suggests the developing Asian economies may have greatly improved energy efficiency, and many have coal as an alternative energy source. Consequently, growth impacts of high oil prices may be smaller than in earlier years. Additionally, if economic growth in these countries slows significantly, demand for oil and other industrial commodities would fall, with prices declining as well. These types of economic adjustments (as happened in the late 1980s when a spike in industrial commodity prices triggered a slowdown in world growth and encouraged conservation of energy and raw materials, which combined to lower demand and prices) reduce the likelihood of a sustained economic slowdown due to high oil and industrial commodity prices.
- Instead, if the world economy were to adjust with less flexibility, global economic growth could be lower than assumed for the baseline.

## **Fertilizer Imports To Mitigate the Impact of Rising Natural Gas Prices on the Farm Sector**

Tightness in the U.S. natural gas market is expected to persist for the medium term, although the resulting price volatility will have only modest implications for the farm sector because of higher imports of fertilizer. Although the direct use of natural gas on U.S. farms is small compared to use of other energy sources, nitrogen-based fertilizer produced from natural gas feedstock is of considerable importance in the production of many crops, such as corn, cotton, and rice. Use of nitrogen-based fertilizers (nitrogenates) has been part of the remarkable productivity gains of U.S. agriculture.

### **Natural Gas Market Developments**

While the United States has imported significant amounts of natural gas from Mexico and Canada over the past 20 years, North America had been largely self-sufficient in natural gas production until the last several years. In this period, the natural gas market tightened as demand for this low-polluting fuel rose for use in electricity generation, petrochemical production, and other manufacturing. Natural gas imports through shipments of liquefied natural gas (LNG) will become increasingly important in augmenting North American supply and relieving the demand pressures on prices. However, there currently are not enough facilities to convert LNG to natural gas to meet projected natural gas demand, with several years needed before new LNG conversion facilities will be available to ease this situation. Thus, natural gas prices could be high and somewhat volatile over the next several years.

### **Fertilizer Market Adjustments**

North American nitrogenates are produced using natural gas due to its availability, historically low price, and environmental friendliness. However, as U.S. natural gas prices rose sharply in recent years, some U.S. plants that produce nitrogen-based fertilizer shut down, reducing domestic fertilizer production capacity. Instead, fertilizer suppliers imported nitrogenates from major fertilizer exporters, such as Trinidad and Tobago, Canada, Russia, and Saudi Arabia. These countries have lower natural gas prices and thus a substantial cost advantage in nitrogenate production.

Fertilizer imports help keep prices for nitrogenates in the United States from rising as much as natural gas prices. Although fertilizer prices will rise when natural gas prices increase, as long as world fertilizer production capacity remains ample, the availability of fertilizer imports to augment domestic supplies will continue to moderate fertilizer prices for the U.S. farm sector.

Table 1. U.S. macroeconomic assumptions

Item	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
GDP, billion dollars												
Nominal	11,004	11,752	12,432	13,137	13,829	14,543	15,294	16,084	16,914	17,788	18,706	19,672
Real 1996 chained dollars	10,381	10,838	11,196	11,554	11,901	12,246	12,601	12,966	13,342	13,729	14,127	14,537
percent change	3.0	4.4	3.3	3.2	3.0	2.9	2.9	2.9	2.9	2.9	2.9	2.9
Disposable personal income												
Nominal (billions)	8,160	8,641	9,134	9,636	10,166	10,725	11,315	11,938	12,594	13,287	14,018	14,789
percent change	4.2	5.9	5.7	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Nominal per capita, dollars	28,033	29,402	30,783	32,170	33,623	35,146	36,741	38,412	40,163	41,998	43,922	45,938
percent change	3.2	4.9	4.7	4.5	4.5	4.5	4.5	4.5	4.6	4.6	4.6	4.6
Real (billion 1996 chained)	7,734	7,997	8,237	8,500	8,772	9,053	9,343	9,641	9,950	10,268	10,597	10,936
percent change	2.3	3.4	3.0	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
Real per capita, 96 dollars	26,569	27,209	27,759	28,377	29,013	29,665	30,335	31,024	31,731	32,457	33,204	33,971
percent change	1.3	2.4	2.0	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3
Consumer spending												
Real (billion 1996 chained)	7,356	7,613	7,834	8,077	8,319	8,552	8,791	9,038	9,291	9,551	9,818	10,093
percent change	3.3	3.5	2.9	3.1	3.0	2.8	2.8	2.8	2.8	2.8	2.8	2.8
Inflation measures												
GDP price index, chained	106.0	108.4	111.0	113.7	116.2	118.8	121.4	124.0	126.8	129.6	132.4	135.3
percent change	1.8	2.3	2.4	2.4	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
CPI-U, 82-84=100	184.0	189.1	194.0	199.1	204.0	209.1	214.4	219.7	225.2	230.9	236.6	242.5
percent change	2.3	2.8	2.6	2.6	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
PPI, finished goods 82=100	143.3	147.5	151.2	153.6	156.0	158.5	161.1	163.6	166.3	168.9	171.6	174.4
percent change	3.2	2.9	2.5	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
PPI, crude goods 82=100	135.3	156.9	172.6	164.0	159.1	161.0	163.1	165.4	167.7	170.0	172.4	174.8
percent change	25.1	16.0	10.0	-5.0	-3.0	1.2	1.3	1.4	1.4	1.4	1.4	1.4
Crude oil price, \$/barrel												
Refiner acq. cost, imports	27.9	38.5	42.6	37.5	34.1	33.1	33.0	33.9	34.9	35.9	36.9	37.9
percent change	17.9	38.1	10.6	-11.9	-9.0	-2.9	-0.4	2.8	2.8	2.8	2.8	2.8
Real 1996 chained dollars	26.3	35.5	38.3	33.0	29.3	27.9	27.2	27.3	27.5	27.7	27.8	28.0
percent change	15.8	35.0	8.0	-14.0	-11.0	-5.0	-2.5	0.6	0.6	0.6	0.6	0.6
Labor compensation per hour												
nonfarm business, 92=100	149.7	155.5	161.0	166.5	172.1	178.0	184.0	190.3	196.7	203.4	210.3	217.5
percent change	4.1	3.9	3.5	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
Interest rates, percent												
3-month T-bills	1.0	1.3	3.2	3.8	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
3-month commercial paper	1.1	1.6	3.5	4.3	4.5	4.7	4.7	4.7	4.7	4.7	4.7	4.7
Bank prime rate	4.1	4.2	5.9	6.5	7.5	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Treasury bonds (10-year)	4.0	4.5	5.3	5.5	6.0	6.2	6.2	6.2	6.2	6.2	6.2	6.2
Moody's Aaa bonds	5.7	5.9	6.4	6.8	7.5	7.8	7.8	7.8	7.8	7.8	7.8	7.8
Civilian unemployment												
rate, percent	6.0	5.5	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
Nonfarm payroll emp., millions	129.9	131.3	132.9	134.3	135.8	137.3	138.8	140.2	141.6	143.0	144.5	145.9
percent change	-0.3	1.0	1.2	1.1	1.1	1.1	1.1	1.0	1.0	1.0	1.0	1.0
Total population, million												
percent change	291.1	293.9	296.7	299.5	302.4	305.2	308.0	310.8	313.6	316.4	319.1	321.9
percent change	1.0	1.0	1.0	1.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9

Domestic macroeconomic assumptions were completed in October 2004.

Table 2. Global real GDP growth assumptions

Region/country	Share of world GDP 1996-2000								Average		
		2002	2003	2004	2005	2006	2007	2008	1991-2000	2001-2005	2006-2014
	Percent	Percent change									
World	100.0	1.8	2.6	4.1	3.4	3.3	3.2	3.2	2.8	2.6	3.2
less United States	69.6	1.8	2.5	3.9	3.4	3.4	3.3	3.3	2.5	2.6	3.4
North America	32.6	2.0	3.0	4.3	3.3	3.2	3.0	2.9	3.3	2.6	2.9
United States	30.4	1.9	3.0	4.4	3.3	3.2	3.0	2.9	3.3	2.6	2.9
Canada	2.1	3.4	2.0	2.6	3.2	3.1	3.0	3.0	2.7	2.5	3.0
Latin America	6.4	-0.8	1.9	4.0	3.8	3.9	3.9	3.9	3.4	1.8	3.9
Caribbean & Central America	0.6	2.6	2.7	3.1	3.6	4.3	4.0	3.6	3.6	2.9	3.7
Mexico	1.7	0.7	1.3	3.9	4.0	4.0	4.0	4.0	3.6	1.9	4.0
South America	4.1	-2.1	2.1	4.1	3.7	3.8	3.9	3.9	3.3	1.5	3.9
Argentina	1.0	-10.9	8.7	6.5	3.5	3.5	3.5	3.5	4.7	0.7	3.5
Brazil	1.9	1.9	-0.2	3.4	3.5	3.7	3.9	3.9	2.7	2.0	3.9
Other	1.2	-2.0	1.6	3.7	4.1	4.0	4.0	4.0	3.3	1.5	4.0
Europe	27.5	1.2	1.0	2.2	2.4	2.4	2.4	2.4	2.0	1.7	2.4
European Union-25	25.9	1.2	1.0	2.2	2.4	2.4	2.4	2.4	2.0	1.7	2.4
Other Europe	1.6	1.8	1.8	2.3	2.5	2.4	2.4	2.4	1.4	2.1	2.4
Former Soviet Union	1.1	4.8	7.0	6.6	5.0	4.8	4.8	4.8	-4.3	5.9	4.8
Russia	0.8	4.7	7.3	7.1	5.0	5.0	5.0	5.0	-3.9	5.8	5.0
Ukraine	0.1	4.8	9.4	8.0	6.4	4.5	4.5	4.5	-7.7	7.5	4.5
Other	0.2	5.0	4.8	4.3	4.3	4.3	4.3	4.3	-3.6	5.6	4.3
Asia and Oceania	27.0	2.2	4.1	5.3	4.0	3.7	3.7	3.8	3.2	3.4	3.9
East Asia	21.9	1.7	3.8	5.3	3.7	3.3	3.4	3.4	2.9	3.1	3.5
China	3.1	8.0	9.1	9.4	7.5	7.3	7.3	7.3	10.2	8.3	7.3
Hong Kong	0.5	1.9	3.2	5.6	5.2	4.8	4.6	4.5	4.4	3.2	4.5
Japan	15.9	-0.4	2.5	4.2	2.4	1.8	1.8	1.8	1.4	1.6	1.8
Korea	1.4	6.9	3.1	5.0	4.4	5.2	5.4	5.3	6.2	4.5	5.2
Taiwan	0.9	3.6	3.2	5.7	4.6	4.5	4.5	4.5	6.4	3.0	4.5
Southeast Asia	1.9	4.7	5.4	5.7	5.4	5.3	5.3	5.3	5.2	4.6	5.3
Indonesia	0.5	3.7	4.1	4.3	4.8	5.0	5.0	5.0	4.4	4.0	5.0
Malaysia	0.3	4.1	5.3	6.7	5.6	5.5	5.5	5.5	7.2	4.4	5.5
Philippines	0.2	4.4	4.8	5.1	4.5	4.6	4.6	4.6	2.9	4.4	4.6
Thailand	0.4	5.4	6.8	6.9	6.0	5.3	5.3	5.3	4.5	5.4	5.3
Vietnam	0.1	7.1	7.2	7.3	7.2	7.0	7.0	7.0	7.5	7.1	7.0
South Asia	1.8	7.6	6.6	6.3	5.8	5.8	5.8	5.8	5.2	5.9	5.8
India	1.4	8.2	7.1	6.7	6.0	6.0	6.0	6.0	5.5	6.3	6.0
Pakistan	0.2	5.1	4.5	4.5	4.5	4.5	4.5	4.5	4.0	4.0	4.5
Bangladesh	0.1	5.3	5.3	5.2	5.2	5.1	5.1	5.1	4.8	5.1	5.0
Oceania	1.4	3.8	3.1	3.4	3.2	3.5	3.5	3.5	3.6	3.5	3.5
Australia	1.2	3.8	3.0	3.3	3.2	3.5	3.5	3.5	3.7	3.4	3.5
New Zealand	0.2	4.4	3.4	3.6	3.2	3.2	3.2	3.2	2.7	3.6	3.2
Other Asia and Oceania	0.5	3.5	4.5	4.5	4.5	4.5	4.5	4.5	6.0	3.4	4.5
Middle East	3.8	4.4	0.2	5.9	5.3	5.8	5.1	4.4	3.8	3.5	4.6
Iran	1.0	5.9	5.3	5.5	4.5	4.5	4.5	4.5	4.1	5.2	4.5
Iraq	0.6	5.5	-21.2	10.0	12.0	15.0	10.0	5.6	4.1	2.2	7.0
Saudi Arabia	0.6	1.2	5.5	6.6	3.2	3.0	3.0	3.0	2.2	3.5	3.0
Turkey	0.6	7.9	5.8	6.0	4.5	4.6	4.6	4.6	3.6	3.4	4.6
Other	1.1	2.1	3.1	4.0	4.0	4.0	4.0	4.0	4.6	3.2	4.0
Africa	1.6	3.4	3.3	3.7	4.5	4.3	4.3	4.3	2.7	3.6	4.3
North Africa	0.6	3.0	4.6	4.6	5.2	5.1	5.0	4.9	3.3	4.2	4.9
Algeria	0.2	4.1	6.7	6.5	6.8	6.3	6.0	5.8	1.7	5.2	5.7
Egypt	0.3	2.6	2.9	3.5	4.1	4.5	4.5	4.5	4.4	3.2	4.5
Morocco	0.1	3.2	5.5	3.9	5.1	4.7	4.5	4.5	2.4	4.8	4.5
Tunisia	0.1	1.7	5.6	5.5	5.6	5.4	5.3	5.2	4.8	4.7	5.2
Republic of South Africa	0.4	3.6	1.9	2.4	3.4	3.2	3.2	3.2	2.7	3.1	3.2
Other Sub-Saharan Africa	0.6	3.6	3.3	4.4	4.8	4.7	4.6	4.6	1.7	3.7	4.6

International macroeconomic assumptions were completed in October 2004.

Table 3. Population growth assumptions

Region/country	Population in 2001	2002	2003	2004	2005	2006	2007	2008	Average		
									1991-2000	2001-2005	2006-2014
	Millions	Percent change									
World <sup>1</sup>	6,160	1.2	1.2	1.1	1.1	1.1	1.1	1.1	1.4	1.2	1.1
less United States	5,875	1.2	1.2	1.2	1.1	1.1	1.1	1.1	1.4	1.2	1.1
North America	317	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.2	0.9	0.9
United States	285	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.2	0.9	0.9
Canada	32	1.0	1.0	0.9	0.9	0.9	0.9	0.9	1.2	1.0	0.8
Latin America	529	1.3	1.3	1.3	1.2	1.2	1.2	1.2	1.6	1.3	1.1
Caribbean & Central America	75	1.6	1.6	1.5	1.5	1.5	1.5	1.5	1.7	1.6	1.4
Mexico	101	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.6	1.2	1.1
South America	353	1.3	1.3	1.2	1.2	1.2	1.2	1.1	1.6	1.3	1.1
Argentina	38	1.1	1.1	1.0	1.0	1.0	1.0	0.9	1.3	1.1	0.9
Brazil	178	1.2	1.2	1.1	1.1	1.1	1.0	1.0	1.5	1.2	0.9
Other	137	1.6	1.5	1.4	1.4	1.4	1.4	1.3	1.9	1.5	1.3
Europe	521	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.1
European Union-25	454	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.3	0.2	0.1
Other Europe	67	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Former Soviet Union	282	-0.2	-0.1	-0.1	-0.1	0.0	0.0	0.1	0.1	-0.1	0.1
Russia	146	-0.5	-0.5	-0.5	-0.4	-0.4	-0.4	-0.4	-0.1	-0.5	-0.3
Ukraine	49	-0.8	-0.7	-0.7	-0.7	-0.6	-0.6	-0.6	-0.4	-0.8	-0.5
Other	87	0.8	0.8	0.9	0.9	0.9	1.0	1.0	0.6	0.8	1.1
Asia and Oceania	3,449	1.2	1.2	1.1	1.1	1.1	1.1	1.1	1.4	1.2	1.1
East Asia	1,505	0.6	0.5	0.5	0.5	0.5	0.6	0.6	0.9	0.6	0.6
China	1,277	0.6	0.6	0.6	0.6	0.6	0.6	0.6	1.0	0.6	0.6
Hong Kong	7	0.7	0.7	0.7	0.6	0.6	0.6	0.5	1.6	0.7	0.5
Japan	127	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.3	0.1	-0.1
Korea	48	0.7	0.7	0.6	0.6	0.6	0.6	0.5	1.0	0.7	0.4
Taiwan	22	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.9	0.7	0.5
Southeast Asia	539	1.5	1.5	1.4	1.4	1.4	1.3	1.3	1.7	1.5	1.2
Indonesia	228	1.6	1.5	1.5	1.5	1.4	1.4	1.4	1.8	1.5	1.3
Malaysia	22	1.9	1.9	1.9	1.8	1.8	1.8	1.8	2.2	1.9	1.7
Philippines	81	2.0	2.0	1.9	1.9	1.8	1.8	1.8	2.2	2.0	1.7
Thailand	63	1.0	1.0	0.9	0.9	0.9	0.8	0.8	1.2	1.0	0.7
Vietnam	80	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.7	1.3	1.2
South Asia	1,373	1.7	1.7	1.7	1.6	1.6	1.6	1.5	1.9	1.7	1.5
India	1,019	1.5	1.5	1.5	1.4	1.4	1.4	1.3	1.8	1.5	1.3
Pakistan	150	2.0	1.8	2.0	2.0	2.1	2.1	2.0	2.5	2.1	1.9
Bangladesh	133	2.0	2.1	2.1	2.1	2.1	2.1	2.1	1.7	2.0	2.0
Oceania	32	1.5	1.4	1.3	1.3	1.2	1.2	1.2	1.5	1.4	1.1
Australia	19	1.0	0.9	0.9	0.9	0.9	0.8	0.8	1.2	0.9	0.8
New Zealand	4	1.1	1.1	1.1	1.0	1.0	1.0	0.9	1.3	1.1	0.9
Other Asia and Oceania	170	2.0	2.2	1.9	1.9	1.7	1.5	1.4	2.0	1.9	1.4
Middle East	247	1.8	1.7	1.7	1.7	1.8	1.8	1.8	2.1	1.8	1.7
Iran	66	0.7	0.4	0.5	0.8	1.0	1.1	1.1	1.4	0.7	1.1
Iraq	23	2.9	2.8	2.8	2.8	2.7	2.7	2.6	2.3	2.8	2.5
Saudi Arabia	24	2.8	2.7	2.5	2.4	2.3	2.2	2.0	3.7	2.7	1.8
Turkey	66	1.2	1.2	1.2	1.1	1.1	1.1	1.0	1.6	1.2	1.0
Other	67	2.7	2.7	2.7	2.7	2.6	2.6	2.6	2.9	2.7	2.5
Africa	815	2.1	2.1	2.0	2.0	1.9	1.9	1.9	2.5	2.1	1.8
North Africa	143	1.7	1.7	1.6	1.6	1.6	1.5	1.5	2.1	1.7	1.5
Algeria	31	1.4	1.4	1.3	1.3	1.2	1.2	1.2	1.9	1.4	1.2
Egypt	72	2.0	1.9	1.9	1.8	1.8	1.7	1.7	2.2	1.9	1.6
Morocco	31	1.7	1.7	1.6	1.6	1.6	1.6	1.5	2.0	1.7	1.5
Tunisia	10	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.5	1.0	1.0
Sub-Saharan Africa	672	2.2	2.2	2.1	2.1	2.0	2.0	1.9	2.6	2.2	1.9
Republic of South Africa	43	0.3	0.1	-0.1	-0.4	-0.6	-0.8	-0.9	1.3	0.1	-1.1
Other Sub-Saharan Africa	630	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.7	2.3	2.0

1/ Totals for the world and world less United States include countries not otherwise listed in the table.

Source: U.S. Department of Commerce, Bureau of the Census and U.S. Department of Agriculture, Economic Research Service. The population assumptions were completed in August 2004.



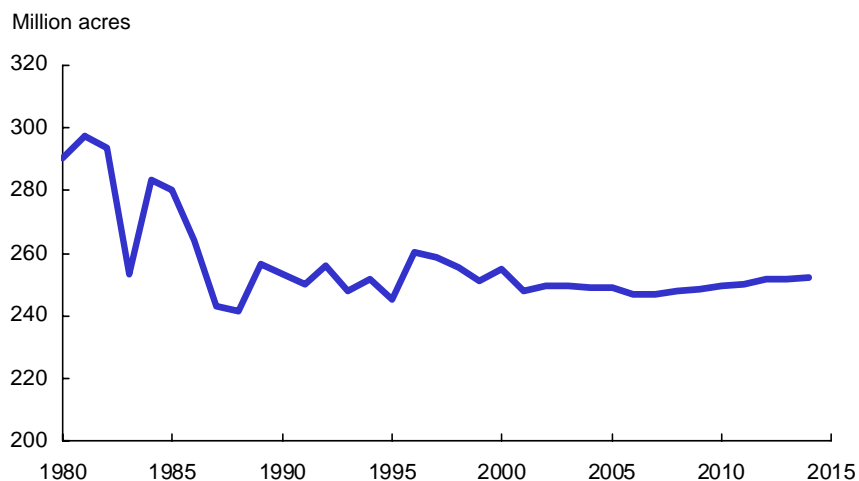
## Crops

Steady U.S. and global economic growth assumed for the baseline provides a favorable demand setting for field crops, supporting longer run increases in consumption, trade, and prices. Despite recent depreciation of the U.S. dollar relative to many currencies, a strengthening dollar (U.S. agricultural export weighted basis) starting in 2007 and trade competition from areas such as Brazil, Argentina, and the Black Sea region constrain U.S. exports for some crops, however.

Baseline assumptions for field crops reflect the Farm Security and Rural Investment Act of 2002 (2002 Farm Act), which is assumed to continue through the projection period. The 2002 Farm Act continues planting flexibility provisions, giving farmers almost complete flexibility in deciding which crops to plant. Support to field crop producers is provided by marketing assistance loans, counter-cyclical payments, and fixed direct payments. During the baseline period, area enrolled in the Conservation Reserve Program (CRP) is assumed to rise to 39.2 million acres from about 35 million acres currently. This increase in enrollment reduces land available for crop production, with about two-thirds of the land in the reserve allocated to the eight major field crops (corn, sorghum, barley, oats, wheat, rice, upland cotton, and soybeans), based on historical plantings.

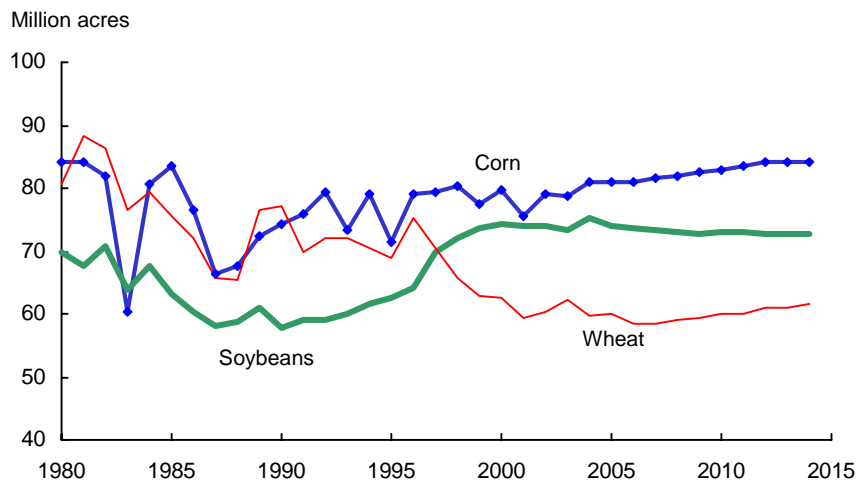
Projected plantings for the eight major field crops in the United States increase slowly in the baseline, from a low of 247 million acres to nearly 252 million acres by 2014, in response to higher producer net returns. Yield increases also contribute to production gains, limiting price increases and reducing the need for more land to be cropped. Thus, the eight-crop plantings total remains considerably lower than the more than 260 million acres planted in 1996.

**Planted area: Eight major crops <sup>1/</sup>**



<sup>1/</sup> The eight major field crops are corn, sorghum, barley, oats, wheat, rice, upland cotton, and soybeans.

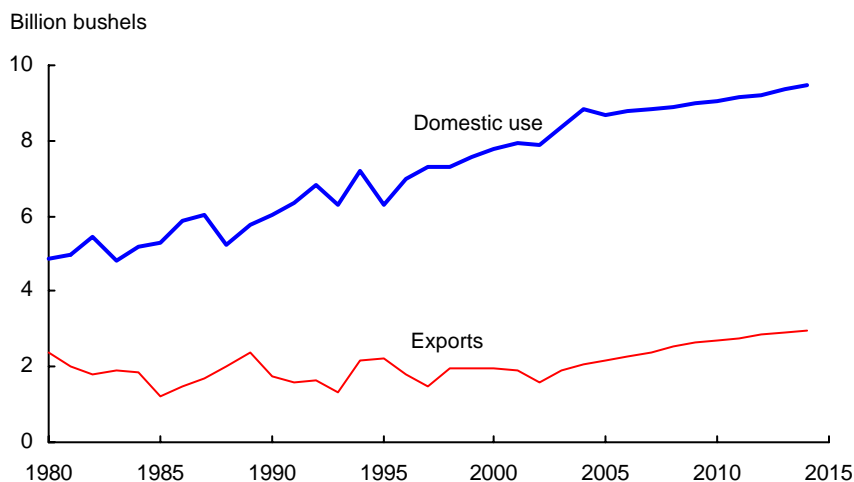
### Planted area: Corn, wheat, and soybeans



Plantings of different crops are influenced by expected net returns among competing crops. Net returns are determined by market prices, yields, and production costs, with returns augmented by marketing loan benefits when prices are low. Some benefits to growing crops may not be fully reflected in a single year's net returns, such as agronomic benefits of crop rotations. Nonetheless, while consideration of these factors can also affect planting choices, measures of farmers' response to net returns based on historical data implicitly include these effects.

- Corn, wheat, and soybeans account for about 87 percent of acreage for the eight major field crops. The cropping mix shifts somewhat more to corn and away from soybeans as growth in global supply and demand is reflected in prices and net returns.
- Corn acreage rises gradually through the projections as increasing exports and domestic demand lead to rising prices and net returns. The increase in corn plantings is facilitated, in part, by a reduction in soybean area.
- Wheat acreage falls below 59 million acres early in the projections period, reflecting lower prices. A moderate increase in land planted to wheat is projected over the rest of the baseline as gains in demand exceed increases in supply provided by rising yields, thus raising prices and providing incentives to plant.
- Soybean plantings initially decline from a relatively high level in 2004 in response to lower prices caused by record 2004 production. Soybean acreage declines further through 2009 as higher prices and net returns for competing crops, particularly corn, provide incentives to switch some land from soybeans. Soybean plantings then stabilize in the remaining years of the projections.

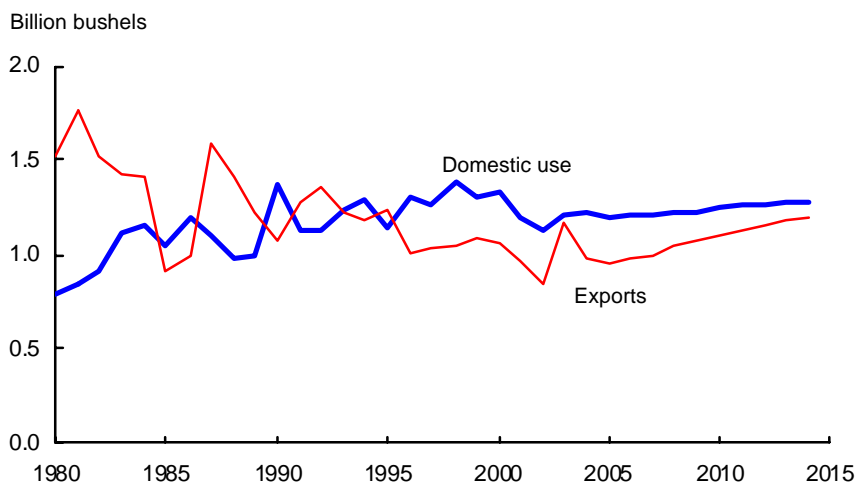
### Corn: Domestic use and exports



Domestic corn use continues to grow throughout the projections period, particularly for feed use and ethanol. Global economic growth underlies longrun increases in U.S. corn exports.

- Feed and residual use of corn rises in the baseline as the U.S. livestock sector grows in response to increases in domestic demand and exports of beef, pork, and poultry. An expanding domestic economy will raise overall meat consumption in the United States. Additionally, as incomes grow in the rest of the world, especially in developing economies, consumers shift to more meat in their diets, which requires more feed grains for meat production. As a result, the baseline analysis also expands world trade in feed grains and increases exports from the United States to support growth in global meat production.
- Large increases are projected in corn use for ethanol production over the next several years, reflecting continued expansion of production capacity. State-level bans (such as those already in place in California, Connecticut, and New York) on methyl tertiary butyl ether (MTBE) as a fuel oxygenate increased incentives for ethanol expansion in recent years, while strong petroleum prices have provided additional support for ethanol use.
- Gains in most other food and industrial components of domestic corn use are projected to be smaller than increases in population. Consumer dietary concerns also limit increases in the use of corn for high-fructose corn syrup (HFCS) and for glucose and dextrose.
- U.S. corn exports rise faster than global trade with the United States increasing its market share, reflecting a U.S. comparative advantage in corn production. Corn exports from Argentina will continue to grow and provide competition to the United States, but China's corn exports drop as its livestock sector expands. Strong increases in corn exports to Mexico reflect increased feed demand for a growing Mexican poultry sector. Additionally, U.S. corn exports to Mexico are boosted by the reduction and elimination by 2008 of the tariff rate on over-quota corn imports from the United States under the North American Free Trade Agreement (NAFTA). This tariff reduction shifts some U.S. exports to corn from sorghum, which already has tariff-free status.

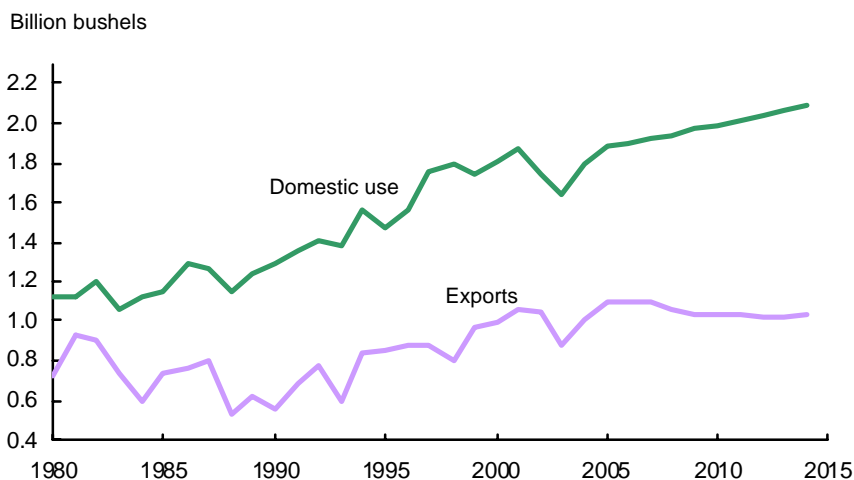
### Wheat: Domestic use and exports



Demand in the U.S. wheat sector grows through the projections, with moderate gains for exports and small increases in domestic food and feed uses.

- Wheat demand in the United States is a relatively mature market. After declining from 2000 to 2003, food use of wheat resumes moderate gains. Growth is somewhat slower than population increases, reflecting a continuation of dietary adjustments by many consumers. Additionally, new technologies can significantly extend the shelf life of bread and reduce spoilage, lowering flour needs required to meet consumer demand.
- Feed use of wheat, a low-value use of the crop, shows only small increases in the projections. Gains in wheat feed and residual use are driven by increases in production in the baseline.
- U.S. wheat exports increase through the projections as income and population in developing countries grow, raising global wheat consumption and trade. Competition from the European Union, Canada, Argentina, Australia, and exporters from the Black Sea region continues through the projections, holding the U.S. market share relatively constant at about 24-25 percent. Market shares for Australia, Argentina, and the Black Sea region increase.

### Soybeans: Domestic use and exports



Domestic use of soybeans continues to rise, but U.S. soybean exports edge down from projected 2005 levels due to moderate output growth and increased global competition.

- Growth in domestic soybean crush is largely driven by increasing demand for domestic soybean meal, mostly because of rising feed demand for expanding meat production. Domestic demand for soybean meal is tempered somewhat by a rising volume of corn byproducts from the production of ethanol.
- Low prices help U.S. soybean exports rise to 1.1 billion bushels in 2005-07. Exports then fall, leveling off near 1.03 billion bushels in 2009-14, largely due to strong competition from Brazil. Consequently, the U.S. market share of global soybean trade declines in the baseline.
- U.S. exports of soybean meal and soybean oil also face strengthening competition from South American producers, holding exports of these soybean products relatively flat after 2005/06, with declining global trade shares.
- The baseline does not include potential effects of Asian soybean rust in the United States. The finding of U.S cases of soybean rust occurred after the baseline commodity projections in this report were completed (see box, page 24).

## Asian Soybean Rust Could Permanently Alter the U.S. Agricultural Sector

Asian soybean rust (*Phakopsora pachyrhizi*) is a wind-borne fungal disease that attacks many legumes and other plant species. In November 2004, soybean rust was found in Louisiana. Subsequently, the disease was detected in at least nine States. Soybean rust has become increasingly widespread in South America over the past several years, but had not been found on the North American continent until now. If left untreated, the highly pathogenic disease can cause severe losses through rapid plant defoliation. Preliminary USDA research indicates that there were large amounts of live fungal spores in the atmosphere that could have been brought to the United States by Hurricane Ivan in mid-September 2004.

The baseline commodity projections in this report were completed prior to knowledge of the occurrence of soybean rust in the United States. The timing of this end-of-season development means little for 2004/05 production, use, or ending stocks estimates. But the newly introduced disease likely will have a permanent impact on production costs and incentives to plant soybeans in future years. The greatest threat that soybean rust poses to crops may be in the Gulf Coast States, where conditions are the most favorable for its survival over the winter on other live plant hosts.

Soybean varieties resistant to rust are not currently available. Prior experience with the disease in South America has proven that using of an array of fungicides over time is the most effective way to control its damage. The U.S. Environmental Protection Agency has granted emergency exemptions for a number of fungicides that had not been registered for use on soybeans. Yet, depending on humidity and temperature levels and the development stage of soybeans at infection, the disease's normally aggressive progression can require repeated chemical applications. That could raise farm expenses and cut expected returns considerably. Expected cost estimates for a single fungicide application range from \$20-\$25 per treated acre.

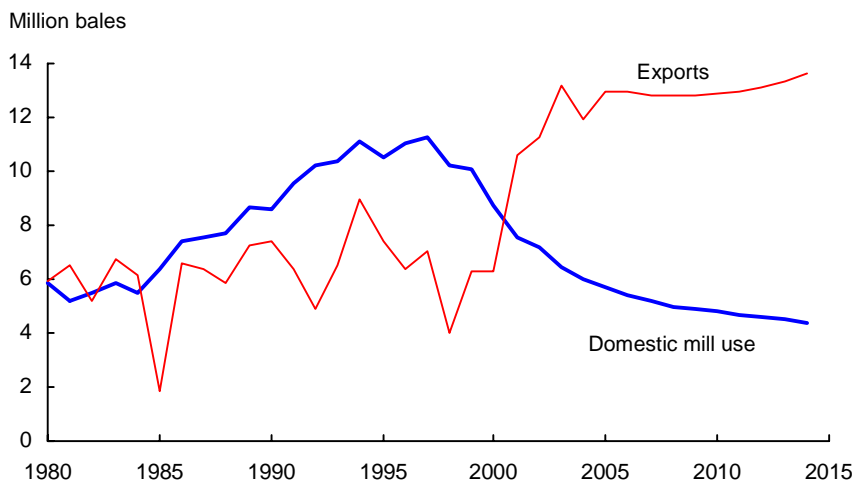
Producers may also experiment with other production practices to see whether they can limit severity of the disease. Some growers may try to plant soybeans as early as possible in the spring, although soil temperatures often dictate how quickly the seed can germinate. The intent would be to have soybeans that are mostly mature by the time that fungal spore production is at its height in the summertime. Other producers may attempt a wider row spacing to see whether improved air circulation under the leaf canopy to minimize wetness reduces the rate of infection.

Some soybean acreage could switch to other crops in areas with the highest risk of outbreaks. However, producers would be reluctant to totally abandon soybeans because substituting another crop in rotations has its own economic impacts, including adverse yield effects. Additionally, coverage for soybean rust damage under the federal crop insurance program may limit potential financial losses from an outbreak. Further, to the extent that soybean plantings may be reduced in some regions, higher prices may encourage producers in lower risk areas to increase soybean output.

Nonetheless, soybean rust brings with it an uncertain potential for lower soybean production in the future that could raise prices and reduce domestic crush and exports.

**For more information on this topic**, see *Economic and Policy Implications of Wind-Borne Entry of Asian Soybean Rust into the United States*, by Mike Livingston, Rob Johansson, Stan Daberkow, Michael Roberts, Mark Ash, and Vince Breneman, USDA, ERS, OCS-04-D02, April 2004, available at: <http://www.ers.usda.gov/publications/OCS/Apr04/OCS04D02/>.

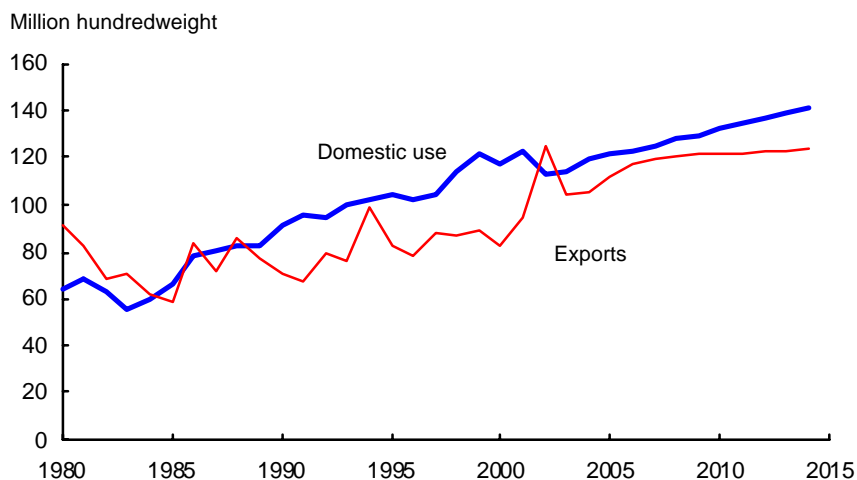
### Upland cotton: Domestic mill use and exports



Mill use of upland cotton in the United States continues to fall through the projection period from its peak in 1997/98. Upland cotton exports rise to and hold at about 13 million bales for most of the baseline as more cotton processing occurs in developing countries with lower labor costs.

- Starting in 2005, textile and apparel import quotas established under the Multi-Fiber Arrangement are eliminated in accordance with the Uruguay Round's Agreement on Textiles and Clothing. Apparel imports to the United States increase, reducing domestic apparel production and lowering the apparel industry's demand for fabric and yarn produced in the United States. Some increase in U.S. yarn and fabric exports is projected, but the net effect is for declining domestic mill use, which is projected at less than 40 percent of its 1997/98 level at the end of the projection period.
- Upland cotton exports remain relatively stable at 12.8-13.6 million bales annually through the projections. As growth in the textile industry in China slows from the rapid expansion of recent years, growth in China's import demand and growth in global cotton trade slow as well. Thus, despite only a small expansion in U.S. cotton exports, the U.S. share of global cotton trade remains about 36-37 percent in the projections.

### Rice: Domestic use and exports

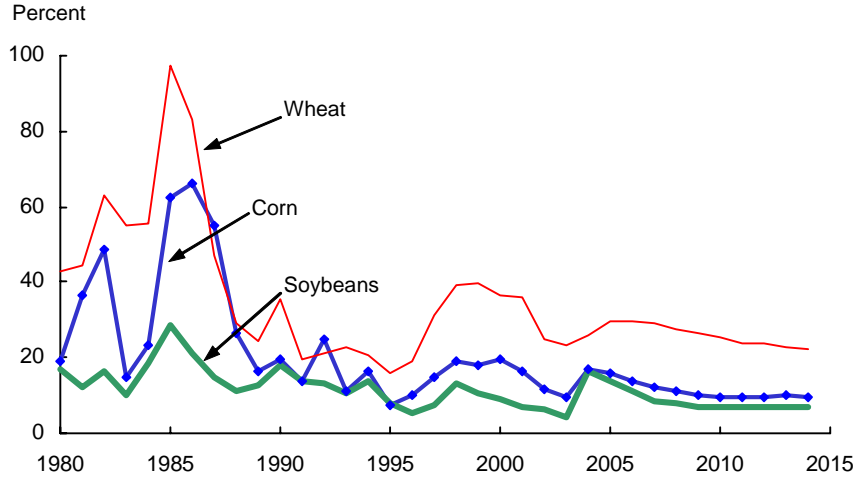


Steady expansion of domestic food use of rice is projected over the baseline, although the rate of expansion is well below rates in the 1980s and 1990s. U.S. rice exports are projected to expand at a modest pace.

- Growth in domestic use of rice is largely due to an increasing share of the U.S. population of Asian and Latin American descent, expanding imports of specialty rice from Asia. Use of rice in processed foods and pet foods also increases. Overall, these factors result in a small, but steady rise in per capita rice use in the United States.
- U.S. rice exports increase as production growth more than offsets expanding domestic use, keeping the U.S. price difference over Asian competitors quite small early in the baseline. In the later years of the projections, larger domestic use pushes U.S. prices higher, reducing U.S. competitiveness in global markets and slowing the growth in U.S. rice exports.
- Global rice prices are projected to increase about 3 percent per year over the baseline, reaching \$8.43 per hundredweight (rough basis) by 2014/15, about equal to the 1997/98 El Niño-driven \$8.45 price and more than twice the 2000/01-2002/03 annual averages. Slower production growth in Asia and growing worldwide import demand for rice are behind the steady increase in global trading prices.

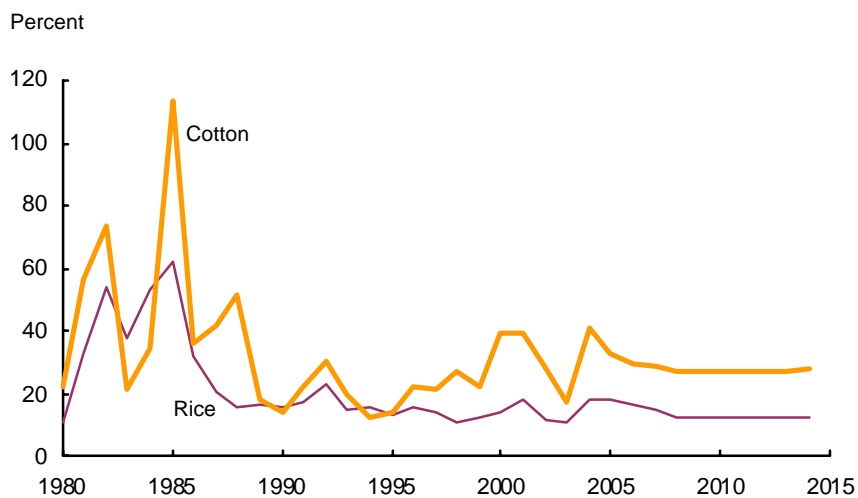


### Stocks-to-use ratios: Corn, wheat, and soybeans



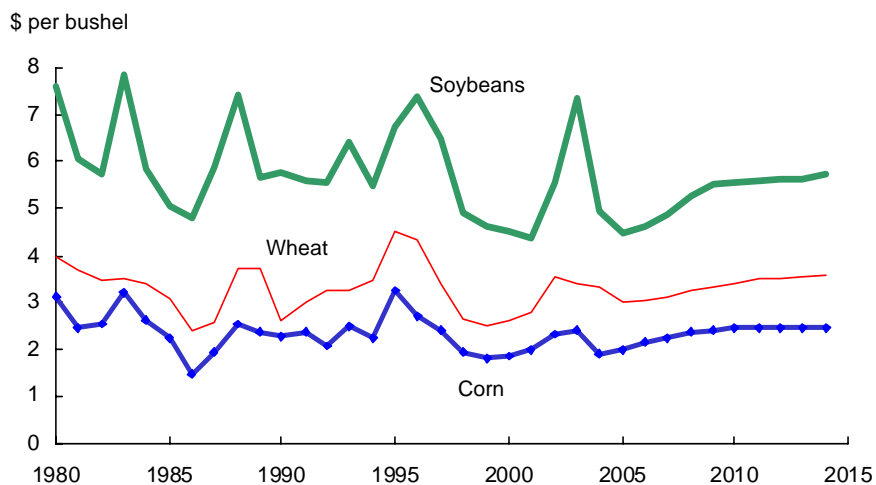
U.S. stocks-to-use ratios for corn and soybeans are up sharply in 2004/05 following the record yields and large production of the 2004 growing season. Large corn and soybean stocks are reduced early in the projections and stocks-to-use ratios for those crops decline from their initial high levels. Later in the projections, prices rise and encourage additional production, resulting in stocks-to-use ratios leveling. The wheat stocks-to-use ratio also is up initially but not as much as for corn and soybeans because 2004 wheat production, while large, was not a record. The stocks-to-use ratio for wheat rises through 2006/07, largely reflecting weak exports, but declines in subsequent years as exports strengthen.

### Stocks-to-use ratios: Cotton and rice



As with corn and soybeans, stocks-to-use ratios for cotton and rice are initially large due to high 2004 yields and production. Both decline from these high levels, with each flattening in the later years of the projections.

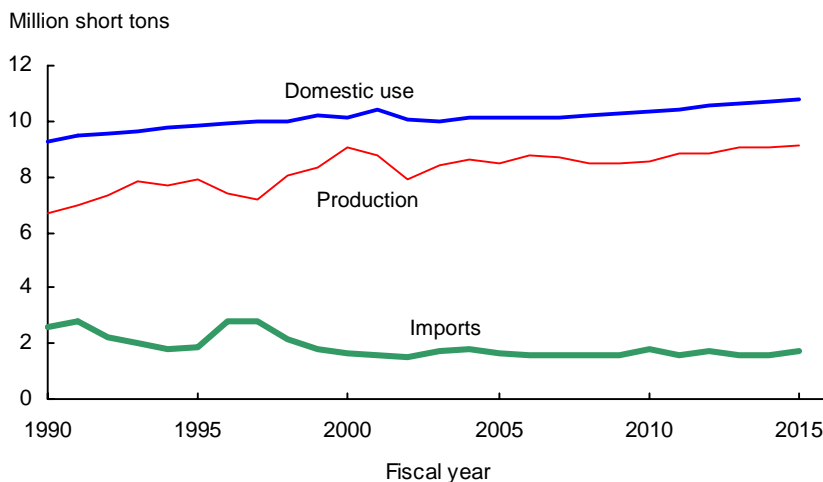
### Corn, wheat, and soybean prices



Projected prices for corn, wheat, and soybeans reflect, in part, movements in U.S. stocks-to-use ratios.

- Price movements in the near term reflect adjustments following the large 2004 production levels. Corn prices rise from the lows of 2004/05 as a return to trend yields reduces production and overall supplies from the 2004 record. Soybean production is reduced from the 2004 level, but large carryover stocks increase total supplies in the near term and lead to further price declines. Greater foreign competition and weaker U.S. wheat exports initially reduce wheat prices.
- Prices for each of these three crops then rise through the remainder of the projections as stocks-to-use ratios decline from the near-term high levels.

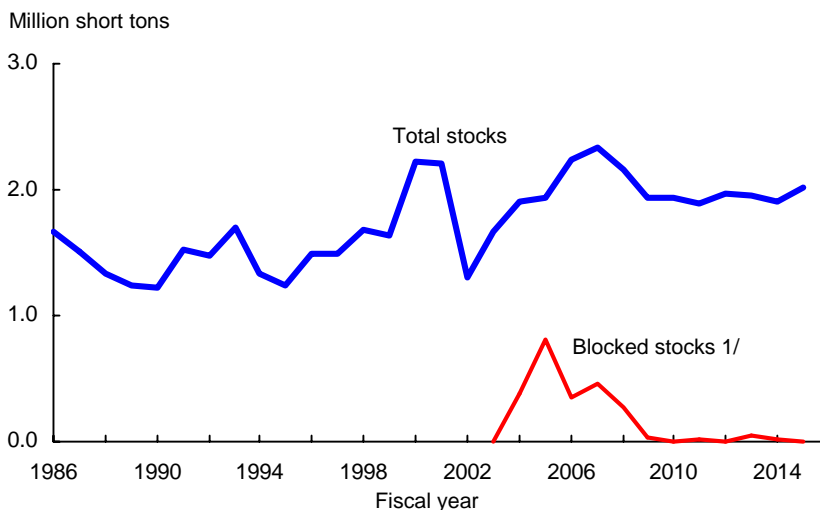
### Sugar: Domestic production, use, and imports



The sugar price support program includes the loan rate program and domestic marketing allotments. The loan rate for raw sugar is 18 cents per pound and the rate for refined beet sugar is 22.9 cents per pound. Marketing allotments are functioning each year of the projections. The annual marketing allotment (called the Overall Allotment Quantity, or OAQ) is set according to provisions of the 2002 Farm Act.

- Planted and harvested area in the projections are assumed to be related to lagged real sugar crop prices relative to prices for alternative crops and adjustments to the previous year's ratio of blocked stocks (those held by processors that cannot be marketed because of marketing allotments) to allotted marketings. These variables imply that there is little incentive to expand acreage for sugar crops in most years of the baseline.
- Historical growth trends in productivity measures, such as yields, are assumed to hold through the projection period.
- Sugar deliveries to producers of sugar-containing products (SCP) and to non-industrial endusers are a function of U.S. population growth. SCP imports are projected to increase throughout the baseline, although the rate of gain slows as the import share of SCPs levels off beyond fiscal year 2010. At that time, domestic deliveries of sugar are projected to increase about 81,000 short tons, raw value (STRV) a year.

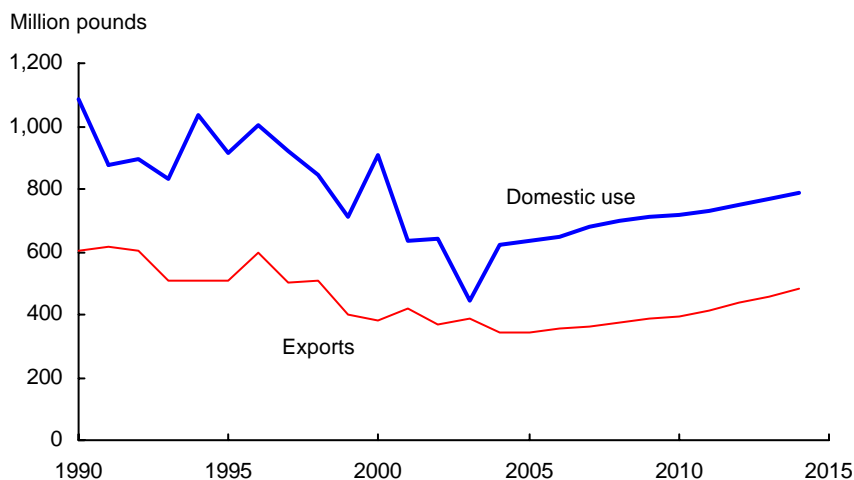
## U.S. sugar stocks



1/ Blocked stocks are stocks held by processors that cannot be marketed because of marketing allotments.

- The sugar baseline projects that the raw sugar tariff-rate quota (TRQ) is established each year at 1,117,195 metric tons, raw value (MTRV), the World Trade Organization (WTO) minimum access level, except for fiscal years 2010, 2012, and 2015. In those years, the raw sugar TRQ is increased to compensate for levels of domestic production below the OAQ. In the year following a rise in the TRQ, the baseline projections assume that domestic producers respond by increasing sugar crop acreage on land that had been withdrawn from production in previous years due to adjustments to blocked stocks (stocks unable to be marketed because of marketing allotments). The refined sugar TRQ is established each year at 39,000 MTRV. The yearly raw sugar TRQ shortfall is assumed to equal 50,000 STRV.
- The Mexican consumption tax on soft drinks that use fructose is assumed to remain in place through 2015, thereby limiting sugar available for export to the United States under the terms of the North American Free Trade Agreement (NAFTA).

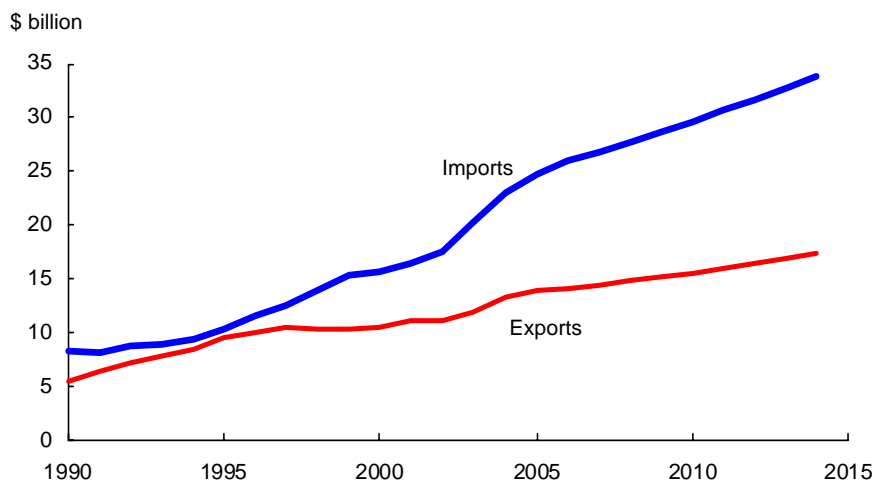
### U.S. flue-cured and burley tobacco: Domestic use and exports



Since 1938, tobacco production in the United States has been under a marketing quota program with price supports. However, legislation enacted in October 2004 ends the U.S. tobacco marketing quota and price support program after the 2004 crop year. A buyout of tobacco quotas accompanies the termination of the program. With the elimination of the tobacco program, producers will no longer be restricted in the location or quantity of tobacco they produce, nor will they receive price support for the tobacco they sell. Mandatory inspection of imported tobacco will cease, although inspections will continue for some domestic types. As part of the quota buyout, stocks of tobacco currently held by grower-owned cooperatives will be sold in a manner that does not destabilize tobacco markets.

- Ending the tobacco program will have unprecedented effects on the U.S. tobacco industry. Initially, an exodus of farmers will cause leaf production to decline. However, after this initial response, expansion by remaining growers will cause production to recover as production costs decline due to the elimination of costs associated with acquiring quota and as economies of scale are achieved on fewer, larger farms. Additionally, production will likely shift to areas where producers can achieve more economically viable scales of operation.
- Lower prices will make U.S. leaf more competitive in domestic markets and global trade, although the tobacco industry will continue to face declining domestic cigarette consumption and trade competition from foreign producers, particularly Brazil. Nonetheless, with lower prices, a greater share of U.S. leaf will be used in domestic production of tobacco products, raising total domestic use. Lower prices also underlie projected increases in U.S. exports of tobacco leaf. The projected gains in domestic use and exports reverse the generally downward trend of recent years in those markets.
- Cigarette sales in the United States are expected to continue declining at 2-3 percent per year for the baseline period. Per capita consumption declines as those who smoke find fewer opportunities to smoke in public places and the cost of cigarettes increases due to higher prices and taxes. Exports of cigarettes will likely stabilize near current levels.
- After an initial multi-year adjustment period following the end of the tobacco program, the market will stabilize at higher production levels in the second half of the projection period and reflect trends in domestic and global demand for tobacco leaf.

### Value of horticultural trade



The United States remains a net importer of horticultural products (fruit and nuts, vegetables, and greenhouse and nursery products). Export growth continues to be important to the U.S. horticultural sector.

- U.S. exports of horticultural products, worth \$13.8 billion in fiscal year 2005, are projected to grow in value by 2.6 percent on average from 2005 to 2014. Horticulture imports of \$24.8 billion in 2005 expand by 3.6 percent over the same period. Thus, the estimated \$11 billion horticulture trade deficit in 2005 increases to more than \$16 billion in 2014.
- Major export markets for U.S. horticultural products include Canada, Japan, and Southeast Asian nations. Among fruit exports, fresh noncitrus fruits and fruit juices lead in growth. The largest exports are grapes, strawberries, apples, and orange juice. Export prospects for processed vegetables are stronger than for fresh vegetables. Frozen potatoes are the leading U.S. vegetable export.
- Major U.S. horticultural imports include potatoes, tomatoes, bananas, grapes, frozen concentrated orange juice, apple juice, melons, and tree nuts (especially cashews) from Mexico, Chile, Canada, and Brazil. Imports play an important role in domestic supply during the winter months and, increasingly, during other times of the year as lower costs and reduced trade barriers make horticultural imports more competitive.

Table 4. Summary policy variables for major field crops

	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Target prices												
	<i>Dollars</i> <sup>1</sup>											
Corn	2.60	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63
Sorghum	2.54	2.57	2.57	2.57	2.57	2.57	2.57	2.57	2.57	2.57	2.57	2.57
Barley	2.21	2.24	2.24	2.24	2.24	2.24	2.24	2.24	2.24	2.24	2.24	2.24
Oats	1.40	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44
Wheat	3.86	3.92	3.92	3.92	3.92	3.92	3.92	3.92	3.92	3.92	3.92	3.92
Rice	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50
Upland cotton	0.724	0.724	0.724	0.724	0.724	0.724	0.724	0.724	0.724	0.724	0.724	0.724
Soybeans	5.80	5.80	5.80	5.80	5.80	5.80	5.80	5.80	5.80	5.80	5.80	5.80
Marketing assistance loan rates												
Corn	1.98	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95
Sorghum	1.98	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95
Barley	1.88	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.85
Oats	1.35	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
Wheat	2.80	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75
Rice	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50
Upland cotton	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52
Soybeans	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Direct payment rates												
Corn	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28
Sorghum	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35
Barley	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24
Oats	0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.024
Wheat	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52
Rice	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35
Upland cotton	0.0667	0.0667	0.0667	0.0667	0.0667	0.0667	0.0667	0.0667	0.0667	0.0667	0.0667	0.0667
Soybeans	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44
Counter-cyclical payment rates <sup>2</sup>												
Corn	0.00	0.40	0.35	0.20	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sorghum	0.00	0.27	0.27	0.22	0.12	0.02	0.00	0.00	0.00	0.00	0.00	0.00
Barley	0.00	0.15	0.15	0.10	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Oats	0.00	0.016	0.086	0.066	0.066	0.016	0.00	0.00	0.00	0.00	0.00	0.00
Wheat	0.00	0.05	0.40	0.35	0.25	0.15	0.05	0.00	0.00	0.00	0.00	0.00
Rice	0.66	0.90	0.80	0.60	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Soybeans	0.00	0.36	0.36	0.36	0.36	0.11	0.00	0.00	0.00	0.00	0.00	0.00

1/ Units are dollars per bushel except for upland cotton (per pound) and rice (per hundredweight).

2/ Counter-cyclical payment rates are dependent on marketing year average prices. CCP rates for upland cotton are not shown because USDA is prohibited from publishing cotton price projections.

Table 5. Conservation Reserve Program acreage assumptions

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<i>Million acres</i>												
Crop allocation												
Corn	5.6	5.7	6.1	6.4	6.7	6.8	6.8	6.8	6.8	6.8	6.8	6.8
Sorghum	1.0	1.0	0.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Barley	0.9	1.0	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
Oats	0.5	0.5	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Wheat	8.7	8.8	8.4	8.9	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4
Upland cotton	1.4	1.5	1.5	1.6	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
Soybeans	5.2	5.3	5.6	5.9	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2
Subtotal	23.4	23.8	23.8	25.1	26.4	26.4	26.4	26.4	26.4	26.4	26.4	26.4
Other	10.7	10.9	11.5	12.1	12.7	12.8	12.8	12.8	12.8	12.8	12.8	12.8
Total	34.1	34.7	35.2	37.2	39.1	39.2	39.2	39.2	39.2	39.2	39.2	39.2

Table 6. Planted and harvested acreage for major field crops, baseline projections

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<i>Million acres</i>												
Planted acreage, eight major crops												
Corn	78.7	81.0	81.0	81.0	81.5	82.0	82.5	83.0	83.5	84.0	84.0	84.0
Sorghum	9.4	7.5	8.4	8.4	8.4	8.4	8.3	8.3	8.3	8.2	8.2	8.2
Barley	5.3	4.5	4.4	4.4	4.4	4.4	4.4	4.4	4.3	4.3	4.3	4.3
Oats	4.6	4.1	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Wheat	62.1	59.7	60.0	58.5	58.5	59.0	59.5	60.0	60.0	61.0	61.0	61.5
Rice	3.0	3.4	3.3	3.3	3.3	3.3	3.3	3.3	3.4	3.4	3.4	3.4
Upland cotton	13.3	13.5	13.8	13.8	13.8	13.6	13.6	13.5	13.5	13.6	13.6	13.7
Soybeans	73.4	75.1	74.0	73.8	73.3	73.0	72.8	73.0	73.0	72.8	72.8	72.8
Total	249.8	248.8	248.9	247.2	247.2	247.7	248.4	249.5	250.0	251.3	251.3	251.9
Harvested acreage, eight major crops												
Corn	71.1	73.3	73.6	73.6	74.1	74.6	75.1	75.6	76.1	76.6	76.6	76.6
Sorghum	7.8	6.6	7.0	7.0	7.0	7.0	6.9	6.9	6.9	6.8	6.8	6.8
Barley	4.7	4.0	3.8	3.8	3.8	3.8	3.8	3.8	3.7	3.7	3.7	3.7
Oats	2.2	1.8	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
Wheat	53.1	50.0	51.0	49.7	49.7	50.2	50.6	51.0	51.0	51.9	51.9	52.3
Rice	3.0	3.3	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.4
Upland cotton	11.8	13.0	12.4	12.4	12.4	12.2	12.2	12.2	12.2	12.2	12.2	12.3
Soybeans	72.5	74.0	72.7	72.4	71.9	71.7	71.4	71.7	71.7	71.4	71.4	71.4
Total	226.2	226.0	225.3	223.7	223.7	224.4	224.9	226.1	226.5	227.5	227.5	228.1



Table 7. Selected supply, use, and price variables for major field crops, baseline projections

	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
<b>Yields<sup>1</sup></b>												
Corn	142.2	160.2	145.6	147.4	149.2	151.0	152.8	154.6	156.4	158.2	160.0	161.8
Sorghum	52.7	71.9	62.5	63.0	63.4	63.9	64.3	64.8	65.2	65.7	66.1	66.6
Barley	58.9	69.5	63.7	64.3	64.9	65.5	66.1	66.7	67.3	67.9	68.5	69.1
Oats	65.0	64.7	62.4	62.8	63.2	63.6	64.0	64.4	64.8	65.2	65.6	66.0
Wheat	44.2	43.2	42.3	42.7	43.1	43.5	43.9	44.3	44.7	45.1	45.5	45.9
Rice	6,645	6,828	6,800	6,868	6,937	7,003	7,063	7,124	7,187	7,243	7,300	7,358
Upland cotton	723	808	680	683	686	689	692	695	698	701	704	707
Soybeans	33.9	42.6	40.0	40.4	40.8	41.2	41.6	42.0	42.4	42.8	43.2	43.6
<b>Production<sup>2</sup></b>												
Corn	10,114	11,741	10,715	10,850	11,055	11,265	11,475	11,690	11,900	12,120	12,255	12,395
Sorghum	411	472	440	440	445	445	445	445	450	445	450	455
Barley	278	279	240	245	245	250	250	255	250	250	255	255
Oats	144	116	100	100	100	100	100	105	105	105	105	105
Wheat	2,345	2,158	2,155	2,120	2,140	2,185	2,220	2,260	2,280	2,340	2,360	2,400
Rice	199.2	227.7	219.0	221.6	223.8	227.9	232.0	235.4	239.0	241.6	244.2	246.9
Upland cotton	17,823	21,825	17,600	17,600	17,700	17,500	17,600	17,700	17,700	17,800	17,900	18,100
Soybeans	2,454	3,150	2,910	2,925	2,935	2,955	2,970	3,010	3,040	3,055	3,085	3,115
<b>Exports<sup>2</sup></b>												
Corn	1,897	2,050	2,150	2,275	2,400	2,525	2,625	2,700	2,775	2,850	2,900	2,975
Sorghum	201	200	225	215	200	185	195	200	200	205	210	215
Barley	19	15	15	15	15	15	15	15	15	15	15	15
Oats	2	3	2	2	2	2	2	2	2	2	2	2
Wheat	1,159	975	950	975	1,000	1,050	1,075	1,100	1,125	1,150	1,175	1,200
Rice	103.7	105.0	112.0	117.0	119.0	120.0	121.0	121.0	122.0	123.0	123.0	124.0
Upland cotton	13,221	11,925	13,000	13,000	12,800	12,800	12,800	12,900	13,000	13,100	13,300	13,600
Soybeans	885	1,010	1,100	1,105	1,100	1,055	1,030	1,030	1,030	1,025	1,025	1,030
Soybean meal	4,340	5,400	6,700	6,500	6,500	6,400	6,500	6,500	6,500	6,500	6,500	6,600
<b>Ending stocks<sup>2</sup></b>												
Corn	958	1,819	1,724	1,549	1,394	1,264	1,159	1,109	1,109	1,164	1,194	1,179
Sorghum	34	60	60	58	58	58	58	56	61	59	59	62
Barley	120	123	121	119	117	120	118	121	119	117	120	118
Oats	65	54	53	57	56	60	59	58	57	56	55	59
Wheat	547	568	638	648	647	626	609	597	569	571	557	553
Rice	23.7	41.8	42.8	39.8	35.2	32.0	30.2	29.9	30.6	30.9	32.0	33.0
Upland cotton	3,428	7,307	6,200	5,400	5,100	4,800	4,700	4,700	4,700	4,800	4,900	5,000
Soybeans	112	460	400	330	255	230	210	209	210	207	209	209
<b>Prices<sup>3</sup></b>												
Corn	2.42	1.90	2.00	2.15	2.25	2.35	2.40	2.45	2.45	2.45	2.45	2.45
Sorghum	2.39	1.75	1.85	2.00	2.10	2.20	2.25	2.30	2.30	2.30	2.30	2.30
Barley	2.83	2.45	2.30	2.45	2.45	2.55	2.60	2.65	2.65	2.65	2.65	2.65
Oats	1.48	1.40	1.30	1.35	1.35	1.40	1.45	1.50	1.50	1.50	1.50	1.50
Wheat	3.40	3.35	3.00	3.05	3.15	3.25	3.35	3.40	3.50	3.50	3.55	3.60
Rice	7.49	7.25	7.35	7.55	7.87	8.23	8.62	8.91	9.14	9.40	9.61	9.85
Soybeans	7.34	4.95	4.50	4.60	4.85	5.25	5.50	5.55	5.60	5.65	5.65	5.70
Soybean oil	0.300	0.230	0.205	0.198	0.200	0.205	0.208	0.213	0.218	0.223	0.230	0.235
Soybean meal	256.1	160.0	150.0	155.0	163.0	176.5	185.0	183.5	182.5	181.5	177.0	176.0

1/ Bushels per acre except for upland cotton and rice (pounds per acre).

2/ Million bushels except for upland cotton (thousand bales), rice (million hundredweight), and soybean meal (thousand tons).

3/ Dollars per bushel except for soybean oil (per pound), rice (per hundredweight), and soybean meal (per ton).

Table 8. U.S. corn baseline

Item	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Area (million acres):												
Planted acres	78.7	81.0	81.0	81.0	81.5	82.0	82.5	83.0	83.5	84.0	84.0	84.0
Harvested acres	71.1	73.3	73.6	73.6	74.1	74.6	75.1	75.6	76.1	76.6	76.6	76.6
Yields (bushels per acre):												
Yield/harvested acre	142.2	160.2	145.6	147.4	149.2	151.0	152.8	154.6	156.4	158.2	160.0	161.8
Supply and use (million bushels):												
Beginning stocks	1,087	958	1,819	1,724	1,549	1,394	1,264	1,159	1,109	1,109	1,164	1,194
Production	10,114	11,741	10,715	10,850	11,055	11,265	11,475	11,690	11,900	12,120	12,255	12,395
Imports	14	15	15	15	15	15	15	15	15	15	15	15
Supply	11,215	12,714	12,549	12,589	12,619	12,674	12,754	12,864	13,024	13,244	13,434	13,604
Feed & residual	5,783	6,075	5,800	5,800	5,825	5,850	5,900	5,950	6,000	6,050	6,125	6,200
Food, seed, & industrial	2,577	2,770	2,875	2,965	3,000	3,035	3,070	3,105	3,140	3,180	3,215	3,250
Fuel alcohol use	1,204	1,370	1,470	1,550	1,575	1,600	1,625	1,650	1,675	1,700	1,725	1,750
Domestic use	8,360	8,845	8,675	8,765	8,825	8,885	8,970	9,055	9,140	9,230	9,340	9,450
Exports	1,897	2,050	2,150	2,275	2,400	2,525	2,625	2,700	2,775	2,850	2,900	2,975
Total use	10,257	10,895	10,825	11,040	11,225	11,410	11,595	11,755	11,915	12,080	12,240	12,425
Ending stocks	958	1,819	1,724	1,549	1,394	1,264	1,159	1,109	1,109	1,164	1,194	1,179
Stocks/use ratio, percent	9.3	16.7	15.9	14.0	12.4	11.1	10.0	9.4	9.3	9.6	9.8	9.5
Prices (dollars per bushel):												
Farm price	2.42	1.90	2.00	2.15	2.25	2.35	2.40	2.45	2.45	2.45	2.45	2.45
Loan rate	1.98	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95
Variable costs of production (dollars):												
Per acre	158.85	164.93	168.05	170.46	171.98	173.52	175.16	176.96	178.85	180.75	182.67	184.65
Per bushel	1.12	1.03	1.15	1.16	1.15	1.15	1.15	1.14	1.14	1.14	1.14	1.14
Returns over variable costs (dollars per acre):												
Net returns <sup>1</sup>	185.28	179.50	144.99	146.45	163.72	181.33	191.56	201.81	204.33	206.84	209.33	211.76

1/ Net returns include estimates of marketing loan benefits.

Table 9. U.S. sorghum baseline

Item	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Area (million acres):												
Planted acres	9.4	7.5	8.4	8.4	8.4	8.4	8.3	8.3	8.3	8.2	8.2	8.2
Harvested acres	7.8	6.6	7.0	7.0	7.0	7.0	6.9	6.9	6.9	6.8	6.8	6.8
Yields (bushels per acre):												
Yield/harvested acre	52.7	71.9	62.5	63.0	63.4	63.9	64.3	64.8	65.2	65.7	66.1	66.6
Supply and use (million bushels):												
Beginning stocks	43	34	60	60	58	58	58	58	56	61	59	59
Production	411	472	440	440	445	445	445	445	450	445	450	455
Imports	0	0	0	0	0	0	0	0	0	0	0	0
Supply	454	505	500	500	503	503	503	503	506	506	509	514
Feed & residual	200	195	165	175	190	200	190	185	180	175	170	165
Food, seed, & industrial	20	50	50	52	55	60	60	62	65	67	70	72
Domestic	220	245	215	227	245	260	250	247	245	242	240	237
Exports	201	200	225	215	200	185	195	200	200	205	210	215
Total use	421	445	440	442	445	445	445	447	445	447	450	452
Ending stocks	34	60	60	58	58	58	58	56	61	59	59	62
Stocks/use ratio, percent	8.1	13.5	13.6	13.1	13.0	13.0	13.0	12.5	13.7	13.2	13.1	13.7
Prices (dollars per bushel):												
Farm price	2.39	1.75	1.85	2.00	2.10	2.20	2.25	2.30	2.30	2.30	2.30	2.30
Loan rate	1.98	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95
Variable costs of production (dollars):												
Per acre	97.94	102.83	105.26	106.08	106.58	107.38	108.33	109.46	110.61	111.78	112.96	114.17
Per bushel	1.86	1.43	1.68	1.68	1.68	1.68	1.68	1.69	1.70	1.70	1.71	1.71
Returns over variable costs (dollars per acre):												
Net returns <sup>1</sup>	28.01	51.76	29.11	29.37	29.73	33.20	36.35	39.58	39.35	39.33	39.07	39.01

1/ Net returns include estimates of marketing loan benefits.

Table 10. U.S. barley baseline

Item	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Area (million acres):												
Planted acres	5.3	4.5	4.4	4.4	4.4	4.4	4.4	4.4	4.3	4.3	4.3	4.3
Harvested acres	4.7	4.0	3.8	3.8	3.8	3.8	3.8	3.8	3.7	3.7	3.7	3.7
Yields (bushels per acre):												
Yield/harvested acre	58.9	69.5	63.7	64.3	64.9	65.5	66.1	66.7	67.3	67.9	68.5	69.1
Supply and use (million bushels):												
Beginning stocks	69	120	123	121	119	117	120	118	121	119	117	120
Production	278	279	240	245	245	250	250	255	250	250	255	255
Imports	21	20	25	25	25	25	25	25	25	25	25	25
Supply	368	420	388	391	389	392	395	398	396	394	397	400
Feed & residual	57	110	80	85	85	85	90	90	90	90	90	95
Food, seed, & industrial	172	172	172	172	172	172	172	172	172	172	172	172
Domestic	229	282	252	257	257	257	262	262	262	262	262	267
Exports	19	15	15	15	15	15	15	15	15	15	15	15
Total use	248	297	267	272	272	272	277	277	277	277	277	282
Ending stocks	120	123	121	119	117	120	118	121	119	117	120	118
Stocks/use ratio, percent	48.4	41.4	45.3	43.8	43.0	44.1	42.6	43.7	43.0	42.2	43.3	41.8
Prices (dollars per bushel):												
Farm price	2.83	2.45	2.30	2.45	2.45	2.55	2.60	2.65	2.65	2.65	2.65	2.65
Loan rate	1.88	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.85
Variable costs of production (dollars):												
Per acre	87.78	91.38	93.31	94.54	95.36	96.25	97.22	98.27	99.35	100.46	101.58	102.73
Per bushel	1.49	1.31	1.46	1.47	1.47	1.47	1.47	1.47	1.48	1.48	1.48	1.49
Returns over variable costs (dollars per acre):												
Net returns <sup>1</sup>	78.91	85.84	69.13	69.43	70.13	70.77	74.64	78.48	78.99	79.48	79.95	80.39

<sup>1/</sup> Net returns include estimates of marketing loan benefits.

Table 11. U.S. oats baseline

Item	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Area (million acres):												
Planted acres	4.6	4.1	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Harvested acres	2.2	1.8	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
Yields (bushels per acre):												
Yield/harvested acre	65.0	64.7	62.4	62.8	63.2	63.6	64.0	64.4	64.8	65.2	65.6	66.0
Supply and use (million bushels):												
Beginning stocks	50	65	54	53	57	56	60	59	58	57	56	55
Production	144	116	100	100	100	100	100	105	105	105	105	105
Imports	90	85	85	85	85	90	90	90	90	90	90	95
Supply	285	266	239	238	242	246	250	254	253	252	251	255
Feed & residual	144	135	110	105	110	110	115	120	120	120	120	120
Food, seed, & industrial	73	74	74	74	74	74	74	74	74	74	74	74
Domestic	217	209	184	179	184	184	189	194	194	194	194	194
Exports	2	3	2	2	2	2	2	2	2	2	2	2
Total use	220	212	186	181	186	186	191	196	196	196	196	196
Ending stocks	65	54	53	57	56	60	59	58	57	56	55	59
Stocks/use ratio, percent	29.5	25.5	28.5	31.5	30.1	32.3	30.9	29.6	29.1	28.6	28.1	30.1
Prices (dollars per bushel):												
Farm price	1.48	1.40	1.30	1.35	1.35	1.40	1.45	1.50	1.50	1.50	1.50	1.50
Loan rate	1.35	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
Variable costs of production (dollars):												
Per acre	54.67	57.02	58.14	58.92	59.40	59.91	60.49	61.13	61.79	62.46	63.13	63.82
Per bushel	0.84	0.88	0.93	0.94	0.94	0.94	0.95	0.95	0.95	0.96	0.96	0.97
Returns over variable costs (dollars per acre):												
Net returns <sup>1</sup>	46.08	41.98	37.33	37.17	37.30	37.39	37.43	37.40	37.35	37.30	37.24	37.16

1/ Net returns include estimates of marketing loan benefits.

Table 12. U.S. wheat baseline

Item	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Area (million acres):												
Planted acres	62.1	59.7	60.0	58.5	58.5	59.0	59.5	60.0	60.0	61.0	61.0	61.5
Harvested acres	53.1	50.0	51.0	49.7	49.7	50.2	50.6	51.0	51.0	51.9	51.9	52.3
Yields (bushels per acre):												
Yield/harvested acre	44.2	43.2	42.3	42.7	43.1	43.5	43.9	44.3	44.7	45.1	45.5	45.9
Supply and use (million bushels):												
Beginning stocks	491	547	568	638	648	647	626	609	597	569	571	557
Production	2,345	2,158	2,155	2,120	2,140	2,185	2,220	2,260	2,280	2,340	2,360	2,400
Imports	72	65	65	70	70	70	70	75	75	75	75	75
Supply	2,909	2,770	2,788	2,828	2,858	2,902	2,916	2,944	2,952	2,984	3,006	3,032
Food	911	920	920	925	930	935	940	945	950	955	960	965
Seed	80	82	80	80	81	81	82	82	83	83	84	84
Feed & residual	211	225	200	200	200	210	210	220	225	225	230	230
Domestic	1,202	1,227	1,200	1,205	1,211	1,226	1,232	1,247	1,258	1,263	1,274	1,279
Exports	1,159	975	950	975	1,000	1,050	1,075	1,100	1,125	1,150	1,175	1,200
Total use	2,362	2,202	2,150	2,180	2,211	2,276	2,307	2,347	2,383	2,413	2,449	2,479
Ending stocks	547	568	638	648	647	626	609	597	569	571	557	553
Stocks/use ratio, percent	23.2	25.8	29.7	29.7	29.3	27.5	26.4	25.4	23.9	23.7	22.7	22.3
Prices (dollars per bushel):												
Farm price	3.40	3.35	3.00	3.05	3.15	3.25	3.35	3.40	3.50	3.50	3.55	3.60
Loan rate	2.80	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75
Variable costs of production (dollars):												
Per acre	70.09	73.08	74.65	75.67	76.37	77.09	77.89	78.77	79.68	80.61	81.54	82.49
Per bushel	1.59	1.69	1.76	1.77	1.77	1.77	1.77	1.78	1.78	1.79	1.79	1.80
Returns over variable costs (dollars per acre):												
Net returns <sup>1</sup>	80.19	71.64	54.37	54.56	59.40	64.28	69.18	71.85	76.77	77.24	79.99	82.75

<sup>1/</sup> Net returns include estimates of marketing loan benefits.

Table 13. U.S. soybean and products baseline

Item	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
<b>Soybeans</b>												
Area (million acres):												
Planted	73.4	75.1	74.0	73.8	73.3	73.0	72.8	73.0	73.0	72.8	72.8	72.8
Harvested	72.5	74.0	72.7	72.4	71.9	71.7	71.4	71.7	71.7	71.4	71.4	71.4
Yield/harvested acre (bushels)	33.9	42.6	40.0	40.4	40.8	41.2	41.6	42.0	42.4	42.8	43.2	43.6
Supply (million bushels)												
Beginning stocks, Sep. 1	178	112	460	400	330	255	230	210	209	210	207	209
Production	2,454	3,150	2,910	2,925	2,935	2,955	2,970	3,010	3,040	3,055	3,085	3,115
Imports	6	6	3	4	4	5	4	4	3	4	5	4
Total supply	2,638	3,269	3,373	3,329	3,269	3,215	3,204	3,224	3,252	3,269	3,297	3,328
Disposition (million bushels)												
Crush	1,530	1,645	1,725	1,745	1,765	1,780	1,810	1,830	1,855	1,880	1,905	1,930
Seed and residual	111	153	148	149	149	150	154	155	157	157	158	159
Exports	885	1,010	1,100	1,105	1,100	1,055	1,030	1,030	1,030	1,025	1,025	1,030
Total disposition	2,525	2,808	2,973	2,999	3,014	2,985	2,994	3,015	3,042	3,062	3,088	3,119
Carryover stocks, Aug. 31												
Total ending stocks	112	460	400	330	255	230	210	209	210	207	209	209
Stocks/use ratio, percent	4.4	16.4	13.5	11.0	8.5	7.7	7.0	6.9	6.9	6.8	6.8	6.7
Prices (dollars per bushel)												
Loan rate	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Soybean price, farm	7.34	4.95	4.50	4.60	4.85	5.25	5.50	5.55	5.60	5.65	5.65	5.70
Variable costs of production (dollars):												
Per acre	79.15	81.26	82.30	83.54	84.22	84.91	85.59	86.29	87.02	87.77	88.55	89.36
Per bushel	2.33	1.91	2.06	2.07	2.06	2.06	2.06	2.05	2.05	2.05	2.05	2.05
Returns over variable costs (dollars per acre):												
Net returns <sup>1</sup>	169.68	140.26	125.70	126.54	127.94	131.39	143.21	146.81	150.42	154.05	155.53	159.16
<b>Soybean oil (million pounds)</b>												
Beginning stocks, Oct. 1	1,491	1,057	1,187	1,487	1,682	1,877	1,962	2,107	2,127	2,077	1,937	1,752
Production	17,077	18,425	19,390	19,630	19,875	20,060	20,415	20,660	20,960	21,265	21,565	21,865
Imports	307	105	110	115	120	125	130	135	140	145	150	155
Total supply	18,875	19,587	20,687	21,232	21,677	22,062	22,507	22,902	23,227	23,487	23,652	23,772
Domestic disappearance	16,881	17,300	17,650	18,000	18,350	18,675	19,025	19,375	19,725	20,100	20,475	20,850
Exports	937	1,100	1,550	1,550	1,450	1,425	1,375	1,400	1,425	1,450	1,425	1,350
Total demand	17,818	18,400	19,200	19,550	19,800	20,100	20,400	20,775	21,150	21,550	21,900	22,200
Ending stocks, Sep. 30	1,057	1,187	1,487	1,682	1,877	1,962	2,107	2,127	2,077	1,937	1,752	1,572
Soybean oil price (dollars per lb)	0.300	0.230	0.205	0.198	0.200	0.205	0.208	0.213	0.218	0.223	0.230	0.235
<b>Soybean meal (thousand short tons)</b>												
Beginning stocks, Oct. 1	220	212	250	250	250	250	250	250	250	250	250	250
Production	36,318	39,173	41,035	41,485	41,985	42,385	43,035	43,585	44,135	44,710	45,285	45,985
Imports	270	165	165	165	165	165	165	165	165	165	165	165
Total supply	36,808	39,550	41,450	41,900	42,400	42,800	43,450	44,000	44,550	45,125	45,700	46,400
Domestic disappearance	32,256	33,900	34,500	35,150	35,650	36,150	36,700	37,250	37,800	38,375	38,950	39,550
Exports	4,340	5,400	6,700	6,500	6,500	6,400	6,500	6,500	6,500	6,500	6,500	6,600
Total demand	36,596	39,300	41,200	41,650	42,150	42,550	43,200	43,750	44,300	44,875	45,450	46,150
Ending stocks, Sep. 30	212	250	250	250	250	250	250	250	250	250	250	250
Soybean meal price (dollars per ton)	256.05	160.00	150.00	155.00	163.00	176.50	185.00	183.50	182.50	181.50	177.00	176.00
Crushing yields (pounds per bushel)												
Soybean oil	11.16	11.20	11.24	11.25	11.26	11.27	11.28	11.29	11.30	11.31	11.32	11.33
Soybean meal	47.48	47.62	47.60	47.60	47.60	47.60	47.60	47.60	47.60	47.60	47.60	47.60
Crush margin (dollars per bushel)	2.08	1.44	1.37	1.31	1.28	1.26	1.24	1.22	1.20	1.19	1.17	1.15

1/ Net returns include estimates of marketing loan benefits.

Table 14. U.S. rice baseline, rough basis

Item	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Area (million acres):												
Planted	3,022	3,364	3,250	3,250	3,250	3,280	3,310	3,330	3,350	3,360	3,370	3,380
Harvested	2,997	3,334	3,220	3,226	3,226	3,255	3,285	3,305	3,325	3,335	3,345	3,355
Yields (pounds per acre):												
Yield/harvested acre	6,645	6,828	6,800	6,868	6,937	7,003	7,063	7,124	7,187	7,243	7,300	7,358
Supply and use (million cwt):												
Beginning stocks	26.8	23.7	41.8	42.8	39.8	35.2	32.0	30.2	29.9	30.6	30.9	32.0
Production	199.2	227.7	219.0	221.6	223.8	227.9	232.0	235.4	239.0	241.6	244.2	246.9
Imports	15.6	14.5	15.0	15.5	15.9	16.4	16.9	17.4	17.9	18.5	19.0	19.6
Total supply	241.5	265.8	275.8	279.9	279.5	279.5	280.9	282.9	286.9	290.6	294.1	298.5
Domestic use and residual	114.1	119.0	121.0	123.1	125.3	127.5	129.7	132.0	134.3	136.7	139.1	141.5
Exports	103.7	105.0	112.0	117.0	119.0	120.0	121.0	121.0	122.0	123.0	123.0	124.0
Total use	217.8	224.0	233.0	240.1	244.3	247.5	250.7	253.0	256.3	259.7	262.1	265.5
Ending stocks (million cwt.)	23.7	41.8	42.8	39.8	35.2	32.0	30.2	29.9	30.6	30.9	32.0	33.0
Stocks/use ratio, percent	10.9	18.7	18.4	16.6	14.4	12.9	12.0	11.8	11.9	11.9	12.2	12.4
Milling rate, percent	70.8	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0
Prices (dollars per cwt.):												
Premium	2.81	1.15	0.90	0.90	1.02	1.17	1.35	1.42	1.43	1.46	1.43	1.42
World price	4.68	6.10	6.45	6.65	6.85	7.06	7.27	7.49	7.71	7.94	8.18	8.43
Average market price	7.49	7.25	7.35	7.55	7.87	8.23	8.62	8.91	9.14	9.40	9.61	9.85
Loan rate	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50
Variable costs of production (dollars):												
Per acre	335	346	353	357	360	363	367	371	375	380	384	389
Per cwt.	5.04	5.07	5.19	5.19	5.18	5.18	5.19	5.21	5.22	5.24	5.26	5.28
Returns over variable costs (dollars per acre):												
Net returns <sup>1</sup>	284	176	150	162	186	213	242	264	282	301	318	336

1/ Net returns include estimates of marketing loan benefits.



Table 15. U.S. upland cotton baseline

Item	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Area (million acres):												
Planted acres	13.3	13.5	13.8	13.8	13.8	13.6	13.6	13.5	13.5	13.6	13.6	13.7
Harvested acres	11.8	13.0	12.4	12.4	12.4	12.2	12.2	12.2	12.2	12.2	12.2	12.3
Yields (pounds per acre):												
Yield/harvested acre	723	808	680	683	686	689	692	695	698	701	704	707
Supply and use (thousand bales):												
Beginning stocks	5,140	3,428	7,307	6,200	5,400	5,100	4,800	4,700	4,700	4,700	4,800	4,900
Production	17,823	21,825	17,600	17,600	17,700	17,500	17,600	17,700	17,700	17,800	17,900	18,100
Imports	3	5	10	10	10	10	10	10	10	10	10	10
Supply	22,966	25,258	24,917	23,810	23,110	22,610	22,410	22,410	22,410	22,510	22,710	23,010
Domestic use	6,424	6,035	5,700	5,400	5,200	5,000	4,900	4,800	4,700	4,600	4,500	4,400
Exports	13,221	11,925	13,000	13,000	12,800	12,800	12,800	12,900	13,000	13,100	13,300	13,600
Total use	19,645	17,960	18,700	18,400	18,000	17,800	17,700	17,700	17,700	17,700	17,800	18,000
Ending stocks	3,428	7,307	6,200	5,400	5,100	4,800	4,700	4,700	4,700	4,800	4,900	5,000
Stocks/use ratio, percent	17.4	40.7	33.2	29.3	28.3	27.0	26.6	26.6	26.6	27.1	27.5	27.8
Prices (dollars per pound):												
Farm price <sup>1</sup>	0.618	---	---	---	---	---	---	---	---	---	---	---
Loan rate	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52
Variable costs of production (dollars):												
Per acre	327.67	345.28	343.83	348.98	352.71	356.65	360.70	364.83	369.21	373.72	378.36	383.18
Per pound	0.45	0.43	0.51	0.51	0.51	0.52	0.52	0.52	0.53	0.53	0.54	0.54
Returns over variable costs (dollars per acre):												
Net returns <sup>2</sup>	187.90	192.29	106.88	101.26	108.08	113.31	112.42	112.08	110.88	108.99	107.54	106.56

1/ USDA is prohibited from publishing cotton price projections.

2/ Net returns include estimates of marketing loan benefits.

Table 16. U.S. sugar baseline 1/

Item	Units	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Sugarbeets</b>													
Planted area	1,000 acres	1,365	1,359	1,371	1,353	1,313	1,303	1,310	1,337	1,330	1,336	1,330	1,327
Harvested area	1,000 acres	1,348	1,326	1,343	1,325	1,286	1,276	1,283	1,310	1,303	1,309	1,303	1,300
Yield	Tons/acre	22.7	22.4	22.5	22.8	22.9	23.1	23.3	23.5	23.7	23.8	24.0	24.2
Production	Mil. s. tons	30.6	29.8	30.3	30.2	29.5	29.5	29.9	30.7	30.8	31.2	31.3	31.5
<b>Sugarcane</b>													
Harvested area	1,000 acres	935	903	937	909	871	866	860	874	872	882	881	881
Yield	Tons/acre	34.2	31.7	34.8	34.8	34.9	34.9	34.9	35.0	35.0	35.0	35.0	35.0
Production	Mil. s. tons	32.0	28.6	32.6	31.6	30.4	30.2	30.0	30.6	30.5	30.9	30.8	30.8
<b>Supply:</b>													
Beginning stocks	1,000 s. tons	1,665	1,907	1,939	2,234	2,335	2,165	1,942	1,941	1,883	1,971	1,954	1,912
Production	1,000 s. tons	8,645	8,508	8,788	8,679	8,475	8,494	8,576	8,822	8,872	9,026	9,082	9,154
Beet sugar	1,000 s. tons	4,692	4,697	4,667	4,668	4,586	4,608	4,689	4,846	4,880	4,962	4,998	5,048
Cane sugar	1,000 s. tons	3,953	3,811	4,121	4,012	3,888	3,886	3,887	3,976	3,992	4,063	4,083	4,105
Total imports	1,000 s. tons	1,762	1,629	1,603	1,574	1,574	1,574	1,796	1,574	1,750	1,574	1,574	1,736
TRQ less NAFTA <sup>2</sup>	1,000 s. tons	1,226	1,229	1,224	1,224	1,224	1,224	1,446	1,224	1,400	1,224	1,224	1,386
Mexico - NAFTA low-tier	1,000 s. tons	0	0	0	0	0	0	0	0	0	0	0	0
Mexico - NAFTA high-tier <sup>3</sup>	1,000 s. tons	10	10	29	0	0	0	0	0	0	0	0	0
Other high-tier tariff	1,000 s. tons	0	0	0	0	0	0	0	0	0	0	0	0
Re-export and polyhydric	1,000 s. tons	481	350	300	300	300	300	300	300	300	300	300	300
Other	1,000 s. tons	55	50	50	50	50	50	50	50	50	50	50	50
Total supply	1,000 s. tons	12,072	12,044	12,330	12,488	12,384	12,234	12,313	12,337	12,506	12,571	12,611	12,802
<b>Use:</b>													
Exports	1,000 s. tons	295	200	150	150	150	150	150	150	150	150	150	150
Domestic deliveries	1,000 s. tons	9,824	9,905	9,946	10,004	10,069	10,142	10,223	10,304	10,385	10,467	10,549	10,631
Miscellaneous	1,000 s. tons	46	0	0	0	0	0	0	0	0	0	0	0
Total use	1,000 s. tons	10,165	10,105	10,096	10,154	10,219	10,292	10,373	10,454	10,535	10,617	10,699	10,781
Ending stocks	1,000 s. tons	1,907	1,939	2,234	2,335	2,165	1,942	1,941	1,883	1,971	1,954	1,912	2,022
Stocks/use ratio	Percent	18.8	19.2	22.1	23.0	21.2	18.9	18.7	18.0	18.7	18.4	17.9	18.8
<b>Raw sugar price:</b>													
New York (No. 14)	Cents/lb.	20.54	20.63	21.10	21.21	21.21	21.20	21.11	21.48	21.11	21.42	21.53	21.09
Raw sugar loan rate	Cents/lb.	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00
Beet sugar loan rate	Cents/lb.	22.90	22.90	22.90	22.90	22.90	22.90	22.90	22.90	22.90	22.90	22.90	22.90
<b>Grower prices:</b>													
Sugarbeets	Dol./ton	35.72	36.51	37.58	36.78	37.29	38.22	38.19	38.57	38.19	38.28	38.66	38.15
Sugarcane	Dol./ton	26.26	26.67	25.39	25.46	26.03	26.60	26.62	26.95	26.56	26.82	26.89	26.44

1/ Fiscal years, October 1 through September 30.

2/ Includes 8,000 STRV allocated to Mexico as part of the raw sugar TRQ and 3,256 STRV to Mexico as part of the refined sugar TRQ.

3/ Starting in FY 2008 under NAFTA, Mexico can ship duty-free sugar to the United States with no quantitative limit.

Table 17. Flue-cured tobacco baseline

Item	Unit	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Area, yield, and production:													
Planted area	1,000 acres	233	229	217	229	245	263	270	277	282	286	289	293
Harvested area	1,000 acres	233	229	217	229	245	263	270	277	282	286	289	293
Yield	lbs./acre	1,957	2,237	2,300	2,400	2,450	2,450	2,450	2,450	2,450	2,450	2,450	2,450
Production	Mil. lbs.	457	513	500	550	600	650	675	700	720	730	740	750
Supply:													
Beginning stocks	Mil. lbs.	838	823	710	585	500	455	450	460	485	510	520	520
Marketings	Mil. lbs.	508	499	500	550	600	650	675	700	720	730	740	750
Total <sup>1</sup>	Mil. lbs.	1,345	1,322	1,210	1,135	1,100	1,105	1,125	1,160	1,205	1,240	1,260	1,270
Use:													
Domestic	Mil. lbs.	307	412	420	425	430	435	440	445	450	460	470	480
Exports	Mil. lbs.	216	200	205	210	215	220	225	230	245	260	270	280
Total <sup>1</sup>	Mil. lbs.	523	612	625	635	645	655	665	675	695	720	740	760
Ending stocks:													
Total <sup>1</sup>	Mil. lbs.	823	710	585	500	455	450	460	485	510	520	520	510
Price:													
Avg. to growers	\$/cwt	185	187	145	145	150	150	155	155	160	160	170	170
Support	\$/cwt	166	168	na	na	na	na	na	na	na	na	na	na
Imports	Mil. lbs.	175	175	200	190	180	170	160	150	135	122	109	98

<sup>1/</sup> Domestic tobacco only; imports are not included in supply, use, or stocks.

na: not applicable

Table 18. Burley tobacco baseline

Item	Unit	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Area, yield, and production:													
Planted area	1,000 acres	152	154	138	154	155	160	165	174	196	217	228	239
Harvested area	1,000 acres	152	154	138	154	155	160	165	174	196	217	228	239
Yield	lbs./acre	1,850	1,958	2,100	2,150	2,200	2,250	2,300	2,300	2,300	2,300	2,300	2,300
Production	Mil. lbs.	282	302	290	330	340	360	380	400	450	500	525	550
Supply:													
Beginning stocks	Mil. lbs.	578	540	491	426	386	326	266	216	176	176	206	241
Marketings	Mil. lbs.	272	302	290	330	340	360	380	400	450	500	525	550
Total <sup>1</sup>	Mil. lbs.	850	841	781	756	726	686	646	616	626	676	731	791
Use:													
Domestic	Mil. lbs.	136	210	215	225	250	265	270	275	280	290	300	310
Exports	Mil. lbs.	174	140	140	145	150	155	160	165	170	180	190	200
Total <sup>1</sup>	Mil. lbs.	310	350	355	370	400	420	430	440	450	470	490	510
Ending stocks:													
Total <sup>1</sup>	Mil. lbs.	540	491	426	386	326	266	216	176	176	206	241	281
Price:													
Avg. to growers	\$/cwt	197	198	150	150	155	160	160	165	165	170	170	175
Support	\$/cwt	185	186	na	na	na	na	na	na	na	na	na	na
Imports	Mil. lbs.	218	220	220	210	200	180	160	150	140	130	120	110

<sup>1/</sup> Domestic tobacco only; imports are not included in supply, use, or stocks.

na: not applicable

Table 19. Horticultural crops baseline: Production, values, and prices

Item	Unit	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Production value:													
Fruit and nuts													
Citrus	\$ Mil.	2,256	2,352	2,399	2,447	2,496	2,546	2,597	2,649	2,702	2,756	2,811	2,868
Noncitrus <sup>1</sup>	\$ Mil.	8,486	8,741	9,003	9,273	9,552	9,838	10,133	10,437	10,750	11,073	11,405	11,747
Tree nuts	\$ Mil.	2,448	2,522	2,597	2,675	2,756	2,838	2,923	3,011	3,101	3,194	3,290	3,389
Total	\$ Mil.	13,191	13,615	14,000	14,396	14,804	15,223	15,654	16,098	16,554	17,024	17,507	18,004
Vegetables and melons													
Fresh <sup>2</sup>	\$ Mil.	9,593	9,881	10,178	10,483	10,797	11,121	11,455	11,799	12,153	12,517	12,893	13,279
Processed	\$ Mil.	1,367	1,383	1,400	1,416	1,433	1,451	1,468	1,486	1,504	1,522	1,540	1,558
Potatoes	\$ Mil.	2,686	2,611	2,637	2,663	2,690	2,717	2,744	2,771	2,799	2,827	2,855	2,884
Sweet potatoes	\$ Mil.	305	311	320	330	339	350	360	371	382	394	405	418
Pulses <sup>3</sup>	\$ Mil.	497	502	507	512	518	523	528	533	539	544	549	555
Mushrooms	\$ Mil.	890	920	945	971	997	1,024	1,052	1,080	1,109	1,139	1,170	1,201
Total	\$ Mil.	15,339	15,608	15,987	16,375	16,775	17,185	17,607	18,040	18,485	18,942	19,412	19,895
Nursery/greenhouse	\$ Mil.	15,193	15,302	15,557	15,817	16,081	16,351	16,625	16,904	17,188	17,478	17,772	18,072
Floriculture	\$ Mil.	5,069	5,076	5,126	5,178	5,229	5,282	5,335	5,388	5,442	5,496	5,551	5,607
Nursery and other	\$ Mil.	10,125	10,226	10,431	10,639	10,852	11,069	11,290	11,516	11,746	11,981	12,221	12,465
Other crops <sup>4</sup>	\$ Mil.	269	275	281	287	293	299	305	312	318	325	332	339
Total, horticultural crops	\$ Mil.	43,992	44,800	45,824	46,875	47,952	49,058	50,191	51,353	52,546	53,769	55,023	56,310
Production, farm weight:													
Fruit and nuts													
Citrus	Mil. lbs.	30,360	30,654	30,948	31,242	31,536	31,829	32,122	32,414	32,706	32,997	33,287	33,577
Fresh	Mil. lbs.	4,497	4,540	4,584	4,628	4,671	4,715	4,758	4,801	4,844	4,888	4,931	4,973
Processed	Mil. lbs.	10,683	10,786	10,890	10,993	11,097	11,200	11,303	11,406	11,508	11,611	11,713	11,815
Noncitrus	Mil. lbs.	33,280	33,602	33,925	34,247	34,569	34,890	35,211	35,532	35,852	36,171	36,489	36,806
Fresh	Mil. lbs.	13,086	13,213	13,339	13,466	13,593	13,719	13,845	13,971	14,097	14,223	14,348	14,472
Processed	Mil. lbs.	20,194	20,389	20,585	20,781	20,976	21,171	21,366	21,560	21,754	21,948	22,141	22,334
Tree nuts	Mil. lbs.	2,848	2,876	2,903	2,931	2,958	2,986	3,013	3,041	3,068	3,096	3,123	3,150
Total	Mil. lbs.	66,488	67,131	67,776	68,420	69,063	69,705	70,346	70,987	71,625	72,263	72,899	73,533
Vegetables and melons													
Fresh <sup>2</sup>	Mil. lbs.	45,829	46,272	46,716	47,160	47,603	48,046	48,488	48,929	49,370	49,809	50,247	50,684
Processed <sup>2</sup>	Mil. lbs.	31,366	31,669	31,973	32,277	32,580	32,883	33,186	33,488	33,789	34,090	34,390	34,689
Potatoes	Mil. lbs.	45,781	45,017	45,449	45,881	46,312	46,743	47,173	47,602	48,030	48,458	48,884	49,310
Sweet potatoes	Mil. lbs.	1,589	1,653	1,668	1,684	1,700	1,716	1,732	1,748	1,763	1,779	1,795	1,810
Pulses <sup>3</sup>	Mil. lbs.	3,101	3,388	3,421	3,453	3,485	3,518	3,550	3,583	3,615	3,647	3,679	3,711
Mushrooms	Mil. lbs.	848	857	865	874	882	890	898	906	914	923	931	939
Total	Mil. lbs.	128,514	128,856	130,092	131,328	132,563	133,796	135,026	136,255	137,482	138,705	139,926	141,143
Other crops <sup>4</sup>	Mil. lbs.	95.5	96.9	97.8	98.8	99.7	100.6	101.6	102.5	103.4	104.3	105.2	106.2
Total, horticultural crops	Mil. lbs.	195,097	196,084	197,966	199,847	201,726	203,602	205,474	207,344	209,211	211,073	212,930	214,782
Grower prices <sup>5</sup>													
Fruit and nuts													
Citrus	2000=100	102.2	105.5	106.6	107.7	108.8	110.0	111.2	112.4	113.6	114.8	116.1	117.4
Noncitrus	2000=100	122.0	124.4	126.9	129.5	132.2	134.9	137.7	140.5	143.4	146.4	149.5	152.7
Tree nuts	2000=100	124.8	127.3	129.9	132.5	135.2	138.0	140.8	143.7	146.7	149.8	153.0	156.2
Total	2000=100	124.2	126.9	129.3	131.7	134.2	136.7	139.3	141.9	144.6	147.4	150.3	153.2
Vegetables													
Fresh	2000=100	109.7	111.9	114.1	116.5	118.8	121.3	123.8	126.3	129.0	131.7	134.4	137.3
Processed	2000=100	100.3	100.5	100.7	101.0	101.2	101.5	101.8	102.1	102.4	102.7	103.0	103.4
Potatoes	2000=100	116.3	115.0	115.0	115.1	115.2	115.2	115.3	115.4	115.5	115.7	115.8	116.0
Sweet potatoes	2000=100	125.9	123.2	125.6	128.2	130.8	133.5	136.2	139.1	142.0	144.9	148.0	151.1
Pulses	2000=100	114.0	105.4	105.4	105.5	105.5	105.6	105.7	105.8	105.9	106.0	106.1	106.3
Mushrooms	2000=100	104.9	107.4	109.2	111.1	113.0	115.0	117.0	119.1	121.2	123.4	125.7	127.9
Total	2000=100	112.6	114.3	115.9	117.6	119.4	121.2	123.0	124.9	126.8	128.8	130.9	133.0
Retail prices (consumer price indexes):													
Fruits and vegetables	1982-84=100	225.9	232.7	240.2	248.1	256.2	264.7	273.4	282.4	291.8	301.4	311.3	321.7
Fresh fruit	1982-84=100	279.1	286.8	297.0	307.3	318.1	329.2	340.7	352.6	364.9	377.7	390.9	404.6
Fresh vegetables	1982-84=100	250.5	261.2	270.5	280.2	290.4	300.9	311.7	323.0	334.6	346.7	359.2	372.1
Processed fruit & veg.	Dec 1997=100	114.1	115.5	118.6	121.9	125.2	128.7	132.2	135.8	139.5	143.3	147.2	151.3

1/ Includes olives; excludes melons.

2/ Includes melons and processing totals for dual-use crops.

3/ Includes dry edible beans and peas, lentils, Austrian winter peas, and wrinkled seed peas.

4/ Includes hops, peppermint and spearmint oils, maple syrup, and Hawaiian tropical crops.

5/ Computed from unit values of production, or production value divided into production volume.

Data source: NASS, USDA.

Table 20. Horticultural crop baseline: Exports and imports

Item	Unit	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<b>Exports</b>													
Fruit and nuts <sup>1</sup>													
Fresh fruits	\$ Mil.	2,130	2,252	2,306	2,360	2,417	2,475	2,535	2,596	2,659	2,723	2,790	2,858
Citrus	\$ Mil.	631	704	711	718	726	733	740	748	755	763	770	778
Noncitrus	\$ Mil.	1,499	1,548	1,594	1,642	1,691	1,742	1,794	1,848	1,904	1,961	2,020	2,080
Processed fruits	\$ Mil.	666	769	780	792	804	816	828	841	853	866	879	892
Fruit juices	\$ Mil.	658	703	724	745	768	791	815	839	864	890	917	944
Tree nuts	\$ Mil.	1,490	1,888	1,956	2,026	2,099	2,175	2,253	2,334	2,418	2,505	2,595	2,689
Total	\$ Mil.	4,944	5,611	5,765	5,924	6,088	6,256	6,430	6,609	6,794	6,984	7,181	7,383
Vegetables <sup>2</sup>													
Fresh	\$ Mil.	1,220	1,257	1,285	1,313	1,342	1,372	1,402	1,433	1,464	1,496	1,529	1,563
Processed	\$ Mil.	2,605	3,004	3,109	3,218	3,331	3,448	3,568	3,693	3,822	3,956	4,095	4,238
Potatoes	\$ Mil.	651	722	737	752	767	782	798	814	830	846	863	881
Sweet potatoes	\$ Mil.	18	24	24	25	26	27	27	28	29	30	31	32
Pulses	\$ Mil.	243	229	231	233	236	238	240	243	245	248	250	253
Mushrooms	\$ Mil.	26	42	43	44	45	46	48	49	50	51	52	54
Total	\$ Mil.	4,763	5,278	5,435	5,597	5,763	5,935	6,112	6,293	6,481	6,674	6,872	7,077
Nursery/greenhouse	\$ Mil.	259	286	291	297	303	309	315	322	328	335	341	348
Essential oils	\$ Mil.	957	937	951	965	980	994	1,009	1,024	1,040	1,055	1,071	1,087
Wine	\$ Mil.	584	674	700	729	758	788	819	852	886	922	959	997
Beer	\$ Mil.	176	177	179	181	184	186	188	191	193	196	198	201
<b>Imports</b>													
Fruit and nuts <sup>1</sup>													
Bananas	\$ Mil.	1,164	1,122	1,189	1,225	1,243	1,262	1,281	1,300	1,319	1,339	1,359	1,380
Fresh or frozen	\$ Mil.	2,289	2,594	2,800	2,945	3,054	3,168	3,286	3,408	3,535	3,666	3,803	3,944
Citrus	\$ Mil.	283	315	329	344	360	376	393	410	429	448	468	489
Noncitrus	\$ Mil.	2,005	2,279	2,361	2,446	2,534	2,625	2,720	2,818	2,919	3,024	3,133	3,246
Processed fruits	\$ Mil.	1,146	1,304	1,393	1,461	1,525	1,592	1,661	1,732	1,807	1,884	1,964	2,048
Fruit juices	\$ Mil.	776	786	802	818	834	851	868	885	903	921	939	958
Tree nuts	\$ Mil.	724	952	1,095	1,161	1,204	1,248	1,295	1,342	1,392	1,444	1,497	1,552
Total	\$ Mil.	6,099	6,758	7,278	7,609	7,860	8,120	8,389	8,667	8,955	9,254	9,562	9,882
Vegetables <sup>2</sup>													
Fresh or frozen	\$ Mil.	3,319	3,667	3,977	4,179	4,336	4,499	4,668	4,844	5,025	5,214	5,410	5,613
Processed	\$ Mil.	1,945	2,093	2,288	2,416	2,515	2,619	2,727	2,840	2,957	3,078	3,205	3,336
Potatoes	\$ Mil.	668	788	821	856	892	930	970	1,011	1,054	1,098	1,145	1,194
Sweet potatoes	\$ Mil.	3	3	3	3	3	3	3	3	4	4	4	4
Pulses	\$ Mil.	66	75	78	81	83	86	89	93	96	99	103	106
Mushrooms	\$ Mil.	205	222	225	229	232	236	239	243	246	250	254	258
Total	\$ Mil.	6,204	6,848	7,392	7,763	8,063	8,374	8,697	9,033	9,381	9,743	10,119	10,510
Nursery/greenhouse	\$ Mil.	1,216	1,363	1,581	1,660	1,693	1,727	1,761	1,796	1,832	1,869	1,906	1,944
Cut flowers	\$ Mil.	585	702	814	855	872	889	907	925	944	962	982	1,001
Nursery stock	\$ Mil.	632	661	767	805	821	837	854	871	889	907	925	943
Essential oils	\$ Mil.	906	1,825	2,081	2,185	2,250	2,318	2,387	2,459	2,533	2,609	2,687	2,767
Wine	\$ Mil.	3,186	3,319	3,485	3,625	3,770	3,921	4,077	4,241	4,410	4,587	4,770	4,961
Beer	\$ Mil.	2,591	2,805	2,973	3,063	3,154	3,249	3,347	3,447	3,550	3,657	3,767	3,880

1/ Fresh fruits exclude melons; processed fruits include olives; tree nuts exclude peanuts.

2/ Fresh vegetables include melons, but exclude fresh potatoes, sweet potatoes, and fresh mushrooms. Processed vegetables exclude processed potatoes, pulses, processed mushrooms, and olives, but include hops.

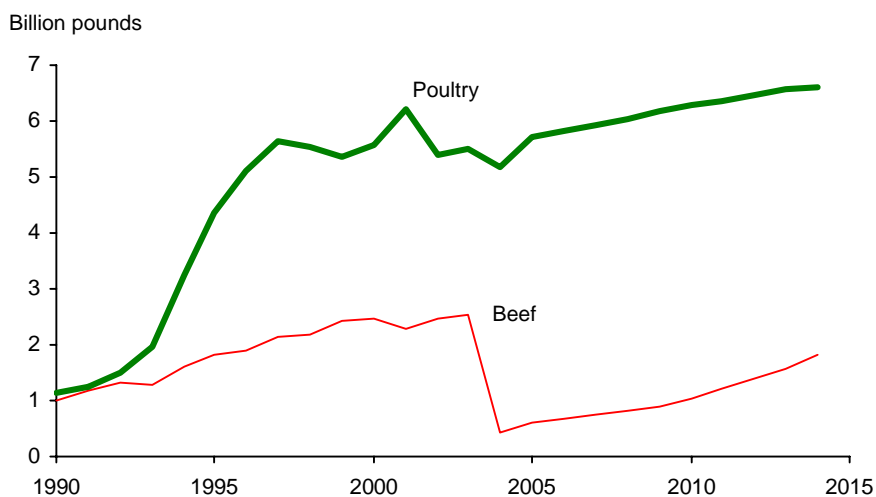
Data source: U.S. Census Bureau.

## Livestock

Livestock sector projections over the baseline period reflect strong domestic demand for meat. Beef and poultry exports rise from the reduced levels of 2004 that reflected concerns with bovine spongiform encephalopathy (BSE) and Avian influenza, respectively. The baseline assumes a gradual rebuilding of U.S. beef exports to Japan, reflecting the October 2004 U.S.-Japan beef trade framework agreement that will permit the resumption of beef trade between the two countries (see box, page 49). While overall meat exports benefit from stronger foreign economic growth in the baseline, U.S. beef exports do not return to levels attained prior to the discovery of a U.S. BSE case in December 2003.

Moderate returns to red meat production lead to only small gains in beef and pork production in the second half of the projections. Larger gains in poultry output result in poultry becoming a larger proportion of total U.S. meat consumption as per capita beef consumption declines and per capita pork consumption levels off.

**U.S. beef and poultry exports**



## **Baseline Trade Assumptions for Cattle and Beef**

Due to uncertainties regarding the length of bans on trade in ruminants and ruminant products following the discovery of cases of BSE in the United States and Canada, the baseline projections for meats are based on a number of key assumptions related this issue.

### **Canadian Beef Exports**

Canadian beef exports have rebounded from the lows of 2003 following the Canadian BSE case in May of that year, but do not fully recover to 2002 levels in the baseline projections.

### **U.S. Beef Exports**

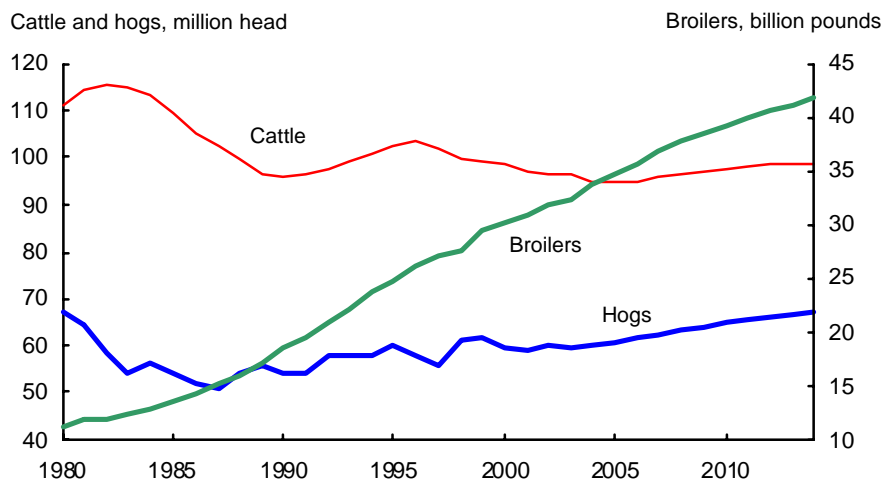
The baseline assumes a resumption of U.S. beef exports to Japan beginning in 2006, facilitated by the October 2004 U.S.-Japan beef trade framework agreement that will permit the reopening of beef trade between the two countries. Japanese imports of U.S. beef are assumed to grow slowly in the projections as the U.S. industry adopts the requirements under the framework agreement. The baseline also assumes a gradual recovery in U.S. beef exports to South Korea.

### **Canadian Cattle Exports to the United States**

The resumption of imports from Canada of slaughter cattle under 30 months of age and feeder cattle is also assumed to begin in 2006 in the baseline. However, after the projections were prepared, a minimal risk rule was published which specifies USDA's regulations on meat and ruminant imports from regions with effective BSE prevention and detection measures. The rule becomes effective on March 7, 2005, and Canada will be the first country to be recognized as a minimal-risk region.

When the minimal risk rule becomes effective, imports of under-30-month-old steers and heifers from Canada for immediate slaughter and imports of Canadian feeder cattle that will enter U.S. feedlots are expected to lead to increased levels of cattle slaughter and beef production in the United States in 2005 and 2006, with somewhat lower cattle and beef prices. Larger beef supplies are also expected to pressure prices for other livestock and other meats.

### Livestock inventories and broiler production



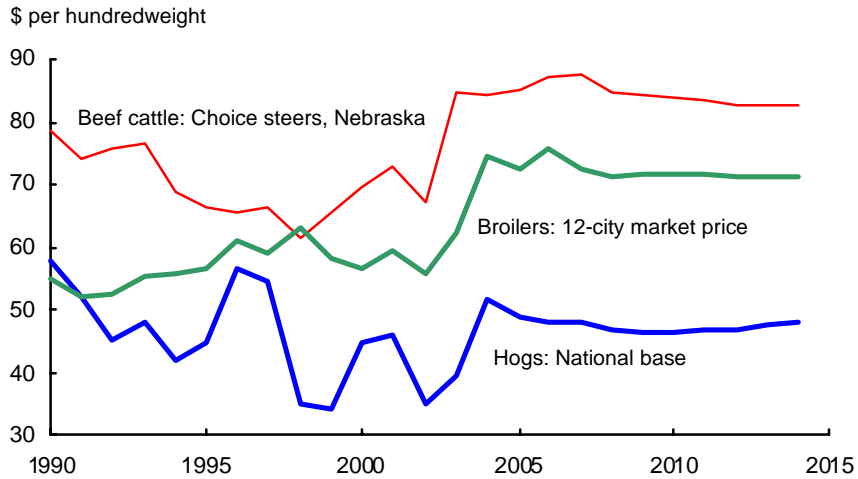
U.S. beef production increases from the sharp declines of 2003 and 2004. Despite the loss of export markets following the case of BSE in late 2003, strong domestic demand for beef has resulted in favorable producer returns which, together with favorable forage and feed grain supplies, begins the process of retention of cows and heifers for future expansion. Cattle herds are expected to increase somewhat from cyclical lows near 95 million head in 2005 and 2006. Rising slaughter weights augment gradual herd expansion over the remainder of the projections. Pork production grows slowly as the coordinated/integrated industrial structure dampens the U.S. hog cycle. Poultry production continues to rise, but at a lower rate than during the 1990s due to the maturity of domestic demand and slower export growth.

The trend toward larger livestock systems continues throughout the baseline period. Efficiency gains allow production to expand while real prices generally decline.

- Strong demand for consistent, higher quality beef continues in the domestic hotel and restaurant market and increasingly in the retail market. Additionally, the rebuilding of beef export markets is primarily for high-quality beef. Increasing movement toward transparent animal identification in international trade will strengthen quality assurance.
- Increased efficiency of the U.S. hog breeding herd is reflected in a shift to larger, more efficient operations and in the decline of smaller, less efficient operations. For the baseline, the increase in efficiency slows somewhat since larger, more efficient operations already account for a large share of the U.S. pig crop.
- Production coordination and market integration between the United States and Canada continues to increase in the hog sector. Canada is the major supplier of live hog imports to the United States. Feeder pigs produced in Canada are finished and processed in the United States, where feed grain prices remain favorable and processing costs are lower. Large wholesale and retail buyers source pork cuts where prices are attractive, with demand accommodated by trade between the two countries.
- The poultry sector has benefited from economies of scale associated with the industry's horizontal and vertical integration. Projected gains in efficiency over the next decade are smaller than in the past 25 years.

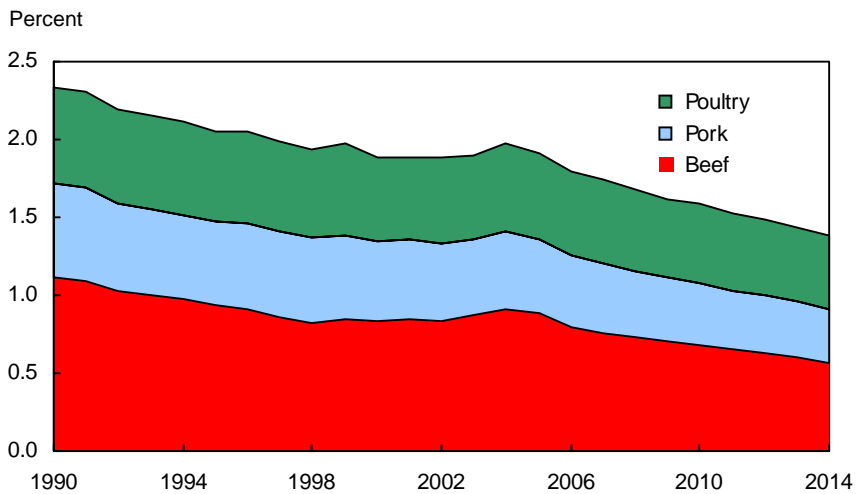


### Nominal livestock prices



Livestock prices are projected to average somewhat lower than the high levels of 2004, particularly in the second half of the projections period when per capita consumption flattens at record high levels.

### Percent of U.S. income spent on meat

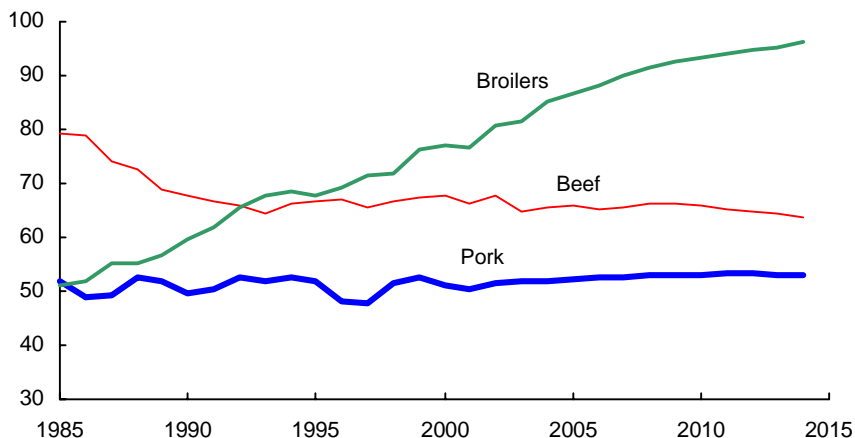


U.S. consumers buy more meat, but spend a smaller proportion of disposable income for these purchases, continuing a long-term trend. Over the next 10 years, consumer meat expenditures decline from about 2 percent to 1.4 percent of disposable income.

- Poultry expenditures continue to increase as a share of consumer spending on meats.

### Per capita meat consumption

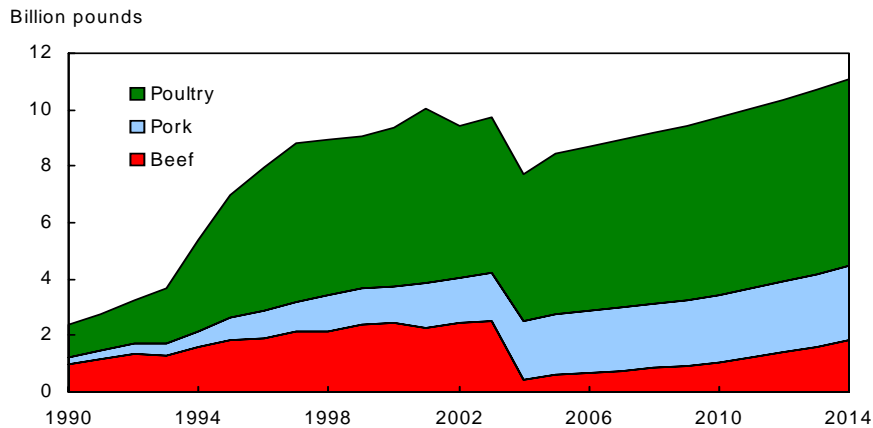
Pounds per capita, retail weight



Higher levels of total per capita meat consumption are projected over the next decade, largely reflecting continued increases in poultry consumption. On a retail weight basis, per capita consumption rises to about 234 pounds from the 2004 level of 223 pounds.

- Per capita consumption of beef remains at relatively high levels through the baseline in part because beef exports, although growing, do not return to 2003 levels in the projections.
- Pork consumption remains stable at 52-53 pounds per person throughout the projections.
- Per capita consumption of relatively lower priced poultry increases throughout the baseline, allowing poultry to gain a larger share of total meat consumption and meat expenditures.

## U.S. meat exports



U.S. meat exports rise throughout the baseline period from the reduced levels in 2004 that reflected disease-related loss of markets, especially for beef and broilers. Improved global economic growth and rising demand for meats contribute to the gains in U.S. exports. The gradual recovery in beef exports to markets such as Japan and South Korea is also critical to the projections. The baseline assumes that Brazil and Argentina will not be recognized as free of foot-and-mouth disease (FMD) by key importing countries, such as Japan.

### Beef

- U.S. beef exports primarily reflect demand for high-quality fed beef, with most U.S. beef exports typically going to markets in Pacific Rim nations. With the loss of those markets following the BSE case in the United States in late-December 2003, U.S. beef exports were sharply lower in 2004. However, U.S. beef exports are projected to rise slowly in the baseline as the October 2004 beef trade framework agreement between the United States and Japan facilitates the resumption of beef trade between the two countries. A gradual recovery in U.S. beef exports to South Korea is also assumed.
- U.S. imports of processing beef from Australia and New Zealand decline in the baseline as more, lower quality processing beef comes from domestic sources with the rebuilding of the cattle herd. The United States is a net beef importer on a volume basis through the projections as the recovery of high-quality fed beef exports does not reach prior levels.

### Pork

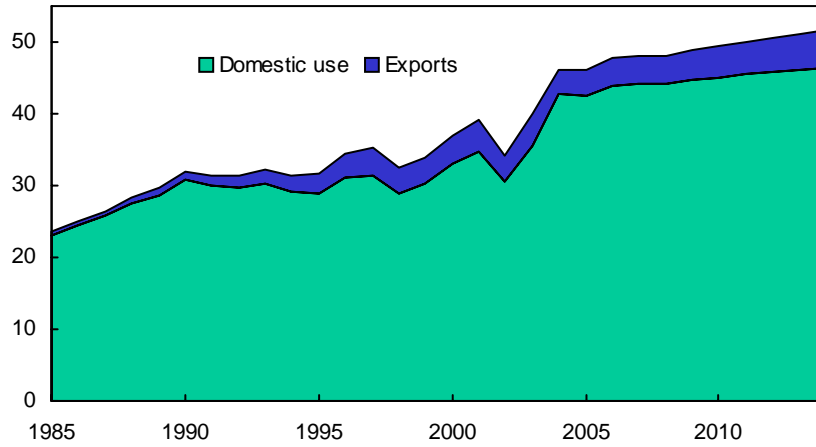
- U.S. pork exports benefit somewhat from reduced beef exports as import demand shifts among competing meats. Pacific Rim nations and Mexico remain key markets for long-term growth of U.S. pork exports. Canada continues to be a strong competitor in these markets. Brazil also is a major pork exporter. However, without nationwide FMD-free status, Brazil focuses its pork exports on Russia, Argentina, and Asian markets other than Japan and South Korea.
- While increased efficiency in pork production helps limit production costs, longer term gains in U.S. pork exports will be determined by costs of production and environmental regulations relative to competitors. Such costs tend to be lower in countries with growing pork industries, such as Brazil and Mexico.

### Poultry

- U.S. broiler export growth is expected to slow from the rate of the 1990s. U.S. producers will face strong competition from other major broiler exporting countries, particularly Brazil.
- Major U.S. export markets include Asia, Russia, and Mexico. Gains in these markets reflect strong economic growth and rising consumer demand.

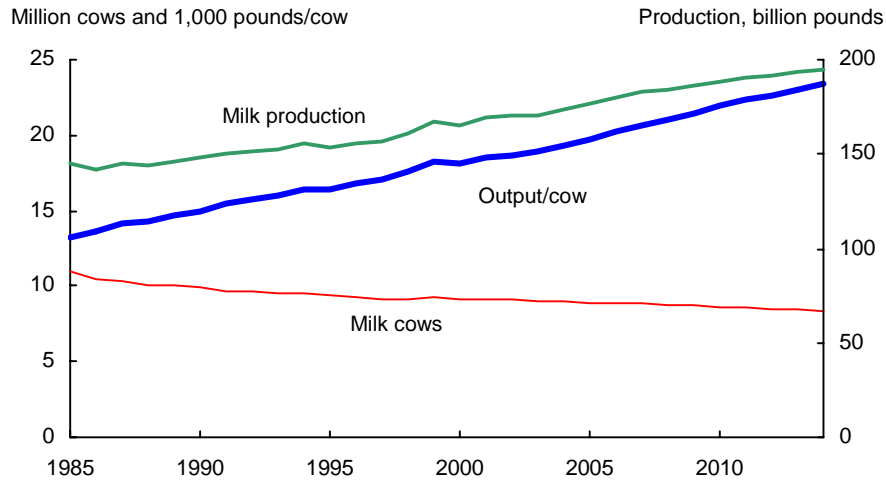
### Farm value of domestically produced meat

\$ billion



The sharp decline in beef exports in 2004 lowered the overall meat export share of the total value of domestically produced meat from about 11 percent in 2003 to under 8 percent, based on a measure that weights exports of beef, pork, and chicken by farm-level prices. While U.S. meat exports grow in importance in the projections, the domestic market remains the dominant source of demand and exports only recover to 10 percent of the production value.

### Milk production and dairy herd



Relatively favorable farm milk prices encourage strong gains in milk production during the next several years. Demand for dairy products increases moderately.

- Management and productivity gains are expected to boost milk output per cow and total milk production. Further development of large, specialized operations in many regions will be a significant contributor to these gains.
- The baseline assumes a return to normal availability of the bovine growth hormone rBST (recombinant bovine somatotropin) to the dairy sector in 2006. Nonetheless, growth in milk output per cow is projected to slow as gains are less easily boosted by simply increasing the amount of concentrate feeds fed.
- Milk cow numbers are expected to decline at a relatively slow pace. Increasing specialization of dairy farms over time (and the associated less-attractive salvage uses for dairy capital and other inputs) probably makes exit rates from milk production lower than in past decades.
- Domestic dairy product use grows slowly throughout the baseline period, slightly faster than the growth in population. Cheese and butter demand benefit from greater consumption of prepared foods and increased away-from-home eating. Per capita consumption of fluid milk, however, is expected to decline slowly.
- Real farm-level milk prices are projected to decline.

Table 21. Per capita meat consumption, retail weight

Item	Units	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Total beef	Pounds	64.8	65.7	66.0	65.2	65.4	66.3	66.2	65.9	65.3	64.9	64.4	63.7
Total veal	Pounds	0.7	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.4
Total pork	Pounds	51.7	51.9	52.1	52.5	52.7	52.9	53.0	53.1	53.2	53.2	53.1	53.0
Lamb and mutton	Pounds	1.1	1.2	1.2	1.2	1.1	1.1	1.1	1.1	1.1	1.1	1.0	1.0
Total red meat	Pounds	118.4	119.4	119.9	119.5	119.8	120.8	120.9	120.6	120.1	119.6	119.0	118.2
Broilers	Pounds	81.4	85.3	86.8	88.1	90.1	91.5	92.5	93.4	94.1	94.7	95.1	96.4
Other chicken	Pounds	1.4	0.9	0.9	1.0	1.1	1.1	1.1	1.1	1.1	1.2	1.2	1.2
Turkeys	Pounds	17.4	17.1	16.8	17.0	17.4	17.6	17.8	17.8	18.0	18.1	18.4	18.6
Total poultry	Pounds	100.2	103.3	104.4	106.2	108.6	110.2	111.4	112.4	113.2	114.0	114.6	116.1
Red meat & poultry	Pounds	218.6	222.8	224.2	225.7	228.4	231.1	232.3	233.0	233.3	233.6	233.6	234.3

Table 22. Consumer expenditures for meats

Item	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Beef, dollars per person	243.05	268.21	270.50	253.31	255.07	255.77	257.67	260.40	262.04	263.26	263.72	263.67
Percent of income	0.87	0.91	0.88	0.79	0.76	0.73	0.70	0.68	0.65	0.63	0.60	0.57
Percent of meat expenditures	45.71	46.11	45.97	43.88	43.67	43.49	43.11	42.94	42.56	42.30	41.89	41.34
Pork, dollars per person	137.58	145.91	148.93	150.14	150.43	150.14	150.92	151.99	153.37	154.66	156.28	157.86
Percent of income	0.49	0.50	0.48	0.47	0.45	0.43	0.41	0.40	0.38	0.37	0.36	0.34
Percent of meat expenditures	25.87	25.09	25.31	26.01	25.76	25.53	25.25	25.06	24.91	24.85	24.82	24.75
Broilers, dollars per person	132.25	148.75	150.80	155.16	159.44	162.75	168.91	173.38	178.98	182.65	187.12	193.01
Percent of income	0.47	0.51	0.49	0.48	0.47	0.46	0.46	0.45	0.45	0.43	0.43	0.42
Percent of meat expenditures	24.87	25.57	25.63	26.88	27.30	27.67	28.26	28.59	29.07	29.35	29.72	30.27
Turkeys, dollars per person	18.83	18.74	18.14	18.64	19.13	19.52	20.23	20.62	21.31	21.78	22.51	23.19
Percent of income	0.07	0.06	0.06	0.06	0.06	0.06	0.06	0.05	0.05	0.05	0.05	0.05
Percent of meat expenditures	3.54	3.22	3.08	3.23	3.28	3.32	3.38	3.40	3.46	3.50	3.57	3.64
Total meat, dollars per person	531.71	581.61	588.37	577.25	584.07	588.18	597.74	606.39	615.70	622.35	629.63	637.73
Percent of income	1.90	1.98	1.91	1.79	1.74	1.67	1.63	1.58	1.53	1.48	1.43	1.39

Table 23. Beef baseline

Item	Units	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Beginning stocks	Mil. lbs.	691	518	625	575	575	575	575	575	575	575	575	575
Commercial production	Mil. lbs.	26,238	24,498	24,775	24,808	25,213	26,034	26,458	26,884	27,115	27,416	27,692	27,941
Change from previous year	Percent	-3.1	-6.6	1.1	0.1	1.6	3.3	1.6	1.6	0.9	1.1	1.0	0.9
Farm production	Mil. lbs.	101	101	101	101	101	101	101	101	101	101	101	101
Total production	Mil. lbs.	26,339	24,599	24,876	24,909	25,314	26,135	26,559	26,985	27,216	27,517	27,793	28,042
Imports	Mil. lbs.	3,006	3,551	3,660	3,682	3,671	3,582	3,472	3,325	3,250	3,200	3,150	3,100
Total supply	Mil. lbs.	30,036	28,668	29,161	29,166	29,560	30,292	30,606	30,885	31,041	31,292	31,518	31,717
Exports	Mil. lbs.	2,519	443	620	682	750	825	908	1,044	1,200	1,381	1,588	1,826
Ending stocks	Mil. lbs.	518	625	575	575	575	575	575	575	575	575	575	575
Total consumption	Mil. lbs.	26,999	27,600	27,966	27,909	28,235	28,892	29,123	29,266	29,266	29,336	29,355	29,316
Per capita, carcass weight	Pounds	92.6	93.9	94.3	93.2	93.4	94.7	94.6	94.2	93.3	92.7	92.0	91.1
Per capita, retail weight	Pounds	64.8	65.7	66.0	65.2	65.4	66.3	66.2	65.9	65.3	64.9	64.4	63.7
Change from previous year	Percent	-4.1	1.4	0.4	-1.1	0.2	1.4	-0.1	-0.4	-0.9	-0.6	-0.8	-1.0
Prices:													
Beef cattle, farm	\$/cwt	79.97	83.22	83.91	85.63	86.37	83.54	82.86	82.69	82.30	81.64	81.53	81.35
Calves, farm	\$/cwt	103.55	120.23	111.89	110.49	109.89	107.50	104.44	105.38	103.54	101.64	100.76	99.74
Choice steers, Nebraska	\$/cwt	84.69	84.22	85.00	86.75	87.49	84.63	83.94	83.77	83.37	82.70	82.59	82.41
Deflated price	\$/cwt	46.04	44.54	43.81	43.58	42.88	40.46	39.16	38.13	37.02	35.82	34.90	33.98
Yearling steers, Okla. City	\$/cwt	89.85	104.46	96.75	95.54	95.02	92.96	90.31	91.12	89.53	87.88	87.13	86.24
Deflated price	\$/cwt	48.84	55.24	49.87	47.99	46.57	44.45	42.13	41.47	39.75	38.07	36.82	35.56
Retail: Beef and veal	1982-84=100	175.1	195.3	197.0	186.6	187.5	185.4	187.0	189.8	192.7	194.9	196.8	198.7
Retail: Other meats	1982-84=100	166.0	173.4	176.1	178.2	180.2	182.0	184.3	186.8	189.3	192.0	194.9	197.9
ERS retail beef	\$/lb.	3.75	4.08	4.10	3.88	3.90	3.86	3.89	3.95	4.01	4.06	4.10	4.14
Costs and returns, cow-calf enterprise:													
Variable expenses	\$/cow	219.52	228.40	221.52	224.26	227.62	232.88	238.75	243.44	247.46	250.51	253.86	257.29
Fixed expenses	\$/cow	121.58	123.90	125.71	131.06	136.39	140.95	143.78	146.20	148.53	150.81	153.12	155.71
Total cash expenses	\$/cow	341.10	352.30	347.23	355.32	364.01	373.83	382.53	389.64	395.99	401.32	406.97	413.00
Returns above cash costs	\$/cow	83.72	148.03	125.82	120.03	115.86	102.44	88.27	92.42	85.76	79.52	77.17	73.76
Cattle inventory	1,000 head	96,100	94,882	94,732	94,711	95,842	96,490	97,171	97,646	98,170	98,671	98,901	98,776
Beef cow inventory	1,000 head	32,983	32,860	32,592	32,402	32,804	33,232	33,633	33,927	34,066	34,241	34,322	34,335
Total cow inventory	1,000 head	42,125	41,851	41,550	41,310	41,677	42,041	42,366	42,585	42,650	42,765	42,786	42,740

Table 24. Pork baseline

Item	Units	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Beginning stocks	Mil. lbs.	533	532	510	520	520	520	520	520	520	520	520	520
Commercial production	Mil. lbs.	19,945	20,573	20,800	21,182	21,452	21,765	22,032	22,295	22,554	22,777	22,972	23,148
Change from previous year	Percent	1.4	3.1	1.1	1.8	1.3	1.5	1.2	1.2	1.2	1.0	0.9	0.8
Farm production	Mil. lbs.	21	22	22	22	23	23	23	23	24	24	24	24
Total production	Mil. lbs.	19,966	20,595	20,822	21,205	21,475	21,788	22,056	22,318	22,578	22,801	22,996	23,172
Imports	Mil. lbs.	1,185	1,130	1,215	1,235	1,268	1,290	1,323	1,334	1,367	1,400	1,422	1,444
Total supply	Mil. lbs.	21,684	22,257	22,547	22,960	23,263	23,598	23,899	24,172	24,465	24,721	24,938	25,136
Exports	Mil. lbs.	1,717	2,080	2,115	2,172	2,227	2,282	2,337	2,392	2,458	2,513	2,579	2,646
Ending stocks	Mil. lbs.	532	510	520	520	520	520	520	520	520	520	520	520
Total consumption	Mil. lbs.	19,435	19,667	19,912	20,268	20,516	20,796	21,042	21,260	21,487	21,688	21,839	21,970
Per capita, carcass weight	Pounds	66.7	66.9	67.1	67.7	67.9	68.1	68.3	68.4	68.5	68.6	68.4	68.2
Per capita, retail weight	Pounds	51.7	51.9	52.1	52.5	52.7	52.9	53.0	53.1	53.2	53.2	53.1	53.0
Change from previous year	Percent	0.5	0.4	0.3	0.8	0.3	0.4	0.3	0.1	0.2	0.0	-0.2	-0.3
Prices:													
Hogs, farm	\$/cwt	37.55	50.06	47.20	46.56	46.14	45.34	45.14	45.13	45.22	45.43	45.89	46.43
National base, live equivalent	\$/cwt	39.45	51.67	48.75	48.09	47.66	46.84	46.63	46.63	46.72	46.94	47.41	47.97
Deflated price	\$/cwt	21.45	27.32	25.13	24.16	23.36	22.40	21.75	21.22	20.74	20.33	20.04	19.78
Retail: pork	1982-84=100	164.9	174.2	178.0	178.0	177.8	176.7	177.2	178.2	179.5	180.9	183.2	185.5
ERS retail pork	\$/lb.	2.66	2.81	2.86	2.86	2.86	2.84	2.85	2.86	2.88	2.91	2.94	2.98
Costs and returns, farrow to finish:													
Variable expenses	\$/cwt	33.20	37.86	30.84	31.43	32.42	33.76	35.23	36.30	36.90	37.17	37.55	37.91
Fixed expenses	\$/cwt	3.97	4.31	4.36	4.39	4.41	4.44	4.46	4.49	4.52	4.55	4.57	4.61
Total cash expenses	\$/cwt	37.17	42.18	35.20	35.82	36.83	38.19	39.69	40.78	41.42	41.72	42.12	42.52
Returns above cash costs	\$/cwt	-0.36	6.61	10.60	9.07	7.37	4.96	3.09	1.85	1.16	0.92	0.85	0.85
Hog inventory,													
Dec. 1, previous year	1,000 head	59,554	60,449	60,700	61,749	62,488	63,346	64,080	64,799	65,512	66,124	66,657	67,139

Table 25. Young chicken baseline

Item	Units	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Beginning stocks	Mil. lbs.	763	608	700	650	650	650	650	650	650	650	650	650
Federally inspected slaughter	Mil. lbs.	32,749	34,134	35,225	36,181	37,301	38,195	38,994	39,716	40,373	40,975	41,517	42,366
Change from previous year	Percent	1.6	4.2	3.2	2.7	3.1	2.4	2.1	1.9	1.7	1.5	1.3	2.0
Production	Mil. lbs.	32,399	33,769	34,848	35,819	36,928	37,814	38,604	39,319	39,969	40,565	41,102	41,942
Total supply	Mil. lbs.	33,173	34,405	35,576	36,497	37,606	38,492	39,282	39,997	40,647	41,243	41,780	42,620
Change from previous year	Percent	1.7	3.7	3.4	2.6	3.0	2.4	2.1	1.8	1.6	1.5	1.3	2.0
Exports	Mil. lbs.	4,920	4,507	4,955	5,110	5,225	5,340	5,460	5,550	5,640	5,720	5,800	5,860
Ending stocks	Mil. lbs.	608	700	650	650	650	650	650	650	650	650	650	650
Consumption	Mil. lbs.	27,645	29,198	29,971	30,737	31,731	32,502	33,172	33,797	34,357	34,873	35,330	36,110
Per capita, carcass weight	Pounds	94.8	99.3	101.0	102.6	104.9	106.5	107.7	108.8	109.6	110.2	110.7	112.2
Per capita, retail weight	Pounds	81.4	85.3	86.8	88.1	90.1	91.5	92.5	93.4	94.1	94.7	95.1	96.4
Change from previous year	Percent	1.2	4.8	1.7	1.6	2.3	1.5	1.1	1.0	0.7	0.6	0.4	1.3
Prices:													
Broilers, farm	Cents/lb.	35.3	45.5	44.1	46.2	44.1	43.5	43.7	43.5	43.7	43.5	43.4	43.3
12-city market price	Cents/lb.	62.0	74.6	72.3	75.8	72.3	71.4	71.7	71.5	71.7	71.3	71.2	71.0
Deflated wholesale price	Cents/lb.	33.7	39.4	38.5	38.1	35.5	34.1	33.5	32.5	31.8	30.9	30.1	29.3
Change from previous year	Percent	9.0	17.0	-2.4	-1.1	-6.9	-3.7	-2.0	-2.8	-2.1	-3.0	-2.6	-2.8
Composite retail broiler price	Cents/lb.	162.4	174.3	173.8	176.0	176.9	177.9	182.6	185.6	190.2	192.9	196.8	200.3
Costs and returns:													
Total costs	Cents/lb.	58.42	63.21	65.39	65.79	64.82	65.70	66.70	68.44	69.79	69.93	71.14	70.36
Net returns	Cents/lb.	3.58	11.39	6.91	10.03	7.53	5.68	5.04	3.04	1.94	1.39	0.08	0.61



Table 26. Turkey baseline

Item	Units	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Beginning stocks	Mil. lbs.	333	354	275	275	300	300	300	300	300	300	300	300
Federally inspected slaughter	Mil. lbs.	5,651	5,455	5,575	5,705	5,850	5,986	6,100	6,176	6,280	6,386	6,523	6,658
Change from previous year	Percent	-1.1	-3.5	2.2	2.3	2.5	2.3	1.9	1.2	1.7	1.7	2.1	2.1
Production	Mil. lbs.	5,578	5,384	5,502	5,630	5,774	5,908	6,021	6,096	6,199	6,303	6,438	6,572
Total supply	Mil. lbs.	5,911	5,738	5,777	5,905	6,074	6,208	6,321	6,396	6,499	6,603	6,738	6,872
Change from previous year	Percent	0.5	-2.9	0.7	2.2	2.8	2.2	1.8	1.2	1.6	1.6	2.0	2.0
Exports	Mil. lbs.	484	450	510	515	525	535	545	555	560	570	580	590
Ending stocks	Mil. lbs.	354	275	300	300	300	300	300	300	300	300	300	300
Consumption	Mil. lbs.	5,074	5,017	4,971	5,090	5,249	5,373	5,476	5,541	5,639	5,733	5,858	5,982
Per capita	Pounds	17.4	17.1	16.8	17.0	17.4	17.6	17.8	17.8	18.0	18.1	18.4	18.6
Change from previous year	Percent	-1.7	-1.9	-1.9	1.4	2.1	1.4	1.0	0.3	0.9	0.8	1.3	1.2
Prices:													
Turkey, farm	Cents/lb.	39.5	41.4	40.7	38.6	38.7	38.8	39.7	41.1	42.5	44.0	45.5	46.9
Hen turkey (whsle.) East	Cents/lb.	62.1	69.5	68.3	64.8	65.0	65.1	66.6	68.9	71.4	73.8	76.3	78.7
Deflated hen turkey	Cents/lb.	33.8	32.3	31.8	32.5	31.9	31.1	31.1	31.4	31.7	32.0	32.2	32.4
Retail frozen turkey	Cents/lb.	108.2	109.8	108.3	109.7	110.2	110.9	113.8	115.7	118.5	120.2	122.6	124.8
Retail: poultry	1982-84=100	169.1	181.7	183.0	185.3	186.2	187.3	192.2	195.4	200.2	203.1	207.2	210.9
Costs and returns:													
Total costs	Cents/lb.	65.71	73.41	67.10	61.78	62.03	62.66	64.40	66.76	67.61	70.13	71.70	74.24
Net returns	Cents/lb.	-3.61	-3.91	1.20	2.98	2.99	2.41	2.22	2.13	3.75	3.69	4.59	4.46

Table 27. Egg baseline

Item	Units	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Beginning stocks	Mil. doz.	10	14	15	14	14	14	14	14	14	14	14	14
Production	Mil. doz.	7,273	7,399	7,495	7,592	7,691	7,783	7,877	7,963	8,051	8,148	8,254	8,361
Change from previous year	Percent	0.1	1.7	1.3	1.3	1.3	1.2	1.2	1.1	1.1	1.2	1.3	1.3
Imports	Mil. doz.	13	14	14	14	14	14	14	14	14	14	14	14
Total supply	Mil. doz.	7,297	7,427	7,524	7,620	7,719	7,811	7,905	7,991	8,079	8,176	8,282	8,389
Change from previous year	Percent	0.0	1.8	1.3	1.3	1.3	1.2	1.2	1.1	1.1	1.2	1.3	1.3
Hatching use	Mil. doz.	959	990	1,030	1,051	1,074	1,094	1,111	1,127	1,141	1,153	1,165	1,180
Exports	Mil. doz.	146	141	160	163	166	169	172	175	178	181	184	187
Ending stocks	Mil. doz.	14	15	14	14	14	14	14	14	14	14	14	14
Consumption	Mil. doz.	6,177	6,281	6,320	6,392	6,465	6,534	6,608	6,676	6,746	6,827	6,919	7,008
Per capita	Number	254.7	256.5	255.6	256.1	256.6	256.9	257.5	257.8	258.2	259.0	260.1	261.2
Change from previous year	Percent	-0.5	0.7	-0.3	0.2	0.2	0.1	0.2	0.1	0.2	0.3	0.5	0.4
Prices:													
Eggs, farm	Cents/doz.	74.6	71.1	64.5	66.0	66.9	68.6	70.4	72.6	74.8	76.6	77.4	78.3
New York, Grade A large	Cents/doz.	87.9	83.9	75.0	75.0	76.0	78.0	80.0	82.5	85.0	87.0	88.0	89.0
Deflated wholesale prices	Cents/doz.	47.8	44.4	38.7	37.7	37.2	37.3	37.3	37.5	37.7	37.7	37.2	36.7
Retail, Grade A, large	Cents/doz.	125	140	130	120	118	117	118	119	122	125	127	128
Retail: Eggs	1982-84=100	157.3	167.0	163.0	151.5	149.7	149.7	151.4	154.0	159.6	164.4	167.3	170.2
Costs and returns:													
Total costs	Cents/doz.	71.12	81.12	66.07	67.33	69.46	72.32	75.47	77.76	79.06	79.64	80.44	81.22
Net returns	Cents/doz.	16.78	2.78	8.93	7.67	6.54	5.68	4.53	4.74	5.94	7.36	7.56	7.78

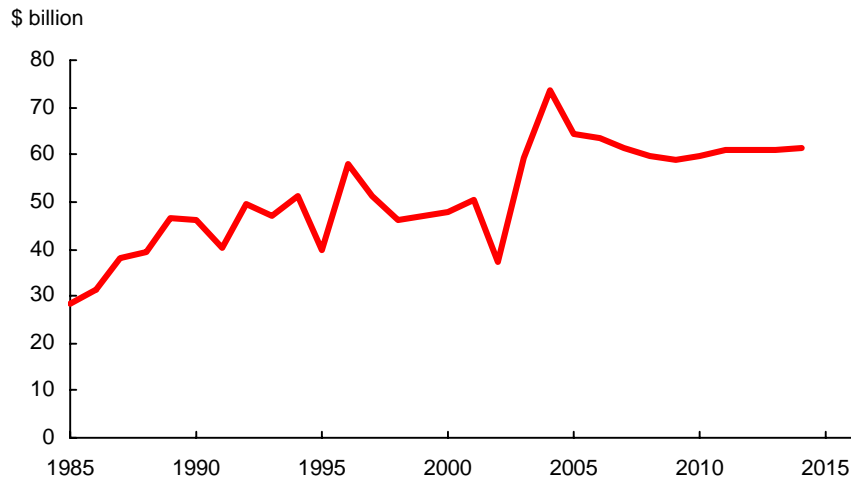
Table 28. Dairy baseline

Item	Units	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Production data:													
Number of cows	1,000	9,008	8,975	8,925	8,890	8,825	8,750	8,675	8,600	8,540	8,480	8,420	8,360
Milk per cow	Pounds	18,888	19,350	19,770	20,215	20,700	21,065	21,485	21,895	22,325	22,635	22,995	23,350
Milk production	Bil. lbs.	170.1	173.7	176.4	179.7	182.7	184.3	186.4	188.3	190.7	191.9	193.6	195.2
Farm use	Bil. lbs.	1.1	1.0	0.9	0.9	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.6
Commercial use, milk equivalent:													
Milkfat basis	Bil. lbs.	175.6	178.4	179.3	183.1	186.4	188.6	191.1	193.6	196.1	197.7	199.4	200.9
Skim solids basis	Bil. lbs.	171.0	174.5	176.7	181.3	185.1	187.1	189.4	191.5	193.8	195.7	197.7	199.6
Net removals, milk equivalent:													
Milkfat basis	Bil. lbs.	-0.1	0.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Skim solids basis	Bil. lbs.	2.1	4.1	3.2	2.6	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
Prices:													
All milk	\$/cwt	15.63	14.10	14.75	15.05	15.35	15.80	16.05	16.50	16.70	16.65	16.90	16.90
Retail, all dairy products	1982-84=100	177.9	183.5	189.0	193.5	198.0	203.0	207.5	213.0	217.5	221.5	226.5	230.5

## U.S. Agricultural Sector Aggregate Indicators Farm Income, Food Prices, and U.S. Trade Value

Longrun developments for the U.S. farm sector reflect steady domestic and international economic growth, which support gains in consumption, trade, and prices. With productivity of U.S. agriculture growing faster than domestic demand, farmers rely increasingly on export market growth. Although export competition is projected to continue, global economic growth, particularly in developing countries, provides a foundation for gains in world trade and U.S. agricultural exports. Combined with gains in domestic demand, the results are rising market prices and cash receipts, as well as improvement in the financial condition of the agricultural sector. Consumer food prices are projected to rise more slowly than the general rate of inflation.

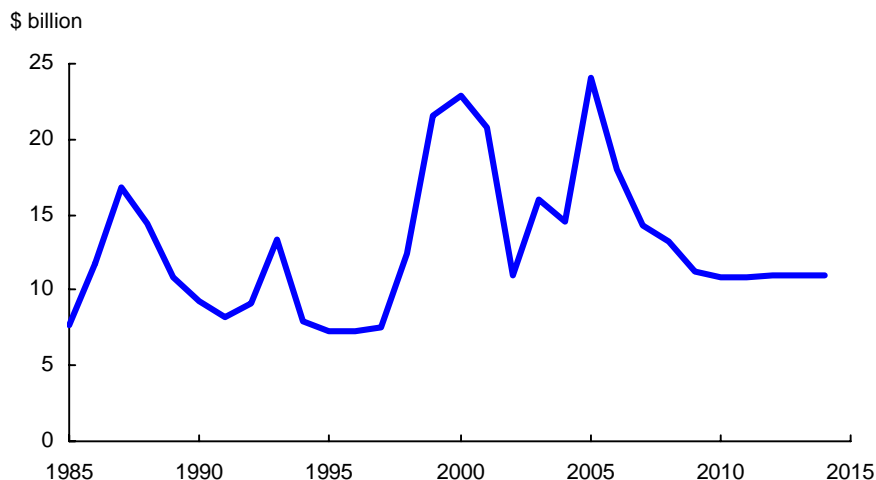
### Net farm income



Strengthening domestic and export demands help to improve financial conditions in the sector. Income projections for the next decade average about \$61 billion, sharply higher than the \$47.7 billion average in the 1990s. Gross cash income (cash receipts, direct government payments, and farm-related income) gradually rises through the projections, with cash receipts for both crops and livestock increasing.

- Net farm income falls from the record high 2004 level over the next several years, reflecting changes in cash receipts that are largely offset by changes in government payments, large swings in changes in the value of inventory, and generally rising farm production expenses.
- As growing demand pushes market prices and cash receipts higher, gains in gross incomes match increases in production expenses. This results in net farm income stabilizing at near \$60 billion, particularly after prices for crops rise high enough to eliminate most counter-cyclical payments and stabilize aggregate government payments to farmers.

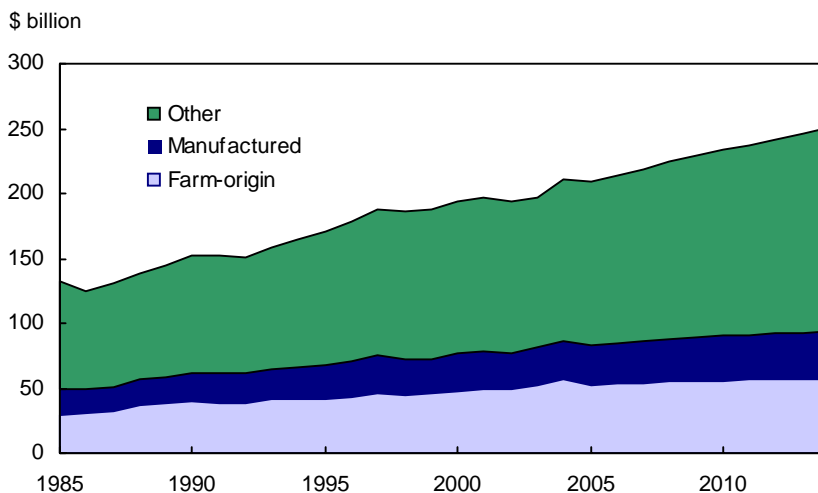
### Direct government payments



After a large increase in government payments in 2005 that reflects emergency spending and higher expenditures for price-linked programs, government payments fall and level off as rising market prices for program commodities reduce marketing loan benefits and counter-cyclical payments.

- Direct government payments to farmers are projected to fall from over \$24 billion in 2005 to about \$11 billion in 2010-14. Toward the end of the projections, direct government payments largely reflect fixed direct payments under the 2002 Farm Act and conservation payments.
- With government payments stabilizing, the agriculture sector relies increasingly on the market for more of its income and the share of income provided by government payments declines. Government payments, which are projected to represent about 9 percent of gross cash income in 2005, account for less than 4 percent at the end of the projections.

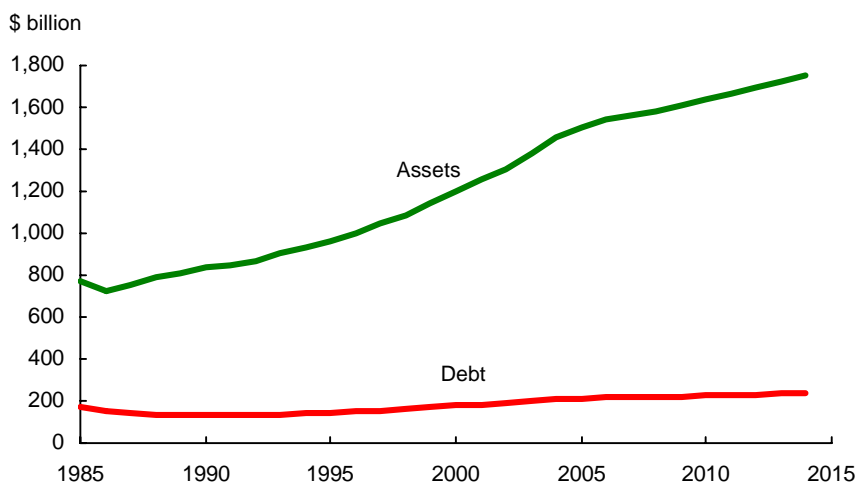
### Farm production expenses



Total production expenses increase at slightly less than the general inflation rate in the projections. These expenses are divided into three categories in the chart above: farm-origin (seed, feed, and feeder livestock), manufactured (fuel, fertilizer, pesticides, and electricity), and other (labor, interest, and other expenses).

- The largest percentage increase is for the other expenses category, reflecting increases in labor expenses and interest costs. Labor expenses rise as sector output increases and wage rates rise. Projected increases in interest costs reflect higher interest rates, as well as higher debt facilitated by rising gross cash income.
- Increases in manufactured input expenses reflect movements in oil prices and expansion of crop production. Overall, these expenses rise less than the general rate of inflation as increases in 2006-09 are held down by decreases in oil prices from recent highs.
- Cash operating margins tighten somewhat over the next several years as expenses rise while changes in cash receipts and government payments combine to keep gross cash incomes relatively constant. For 2009-14, however, as government payments level off, operating margins stabilize, with cash expenses representing 75-76 percent of gross cash income.

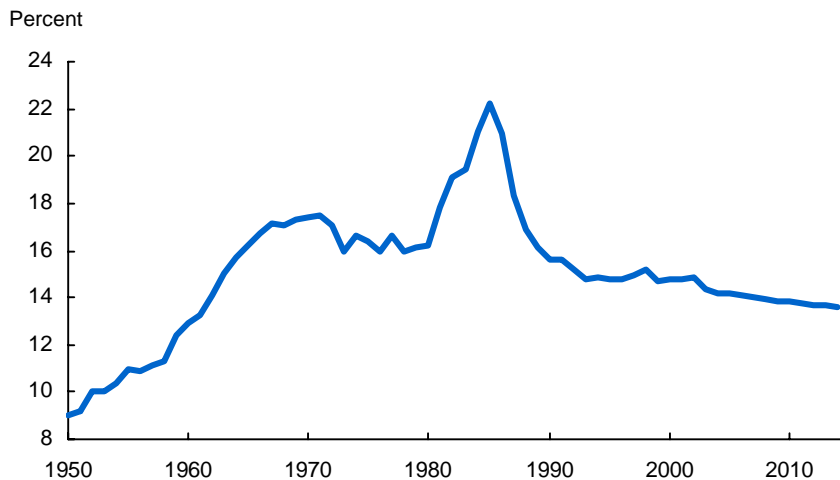
### Farm assets and debt



Increasing cash receipts and gross cash income assist in asset accumulation and debt management, with farm equity rising through the projections.

- Gains in farmland values and real estate assets (representing about 80 percent of total farm assets) reflect increases in agricultural revenues, as well as rising demand for nonagricultural land uses, such as housing and recreation.
- There is considerable variation in the growth of farmland prices across the country. This reflects a variety of factors, including differences in land quality and location, demand for urban development and recreational use, credit conditions, nonfarm investment opportunities, and production risks and weather uncertainties unique to each region's agriculture. As the general economy continues to expand, demand for land for nonagricultural uses contributes to rising farmland values. Farmland in areas with recreational amenities also will increase in value as second-home market demand remains strong.
- Farm debt moves up less rapidly than asset values in the projections, rising an average of about 1.2 percent per year compared with an increase of 1.7 percent annually for assets, resulting in equity gains of 1.8 percent.

### Debt-to-asset ratios

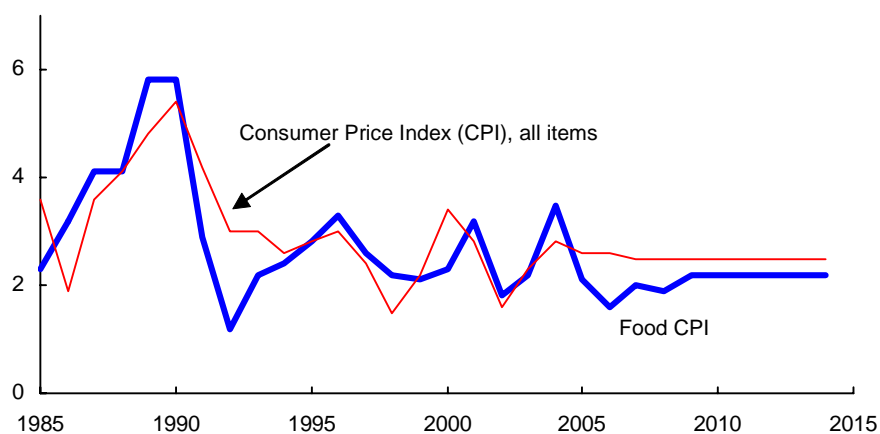


Increasing gross cash income assists in asset accumulation and debt management, raising farm equity and leading to improved financial conditions in the agricultural sector.

- Debt-to-asset ratios decline moderately in the projections to under 14 percent by 2014, compared with over 20 percent in the mid-1980s.

## Food inflation

Percent change

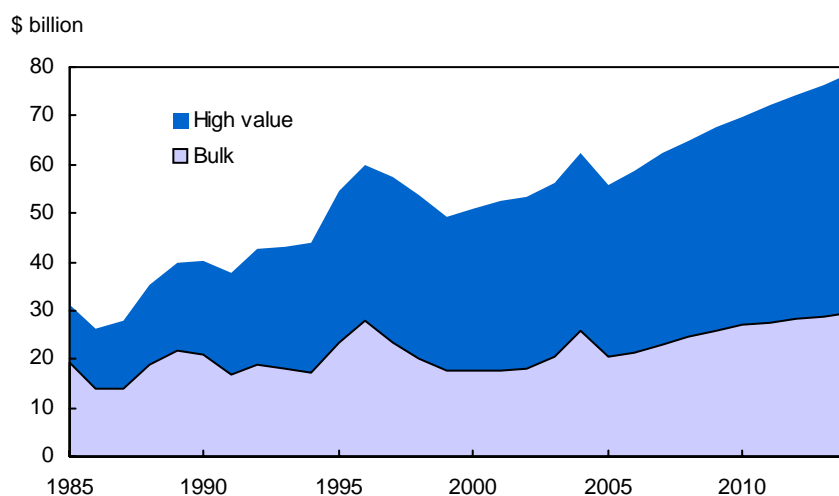


Retail food prices are projected to increase less than the general inflation rate.

- Among foods purchased for consumption at home, projected price increases are generally strongest for more highly processed foods such as cereals and bakery products and fats and oils. For these foods, prices are related more to processing and marketing costs than to farm-level prices and, therefore, rise at a rate near the general inflation rate.
- Prices for food away from home reflect a large service component, with gains held down by competition in the fast-food and foodservice industries.



### U.S. agricultural export value: Bulk and high value 1/



1/ Bulk commodities include wheat, rice, feed grains, soybeans, cotton, and tobacco. High-value products include semi-processed and processed grains and oilseeds, animals and animal products, horticultural products, and sugar and tropical products.

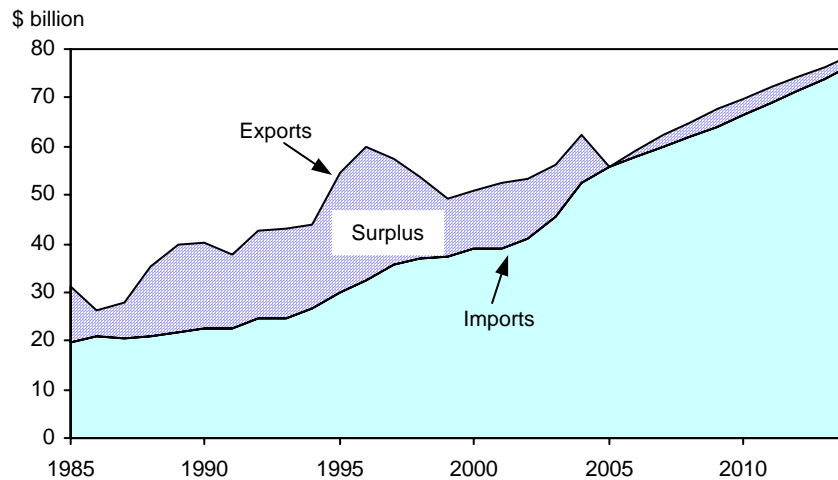
A forecasted decline in the value of U.S. agricultural exports and an increase in agricultural imports for fiscal year 2005 are expected to result in a U.S. agricultural trade balance of 0, which, if realized, would be the first year without a surplus since 1959 (see box, page 68). The 2005 export value decline results from large 2004 production and lower prices for many grains, oilseeds, and fibers and reduced exports of beef due to BSE-related bans on shipments to Japan and South Korea. Strong domestic economic growth and consumer demand boost imports in 2005, particularly horticultural products, continuing to reflect U.S. consumer preferences for a wide variety of foods. Beyond 2005, as export demand rises in the baseline due to increasing global income and as commodity prices strengthen from recent lows, U.S. exports rise more than imports through most of the projections. The agricultural trade surplus increases moderately to over \$3 billion before declining in the last few years of the projections as export growth slows while imports growth continues.

- Strengthening world economic growth, particularly in developing countries, provides a foundation for gains in trade and U.S. agricultural exports. However, competition in global markets remains strong. Overall, the value of U.S. agricultural exports is projected to grow from \$56 billion in fiscal year 2005 to \$78.6 billion in 2014.
- High-value product (HVP) exports continue to grow, accounting for almost two-thirds of total U.S. exports. Much of the growth in HVP exports is in animal products and horticultural products. Most of the growth in the value of bulk commodity exports (grains, oilseeds, cotton, and tobacco) reflects expected price increases and gains in volume for grains.
- U.S. agricultural imports rise to more than \$76 billion in 2014, reflecting gains in consumer income and demand for a large variety of foods. Strong growth in horticultural imports is assumed to continue in the projections, contributing much of the overall agricultural import increase. Processed foods are expected to account for a growing share of total agricultural imports.

## U.S. Agricultural Trade Balance

Although the U.S. agricultural trade balance is a closely watched measure, it is not an indicator of export competitiveness or import dependence. Trade is a means of providing for the needs and wants of consumers that are not satisfied domestically or are produced more cheaply elsewhere. U.S. farmers and food manufacturers do not and cannot produce all or enough of the foods that Americans desire, especially tropical products. Thus, the United States imports large quantities of grain products, vegetable oils, horticultural products, beef, pork, and cattle. Likewise, foreign producers cannot meet all the food needs of consumers abroad. The United States remains a competitive exporter of grains, oilseeds, horticultural products, red meats, poultry, and cotton.

U.S. agricultural trade value



U.S. agricultural imports generally differ from U.S. agricultural exports and will continue to increase independently of exports. U.S. imports consist mostly of high-value products, with very little bulk imports. In contrast, although the share has declined in the past 25 years, about 37 percent of U.S. exports are bulk commodities. A lower U.S. agricultural trade surplus does not signal reduced competitiveness of the U.S. farm sector, but rather Americans' preference for a wide variety of foods and beverages. It also reflects intense competition among foreign food producers and manufacturers and American companies abroad and their affiliates to supply the large American market.

Domestic population growth, income gains, and consumer tastes push U.S. agricultural imports and total food spending higher in the baseline projections. Fueled largely by immigration, the size and diversity of the population in the United States will continue to increase. Both the quantity and the variety of imported foods are projected to grow, with imports accounting for a rising share of total food consumed as well. U.S. agricultural exports, which depend on economic gains and population growth in the rest of the world, are also projected to increase. Both imports and exports are dependent on the dollar's exchange value. The higher the purchasing power of the dollar, the faster imports will grow relative to exports, enabling Americans to buy more of the foods they want. In the baseline projections, the result is a smaller agricultural trade surplus than historical levels.

**For more information on this topic**, see "The U.S. Ag Trade Balance. . . More Than Just A Number," by Alberto Jerardo, *Amber Waves*, USDA, ERS, February 2004, pp. 36-41, available at: [http://www.ers.usda.gov/AmberWaves/February04/pdf/features\\_agtradebalance.pdf](http://www.ers.usda.gov/AmberWaves/February04/pdf/features_agtradebalance.pdf).

Table 29. Farm receipts, expenses, and incomes in nominal dollars

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
	<i>Billion dollars</i>											
Cash receipts:												
Crops	106.2	113.2	104.6	106.2	109.9	113.6	117.0	120.1	123.0	125.4	127.8	130.6
Livestock and products	105.5	122.2	117.9	121.0	123.5	124.5	126.2	128.3	130.1	131.2	132.2	133.8
All commodities	211.6	235.4	222.4	227.2	233.4	238.1	243.3	248.5	253.2	256.6	260.0	264.3
Farm-related income	16.3	16.1	16.8	17.2	17.6	18.1	18.5	19.0	19.4	19.9	20.3	20.8
Government payments	15.9	14.5	24.1	18.0	14.3	13.3	11.2	10.9	10.9	11.0	10.9	10.9
Gross cash income	243.9	266.1	263.4	262.4	265.3	269.5	273.0	278.3	283.5	287.4	291.3	296.1
Cash expenses	175.4	188.3	185.3	190.0	195.5	201.0	205.2	209.7	213.5	217.7	221.6	225.9
Net cash income	68.6	77.8	78.1	72.4	69.8	68.5	67.8	68.6	70.0	69.7	69.7	70.2
Value of inventory change	0.8	6.1	-3.4	1.3	1.5	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Non-money income	12.1	12.9	13.4	13.7	14.0	14.2	14.5	14.7	14.9	15.2	15.4	15.7
Gross farm income	256.9	285.0	273.4	277.5	280.8	284.8	288.6	294.1	299.5	303.7	307.8	312.9
Noncash expenses	15.4	16.1	16.6	16.6	16.8	16.9	17.0	17.2	17.3	17.5	17.7	17.9
Operator dwelling expenses	6.8	7.0	7.0	7.1	7.2	7.3	7.4	7.5	7.6	7.7	7.7	7.8
Total production expenses	197.6	211.4	208.9	213.8	219.5	225.2	229.6	234.4	238.4	242.9	247.0	251.6
Net farm income	59.2	73.6	64.4	63.7	61.3	59.6	58.9	59.7	61.1	60.8	60.8	61.3
Farm assets	1,378.8	1,452.9	1,504.5	1,543.2	1,559.7	1,579.6	1,608.5	1,634.0	1,663.1	1,693.5	1,724.1	1,754.2
Farm debt	198.0	205.9	213.3	217.0	218.7	220.4	223.3	226.1	229.0	232.0	235.0	238.0
Farm equity	1,180.8	1,247.0	1,291.2	1,326.1	1,341.0	1,359.2	1,385.2	1,407.8	1,434.0	1,461.5	1,489.1	1,516.2
	<i>Percent</i>											
Debt/equity ratio	16.8	16.5	16.5	16.4	16.3	16.2	16.1	16.1	16.0	15.9	15.8	15.7
Debt/assets ratio	14.4	14.2	14.2	14.1	14.0	14.0	13.9	13.8	13.8	13.7	13.6	13.6

Table 30. Farm receipts, expenses, and incomes in 1996 dollars

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
	<i>Billion 1996 dollars<sup>1</sup></i>											
Cash receipts:												
Crops	93.9	97.8	88.2	87.5	88.7	89.6	90.3	90.7	90.9	90.7	90.4	90.4
Livestock and products	93.3	105.7	99.5	99.7	99.6	98.2	97.4	96.9	96.2	94.9	93.6	92.6
All commodities	187.1	203.5	187.7	187.2	188.2	187.8	187.7	187.7	187.1	185.5	184.0	183.1
Farm-related income	14.5	13.9	14.2	14.1	14.2	14.2	14.3	14.3	14.4	14.4	14.4	14.4
Government payments	14.1	12.5	20.3	14.9	11.5	10.5	8.6	8.2	8.0	7.9	7.7	7.6
Gross cash income	215.7	230.0	222.3	216.2	214.0	212.5	210.6	210.2	209.5	207.8	206.1	205.0
Cash expenses	155.0	162.7	156.3	156.5	157.7	158.5	158.3	158.4	157.8	157.4	156.8	156.4
Net cash income	60.6	67.2	65.9	59.6	56.3	54.0	52.3	51.8	51.7	50.4	49.3	48.6
Value of inventory change	0.7	5.2	-2.9	1.1	1.2	0.9	0.8	0.8	0.8	0.8	0.8	0.8
Non-money income	10.7	11.1	11.3	11.3	11.3	11.2	11.2	11.1	11.0	11.0	10.9	10.9
Gross farm income	227.1	246.3	230.7	228.6	226.4	224.6	222.6	222.1	221.4	219.6	217.8	216.7
Noncash expenses	13.7	13.9	14.0	13.7	13.5	13.3	13.1	13.0	12.8	12.7	12.5	12.4
Operator dwelling expenses	6.0	6.0	5.9	5.9	5.8	5.8	5.7	5.6	5.6	5.5	5.5	5.4
Total production expenses	174.7	182.7	176.3	176.1	177.0	177.6	177.2	177.0	176.2	175.6	174.8	174.2
Net farm income	52.4	63.6	54.4	52.5	49.4	47.0	45.5	45.1	45.2	44.0	43.0	42.4
Farm assets	1,219.1	1,255.7	1,269.6	1,271.1	1,257.8	1,245.8	1,241.1	1,234.1	1,229.2	1,224.5	1,220.2	1,214.8
Farm debt	175.1	178.0	180.0	178.8	176.4	173.9	172.3	170.8	169.3	167.7	166.3	164.8
Farm equity	1,044.0	1,077.8	1,089.6	1,092.4	1,081.4	1,071.9	1,068.8	1,063.3	1,059.9	1,056.8	1,053.9	1,050.0

1/ Nominal dollar values divided by the GDP chain-type price index.

Table 31. Consumer food price indexes baseline

CPI category	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Consumer price indexes:	<i>1982-84=100</i>												
All food	176.2	180.0	186.2	190.3	193.4	197.3	201.2	205.6	210.1	214.9	219.6	224.3	229.2
Food away from home	178.3	182.1	187.5	191.5	195.5	199.3	203.3	207.4	211.5	215.7	220.1	224.4	228.9
Food at home	175.6	179.4	186.2	190.3	192.9	196.9	200.7	205.3	210.1	215.2	220.1	225.1	230.3
Meats	160.3	169.0	183.2	185.8	181.0	181.9	180.9	182.3	184.6	186.9	189.0	191.2	193.4
Beef and veal	160.6	175.1	195.3	197.0	186.6	187.5	185.4	187.0	189.8	192.7	194.9	196.8	198.7
Pork	161.8	164.9	174.2	178.0	178.0	177.8	176.7	177.2	178.2	179.5	180.9	183.2	185.5
Other meats	161.9	166.0	173.4	176.1	178.2	180.2	182.0	184.3	186.8	189.3	192.0	194.9	197.9
Poultry	167.0	169.1	181.7	183.0	185.3	186.2	187.3	192.2	195.4	200.2	203.1	207.2	210.9
Fish and seafood	188.1	190.0	194.3	199.2	204.2	209.3	214.5	219.9	225.4	231.0	236.8	242.7	248.8
Eggs	138.2	157.3	167.0	163.0	151.5	149.7	149.7	151.4	154.0	159.6	164.4	167.3	170.2
Dairy products	168.1	167.9	180.2	184.9	190.1	194.6	199.3	204.1	208.9	214.1	218.5	222.8	227.5
Fats and oils	155.4	157.4	167.8	172.3	176.9	181.2	185.7	190.3	194.9	199.8	204.6	209.3	214.3
Fruits and vegetables	220.9	225.9	232.7	240.2	248.1	256.2	264.7	273.4	282.4	291.8	301.4	311.3	321.7
Sugar and sweets	159.0	162.0	163.2	167.3	170.1	172.8	176.8	181.2	184.5	188.5	191.4	195.2	199.1
Cereals and bakery products	198.0	202.8	206.0	210.3	214.7	220.0	225.6	231.4	237.1	243.0	249.0	254.8	261.0
Nonalcoholic beverages	139.2	139.8	140.4	143.3	146.3	149.4	152.5	155.7	159.0	162.3	165.7	169.2	172.8
Other foods	177.1	178.8	179.7	184.4	189.1	193.6	198.2	203.0	207.8	212.8	218.0	223.2	228.5

Table 32. Changes in consumer food prices, baseline

CPI category	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
	<i>Percent</i>												
All food	1.8	2.2	3.4	2.2	1.6	2.0	2.0	2.2	2.2	2.3	2.2	2.1	2.2
Food away from home	2.5	2.1	3.0	2.1	2.1	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Food at home	1.3	2.2	3.8	2.2	1.4	2.1	1.9	2.3	2.3	2.4	2.3	2.3	2.3
Meats	0.6	5.4	8.4	1.4	-2.6	0.5	-0.5	0.8	1.3	1.2	1.1	1.2	1.2
Beef and veal	0.1	9.0	11.5	0.9	-5.3	0.5	-1.1	0.9	1.5	1.5	1.1	1.0	1.0
Pork	-0.4	1.9	5.6	2.2	0.0	-0.1	-0.6	0.3	0.6	0.7	0.8	1.3	1.3
Other meats	3.5	2.5	4.5	1.6	1.2	1.1	1.0	1.3	1.4	1.3	1.4	1.5	1.5
Poultry	1.3	1.3	7.5	0.7	1.3	0.5	0.6	2.6	1.7	2.5	1.4	2.0	1.8
Fish and seafood	-1.6	1.0	2.3	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Eggs	1.3	13.8	6.2	-2.4	-7.1	-1.2	0.0	1.1	1.7	3.6	3.0	1.8	1.7
Dairy products	0.6	-0.1	7.3	2.6	2.8	2.4	2.4	2.4	2.4	2.5	2.1	2.0	2.1
Fats and oils	-0.2	1.3	6.6	2.7	2.7	2.4	2.5	2.5	2.4	2.5	2.4	2.3	2.4
Fruits and vegetables	4.1	2.3	3.0	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
Sugar and sweets	2.1	1.9	0.7	2.5	1.7	1.6	2.3	2.5	1.8	2.2	1.5	2.0	2.0
Cereals and bakery products	2.2	2.4	1.6	2.1	2.1	2.5	2.5	2.6	2.5	2.5	2.5	2.3	2.4
Nonalcoholic beverages	0.0	0.4	0.4	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
Other foods	0.6	1.0	0.5	2.6	2.5	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4

Table 33. Summary of U.S. agricultural trade projections, fiscal years

	2002	2003	2004	2005 /1	2006	2007	2008	2009	2010	2011	2012	2013	2014
<i>Billion dollars</i>													
Agricultural exports:													
Animals and products	11.9	12.1	10.8	10.8	11.3	11.7	12.1	12.6	13.2	13.8	14.5	15.2	16.1
Grains, feeds, and products	14.2	14.8	17.9	15.1	15.9	17.6	18.7	19.9	20.9	21.7	22.4	23.0	23.6
Oilseeds and products	9.8	10.2	11.2	8.8	9.4	9.6	10.0	10.5	10.6	10.8	10.9	11.0	11.1
Horticultural products	11.1	11.9	13.3	13.8	14.0	14.4	14.8	15.2	15.6	16.0	16.5	16.9	17.4
Tobacco, unmanufactured	1.1	1.0	1.1	1.1	0.7	0.8	0.8	0.9	0.9	0.9	1.0	1.1	1.2
Cotton and linters	2.1	2.9	4.5	3.1	3.8	4.4	4.4	4.5	4.5	4.5	4.5	4.6	4.6
Other exports	3.2	3.3	3.5	3.3	3.6	3.8	3.9	4.1	4.2	4.3	4.5	4.6	4.7
Total agricultural exports	53.3	56.2	62.3	56.0	58.9	62.2	64.6	67.5	69.8	72.1	74.3	76.4	78.6
Bulk commodities exports	18.2	20.4	25.8	20.5	21.4	23.1	24.4	25.8	26.9	27.6	28.4	28.9	29.5
High-value product exports	35.1	35.8	36.5	35.5	37.5	39.1	40.2	41.7	42.9	44.5	45.9	47.5	49.1
High-value product share	65.9%	63.8%	58.6%	63.3%	63.7%	62.9%	62.2%	61.8%	61.5%	61.7%	61.8%	62.1%	62.5%
Agricultural imports:													
Animals and products	9.1	8.6	10.4	11.1	11.2	11.6	11.8	12.1	12.4	12.8	13.2	13.7	14.2
Grains, feeds, and products	3.6	3.9	4.2	4.3	4.5	4.7	4.9	5.2	5.4	5.7	6.0	6.2	6.5
Oilseeds and products	1.7	2.0	2.9	2.5	2.7	2.8	3.0	3.1	3.3	3.5	3.6	3.8	4.0
Horticultural products	17.5	20.2	22.9	24.8	25.9	26.8	27.7	28.7	29.6	30.7	31.7	32.8	33.9
Tobacco, unmanufactured	0.7	0.7	0.8	0.9	0.7	0.7	0.6	0.6	0.6	0.5	0.5	0.5	0.4
Sugar and related products	1.7	2.1	2.1	2.2	2.3	2.3	2.4	2.5	2.6	2.6	2.7	2.8	2.9
Coffee, cocoa, and rubber	4.0	5.3	6.1	6.7	6.9	7.2	7.5	7.8	8.1	8.5	8.8	9.2	9.6
Other imports	2.6	3.0	3.3	3.6	3.7	3.8	4.0	4.2	4.3	4.5	4.7	4.9	5.1
Total agricultural imports	41.0	45.7	52.7	56.0	57.9	60.0	62.0	64.1	66.3	68.8	71.3	73.9	76.6
Net agricultural trade balance	12.3	10.5	9.6	0.0	1.0	2.2	2.7	3.4	3.5	3.4	3.0	2.5	2.0
<i>Million metric tons</i>													
Agricultural exports (volume):													
Bulk commodity exports	113.9	106.0	115.1	117.4	123.8	127.7	131.2	134.0	136.8	139.6	142.2	144.8	147.0

/1/ The projections were completed in November 2004 based on policy decisions and other information known at that time. For updates of the nearby year forecasts, see USDA's *Outlook for U.S. Agricultural Trade* report, published in February, May, August, and November.

Notes: Other exports consists of seeds, sugar and tropical products, and beverages and preparations. Essential oils, fruit juices, wine, and beer are included in horticultural products. Bulk commodities include wheat, rice, feed grains, soybeans, cotton, and tobacco. High-value product (HVP) values are calculated as total exports less the bulk commodities. HVP's includes semi-processed and processed grains and oilseeds, animals and products, horticultural products, and sugar and tropical products. Other imports include seeds, beverages except beer and wine, and miscellaneous commodities.

## **Agricultural Trade**

With strengthening world economic growth, global agricultural trade is projected to rise throughout the baseline. Agricultural trade will remain very competitive, reflecting expanding production in a number of foreign countries.

The growing economies of developing countries provide a foundation for gains in demand for agricultural products and increases in trade. Broad-based economic growth and increasing urbanization lead to diet diversification in most developing regions, generating increased demand for livestock products and feeds, as well as for fruits, vegetables, and processed products. Developing-country import demand is further reinforced by population growth rates that remain nearly double the growth rates of developed countries.

International trade in animal products, however, remains heavily dependent on demand from developed countries and from market access achieved under existing global trade agreements, although trade is also affected by disease-related concerns such as bovine spongiform encephalopathy (BSE) and Avian influenza (AI). Strong policy support for domestically produced meat is expected to motivate growth in feed grain trade, especially to those regions where limited land availability or agroclimatic conditions preclude expanding domestic crop production, such as North Africa, the Middle East, and East and Southeast Asia.

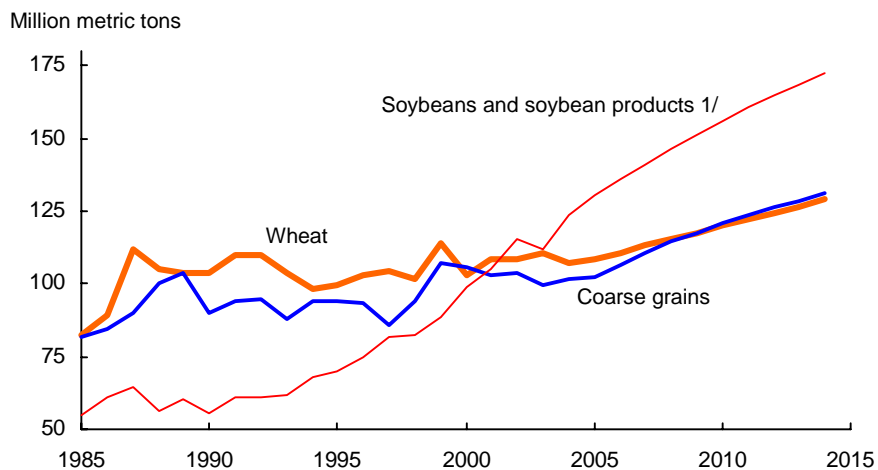
Strong agricultural trade competition is expected in international commodity markets, not only from traditional exporters such as Argentina, Australia, and Canada, but also from countries that are in the process of making significant investments in their agricultural sectors, including Brazil, Russia, Ukraine, and Kazakhstan.

Baseline trade projections to 2014 are founded on long-term assumptions concerning trends in foreign area, yields, and use and on the assumption that all countries fully comply with all existing bilateral and multilateral agreements affecting agriculture and agricultural trade.

The baseline does not incorporate any effects of agreements not formally ratified by November 2004. However, the baseline does incorporate the effects of trade agreements and domestic policy reforms already in place in November 2004. For example, the expansion of the European Union (EU) from 15 to 25 countries in May 2004 and scheduled reforms of the EU's Common Agricultural Policy (CAP) affect the baseline projections for many commodities.

Domestic agricultural and trade policies in individual foreign countries are assumed to continue to evolve along their current path, based on the consensus judgment of USDA's regional and commodity analysts. In particular, economic and trade reform underway in many developing countries is assumed to continue. Similarly, the development and use of agricultural technology and changes in consumer preferences are assumed to continue evolving based on past performance and analysts' judgment regarding future developments.

### Global trade: Wheat, coarse grains, and soybeans and soybean products



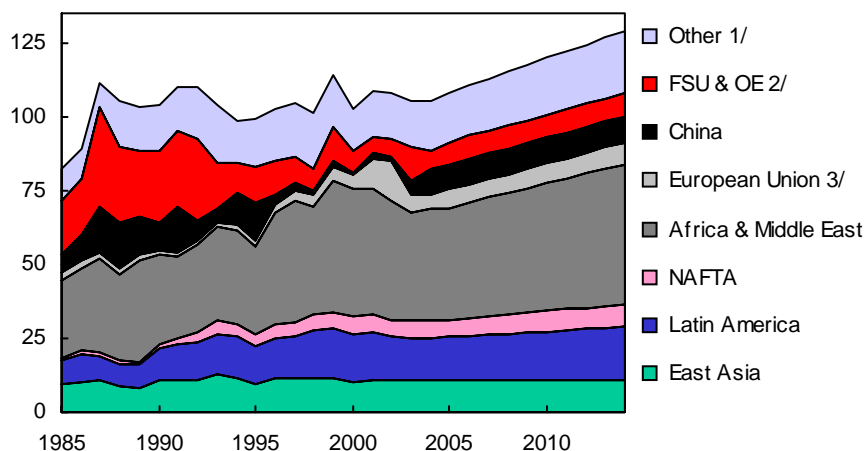
1/ Soybeans and soybean meal in soybean-equivalent units.

Rising unabated since the early 1990s, global trade in soybeans and soybean products has surpassed wheat—the traditional leader in agricultural commodity trade—and total coarse grains. Continued strong growth in global demand for vegetable oil and protein meal is expected to maintain soybean and soybean-product trade well above wheat and coarse grains trade throughout the next decade.

- These three major commodity grouping—wheat, coarse grains, and oilseeds (including soybeans)—compete with each other and with other crops for increasingly limited temperate cropland. However, previously uncropped land in tropical regions of Brazil and Indonesia are being converted to soybean and palm oil production.
- Virtually no growth in overall global wheat and coarse grain trade occurred in the 1990s, largely reflecting reductions in imports by the former Soviet Union (FSU) and Central and Eastern Europe (CEE). With those demand adjustments largely complete, the continuing growth in import demand from other countries leads to overall gains in global grain trade.
- In the projections, total area planted to all crops changes little in most countries. Growth in production is derived mostly from rising yields. The growth rate in crop yields has slowed somewhat during the last several decades and is projected to continue to do so.
- Slower growth in aggregate crop production is offset by slower growth in world population. Nonetheless, population is a significant factor driving overall growth in demand for agricultural products. Additionally, rising per capita income in many countries generates growth in demand for livestock and horticultural products.

## Global wheat imports

Million metric tons



1/ Predominantly South and Southeast Asia.

2/ Former Soviet Union and Other Europe; prior to 1999, includes Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia, and Slovenia.

3/ European Union-15 prior to 1999, EU-25 thereafter. Excludes intra-EU trade.

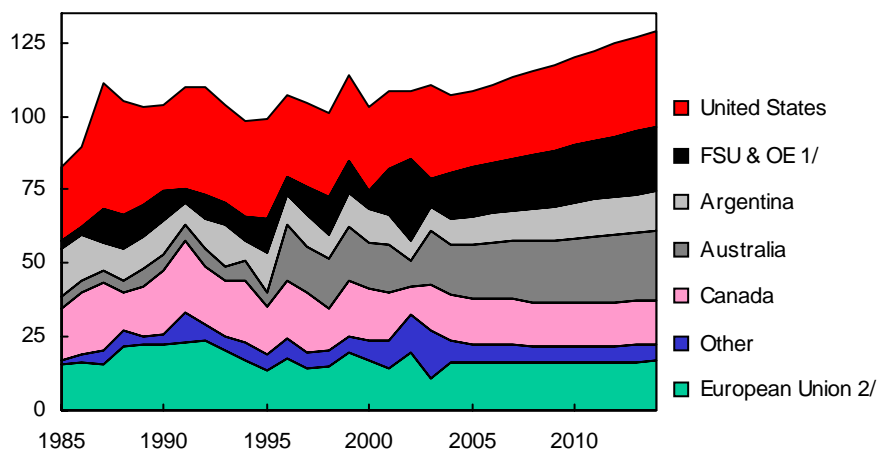
Growth in wheat imports is concentrated in developing countries, primarily Africa, the Middle East, and Asia, where robust growth in income and population underpins increases in demand. Important growth markets include Brazil, Egypt, Sub-Saharan Africa, Indonesia, and Mexico. World wheat trade (including flour) expands by 20.7 million tons (19 percent) between 2005 and 2014 to 129 million tons.

- China's imports jumped sharply in 2004, rising to about 8 million tons, and the country surpassed Egypt as the world's largest importer. While China's imports are projected to remain flat during the baseline, Egypt's imports are projected to climb slowly to about 8 million tons. Imports by Brazil, another large importer, are also projected to rise to nearly 8 million tons. Brazil's climate does not favor wheat, and in some key wheat-producing states, winter corn is expected to have better returns than wheat.
- Population growth boosts imports by some countries. Egypt remains one of the world's largest wheat importers with growth driven by increases in population. Even though Pakistan's per capita consumption is projected to decline, wheat imports rise because of population growth.
- Imports by developing countries in Sub-Saharan Africa, North Africa, and the Middle East rise to over 40 percent of world wheat trade. In most developing countries, little change in per capita wheat consumption is expected but imports expand modestly because of population growth and limited potential to expand production.
- Changing consumption patterns affect the projections for some major importing countries. In Indonesia, diversification of diets and strong economic growth are projected to increase per capita wheat consumption. Mexican consumers are projected to continue substituting some wheat for corn in their diets.



## Global wheat exports

Million metric tons



1/ Former Soviet Union and Other Europe; prior to 1999, includes Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia, and Slovenia.

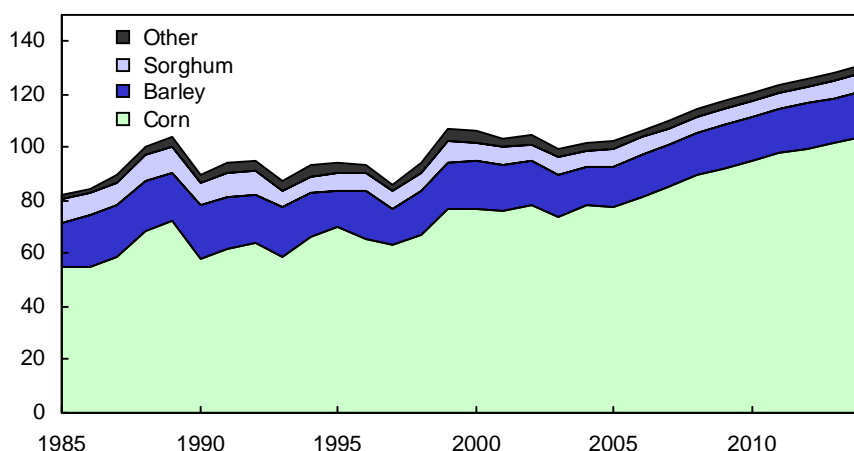
2/ European Union-15 prior to 1999, EU-25 thereafter. Excludes intra-EU trade.

The top five wheat exporting nations (the United States, Australia, the EU, Canada, and Argentina) account for about 79 percent of world trade through 2014. This is down from the average of 82 percent during 1996-2003, mostly due to increased exports from the Black Sea area. U.S. wheat exports are projected to account for about 25 percent of global wheat trade.

- Australia's share of the world wheat market rises slightly, offsetting a small decline by Canada.
- In Canada, increased demand for barley and oilseeds is expected to cause wheat area to decline. Declining wheat area, combined with slow growth in yields and expanding domestic demand, causes Canadian exports to trend slowly downward.
- Exports by the EU and Other Europe will be constrained by several factors. Some marginal EU land will go out of wheat and rice production as a result of CAP reform. In 2004, the set-aside rate was lowered from 10 percent to 5 percent in response to the drought-reduced 2002 crop and low stock levels. These projections assume that the set-aside rate reverts back to 10 percent.
- Kazakhstan and Ukraine become modest wheat exporters. Low costs of production and ongoing investment in their agricultural sectors are expected to enable their export market share to rise from 4-6 percent in recent years to 11 percent by the end of the period, although high year-to-year volatility in production and trade can be expected.

### Global coarse grain trade, by type

Million metric tons

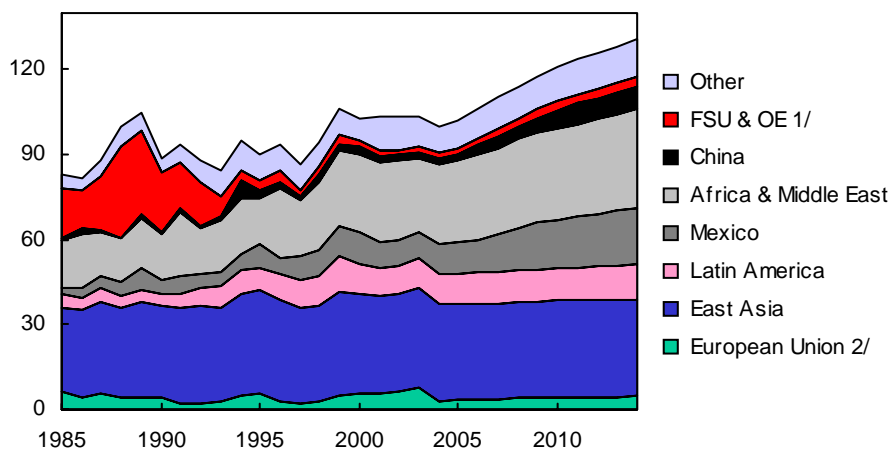


Growth in trade of coarse grains is strongly linked to expansion of livestock activities in regions unable to meet their own forage and feed needs, particularly North Africa, the Middle East, and East and South East Asia.

- Corn is the dominant feed grain traded in international markets. Corn accounts for an average of 78 percent of all coarse grain trade through the projection period, followed by barley (14 percent), and sorghum (5 percent).
- Hogs and ruminants, such as cattle and sheep, are capable of digesting a broad range of feedstuffs, making demand relatively price-sensitive across alternate feed sources. However, as pork and poultry production become increasingly commercialized, they also demand a higher minimum quality of feedstuffs, particularly related to energy and protein content. This commercialization of livestock activities has been a driving force behind the gains in global protein meal markets and the growing dominance of corn in international feed grain markets.
- Gradual elimination of Mexico's over-quota tariffs on corn imports will shift some of Mexico's grain imports from sorghum to corn.
- Trade in barley and oats is becoming increasingly driven by specific end-use demands such as barley for feed and malt markets, and oats used for horse feed rather than human consumption.

## Global coarse grain imports

Million metric tons



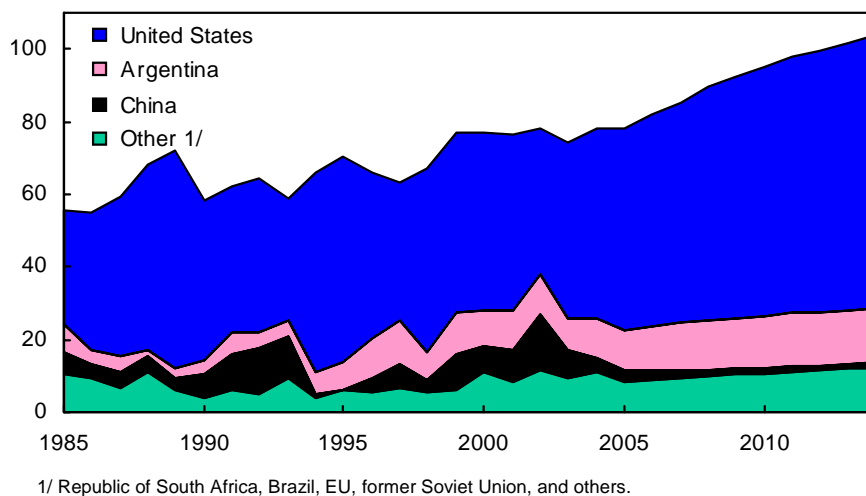
1/ Former Soviet Union and Other Europe; prior to 1999, includes Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia, and Slovenia.  
2/ European Union-15 prior to 1999, EU-25 thereafter. Excludes intra-EU trade.

Rising incomes and associated gains in per capita meat consumption, particularly in developing countries, are important drivers of projected gains in coarse grain use and trade. Key growth markets include Mexico, China, and North Africa and the Middle East.

- World coarse grain trade expands about 29 million tons (28 percent) from 2005 to 2014. About two-thirds of global coarse grain supplies are used as animal feed. Industrial uses, such as starch, ethanol, and malt production, are relatively small but growing. Food use of coarse grains, concentrated in parts of Latin America, Africa, and Asia, has generally declined over time as consumers tend to shift consumption toward wheat, rice, and other foods as their incomes rise.
- A key factor that weakened global coarse grain demand during the 1990s was the drop in livestock numbers and feeding that occurred in the FSU and CEE as these economies underwent structural reform. These adjustments are largely completed. In the projections, steady longrun growth in the livestock sectors of developing countries in Asia, Latin America, North Africa, and the Middle East is expected to more than make up for the lost feed demand of the FSU and CEE.
- Mexico's imports of corn are projected to rise from 6.3 million tons in 2004 to more than 15 million in 2014. Imports will be stimulated by rapidly rising poultry production and a steady reduction in Mexico's over-quota tariff on corn imports from the United States to zero by January 1, 2008. Some corn imports will substitute for imports of sorghum, which already have tariff-free status.
- North Africa and the Middle East experience continued growth in import demand for grain and protein meals through 2014, as rising populations and increasing incomes sustain strong demand growth for domestically produced animal products.
- Increasing meat imports will limit coarse grain imports in Japan, South Korea, and Taiwan.

## Global corn exports

Million metric tons



The United States dominates world trade in coarse grains, particularly corn. The U.S. share of world corn trade is expected to grow to nearly 73 percent by 2014 as few countries have similar capabilities to respond to rising international demand for corn. China's share of world exports drops, but the U.S. corn sector faces increased competition from non-EU Eastern Europe and Argentina, which also increase their shares of the global corn market.

- Argentina, with a small domestic market, remains the world's second largest corn exporter. As Argentina's economy expands, investments and planted area gradually return to corn production over the baseline, with exports projected to rise from 11 million to nearly 15 million tons.
- China's corn exports decline in the baseline, reflecting strengthening domestic demand driven by its rapidly expanding livestock sector.
- The Republic of South Africa continues exporting some corn to neighboring countries in southern Africa, but amounts remain small (less than 2 million tons).
- Corn exports from non-EU Eastern European countries rise to over 2 million tons by 2014. Favorable resource endowments, increasing economic openness, and greater investment in their agricultural sectors are behind projected gains in production and trade.
- Brazil continues to export about 2-4 million tons of corn in response to niche market demand for non-genetically modified grain, but strong growth in domestic demand from the livestock sector prevents corn exports from increasing.

### China: Corn imports and exports

Million metric tons

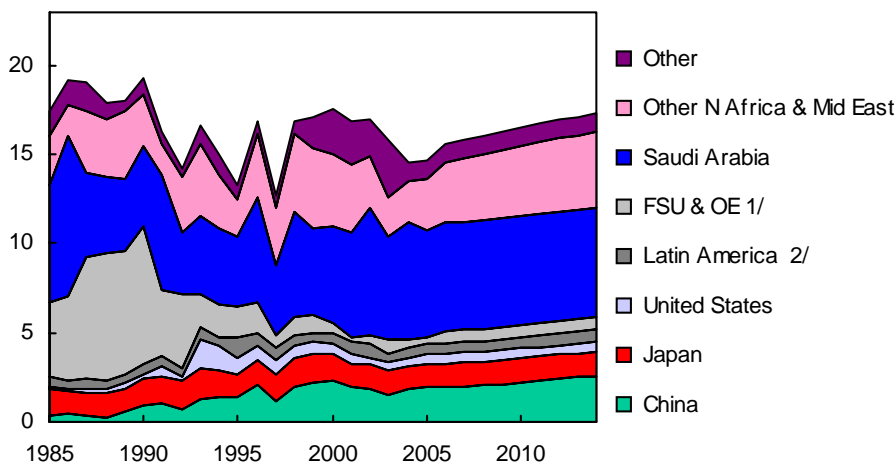


China is projected to become a net corn importer in 2007/08 as demand for feed for a growing livestock sector overtakes China's internal supplies of corn. However, China continues to export corn throughout the projection period, although in declining amounts, due to regional supply and demand differences. Northern China runs a corn surplus, while Southern China is corn deficit.

- Corn is the favored crop in Northeast China. The proximity to South Korea and other Asian markets provides a nearby source of demand, while various government measures—including waiver of certain transportation construction taxes, and a rebate of the value-added tax on exported corn—keep corn exports competitively priced in international markets. Currently, high ocean freight rates raise the delivered cost of U.S. corn to Asian markets, another factor that keeps Chinese corn competitive. Shipments of corn from Northeast China to the country's southern markets are limited by China's high internal transportation costs.
- China experienced a large buildup of corn stocks in the mid- to late-1990s due to a combination of favorable weather and local self-sufficiency policies that boosted grain production to record levels. In the last half decade, China's corn consumption exceeded production, and stocks have declined sharply. Because a continued drop in stocks is unsustainable, China is projected to increase imports and reduce exports, and to become a net corn importer, as livestock production (and thus feed demand) continues to increase in response to income growth and rising meat demand.

## Global barley imports

Million metric tons



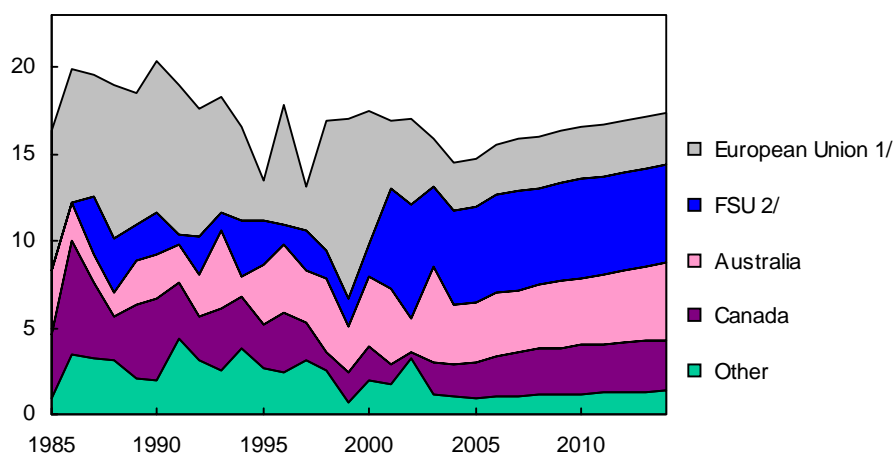
1/ Former Soviet Union and Other Europe; prior to 1999, includes Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia, and Slovenia.  
2/ Includes Mexico.

Global barley trade expands throughout the baseline, driven by rising demand for both malting and feed barley.

- Feed barley imports by North African and Middle Eastern countries—where barley is preferred as a feed for large populations of camels, goats, and sheep—grow steadily through the period. In the mid-1990s, corn overtook barley as the principal coarse grain imported by these countries, due mainly to rising poultry production. This pattern is expected to continue through the projection period. However, the North Africa and Middle East region is expected to remain the world's largest barley importing area.
- Saudi Arabia—the world's foremost barley importer—accounts for over 30 percent of world barley trade through the baseline. Saudi Arabia's barley imports are used primarily as a ruminant feed.
- International demand for malting barley is boosted by strong growth in beer demand in many developing countries, notably China—the world's largest malting barley importer. China's beer demand is rising steadily due to growth in incomes and population and malting barley is a leading ingredient used by brewers to produce beer.

## Global barley exports

Million metric tons



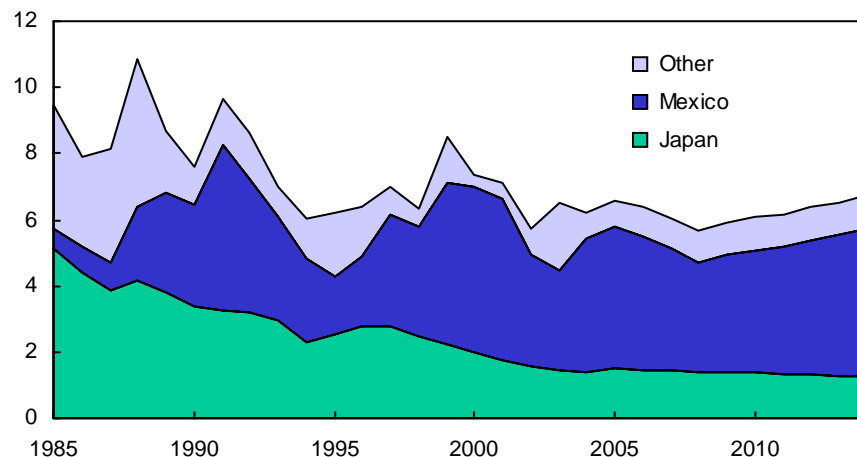
1/ European Union-15 prior to 1999, EU-25 thereafter. Excludes intra-EU trade.  
2/ Former Soviet Union.

Historically, global barley exports have originated primarily from the EU, Australia, and Canada. However, Ukraine and, to a lesser extent, Russia, have emerged as important competitors in international feed barley markets and remain so throughout the baseline period.

- Barley production is expected to increase throughout the EU as a result of CAP reform and EU enlargement. The abolition of EU intervention for rye, combined with higher barley prices in the acceding countries, will stimulate more area allocated to barley production. Within the enlarged EU-25, barley trade will rise. However, EU-25 exports to non-EU countries are projected to hover around 3.0 million tons over the projection period (18 percent of world trade).
- The FSU remains a major barley exporter throughout the baseline as exports exceed 5 million tons. Together, the FSU and EU-25 account for 50 to 55 percent of world barley trade throughout the baseline.
- Malting barley is a different variety and quality than feed barley and commands a substantial price premium over feed barley. In the long run, the malting barley price premium is expected to strongly influence planting decisions in Canada and Australia, and, in both countries, malting barley's share of total barley area rises in the latter half of the projections period.

## Global sorghum imports

Million metric tons

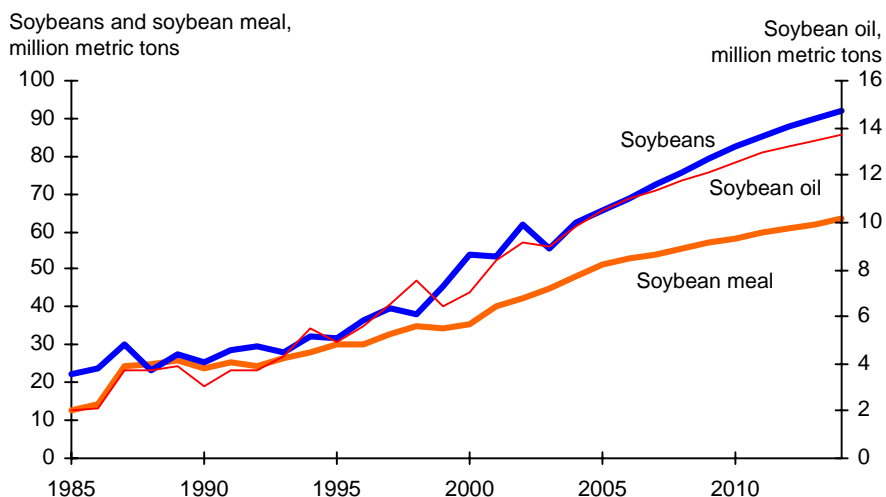


World sorghum trade, which averaged nearly 7 millions tons during the last decade, declines to about 6 million tons by the middle of the projection period before increasing through the remainder of the baseline. This trade pattern is driven almost entirely by Mexico.

- Mexico is the world's leading sorghum importer, although its sorghum imports were reduced in 2002 and 2003 due to reduced U.S. production. During this 2-year period of reduced U.S. exportable supplies of sorghum, U.S. exports to Mexico of kibbled corn (processed corn that has tariff-free status) rose sharply, reaching a record 1.97 million tons (whole-corn equivalent) in 2003/04. Under NAFTA, Mexico's over-quota tariff on corn imports from the United States is gradually reduced to zero by 2008. The projections assume that the tariff will be low enough to facilitate some over-quota corn imports before 2008. As corn substitutes for sorghum in the import mix, Mexico's sorghum imports decline by about 1 million tons to less than 3.5 million tons by 2008/09. Even at the reduced sorghum import level, Mexico still accounts for about 60 percent of world import demand for sorghum.
- Japan imports a fairly stable volume of sorghum (1.3 million tons) throughout the period to maintain diversity and stability in its feed grain supplies.
- The United States is the largest exporter of sorghum, accounting for about 80 percent of world trade in recent years. During the projection period, the U.S. share declines to 72 percent by 2014, as U.S. sorghum exports to Mexico decline.
- The primary sorghum markets for Argentina, the world's second largest exporter, are Japan, Chile, and Europe. Argentina's exports rise steadily during the projection period.



### Global exports: Soybeans, soybean meal, and soybean oil

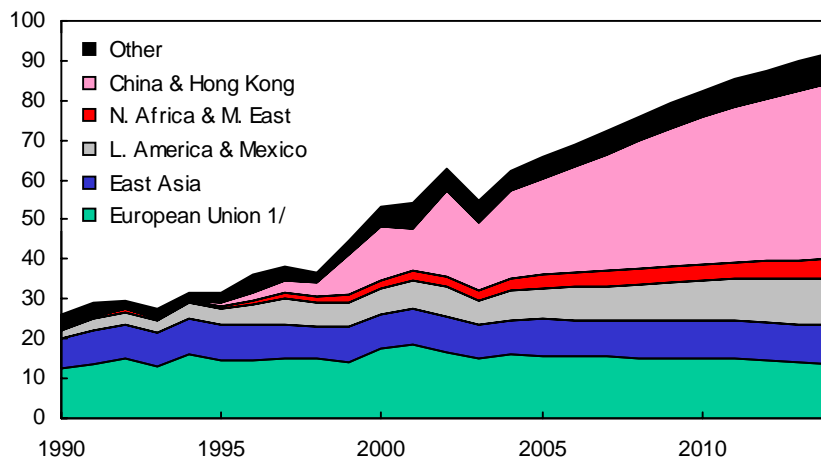


Strong income and population growth in developing countries generates increasing demand for vegetable oils for food consumption and for protein meals used in livestock production. World soybean trade grows at an average annual rate of 3.8 percent through the projection period compared with rates of 2.9 and 2.3 percent for soybean oil and soybean meal.

- Many countries with limited opportunity to expand oilseed production continue investment in oilseed crushing capacity, such as China and some countries in North Africa, the Middle East, and South Asia. As a result, oilseed import demand is maintained above protein meal import demand throughout the baseline. However, strong competition in international protein meal markets is expected to pressure crushing margins and shift some of the import demand for oilseeds to cheaper meals. The steady competitive pressure of new oilseed crushing capacity is expected to result in many inefficient crushers going out of business.
- Growth in import demand for total vegetable oils exceeds growth in import demand for either oilseeds or protein meals. Consequently, economic incentives to produce palm oil and high-oil content oilseeds, such as rapeseed and sunflower seed, strengthen through the baseline period.
- China's policy of expanding domestic crushing capacity instead of importing protein meal and vegetable oil significantly influences the composition of world trade by raising international import demand for soybeans and other oilseeds rather than for products.
- Brazil's rapidly increasing area planted to soybeans enables it to gain a larger share of world soybean and soybean meal exports, despite increasing domestic feed use. Its share of world exports of soybeans plus the soybean equivalent of soybean meal exports rises from about 35 percent in recent years to 45 percent by 2014.

## Global soybean imports

Million metric tons

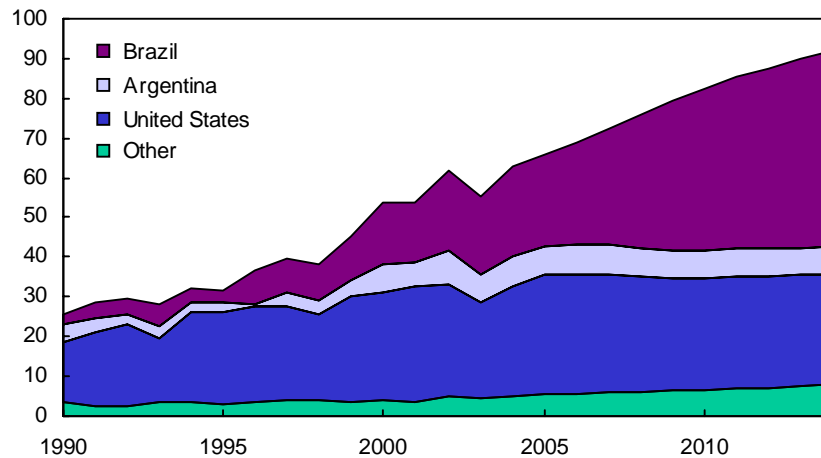


1/ European Union-15 prior to 1999, EU-25 thereafter. Excludes intra-EU trade.

- The EU has been the world's leading importer of soybean meal, and until 2002, of soybeans. However, increases in grain and rapemeal feeding are expected to continue to slow the growth in EU soybean meal and soybean imports. Abundant EU grain stocks, lower internal EU grain prices due to Agenda 2000 price cuts, increased barley production due to CAP 2003 reforms, greater supplies of coarse grains from acceding countries, and more rapemeal available as a result of the biofuels initiative, combine to slow the growth of soymeal consumption. These factors are only partially offset by an increase in the dairy quota that would increase the feeding of soymeal.
- China accounts for over 75 percent of the world's 26-million-ton growth in soybean imports over the next 10 years. Significant investments in oilseed crushing infrastructure by China drive strong gains in soybean imports as China seeks to capture the value added from processing oilseeds into protein meal and vegetable oil.
- East Asia's trade outlook is dominated by a continuing shift from importing feedstuffs to importing meat and other livestock products. As a result, this region's import demand for protein meal and oilseeds slows over the baseline. This process occurs most noticeably in Japan.

## Global soybean exports

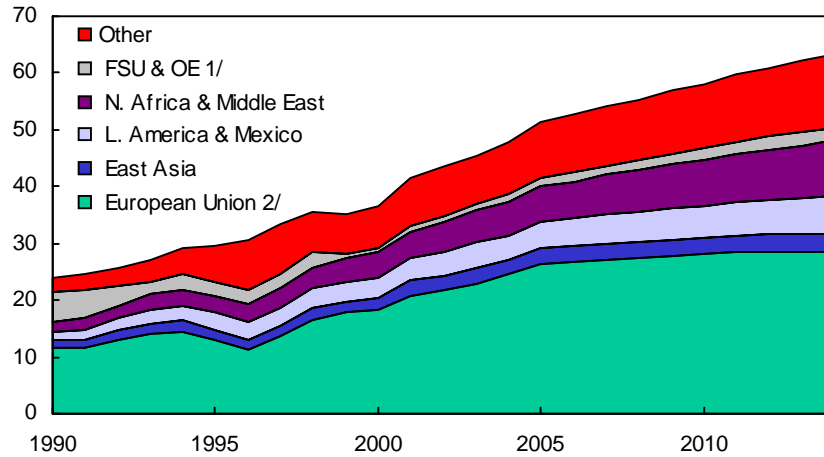
Million metric tons



- The three leading soybean exporters—the United States, Brazil, and Argentina—account for more than 90 percent of world trade throughout the baseline.
- With continuing area gains, Brazil maintains its position as the world’s leading exporter of soybeans and soybean products. Although combating soybean rust disease increases the costs of producing soybeans, soybeans remain more profitable than other crops in most areas of Brazil.
- In the United States, projected declines in acreage planted to soybeans and increased domestic crush limit exportable supplies.
- Argentina’s soybean exports hold steady at about 7 million tons, reflecting the country’s substantial crush capacity and an export tax structure that favors domestic crushing of whole seeds and exporting of the products.

## Global soybean meal imports

Million metric tons



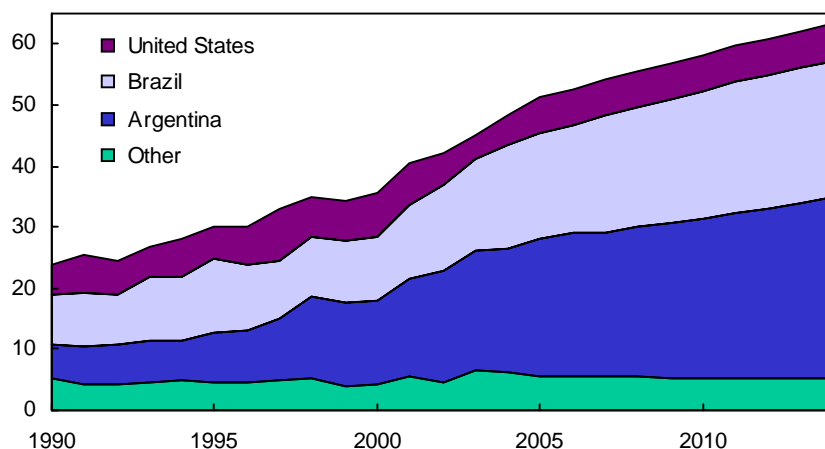
1/ Former Soviet Union and Other Europe; prior to 1999, includes Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia, and Slovenia.

2/ European Union-15 prior to 1999, EU-25 thereafter. Excludes intra-EU trade.

- Despite increased domestic feeding of grains, the EU remains the world's principal destination for soybean meal through the projection period, as import prices for meal relative to soybeans pressure crush margins, curtailing soybean imports in favor of soybean products.
- Latin America, North Africa, the Middle East, Southeast Asia, and the former Soviet Union remain important growth markets for soybean meal.

## Global soybean meal exports

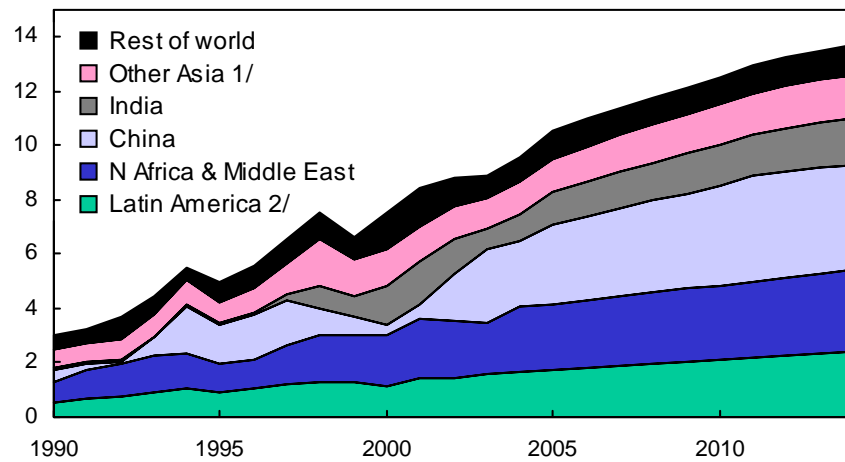
Million metric tons



- Argentina, Brazil, and the United States are the three major exporters in international protein meal markets. These countries increase their share of global soybean meal trade from about 85 percent in recent years to more than 90 percent at the end of the projection period.
- Argentina and Brazil, the world's two largest exporters, increase their share of soybean meal exports slightly, while the export shares of the United States and other exporters fall.
- Strong growth in domestic meal consumption due to rapid expansion of the poultry and pork sectors constrains growth in Brazil's soybean meal exports.
- Significant expansion in domestic crushing in China and large imports of oilseeds in the baseline result in Chinese soybean meal exports near 1 million tons annually in the projections. These are joined by increasing exports from other South American countries (mostly Paraguay) to keep international protein meal markets very competitive.
- The EU continues to be a small but steady exporter of soybean meal exports. India remains an exporter, although export volume declines.

## Global soybean oil imports

Million metric tons

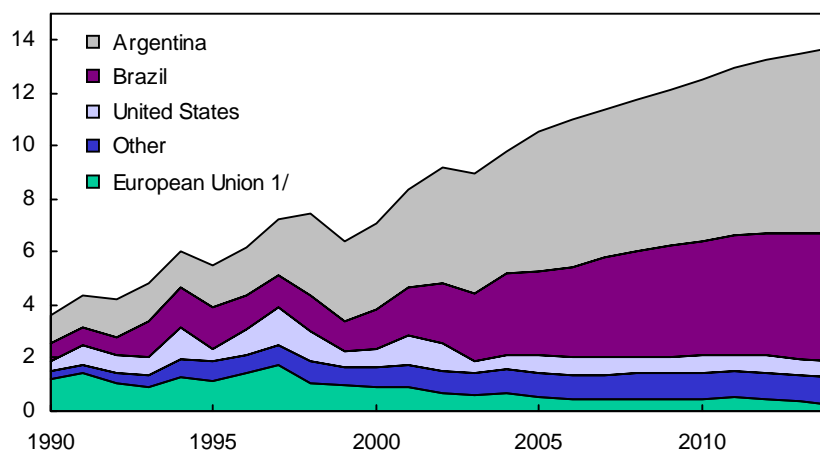


1/ Asia less India and China. 2/ Includes Mexico.

- Import demand for soybean oil rises in nearly all countries and regions except for the FSU and Other Europe. Countries with the largest projected gains are China and India. In the North Africa and Middle East region and in Latin America (particularly Central America and the Caribbean), income and population growth drive strong gains in soybean oil imports.
- In China, growing demand for high-quality vegetable oils outpaces domestic oil production and fuels expanding soybean oil imports. Land-use competition from other crops constrains area planted to vegetable oil crops in China.
- In India, relatively lower tariffs on soybean oil (held in check by World Trade Organization tariff-binding commitments) compared with those for other vegetable oils favor continued strong imports of soybean oil. India accounts for an increasing share of world soybean oil imports, due to burgeoning domestic demand for vegetable oils and limitations on domestic production of oilseeds. Low yields associated with erratic rainfed growing conditions and low input use limit oilseed production in India.

## Global soybean oil exports

Million metric tons



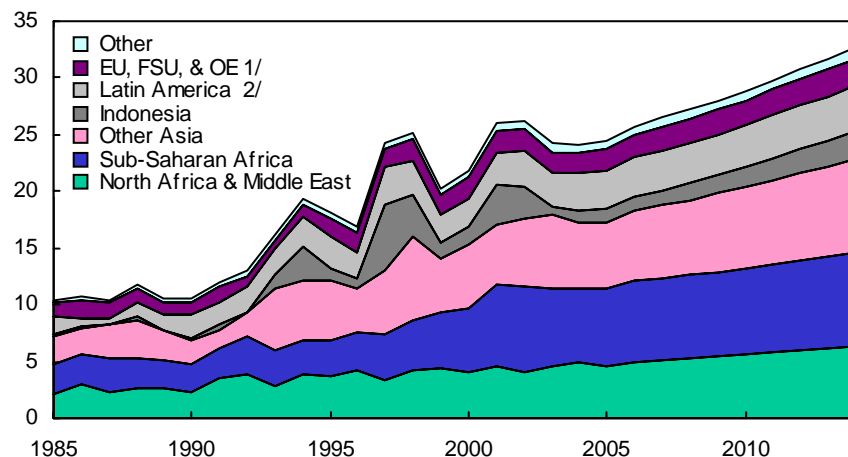
1/ European Union-15 prior to 1999, EU-25 thereafter. Excludes intra-EU trade.

A strong emphasis on exporting soybean products pushes Argentina's and Brazil's combined share of world soybean oil exports from about 80 percent in 2004 to 86 percent by the end of the baseline.

- Argentina is the leading exporter of soybean oil, reflecting the country's large crush capacity, its small domestic market for soybean oil, and an export tax structure that favors the exports of products rather than soybeans. Increases in crush and soybean oil exports are supported by gains in Argentine soybean production due to extensive double-cropping, further adjustments to crop-pasture rotations, and the addition of marginal lands in the northwest part of the country.
- Brazil's expansion of soybean production into new areas of cultivation enables it to increase both its volume of soybean oil exports and its share of world trade.
- The United States remains the world's third largest soybean oil exporter throughout the baseline, although its share of world trade continues a downward trend to less than 5 percent by 2014.
- The EU-25 remains a small exporter, although export volume and share of world trade decline.

## Global rice imports

Million metric tons



1/ European Union, former Soviet Union, and Other Europe. 2/ Includes Mexico.

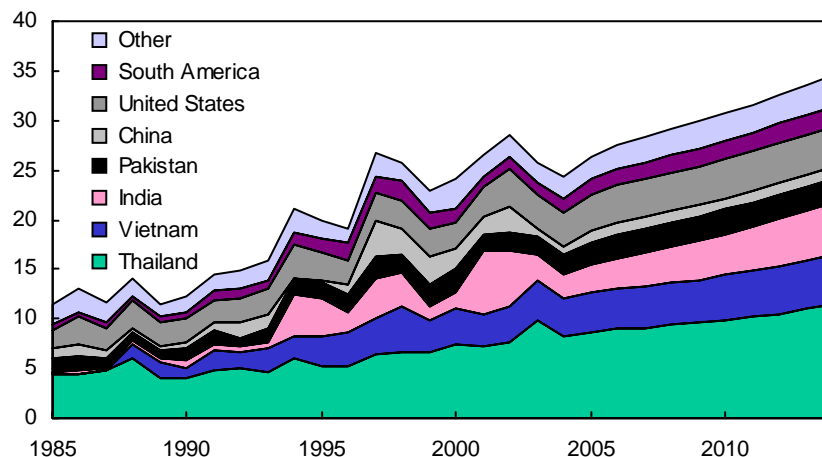
Global rice trade is projected to average 2.3-percent annual growth from 2005 through 2014. By 2014, global rice trade is projected to reach more than 34.5 million tons, over 20 percent higher than the record set in 2002. Despite the growth, rice trade as a share of global rice use is less than 8 percent and remains small relative to other cereals.

- International rice trade consists predominantly of long-grain varieties, which also account for the bulk of expected trade growth over the next decade. Long-grain rice is imported by a broad spectrum of countries in South and Southeast Asia, the Middle East, Sub-Saharan Africa, and Latin America. Indonesia, Nigeria, Iran, Iraq, the Philippines, and Saudi Arabia are typically the top long-grain import markets.
- In contrast, medium- and short-grain rice is primarily imported by countries that have taste preferences for Japonica rice, such as Japan, South Korea, Taiwan, Turkey, and Jordan. Expansion in medium-grain rice trade is projected to be much slower than for long grain, despite the partial opening of domestic markets to imported rice by Japan and South Korea in 1995 and Taiwan in 2002 as part of World Trade Organization (WTO) commitments.
- Aromatic rice, primarily basmati and jasmine, makes up most of the rest of global rice trade. Aromatics typically sell at a substantial price premium to long- and medium-grain varieties in global markets. Aromatics are imported mostly for high-income consumers. Glutinous, or sweet rice, varieties only account for a small share of global rice trade.
- Rising food demand from rapidly growing populations in Indonesia and Bangladesh is responsible for much of the expected growth in global rice imports over the baseline. Already two of the world's leading rice importers, their share of global rice imports grows from less than 7 percent in 2004 to nearly 14 percent in 2014. Land constraints and already high cropping intensities indicate little opportunity for either country to significantly expand production.
- Sub-Saharan Africa and the Middle East are also major destinations for internationally traded rice. In both regions, strong demand growth driven by rapidly expanding populations and rising incomes confronts limited opportunities to expand production, due to constraints such as agroclimatic conditions in the Middle East and infrastructure deficiencies in Sub-Saharan Africa.



## Global rice exports

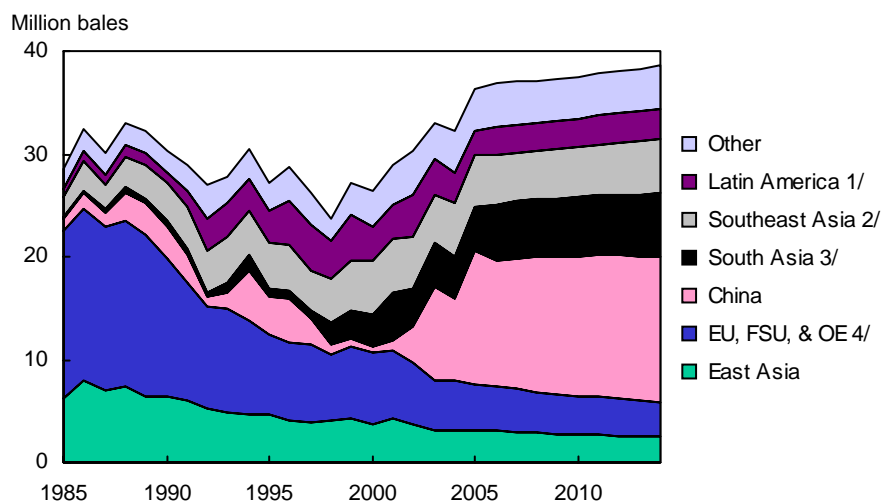
Million metric tons



Asia is the largest rice exporting region throughout the projection period.

- Thailand and Vietnam, the world's largest rice-exporting countries, account for nearly half of all rice exports in the baseline. Both countries produce and export primarily long-grain rice. Rising production, mostly due to higher yields, and declining per capita consumption, drive the expansion in exports from both countries.
- The United States is projected to be the third largest rice-exporting country during the first half of the baseline. Rising domestic demand and a slower growth rate in yields constrains the expansion in U.S. rice exports.
- Midway through the baseline, India becomes the third largest rice exporter. India was a volatile and sometimes large rice exporter during the 1990s, primarily due to fluctuating production and stocks. Exports are projected to steadily increase over the next decade as high internal prices stimulate production and exportable supplies. India exports both low-quality, long-grain rice and smaller quantities of high-quality basmati rice.
- Rice exports from China, typically the world's fifth-leading exporter, increase early in the baseline and then level off as production growth stagnates. Higher yields are offset by declining area planted to rice. Consumption growth is negligible as declining per capita rice consumption offsets rising population. China exports high-quality, short-grain rice to Northeast Asian markets and low-quality, long-grain rice to Sub-Saharan Africa and some lower income Asian markets.
- Pakistan exports both high-quality basmati and low-quality, long-grain rice. Although rice is an important source of foreign exchange, Pakistan has little ability to expand rice area, and its agricultural sector is confronting a growing water shortage. Rice exports rise early in the baseline and then are stable at almost 2.5 million tons, fractionally above the 2000 record.

### Global cotton imports

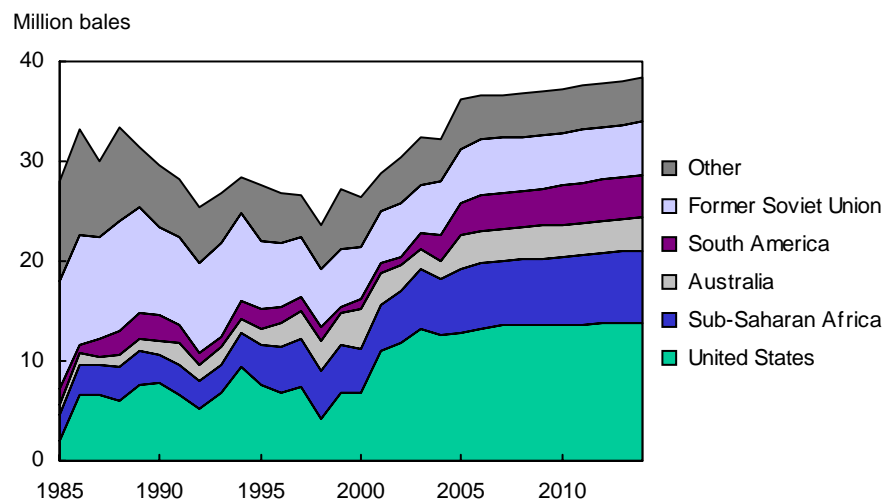


1/ Includes Mexico. 2/ Malaysia, Philippines, Thailand, and Vietnam.  
3/ Bangladesh, India, and Pakistan. 4/ European Union, former Soviet Union, and Other Europe.

Completion of the Multi-Fiber Arrangement (MFA) phaseout at the end of calendar 2004 eliminated the quotas that governed much of the world's trade in textiles and apparel for more than 30 years. These restrictions were removed per WTO commitments by the United States, the EU, and Canada, and their removal has been a major influence on world cotton trade patterns. For apparel production, labor is the decisive input factor. As a result, textile production and raw cotton consumption will increase in developing countries where labor costs are lowest. High-cost labor markets in Europe and East Asia continue to reduce their cotton imports through the baseline.

- The textile industries in China, India, and Pakistan are the major beneficiaries of the MFA's elimination. Much of the increase in world imports is attributable to China, whose textile industry has been importing record amounts of cotton since 2003/04. After 2004, China's cotton imports are expected to stabilize, but remain by far the world's largest.
- India is expected to benefit significantly from the MFA phaseout as well, but cotton imports are expected to remain below recent record levels. The use of manmade fiber in India's textile industry has been accelerating in recent years, and cotton use is not expected to grow as rapidly as in China, despite India's growing textile exports. Furthermore, improved cotton crop yields, in part due to the adoption of GMO cotton, have raised India's output in recent years, reducing the need for imports.
- In contrast, Turkey's cotton imports decline slightly. In recent years, Turkey's textile industry has benefited from favorable trade access to the EU, its major export market for textiles and apparel. However, the end of the MFA quotas will now give lower cost competitors the same favorable access to EU markets.
- Similarly, the EU, Japan, Taiwan, and South Korea all steadily reduce their cotton imports as textile trade reforms and/or higher wages in these countries drive textile production to lower wage countries.

## Global cotton exports

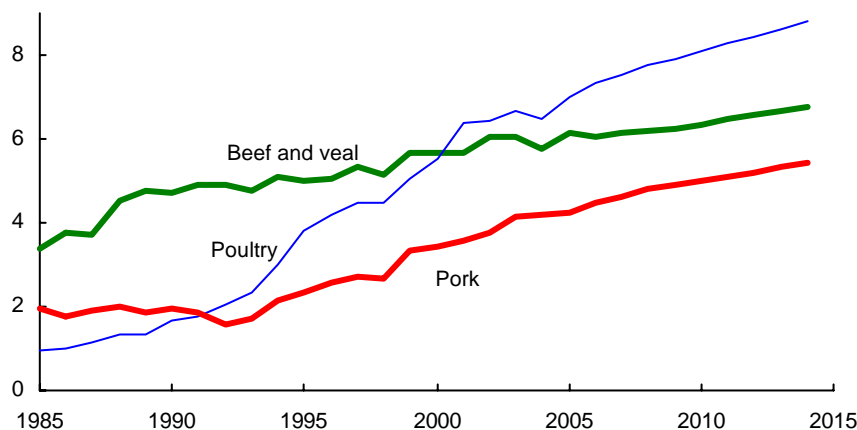


The end of the MFA phaseout is expected to move raw cotton production to countries where resource endowments and technology result in the lowest production costs. Land is a key input factor. Traditional producers with large land bases suitable for cotton production are expected to benefit from post-MFA phaseout trade patterns. Such producer/exporter regions include the United States, Sub-Saharan Africa, the former Soviet Union, Australia, and Brazil.

- The United States remains the world's leading cotton exporter throughout the baseline period with annual exports (upland and extra-long staple) increasing from 12.8 to 13.8 million bales.
- Central Asian countries of the former Soviet Union, the principal competitors with the United States in world raw cotton markets for the last decade, have been overtaken by Sub-Saharan Africa, which is expected to expand its lead. Government policies in Central Asia promoting investment in textiles have increasingly resulted in exports of textile products rather than exports of raw cotton.
- Economic reforms have lagged throughout much of Central Asia, limiting the transmission of price signals from world markets to cotton producers.
- Sub-Saharan Africa's exports have risen in large part due to economic reforms. A large correction in the foreign exchange value of the currency of the major cotton exporting countries of West Africa in 1994 led to nearly a decade of growth in West Africa's cotton production. As West Africa's production gains began to lag at the end of the 1990s, several southern African countries began increasing their cotton production, aided by reforms such as ending marketing board monopolies. Continued increases in output are expected as producers take advantage of more export-oriented government policies.

### Meat exports 1/

Million metric tons



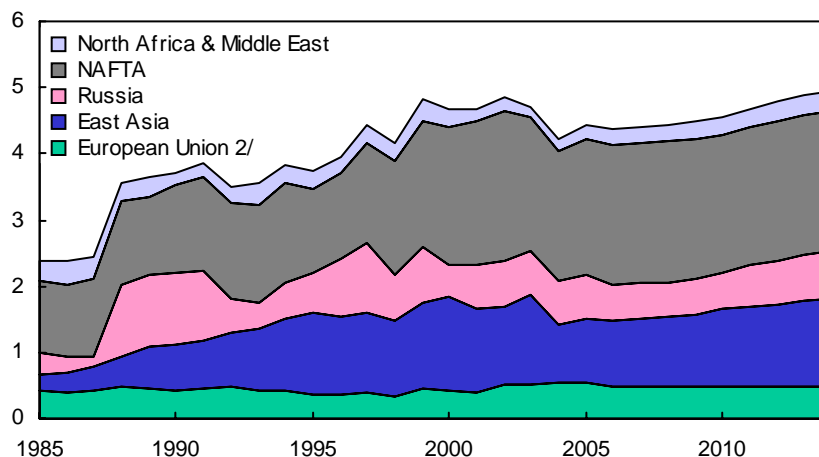
1/ Major exporters.

Increased market access achieved under existing global trade agreements was behind much of the gains in animal product trade over the past decade. During the baseline, per capita income growth in a broad number of importing countries is the driving force behind rising global meat demand. However, animal disease remains a dampening force in world meat trade.

- BSE in Canada and the United States has resulted in changes in Canada's beef and live cattle exports to the United States. Although Canadian beef exports have recovered much of the decline following the 2003 BSE case, they are projected to remain flat over the baseline period. Canadian exports to the United States of live cattle under 30 months of age are assumed in the baseline to resume in 2006 (see box, page 49).
- EU enlargement results in greater shipments between the EU-15 and the acceding 10 countries and less trade of meat outside the EU-25. EU beef exports remain below the annual WTO export-subsidy limit of 817,000 tons as a stronger euro limits their competitiveness and policy changes lower beef production and the need to remove beef from the domestic market.
- Beef exports from Australia and New Zealand, mostly of grass-fed beef destined for markets in the United States and Asia, increase slightly through the baseline.
- Argentine exports of fresh/chilled beef and processed products remain strong due to competitive pricing into Hong Kong and European markets.
- The baseline assumes that Brazil does not gain nationwide FMD-free status. However, Brazil's expanding pork production is expected to be very competitive in non-FMD free markets. Its pork exports rise strongly and are focused on Russia, Argentina, and Asian markets other than Japan and South Korea.
- U.S. poultry exports face strong competition from other countries, particularly Brazil.
- A growing share of Brazil's rapidly increasing poultry production enters international markets at very competitive prices, and Brazil's poultry exports rise strongly.
- Thailand's exports of chilled and frozen poultry meat are reduced by Avian influenza.

## Beef and veal imports 1/

Million metric tons



1/ Selected importers.

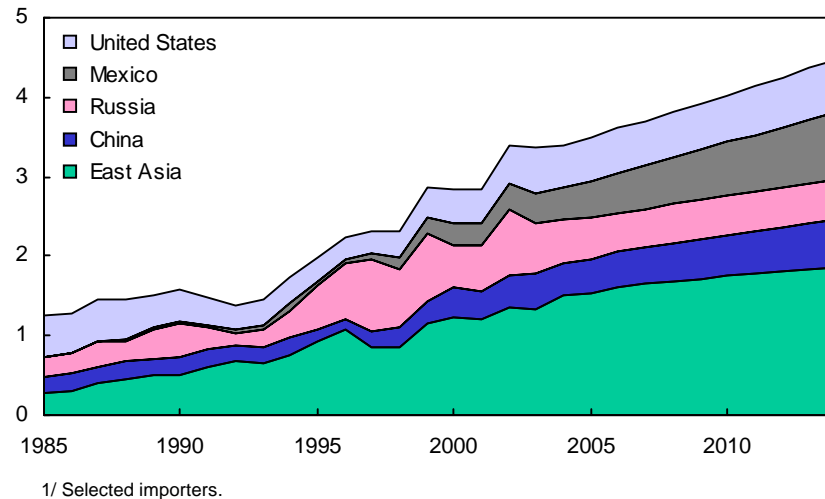
2/ European Union-15 prior to 1999, EU-25 thereafter. Excludes intra-EU trade.

Beef trade occurs largely between developed countries and is closely linked to market access gains achieved under prior trade agreements. BSE in Canada and the United States resulted in restrictions on trade in the international beef market. However, the baseline assumes a re-opening of trade to Japan and South Korea.

- Higher income countries, such as Japan and South Korea, increase imports of beef, reflecting domestic cattle sectors that are constrained by land availability. These imports are primarily of higher quality beef. Although U.S. beef exports to these countries are projected to gradually rebuild, they do not return to levels attained prior to the U.S. BSE case in 2003.
- U.S. beef imports, primarily from Australia and New Zealand for ground beef and other processed products, decline slightly through the period.
- Robust import growth of U.S. higher quality beef is also projected for Mexico.
- The baseline assumes that the tariff rate quota (TRQ) for beef that Russia imposed in 2003 remains in effect until 2006 (the period established by current Russian legislation). In the longer run, the growth in Russia's beef imports resumes as rising consumer demand continues to outpace gains in domestic production. Russia remains a large market for EU-subsidized beef exports as well as Brazilian beef.

### Pork imports 1/

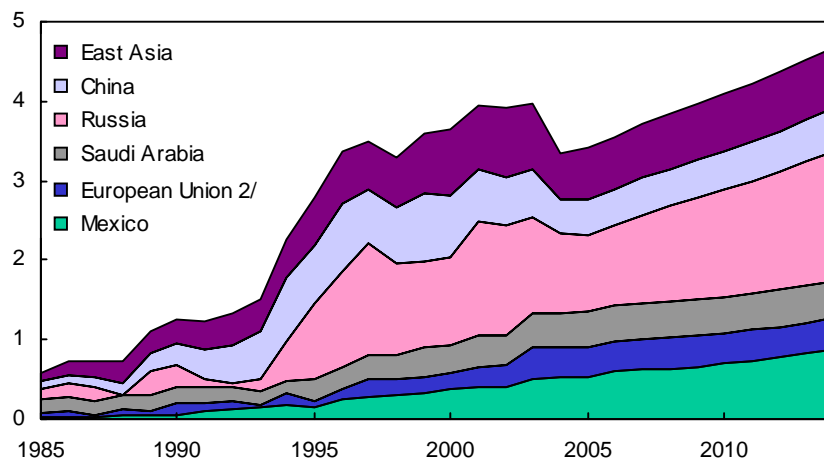
Million metric tons



- Mexican pork imports increase about 400,000 tons between 2005 and 2014, making Mexico the fastest growing pork importer. Increases in income and population are the primary drivers of Mexico's increasing demand for pork products.
- Higher income countries of East Asia, such as Japan, Hong Kong, and South Korea, increase pork imports as their domestic hog sectors are constrained by environmental issues and imported feed costs. In South Korea and Japan, the presence of BSE boosts pork consumption and imports.
- As with beef, the baseline assumes that the TRQ that Russia imposed for pork in 2003 remains in effect until 2006. Although the TRQ initially lowers pork imports, Russia remains a major destination for competitively priced pork exports from the EU and Brazil as demand growth continues to exceed Russian meat producers' ability to respond.
- Although China's pork production and exports continue to rise rapidly, its net exports decline slightly to 300,000 tons in 2014 as imports rise more than exports.

## Poultry imports 1/

Million metric tons



1/ Selected importers.

2/ European Union-15 prior to 1999, EU-25 thereafter. Excludes intra-EU trade.

- Russia remains the world's foremost poultry importer as rising consumer demand continues to outpace increases in domestic production.
- The quota on poultry imports that Russia imposed in 2003 is assumed to exist until 2006. The quota raises domestic prices, thereby spurring domestic poultry production and feed demand. As a result, wheat and barley feeding, as well as corn imports, rise over the period. Imports rise after the poultry quota is discontinued, and then climb steadily during the rest of the baseline, driven by growing consumer demand.
- In Mexico, the world's second largest importer, strong economic growth raises per capita poultry consumption, and trade liberalization under NAFTA generates a large increase in poultry imports. Domestic poultry production also rises rapidly.
- Poultry consumption growth in China is met largely by expanding domestic production, but imports are also projected to grow.
- Thailand's exports of frozen and chilled poultry meat are curtailed by Avian influenza. Exports of cooked chicken products replace some but not all of Thailand's frozen poultry exports.
- Poultry imports into Saudi Arabia continue to rise through the baseline. However, consumer preference for freshly killed birds keeps domestic production strong.

Table 34. Coarse grains trade baseline projections

	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
	<i>Imports, million metric tons</i>											
<b>Importers</b>												
Former Soviet Union <sup>1</sup>	1.6	1.3	1.4	1.8	2.2	2.4	2.5	2.6	2.7	2.7	2.7	2.8
Other Europe	0.9	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
European Union <sup>2</sup>	8.0	3.1	3.2	3.3	3.5	3.8	4.1	4.2	4.3	4.4	4.5	4.6
North Africa & Middle East	23.6	24.9	25.8	26.8	27.4	28.0	28.5	29.2	29.7	30.3	30.8	31.4
Sub-Saharan Africa <sup>3</sup>	2.2	2.6	2.6	2.7	2.7	2.7	2.7	2.7	2.8	2.8	2.8	2.9
Japan	20.0	20.0	20.1	20.0	20.0	19.9	19.9	19.8	19.7	19.7	19.6	19.5
South Korea	9.0	8.7	8.5	8.5	8.4	8.5	8.6	8.7	8.7	8.8	8.9	9.0
Taiwan	5.1	4.9	5.0	5.0	5.1	5.1	5.1	5.2	5.2	5.2	5.3	5.3
China	1.5	2.0	2.1	3.7	4.2	4.5	5.2	6.1	7.1	7.2	7.5	8.2
Other Asia & Oceania	4.0	4.2	4.5	4.9	5.1	5.3	5.4	5.6	5.8	6.1	6.3	6.6
Mexico	8.8	10.4	10.9	11.3	12.8	14.9	16.1	16.8	17.5	18.3	19.0	19.8
Central America & Caribbean	4.0	4.0	4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8	4.9	5.0
Brazil	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Other South America	5.9	5.8	5.8	5.9	5.9	6.0	6.0	6.1	6.2	6.2	6.3	6.3
Other foreign <sup>4</sup>	6.1	4.7	4.8	5.1	5.3	5.5	5.6	5.8	6.0	6.2	6.2	6.3
United States	2.4	2.3	2.4	2.4	2.4	2.5	2.5	2.5	2.5	2.5	2.5	2.6
<b>Total trade</b>	<b>103.5</b>	<b>99.9</b>	<b>102.1</b>	<b>106.6</b>	<b>110.3</b>	<b>114.4</b>	<b>117.6</b>	<b>120.9</b>	<b>123.8</b>	<b>126.1</b>	<b>128.2</b>	<b>131.2</b>
	<i>Exports, million metric tons</i>											
<b>Exporters</b>												
European Union <sup>2</sup>	4.3	4.3	4.2	4.4	4.4	4.5	4.5	4.5	4.5	4.5	4.5	4.5
China	7.7	4.1	3.1	2.6	2.1	2.0	1.9	1.8	1.6	1.5	1.4	1.4
Argentina	9.4	11.6	11.9	13.2	14.0	14.7	14.6	15.5	16.0	15.8	16.2	16.5
Australia	6.2	4.1	4.0	4.1	4.0	4.1	4.3	4.3	4.5	4.7	4.9	5.0
Canada	3.5	3.4	3.6	4.0	4.1	4.4	4.4	4.5	4.6	4.6	4.6	4.7
Republic of South Africa	0.9	1.0	1.0	1.0	1.1	1.1	1.3	1.3	1.4	1.6	1.6	1.8
Other Europe	0.3	1.9	1.4	1.5	1.7	1.8	1.9	2.0	2.1	2.2	2.3	2.4
Former Soviet Union <sup>1</sup>	6.1	7.2	6.9	7.0	7.2	7.0	7.1	7.2	7.2	7.2	7.2	7.2
Other foreign	11.4	4.9	4.9	5.2	5.5	5.7	5.9	6.1	6.3	6.5	6.7	6.9
United States	53.7	57.5	61.2	63.5	66.3	69.1	71.7	73.6	75.5	77.4	78.7	80.8
	<i>Percent</i>											
<b>U.S. trade share</b>	<b>51.9</b>	<b>57.6</b>	<b>59.9</b>	<b>59.6</b>	<b>60.1</b>	<b>60.4</b>	<b>61.0</b>	<b>60.9</b>	<b>61.0</b>	<b>61.4</b>	<b>61.4</b>	<b>61.5</b>

1/ Covers FSU-12, includes intra-FSU trade.

2/ Covers EU-25, excludes intra-EU trade.

3/ Includes Republic of South Africa.

4/ Includes unaccounted.

The projections were completed in November 2004.



Table 35. Corn trade baseline projections

	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
<i>Imports, million metric tons</i>												
Importers												
European Union <sup>1</sup>	5.6	2.5	2.6	2.7	3.0	3.3	3.5	3.6	3.7	3.8	3.9	4.0
Former Soviet Union <sup>2</sup>	0.6	0.8	0.9	1.0	1.4	1.5	1.7	1.8	1.8	1.9	1.9	1.9
Egypt	3.8	4.3	4.8	5.0	5.1	5.2	5.4	5.5	5.6	5.8	5.8	5.9
Algeria	1.9	1.8	1.9	1.9	2.0	2.1	2.1	2.2	2.3	2.4	2.5	2.6
Morocco	1.2	1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.4	1.4	1.5	1.6
Iran	1.7	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.1
Saudi Arabia	1.5	1.6	1.6	1.7	1.7	1.8	1.8	1.9	1.9	2.0	2.1	2.2
Turkey	1.1	0.9	1.0	1.1	1.1	1.1	1.1	1.1	1.1	1.2	1.1	1.1
Other N. Africa & Middle East	4.3	4.2	4.3	4.4	4.5	4.6	4.7	4.9	4.9	5.0	5.1	5.2
Japan	16.8	16.8	16.8	16.8	16.7	16.7	16.7	16.6	16.6	16.6	16.5	16.4
South Korea	8.8	8.5	8.3	8.2	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.7
Taiwan	4.9	4.7	4.8	4.8	4.9	4.9	4.9	5.0	5.0	5.0	5.0	5.1
China	0.0	0.2	0.2	1.7	2.2	2.4	3.0	3.8	4.7	4.7	4.9	5.6
Indonesia	1.4	1.3	1.4	1.5	1.6	1.8	1.9	2.0	2.1	2.3	2.4	2.6
Malaysia	2.1	2.0	2.1	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.4
Other Asia & Oceania	0.5	0.8	1.0	1.2	1.2	1.3	1.2	1.3	1.3	1.4	1.4	1.4
Canada	2.0	2.3	2.4	2.7	2.9	3.1	3.2	3.4	3.6	3.7	3.8	3.9
Mexico	5.7	6.3	6.4	7.1	8.9	11.4	12.3	12.8	13.4	13.9	14.5	15.1
Central America & Caribbean	4.0	4.0	4.0	4.2	4.3	4.4	4.5	4.6	4.7	4.8	4.9	5.0
Brazil	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Other South America	5.4	5.4	5.4	5.5	5.5	5.6	5.6	5.7	5.8	5.8	5.9	6.0
Sub-Saharan Africa <sup>3</sup>	1.9	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.4	2.5	2.5
Other foreign <sup>4</sup>	2.2	1.9	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0
United States	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Total trade	78.0	76.3	78.0	81.7	85.5	89.6	92.3	95.2	97.8	99.6	101.5	103.9
<i>Exports, million metric tons</i>												
Exporters												
European Union <sup>1</sup>	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
China	7.6	4.0	3.0	2.5	2.0	1.9	1.8	1.7	1.5	1.4	1.4	1.3
Argentina	9.0	11.0	11.3	12.4	13.1	13.7	13.6	14.3	14.7	14.3	14.6	14.8
Brazil	4.0	4.0	2.5	2.6	2.7	2.8	2.9	3.0	3.1	3.2	3.3	3.4
Republic of South Africa	0.8	1.0	0.9	1.0	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7
Other Europe	0.3	1.9	1.4	1.5	1.7	1.8	1.9	2.0	2.1	2.2	2.3	2.4
Former Soviet Union <sup>2</sup>	1.3	1.5	1.0	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.2	1.2
Other foreign	6.6	0.3	2.1	2.3	2.4	2.6	2.7	2.7	2.8	2.9	3.0	3.1
United States	48.2	52.1	55.2	57.8	61.0	64.1	66.7	68.6	70.5	72.4	73.7	75.6
<i>Percent</i>												
U.S. trade share	61.7	68.2	70.9	70.7	71.3	71.6	72.2	72.0	72.1	72.7	72.6	72.7

1/ Covers EU-25, excludes intra-EU trade.

2/ Covers FSU-12, includes intra-FSU trade.

3/ Includes Republic of South Africa.

4/ Includes unaccounted.

The projections were completed in November 2004.

Table 36. Sorghum trade baseline projections

	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
<i>Imports, million metric tons</i>												
Importers												
Japan	1.4	1.4	1.5	1.5	1.4	1.4	1.4	1.4	1.3	1.3	1.3	1.3
Mexico	3.0	4.0	4.3	4.0	3.7	3.3	3.5	3.7	3.9	4.1	4.2	4.5
North Africa & Middle East	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2
South America	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0
Sub-Saharan Africa <sup>1</sup>	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Other <sup>2</sup>	1.7	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6
Total trade	6.5	6.2	6.6	6.4	6.1	5.7	5.9	6.1	6.2	6.4	6.5	6.7
<i>Exports, million metric tons</i>												
Exporters												
Argentina	0.3	0.4	0.4	0.5	0.6	0.6	0.7	0.9	0.9	1.1	1.2	1.3
Australia	0.5	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.4
Other foreign	0.7	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
United States	5.1	5.1	5.6	5.3	5.0	4.6	4.7	4.7	4.7	4.7	4.7	4.8
<i>Percent</i>												
U.S. trade share	78.3	82.1	85.0	83.5	81.9	80.5	79.9	77.5	76.1	73.8	72.4	71.6

1/ Includes the Republic of South Africa.

2/ Includes unaccounted.

The projections were completed in November 2004.

Table 37. Barley trade baseline projections

	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
<i>Imports, million metric tons</i>												
<b>Importers</b>												
Former Soviet Union <sup>1</sup>	0.8	0.5	0.3	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Japan	1.4	1.4	1.4	1.3	1.4	1.4	1.4	1.4	1.4	1.3	1.3	1.3
South Korea	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Taiwan	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
China	1.5	1.8	1.9	1.9	2.0	2.0	2.1	2.2	2.3	2.4	2.5	2.6
European Union <sup>2</sup>	0.7	0.4	0.3	0.4	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.3
Latin America <sup>3</sup>	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7
Algeria	0.0	0.0	0.1	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.6	0.6
Saudi Arabia	5.7	6.5	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.2	6.2	6.2
Morocco	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.4	0.4
Tunisia	0.0	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3
Republic of South Africa	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Iran	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4
Turkey	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Other N. Africa & M. East	1.7	1.8	2.1	2.1	2.2	2.2	2.3	2.3	2.4	2.4	2.4	2.4
Other foreign <sup>4</sup>	2.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
United States	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
<b>Total trade</b>	<b>15.8</b>	<b>14.5</b>	<b>14.7</b>	<b>15.6</b>	<b>15.8</b>	<b>16.0</b>	<b>16.3</b>	<b>16.5</b>	<b>16.7</b>	<b>16.9</b>	<b>17.1</b>	<b>17.3</b>
<i>Exports, million metric tons</i>												
<b>Exporters</b>												
European Union <sup>2</sup>	2.8	2.8	2.7	2.9	2.9	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Australia	5.5	3.5	3.5	3.6	3.6	3.6	3.8	3.8	4.0	4.2	4.3	4.4
Canada	1.8	1.8	2.0	2.4	2.5	2.7	2.7	2.8	2.9	2.9	2.9	3.0
Russia	2.4	2.0	1.7	1.6	1.5	1.2	1.2	1.2	1.1	1.0	0.9	0.8
Ukraine	1.5	3.3	3.4	3.5	3.6	3.6	3.7	3.7	3.8	3.8	3.8	3.8
Other Former Soviet Union <sup>5</sup>	0.7	0.1	0.4	0.5	0.6	0.7	0.7	0.8	0.8	0.9	0.9	1.0
Turkey	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3
Other foreign	0.7	0.7	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.7
United States	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
<i>Percent</i>												
U.S. trade share	2.6	2.2	2.2	2.1	2.1	2.0	2.0	2.0	2.0	1.9	1.9	1.9

1/ Covers FSU-12, includes intra-FSU trade.

2/ Covers EU-25, excludes intra-EU trade.

3/ Includes Mexico.

4/ Includes unaccounted.

5/ Covers FSU-12 except Russia and Ukraine, includes intra-FSU trade.

The projections were completed in November 2004.

Table 38. Wheat trade baseline projections

	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
	<i>Imports, million metric tons</i>											
Importers												
Algeria	3.9	4.3	4.4	4.7	4.8	4.9	5.0	5.1	5.1	5.2	5.3	5.4
Egypt	7.3	7.0	7.1	7.1	7.2	7.3	7.5	7.6	7.7	7.8	7.9	8.0
Morocco	2.4	2.2	2.4	2.7	2.8	2.9	3.0	3.1	3.2	3.3	3.4	3.5
Iran	0.8	0.2	0.2	0.3	0.4	0.5	0.6	0.7	0.9	1.0	1.2	1.3
Iraq	1.9	3.3	3.0	3.2	3.3	3.4	3.4	3.5	3.6	3.7	3.8	3.9
Tunisia	0.9	1.0	1.2	1.3	1.3	1.4	1.5	1.5	1.5	1.6	1.6	1.6
Other N. Africa & Middle East	8.5	8.9	9.0	9.2	9.5	9.7	10.0	10.2	10.5	10.8	11.1	11.3
Sub-Saharan Africa <sup>1</sup>	10.6	9.9	10.0	10.2	10.4	10.6	10.9	11.1	11.3	11.5	11.7	11.9
Mexico	3.6	3.9	3.9	3.9	4.1	4.2	4.4	4.5	4.7	4.8	5.0	5.2
Central America & Caribbean	3.3	3.4	3.5	3.5	3.6	3.7	3.7	3.8	3.9	4.0	4.1	4.1
Brazil	5.3	5.0	5.2	5.5	5.8	6.1	6.4	6.7	7.0	7.3	7.6	7.9
Other South America	5.6	5.4	5.6	5.6	5.6	5.7	5.7	5.8	5.8	5.9	5.9	5.9
European Union <sup>2</sup>	5.9	5.0	6.0	6.0	6.1	6.3	6.4	6.5	6.7	6.8	7.0	7.2
Other Europe	4.2	1.7	2.3	2.2	2.2	2.1	2.1	2.0	1.9	1.8	1.8	1.6
Former Soviet Union <sup>3</sup>	7.0	4.3	4.9	5.2	5.3	5.4	5.5	5.7	5.8	6.0	6.1	6.3
Japan	5.8	5.7	5.6	5.5	5.5	5.5	5.4	5.4	5.3	5.3	5.2	5.2
South Korea	3.4	4.0	4.0	4.0	4.0	4.0	4.1	4.1	4.1	4.1	4.1	4.1
Philippines	3.0	3.1	3.2	3.3	3.4	3.4	3.5	3.6	3.7	3.7	3.8	3.9
Indonesia	4.5	4.4	4.5	4.6	4.7	4.8	4.9	5.0	5.1	5.2	5.3	5.3
China	3.7	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Bangladesh	1.8	1.8	1.8	1.9	1.9	2.0	2.0	2.1	2.1	2.1	2.2	2.2
Malaysia	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.4	1.4
Thailand	1.1	1.0	1.0	1.1	1.1	1.1	1.1	1.2	1.2	1.2	1.3	1.3
Vietnam	0.9	1.0	1.0	1.0	1.1	1.1	1.1	1.2	1.2	1.3	1.3	1.3
Pakistan	0.0	1.0	1.0	1.0	1.0	1.0	1.1	1.3	1.4	1.5	1.6	1.7
Other Asia & Oceania	4.4	4.5	4.6	4.7	4.7	4.8	4.9	5.0	5.0	5.1	5.2	5.2
Other foreign	1.7	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
United States	2.0	2.0	1.8	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0
Total trade	105.0	105.2	108.3	110.9	113.0	115.1	117.5	120.0	122.2	124.5	126.7	129.0
	<i>Exports, million metric tons</i>											
Exporters												
European Union <sup>2</sup>	10.9	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.2	16.3	16.6	16.9
Canada	15.8	15.5	15.5	15.5	15.2	15.1	15.1	15.1	15.1	15.1	15.1	15.1
Australia	18.0	17.0	18.0	19.2	20.0	20.6	21.2	21.8	22.4	23.0	23.4	23.8
Argentina	8.7	9.0	9.5	9.7	10.4	11.1	11.6	12.4	12.6	12.8	13.0	13.3
Russia	3.2	6.0	6.4	6.6	6.4	6.3	6.3	6.1	6.0	6.1	6.1	6.1
Ukraine	0.1	3.5	4.2	4.2	4.2	4.2	4.2	4.3	4.4	4.5	4.6	4.7
Other Former Soviet Union <sup>4</sup>	5.8	4.3	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5
Other Europe	0.2	1.6	1.1	1.1	1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.4
India	5.7	1.5	0.9	0.8	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
China	2.8	1.0	0.9	0.8	0.8	0.7	0.7	0.6	0.6	0.5	0.5	0.5
Turkey	0.8	1.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
Other foreign	1.4	2.3	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.1	4.1	4.1
United States	31.5	26.5	25.9	26.5	27.2	28.6	29.3	29.9	30.6	31.3	32.0	32.7
	<i>Percent</i>											
U.S. trade share	30.0	25.2	23.9	23.9	24.1	24.8	24.9	25.0	25.1	25.1	25.2	25.3

1/ Includes Republic of South Africa.

2/ Covers EU-25, excludes intra-EU trade.

3/ Covers FSU-12, includes intra-FSU trade.

4/ Covers FSU-12 except Russia and Ukraine, includes intra-FSU trade.

The projections were completed in November 2004.

Table 39. Soybean trade baseline projections

	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
<i>Imports, million metric tons</i>												
Importers												
European Union <sup>1</sup>	15.3	15.9	15.8	15.5	15.3	15.2	15.1	15.1	15.0	14.5	14.1	13.7
Japan	4.7	5.0	5.0	5.0	5.0	5.1	5.1	5.1	5.1	5.1	5.1	5.2
South Korea	1.4	1.6	1.6	1.6	1.7	1.7	1.7	1.8	1.8	1.9	1.9	1.9
Taiwan	2.3	2.4	2.5	2.5	2.6	2.6	2.6	2.6	2.6	2.7	2.7	2.7
Mexico	3.8	4.5	4.8	5.1	5.4	5.7	6.0	6.3	6.6	6.9	7.2	7.5
Former Soviet Union <sup>2</sup>	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Other Europe	0.6	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
China	16.9	22.0	24.1	26.8	29.4	32.1	34.8	36.9	39.0	40.7	42.5	44.2
Malaysia	0.5	0.5	0.6	0.6	0.7	0.7	0.8	0.9	0.9	1.0	1.0	1.1
Indonesia	1.3	1.4	1.5	1.5	1.6	1.7	1.7	1.8	1.9	1.9	2.0	2.0
Other	8.1	8.3	9.1	9.5	10.0	10.4	10.9	11.3	11.7	12.2	12.7	13.1
Total imports	54.9	62.3	65.6	69.0	72.4	75.9	79.4	82.4	85.3	87.6	89.9	92.0
<i>Exports, million metric tons</i>												
Exporters												
Argentina	6.8	7.7	7.1	7.2	7.3	7.3	7.2	7.2	7.2	7.1	6.9	6.7
Brazil	19.8	22.3	23.1	25.9	29.2	33.7	37.7	40.5	43.2	45.3	47.4	49.4
Other South America	3.2	3.8	4.0	4.2	4.5	4.8	5.1	5.3	5.6	5.9	6.2	6.5
China	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2
Other foreign	1.1	1.2	1.2	1.2	1.2	1.2	1.1	1.1	1.1	1.1	1.1	1.1
United States	24.1	27.5	29.9	30.1	29.9	28.7	28.0	28.0	28.0	27.9	27.9	28.0
Total exports	55.3	62.7	65.6	69.0	72.4	75.9	79.4	82.4	85.3	87.6	89.9	92.0
<i>Percent</i>												
U.S. trade share	43.5	43.9	45.6	43.6	41.4	37.8	35.3	34.0	32.8	31.9	31.0	30.5

1/ Covers EU-25, excludes intra-EU trade.

2/ Covers FSU-12, includes intra-FSU trade.

The projections were completed in November 2004.

Table 40. Soybean meal trade baseline projections

	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
<i>Imports, million metric tons</i>												
Importers												
European Union <sup>1</sup>	23.0	24.5	26.5	26.7	27.2	27.4	27.8	28.0	28.4	28.5	28.5	28.6
Former Soviet Union <sup>2</sup>	0.5	0.6	0.8	0.8	0.9	1.0	1.1	1.2	1.3	1.3	1.4	1.6
Other Europe	0.6	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.9	0.9	0.9	0.9
Canada	1.0	1.0	1.1	1.1	1.1	1.1	1.1	1.0	1.0	1.0	1.0	1.0
Japan	1.2	1.3	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Southeast Asia	5.7	5.6	5.9	6.1	6.4	6.6	6.9	7.1	7.4	7.7	7.9	8.2
Latin America	4.9	5.0	5.3	5.6	5.8	6.1	6.3	6.5	6.7	7.0	7.2	7.4
North Africa & Middle East	5.4	6.0	6.2	6.6	7.0	7.4	7.8	8.1	8.5	8.9	9.3	9.7
Other	3.2	3.2	3.7	3.7	3.8	3.9	4.1	4.2	4.3	4.5	4.6	4.8
Total imports	45.5	47.9	51.4	52.7	54.2	55.4	56.9	58.2	59.7	60.9	62.1	63.3
<i>Exports, million metric tons</i>												
Exporters												
Argentina	19.7	20.2	22.3	23.7	23.6	24.5	25.3	26.2	27.0	27.9	29.0	30.0
Brazil	14.8	17.0	17.4	17.6	19.2	19.7	20.4	20.9	21.6	21.9	22.1	22.3
Other South America	1.8	2.0	1.7	1.8	1.8	1.9	1.9	2.0	2.0	2.0	2.1	2.1
China	0.6	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.0
India	3.3	2.5	2.2	2.1	2.0	1.9	1.7	1.6	1.5	1.4	1.3	1.2
European Union <sup>1</sup>	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Other foreign	0.5	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
United States	3.9	4.9	6.1	5.9	5.9	5.8	5.9	5.9	5.9	5.9	5.9	6.0
Total exports	45.0	48.4	51.4	52.7	54.2	55.4	56.9	58.2	59.7	60.9	62.1	63.3
<i>Percent</i>												
U.S. trade share	8.8	10.1	11.8	11.2	10.9	10.5	10.4	10.1	9.9	9.7	9.5	9.5

<sup>1/</sup> Covers EU-25, excludes intra-EU trade.

<sup>2/</sup> Covers FSU-12, includes intra-FSU trade.

The projections were completed in November 2004.

Table 41. Soybean oil trade baseline projections

	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
<i>Imports, million metric tons</i>												
Importers												
China	2.7	2.4	2.9	3.1	3.3	3.4	3.5	3.7	3.9	3.9	3.9	3.8
India	0.8	1.0	1.2	1.3	1.3	1.4	1.4	1.5	1.6	1.6	1.7	1.7
Other Asia	1.1	1.2	1.3	1.3	1.4	1.4	1.4	1.5	1.5	1.6	1.6	1.6
Latin America	1.5	1.7	1.7	1.8	1.9	1.9	2.0	2.1	2.2	2.2	2.3	2.4
North Africa & Middle East	1.9	2.4	2.4	2.5	2.6	2.6	2.7	2.8	2.9	2.9	3.0	3.1
Former Soviet Union & Other Europe <sup>1</sup>	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Other	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Total imports	8.9	9.6	10.5	11.0	11.4	11.8	12.1	12.5	13.0	13.2	13.5	13.7
<i>Exports, million metric tons</i>												
Exporters												
Argentina	4.5	4.6	5.2	5.5	5.5	5.7	5.9	6.1	6.3	6.5	6.8	7.0
Brazil	2.6	3.1	3.2	3.4	3.8	4.0	4.2	4.3	4.5	4.6	4.7	4.8
European Union <sup>2</sup>	0.6	0.7	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.4	0.3	0.3
Other foreign	0.8	0.9	0.9	0.9	0.9	0.9	1.0	1.0	1.0	1.0	1.0	1.0
United States	0.4	0.5	0.7	0.7	0.7	0.6	0.6	0.6	0.6	0.7	0.6	0.6
Total exports	9.0	9.8	10.5	11.0	11.4	11.8	12.1	12.5	13.0	13.2	13.5	13.7
<i>Percent</i>												
U.S. trade share	4.7	5.1	6.7	6.4	5.8	5.5	5.1	5.1	5.0	5.0	4.8	4.5

<sup>1/</sup> Includes intra-FSU trade.

<sup>2/</sup> Covers EU-25, excludes intra-EU trade.

The projections were completed in November 2004.

Table 42. Rice trade baseline projections

	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
<i>Imports, million metric tons</i>												
<b>Importers</b>												
Canada	0.25	0.25	0.26	0.26	0.26	0.27	0.27	0.28	0.28	0.29	0.29	0.30
Mexico	0.55	0.53	0.61	0.62	0.64	0.66	0.68	0.70	0.72	0.74	0.76	0.78
Central America/Caribbean	1.44	1.70	1.60	1.75	1.82	1.90	1.98	2.06	2.14	2.22	2.30	2.38
Brazil	0.65	0.75	0.52	0.47	0.45	0.43	0.40	0.38	0.35	0.33	0.31	0.30
Other South America	0.40	0.38	0.68	0.64	0.61	0.55	0.53	0.53	0.54	0.54	0.55	0.57
European Union <sup>1</sup>	1.02	1.00	1.08	1.13	1.15	1.18	1.21	1.24	1.27	1.30	1.32	1.35
Former Soviet Union <sup>2</sup>	0.53	0.53	0.68	0.69	0.71	0.72	0.74	0.76	0.77	0.79	0.81	0.83
Other Europe	0.20	0.22	0.23	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24
Bangladesh	0.65	0.75	0.90	1.05	1.20	1.35	1.50	1.65	1.80	2.00	2.14	2.30
China	1.10	0.60	0.58	0.60	0.62	0.65	0.68	0.70	0.72	0.75	0.78	0.80
Japan	0.70	0.70	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68
South Korea	0.18	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
Indonesia	0.80	1.00	1.10	1.20	1.35	1.50	1.65	1.80	1.95	2.10	2.25	2.40
Malaysia	0.50	0.73	0.55	0.55	0.56	0.58	0.61	0.64	0.66	0.69	0.72	0.74
Philippines	1.29	0.90	1.06	1.17	1.23	1.24	1.29	1.35	1.41	1.46	1.51	1.55
Other Asia & Oceania	2.06	2.01	1.91	1.96	1.95	1.95	1.96	1.96	1.97	1.98	1.99	2.00
Iraq	1.10	1.10	1.20	1.26	1.32	1.41	1.44	1.48	1.53	1.58	1.64	1.69
Iran	0.95	0.95	0.92	0.94	0.97	1.03	1.09	1.14	1.21	1.27	1.33	1.39
Saudi Arabia	1.15	1.35	0.97	1.14	1.16	1.18	1.20	1.21	1.23	1.24	1.25	1.27
Other N. Africa & M. East	1.40	1.49	1.53	1.57	1.61	1.65	1.69	1.73	1.78	1.84	1.90	1.96
Sub-Saharan Africa <sup>3</sup>	6.08	5.68	6.13	6.35	6.47	6.56	6.68	6.81	7.00	7.15	7.30	7.50
Republic of South Africa	0.73	0.80	0.66	0.77	0.78	0.78	0.77	0.77	0.77	0.77	0.77	0.77
Unaccounted	1.82	1.84	1.85	1.85	1.85	1.86	1.84	1.85	1.86	1.86	1.86	1.86
United States	0.50	0.46	0.48	0.49	0.51	0.52	0.54	0.55	0.57	0.59	0.60	0.62
<b>Total imports</b>	<b>26.03</b>	<b>25.90</b>	<b>26.39</b>	<b>27.60</b>	<b>28.34</b>	<b>29.08</b>	<b>29.86</b>	<b>30.72</b>	<b>31.66</b>	<b>32.62</b>	<b>33.51</b>	<b>34.49</b>
<i>Exports, million metric tons</i>												
<b>Exporters</b>												
Australia	0.30	0.31	0.28	0.40	0.47	0.52	0.56	0.58	0.60	0.60	0.60	0.60
Argentina	0.23	0.42	0.44	0.46	0.48	0.50	0.53	0.56	0.59	0.62	0.66	0.70
Other South America	0.99	1.15	1.15	1.18	1.21	1.23	1.26	1.29	1.32	1.36	1.38	1.40
European Union <sup>1</sup>	0.23	0.25	0.25	0.25	0.26	0.26	0.26	0.26	0.26	0.27	0.27	0.27
China	0.80	0.80	1.16	1.15	1.20	1.20	1.19	1.19	1.20	1.20	1.20	1.20
India	2.75	2.50	2.82	2.97	3.36	3.58	3.87	4.14	4.41	4.86	5.04	5.22
Pakistan	1.78	2.00	2.24	2.46	2.47	2.47	2.48	2.48	2.48	2.47	2.47	2.47
Thailand	9.80	8.25	8.70	9.00	9.07	9.35	9.55	9.90	10.29	10.55	10.96	11.40
Vietnam	4.00	3.75	4.00	4.15	4.20	4.30	4.40	4.50	4.60	4.70	4.90	5.10
Egypt	0.70	0.70	0.71	0.78	0.72	0.72	0.73	0.74	0.76	0.77	0.79	0.80
Other foreign	0.75	0.80	1.07	1.09	1.12	1.15	1.18	1.23	1.27	1.31	1.35	1.39
United States	3.33	3.33	3.56	3.71	3.78	3.81	3.84	3.84	3.87	3.91	3.91	3.94
<b>Total exports</b>	<b>25.64</b>	<b>24.25</b>	<b>26.39</b>	<b>27.60</b>	<b>28.34</b>	<b>29.08</b>	<b>29.86</b>	<b>30.72</b>	<b>31.66</b>	<b>32.62</b>	<b>33.51</b>	<b>34.49</b>
<i>Percent</i>												
U.S. trade share	13.0	13.8	13.5	13.5	13.3	13.1	12.9	12.5	12.2	12.0	11.7	11.4

<sup>1/</sup> Covers EU-25, excludes intra-EU trade.

<sup>2/</sup> Covers FSU-12, includes intra-FSU trade.

<sup>3/</sup> Excludes Republic of South Africa

The projections were completed in November 2004.

Table 43. All cotton trade baseline projections

	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
	<i>Imports, million bales</i>											
<b>Importers</b>												
European Union <sup>1</sup>	3.1	2.9	2.7	2.7	2.5	2.4	2.3	2.2	2.1	2.0	2.0	1.9
Former Soviet Union <sup>2</sup>	1.6	1.6	1.5	1.4	1.4	1.3	1.3	1.3	1.2	1.2	1.2	1.1
Indonesia	2.1	2.3	2.1	2.1	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.1
Thailand	1.7	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.2	2.3	2.3
India	0.8	0.8	1.1	1.7	1.9	1.8	1.8	1.7	1.7	1.7	1.6	1.6
Brazil	0.5	0.4	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Other Europe	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Other Asia & Oceania	4.8	4.6	4.5	5.0	4.9	5.0	5.1	5.2	5.4	5.6	5.7	5.9
Japan	0.8	0.7	0.7	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.5
South Korea	1.3	1.3	1.3	1.2	1.2	1.1	1.1	1.1	1.0	1.0	1.0	0.9
China	8.8	7.8	12.7	12.0	12.5	12.8	13.0	13.3	13.5	13.7	13.9	14.0
Taiwan	1.0	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.0	1.0	1.0	1.0
Turkey	2.4	2.3	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.0	2.0
Mexico	1.9	1.5	1.8	1.8	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.8
Other	2.0	2.6	2.4	2.6	2.6	2.6	2.7	2.8	2.8	2.9	2.9	3.0
<b>Total imports</b>	<b>33.0</b>	<b>32.2</b>	<b>36.4</b>	<b>36.8</b>	<b>37.0</b>	<b>37.1</b>	<b>37.3</b>	<b>37.5</b>	<b>37.9</b>	<b>38.1</b>	<b>38.3</b>	<b>38.6</b>
	<i>Exports, million bales</i>											
<b>Exporters</b>												
Former Soviet Union <sup>2</sup>	5.0	5.5	5.4	5.7	5.6	5.5	5.4	5.4	5.3	5.3	5.2	5.2
Australia	2.2	1.7	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2
Argentina	0.0	0.2	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3
Pakistan	0.2	0.2	0.4	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
India	0.6	0.4	0.5	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4
China	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3
Egypt	0.4	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Other Latin America	1.5	2.6	3.3	3.4	3.5	3.6	3.7	3.8	3.9	4.0	4.1	4.2
Sub-Saharan Africa <sup>3</sup>	5.9	5.7	6.4	6.5	6.4	6.5	6.7	6.8	6.9	7.0	7.1	7.3
Other foreign	3.2	2.5	2.9	2.8	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
United States	13.2	12.5	12.8	13.3	13.6	13.6	13.6	13.6	13.7	13.8	13.8	13.8
<b>Total exports</b>	<b>32.5</b>	<b>32.2</b>	<b>36.1</b>	<b>36.5</b>	<b>36.7</b>	<b>36.8</b>	<b>37.0</b>	<b>37.2</b>	<b>37.6</b>	<b>37.8</b>	<b>38.0</b>	<b>38.3</b>
	<i>Percent</i>											
<b>U.S. trade share</b>	<b>40.7</b>	<b>38.9</b>	<b>35.6</b>	<b>36.3</b>	<b>37.0</b>	<b>36.9</b>	<b>36.7</b>	<b>36.5</b>	<b>36.4</b>	<b>36.5</b>	<b>36.3</b>	<b>36.0</b>

1/ Covers EU-25, excludes intra-EU trade.

2/ Covers FSU-12, includes intra-FSU trade.

3/ Includes Republic of South Africa.

The projections were completed in November 2004.

Table 44. Beef trade baseline projections

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<i>Imports, thousand metric tons, carcass weight</i>												
Importers												
Japan	810	604	609	618	630	639	669	702	715	728	746	769
South Korea	445	200	275	268	275	298	316	352	363	389	413	429
Taiwan	98	81	83	97	101	104	107	110	113	115	118	121
Philippines	120	125	129	136	147	154	163	173	182	190	197	204
European Union <sup>1</sup>	517	525	535	489	489	488	489	489	489	489	489	489
Russia	650	650	650	552	546	520	519	548	626	664	687	707
Other Europe	54	56	54	58	60	62	63	63	64	64	65	66
Egypt	93	150	155	171	179	197	207	212	217	221	225	230
Mexico	370	270	315	348	362	402	439	473	519	556	582	618
Canada	273	85	80	85	86	88	90	95	96	97	98	99
United States	1,363	1,593	1,660	1,670	1,665	1,625	1,575	1,508	1,474	1,451	1,429	1,406
Major importers	4,793	4,339	4,545	4,493	4,539	4,576	4,634	4,725	4,857	4,965	5,049	5,139
<i>Exports, thousand metric tons, carcass weight</i>												
Exporters												
Australia	1,264	1,300	1,300	1,312	1,277	1,276	1,254	1,272	1,293	1,298	1,310	1,312
New Zealand	578	600	605	575	549	550	544	539	540	543	546	549
Other Asia	482	585	675	610	636	615	634	646	666	660	628	564
European Union <sup>1</sup>	437	410	370	330	353	362	388	401	408	414	421	440
Other Europe	30	31	32	41	40	39	38	40	43	47	51	55
Ukraine	168	100	90	94	92	94	98	99	102	105	107	109
Argentina	386	540	600	482	485	489	492	495	497	500	502	505
Brazil	1,175	1,470	1,620	1,766	1,803	1,816	1,827	1,828	1,828	1,831	1,842	1,851
Canada	384	540	570	551	550	550	552	553	557	560	561	564
United States	1,143	201	281	309	340	374	412	474	545	626	720	828
Major exporters	6,047	5,777	6,143	6,071	6,125	6,166	6,238	6,346	6,478	6,584	6,688	6,776

<sup>1/</sup> Covers EU-25, excludes intra-EU trade.

The projections were completed in November 2004.



Table 45. Pork trade baseline projections

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<i>Imports, thousand metric tons, carcass weight</i>												
Importers												
Japan	1,133	1,225	1,250	1,287	1,309	1,331	1,353	1,373	1,393	1,411	1,428	1,442
China	149	88	88	95	98	110	116	120	126	131	136	141
Hong Kong	302	317	335	347	359	374	388	402	416	430	444	459
South Korea	153	200	208	246	255	266	273	281	289	296	303	312
Russia	620	500	500	450	463	475	488	500	513	525	538	550
Mexico	371	415	440	505	535	577	614	656	702	747	796	845
Canada	91	110	110	114	115	117	118	119	120	121	122	122
United States	567	513	551	560	575	585	600	605	620	635	645	655
Major importers	3,386	3,368	3,482	3,603	3,707	3,833	3,949	4,057	4,178	4,296	4,412	4,525
<i>Exports, thousand metric tons, carcass weight</i>												
Exporters												
Brazil	603	570	580	610	656	718	741	768	793	821	852	882
Canada	975	960	980	995	1,036	1,068	1,092	1,105	1,115	1,122	1,131	1,137
Mexico	48	50	50	65	70	72	74	76	78	80	82	84
European Union <sup>1</sup>	1,325	1,250	1,166	1,304	1,315	1,325	1,330	1,335	1,340	1,361	1,385	1,418
Other Europe	18	18	18	11	29	39	57	72	89	104	121	136
China	282	330	400	405	415	425	435	438	440	442	444	446
United States	779	944	960	985	1,010	1,035	1,060	1,085	1,115	1,140	1,170	1,200
Major exporters	4,030	4,122	4,154	4,375	4,532	4,681	4,788	4,879	4,969	5,070	5,185	5,303

1/ Covers EU-25, excludes intra-EU trade.

The projections were completed in November 2004.

Table 46. Poultry trade baseline projections 1/

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<i>Imports, thousand metric tons, ready to cook</i>												
Importers												
Russia	1,195	1,000	950	1,006	1,106	1,213	1,277	1,340	1,413	1,485	1,562	1,630
European Union <sup>2</sup>	414	375	370	379	381	383	385	386	388	390	392	394
Japan	695	500	530	566	577	585	595	606	617	626	637	647
Hong Kong	154	200	160	194	197	200	204	207	211	214	218	221
China	453	220	300	245	259	266	274	283	293	305	317	329
South Korea	89	30	60	35	37	38	40	41	43	45	46	48
Saudi Arabia	430	435	443	448	452	455	458	460	461	459	459	455
Mexico	495	524	537	606	635	635	663	696	732	777	824	881
Canada	89	137	124	136	139	141	143	146	148	151	154	156
Major importers	4,014	3,421	3,474	3,615	3,783	3,915	4,039	4,165	4,305	4,452	4,609	4,761
<i>Exports, thousand metric tons, ready to cook</i>												
Exporters												
Brazil	2,014	2,383	2,635	2,722	2,812	2,905	3,000	3,099	3,222	3,307	3,417	3,529
European Union <sup>2</sup>	980	975	930	1,034	1,016	1,017	1,018	1,024	1,028	1,027	1,030	1,033
China	388	250	300	309	318	328	338	354	358	369	380	391
Thailand	527	255	263	311	355	410	422	435	448	461	475	490
Saudi Arabia	25	25	25	26	27	28	29	30	31	32	33	34
United States	2,435	2,248	2,479	2,551	2,608	2,665	2,724	2,769	2,812	2,853	2,894	2,926
Major exporters	6,369	6,136	6,632	6,954	7,136	7,352	7,531	7,711	7,898	8,049	8,228	8,402

1/ Broilers and turkeys only.

2/ Covers EU-25, excludes intra-EU trade.

The projections were completed in November 2004.

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