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Chief Economist

World Agricultural  
Outlook Board

Long-term  
Projections Report  
OCE-2009-1

February 2009

# USDA Agricultural Projections to 2018

## Interagency Agricultural Projections Committee

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*USDA Long-term Projections*



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### **Abstract**

This report provides projections for the agricultural sector through 2018. 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 report assumes that there are no shocks due to abnormal weather, further outbreaks of plant or animal diseases, or other factors affecting global supply and demand. Provisions of current law, including the Food, Conservation, and Energy Act of 2008 (2008 Farm Act), are assumed to remain in effect through the projections period. The projections are one representative scenario for the agricultural sector for the next decade. As such, the report 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 2008, reflecting a composite of model results and judgment-based analyses.

Prospects for the agricultural sector in the near term reflect adjustments to the global economic slowdown and the U.S. recession. Additionally, over the next several years, the livestock sector continues to adjust to higher feed prices seen in 2007 and 2008. Longrun developments for global agriculture reflect continued demand for biofuels, particularly in the United States and the European Union (EU). Although increases in corn-based ethanol production in the United States are projected to slow, ethanol demand remains high and affects production, use, and prices of farm commodities throughout the sector. Expansion of biodiesel use in the EU raises demand for vegetable oils in global markets. Further, once the world economies recover from the current slowdown, steady economic gains support increases in consumption, trade, and prices. As a result, although net farm income initially declines from the highs of 2007 and 2008, it remains historically strong and rebounds to near-record levels in the latter part of the projections. U.S. retail food prices increase more than general inflation through 2011 (particularly meats in 2010 and 2011), but then food prices return to the longer term relationship of rising less than the general inflation rate over the remainder of the projection period.

**Keywords:** Projections, crops, livestock, biofuel, ethanol, trade, farm income, food prices.

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## Contents

	Page
A Note to Users of USDA Long-term Projections .....	iii
Long-term Projections on the Internet .....	iv
Contacts for Long-term Projections.....	iv
Acknowledgments.....	iv
Introduction.....	1
Overview of Assumptions and Implications.....	2
Macroeconomic Assumptions.....	8
Crops.....	18
Livestock.....	44
U.S. Agricultural Sector Aggregate Indicators: Farm Income, U.S. Trade Value, Food Prices, and Expenditures .....	54
Agricultural Trade.....	64
List of Tables .....	100

### Features in this Report

	Page
2008 Farm Act Overview .....	6
Global Economic Slowdown.....	9
Corn-based Ethanol Expansion Projected To Slow.....	20
Global Demand for Biofuel Feedstocks .....	66

## **A Note to Users of USDA Long-term Projections**

USDA's long-term agricultural 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 current farm legislation and specific assumptions about external conditions.

The report uses as a starting point the short-term projections from the November 2008 *World Agricultural Supply and Demand Estimates* report. Critical long term assumptions are made for U.S. and international macroeconomic conditions, U.S. and foreign agricultural and trade policies, and growth rates of agricultural productivity in the United States and abroad. The macroeconomic assumptions were completed in October 2008. Normal weather is assumed. Also, the report assumes no further outbreaks of animal or plant diseases. Changes in assumptions for any of these items can significantly affect the projections, and actual conditions that emerge will alter the outcomes.

The projections analysis was conducted by interagency committees in USDA and reflects a composite of model results and judgment-based analyses. The Economic Research Service has the lead role in preparing the Departmental 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 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.

### **Long-term Projections on the Internet**

The Economic Research Service of USDA has a briefing room for long-term projections at:

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

Also, data from the new USDA long-term projections are available electronically at:

<http://usda.mannlib.cornell.edu/MannUsda/viewDocumentInfo.do?documentID=1192>

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# USDA Agricultural Projections to 2018

## Interagency Agricultural Projections Committee

### Introduction

This report provides longrun projections for the agricultural sector through 2018. Major forces and uncertainties affecting future agricultural markets are discussed, such as prospects for long-term global economic growth and population trends. Projections cover production and consumption for agricultural commodities, global agricultural trade and U.S. exports, commodity prices, and aggregate indicators of the sector, such as farm income and food prices.

The projections are a conditional scenario with no shocks and are based on specific assumptions regarding the macroeconomy, agricultural and trade policies, the weather, and international developments. The report assumes that provisions of current law remain in effect through the projection period. This would include the Food, Conservation, and Energy Act of 2008 (the 2008 Farm Act), the Energy Independence and Security Act of 2007, and the Energy Improvement and Extension Act of 2008, for example. The projections are not intended to be a Departmental forecast of what the future will be, but instead are a description of what would be expected to happen under a continuation of current farm legislation, with very specific external circumstances. Thus, the projections provide 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 2008 and reflect a composite of model results and judgment-based analyses. Normal weather is assumed. Also, the projections assume no further outbreaks of plant or animal diseases. Short-term projections used as a starting point in this report are from the November 2008 *World Agricultural Supply and Demand Estimates* report. The macroeconomic assumptions were completed in October 2008.

## Overview of Assumptions and Implications

### Key assumptions underlying the projections and selected implications include:

#### *Economic Growth*

- U.S. and world economic growth reflect near-term effects of the current economic crisis followed by a transition back to steady economic gains.
- The global economy is assumed to slow to 1.7-percent growth in 2009 while the U.S. economy declines by 0.5 percent.
- The financial crisis and global economic slowdown will constrain U.S. exports in the short to intermediate term.
- Global economic growth is assumed to rebound to a 3.4-percent average growth rate for 2010-18. The U.S. economy resumes growth in 2010 at 2.5 percent, followed by average rates near 3 percent over the remainder of the projection period.
- The return to broad-based, steady global economic growth supports longer term gains in world food demand, global agricultural trade, and U.S. agricultural exports.
- Economic growth in developing countries is especially important because food consumption and feed use are particularly responsive to income growth in those countries, with movement away from staple foods and increased diversification of diets.
- Growth in export demand contributes to increases in agricultural commodity prices and gains in farm cash receipts after 2009.

#### *Population*

- Growth in global population is assumed to continue to slow to an average of about 1.1 percent per year over the projection period compared with average annual rates of 1.7 percent in the 1980s and 1.4 percent in the 1990s.
- Population growth rates in most 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 to nearly 84 percent by 2018, up from 78 percent in the 1980s and 80 percent in the 1990s.
- Population gains in developing countries along with increased urbanization and expansion of the middle class are particularly important for the projected growth in global food demand. Population in developing countries, in contrast to that in more developed countries, is dominated by a younger population cohort with larger and increasingly more diverse food consumption.



### ***The Value of the U.S. Dollar***

- The U.S. dollar is assumed to strengthen moderately over 2010-18. Nonetheless, the dollar's low level relative to the early 2000s remains a facilitating factor in projected gains in U.S. agricultural exports.
- The United States will remain competitive in global agricultural markets, although trade competition will continue to be strong. Even with the moderate strengthening of the U.S. dollar, export gains contribute to increases in cash receipts for U.S. farmers.

### ***Oil Prices***

- Much of the large increases in oil prices from late 2002 into 2008 reflected strong demand for crude oil resulting from world economic gains and rapid manufacturing growth in China, India, and other countries in Asia. The weakening of the U.S. and global economies at the end of 2008 and resulting decline in demand for petroleum and other energy supplies pushed crude oil prices down more than 70 percent from peak values in mid-2008.
- Crude oil prices are assumed to rebound in 2009 and average about \$60 per barrel. Prices are then assumed to increase over the remainder of the projection period as global economic activity picks up, rising somewhat faster than the general inflation rate. By the end of the projection period, the refiner acquisition cost for crude oil imports is assumed to be near \$100 per barrel.
- These increases in crude oil prices influence both the costs of production in the agricultural sector as well as the economics of biofuels.

### ***U.S. Agricultural Policy***

- Provisions of current law, particularly the Food, Conservation, and Energy Act of 2008 (2008 Farm Act), are assumed to remain in effect through the projection period. (See box, *2008 Farm Act Overview*, pages 6-7, for further discussion.)
- Under the 2008 Farm Act, the maximum acreage enrolled in the Conservation Reserve Program (CRP) was reduced from 39.2 million acres to 32 million acres, beginning on October 1, 2009. With CRP enrollment at 34.8 million acres on September 30, 2008, this policy change provides some additional cropland for potential use in production rather than tightening cropland availability over the projection period.
- Increased cropland availability, resulting from the reduction in the CRP, combined with sustained high commodity prices keep U.S. cropland use high in the projections.

## *U.S. Biofuels*

- The ethanol tax credit was reduced to 45 cents per gallon under the 2008 Farm Act, starting in calendar 2009.
- The biodiesel tax credit was set at \$1.00 per gallon for all feedstocks under the Energy Improvement and Extension Act of 2008, thus increasing the credit for biodiesel made from recycled vegetable oil or animal fats from 50 cents per gallon.
- The projections assume that these tax credits available to blenders of biofuels (ethanol and biodiesel) as well as the 54-cent-per-gallon tariff on imported ethanol used as fuel are extended beyond their currently legislated expiration dates and remain in effect through the projection period.
- Expansion in the U.S. ethanol industry is projected to continue, although the pace is assumed to slow from the rapid gains of the past several years.
- Corn is expected to remain the primary feedstock for U.S. ethanol production during the projection period. Slower annual growth for corn-based ethanol is projected, however, largely reflecting moderate gains assumed in overall gasoline consumption in the United States. Nonetheless, by the end of the projection period, ethanol production accounts for about 35 percent of corn use, and corn-based ethanol production exceeds 9 percent of annual gasoline consumption.
- Biodiesel production in the United States is assumed to increase to 1 billion gallons by 2012. Less than half this volume is assumed to be from domestic first-use vegetable oils, partly due to the equalization of the biodiesel tax credit across all feedstocks.

## *Livestock and Meat Trade*

- The projections assume a gradual rebuilding of U.S. beef exports to Japan and South Korea. Even with these gains, however, total U.S. beef exports do not return to 2003 levels until 2013.
- The projections assume Canadian cattle and beef from cattle over 30 months of age can be exported to the United States under the conditions that they are age-verifiable and born after March 1, 1999.
- The projections assume implementation of mandatory country of origin labeling (COOL) for beef and veal, pork, lamb, and poultry meat based on the interim final rule published in August 2008. These requirements add costs associated with the tracking of livestock and the labeling of meat. Since August 2008, a final rule has been published and is currently under review.

### *International Policy*

- Trade projections assume that countries comply with existing bilateral and multilateral agreements affecting agriculture and agricultural trade. The report incorporates effects of trade agreements and domestic policies in place in November 2008.
- 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, long-term economic and trade reforms in many developing countries are assumed to continue.

### *International Biofuels*

- The production of biofuels has experienced rapid growth in a number of countries. The projections assume that the most significant increases in foreign biofuel production over the next decade will be in the European Union (EU), Brazil, Argentina, and Canada.
- The projections assume that the EU biofuel target of 5.75 percent of total transportation fuel use by 2010 and mandate of 10 percent by 2020 are only partially met. Nonetheless, growth in biodiesel demand in the EU is a key factor underlying gains in global demand for vegetable oils and oilseeds.

### *Prices*

- Long-term growth in global demand for agricultural products, in combination with the continued presence of U.S. ethanol demand in the corn sector and EU biodiesel demand for vegetable oils, holds prices for corn, oilseeds, and many other crops well above their historical levels, although season-average annual prices are not projected to reach the record highs seen in the first half of 2008.
- Continued high grain and oilseed prices raise feed costs in the livestock sector, leading to reduced U.S. production of total meat and poultry production through 2011 and higher meat prices.
- Sustained biofuel demand and strengthening global food demand after the current economic slowdown provide a major impetus for long-term projections of strong farm income.
- Retail food prices rise faster than overall inflation through 2011, partly reflecting higher meat prices (particularly in 2010 and 2011) as the livestock sector adjusts to increased feed costs. Then consumer food prices in the United States return to the longer term relationship of rising less than the general inflation rate over the remainder of the projection period.

## 2008 Farm Act Overview

The Food, Conservation, and Energy Act of 2008, enacted into law in June 2008, governs the bulk of Federal agriculture and related programs for the next 5 years. Its 15 titles include administrative and funding authorities for programs that cover income and commodity price support, farm credit, and risk management; conservation through land retirement, stewardship of land and water resources, and farmland protection; food assistance and agricultural development efforts abroad and promotion of international access to American farm products; food stamps, domestic food distribution, and nutrition initiatives; rural community and economic development initiatives; and encouraging production and use of agricultural and rural renewable energy sources.

The 2008 Farm Act continues many of the commodity programs from recent farm legislation. The Act provides income support, with new payment and eligibility limits, for wheat, feed grains, cotton, rice, oilseeds, and pulses through direct payments (except pulses), counter-cyclical payments, marketing loan assistance program, and new average crop revenue election (ACRE) payments.

- Direct payment rates are unchanged, but eligible payment acres are reduced from 85 percent of base acres to 83.3 percent for crop years 2009-11.
- Loan rates, specified in the legislation, are unchanged for crop year 2008, but increase for wheat, barley, oats, other oilseeds, and wool for crop years 2010-12. Loan rates for dry peas and lentils are lowered for crop years 2009-12. Large chickpeas become loan eligible in 2009.
- The target price for upland cotton is lowered to 71.25 cents per pound. Target prices increase for wheat, grain sorghum, barley, oats, soybeans, and other oilseeds for crop years 2010-12. Target prices are specified for dry peas, lentils, and small chickpeas and large chickpeas beginning with the 2009 crop year, with these crops becoming eligible for counter-cyclical payments.
- The ACRE program is a new market-based, counter-cyclical revenue program beginning in 2009 which incorporates national prices and state- and farm-level yields. This optional program is an alternative to counter-cyclical payments with the election to receive ACRE payments also requiring a 20 percent reduction in direct payments and a 30 percent reduction in the loan rate.
- Sugar loan rates are raised and a new program is added to use surplus sugar for bioenergy production.
- Dairy price support is revised by specifying mandated purchase prices for manufactured dairy products and allowing purchase prices to decline if purchase levels exceed certain levels.
- The Milk Income Loss Contract (MILC) Program continues, but is modified for the period October 1, 2008 through August 31, 2012. The payment rate percentage applied to the difference between the MILC target price and the Boston milk marketing order Class I price is raised in this period. The quantity of milk eligible for MILC payments for all producers on a single dairy operation is also higher during this period. Additionally, starting in January 2008, the MILC target price is adjusted when the National Average Dairy Feed Ration Cost exceeds designated levels (\$7.35 per hundredweight through August 2012; \$9.50 per hundredweight in subsequent months).
- The Act reduces subsidies to insurance companies for selling and servicing crop insurance policies and increases administrative fees paid by farmers for minimum insurance coverage level.
- A new, whole-farm Supplemental Agricultural Disaster Assistance Program provides revenue-based disaster protection to crop producers and disaster assistance for livestock (including aquaculture and honey bees), forage, and tree and nursery crops.

New titles provide for horticultural crops and organic agriculture and for the livestock and poultry sector.

- The Specialty Crop Block Grant Program continues with increased mandatory funding.

--Continued

### **2008 Farm Act Overview (Continued)**

- Livestock mandatory reporting expands and country-of-origin labeling continues, with some additional commodities added.
- New rules governing hog and poultry production contracts and meat and poultry plant food safety are introduced.

Conservation provisions emphasize and expand working land conservation and environmental practices, while continuing land retirement and farmland preservation programs.

- Conservation on working land is emphasized by increasing funding for the Environmental Quality Incentives Program and the new Conservation Stewardship Program (successor to the Conservation Security Program).
- The Conservation Reserve Program acreage cap is reduced to 32 million acres from 39.2 million acres, beginning on October 1, 2009.
- Emphasis on wetland restoration and farmland preservation continues with expansion of Wetland Reserve Program, Farmland Protection Program, and Grassland Reserve Program.

The Trade title repeals several export assistance programs, while continuing and expanding market development programs.

- The Intermediate Export Guarantee Program (GSM-103), Supplier Credit Guarantee Program, and Export Enhancement Program are repealed.
- Required spending on nonemergency food assistance is increased.
- Mandatory funding for McGovern-Dole International Food for Education and Child Nutrition Program is provided.

Support for nutrition programs expands.

- Benefits and eligibility increase for the Food Stamp Program (FSP), renamed the Supplemental Nutrition Assistance Program (SNAP), beginning in 2009. Additional adjustments for inflation are provided.
- The Fresh Fruit and Vegetable Program and farmers' market and food distribution programs also receive increased funding.

Rural development programs funds planning, coordination, and implementation of rural community and economic development programs.

- Programs continue to emphasize business and economic development and enhanced infrastructure, especially for health care and communications systems.
- Value-added agricultural activities, including renewable energy and locally and regionally produced agricultural products also receive greater attention.

The 2008 Farm Act also includes a number of tax provisions, including several related to biofuels.

- A temporary production tax credit for cellulosic biofuels is provided.
- The tax credit for ethanol blending is reduced to 45 cents per gallon from 51 cents per gallon. This reduction took place at the start of 2009 since the ethanol production trigger was met in 2008.

For further information on the 2008 Farm Act, see *2008 Farm Bill Side-By-Side* at <http://www.ers.usda.gov/FarmBill/2008/Overview.htm>

## Macroeconomic Assumptions

Macroeconomic assumptions underlying USDA's long-term projections reflect a near-term global economic slowdown due to the current financial crisis, followed by a transition back toward steady growth at longrun sustainable rates in 2011 and beyond. Implicit in these assumptions is the U.S. Federal Reserve Board and other major central banks around the world taking aggressive action to counter the financial crisis, and governments also being aggressive in providing stimulus to overcome the economic downturn to keep it short-lived (see box, *Global Economic Slowdown*, page 9). The macroeconomic assumptions were completed in October 2008.

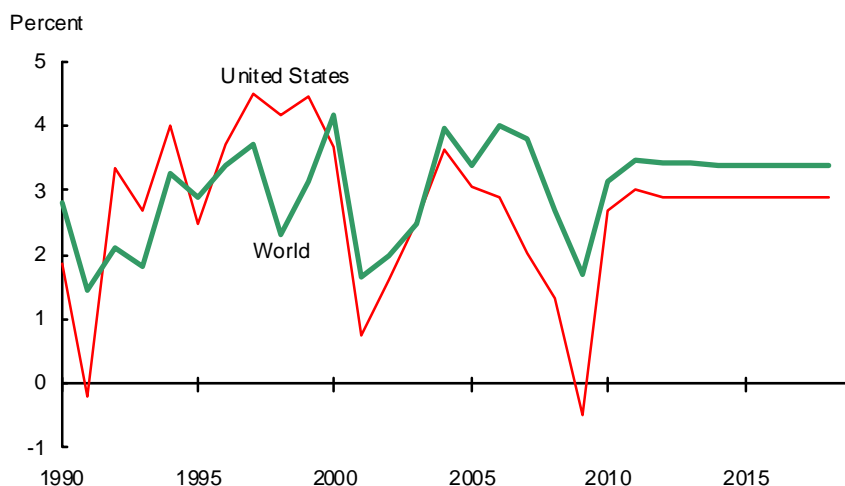
After averaging 3 percent annually between 2001 and 2008, overall world economic growth is projected to increase only 1.7 percent in 2009. Global growth then is projected to average 3.4 percent in 2010 through 2018. The projections assume slowing rates of growth in developed countries and continued strong growth in developing countries and countries of the former Soviet Union.

The financial crisis has a significant impact on economic growth in the United States. The U.S. economy grows 1.3 percent in 2008, contracts by 0.5 percent in 2009, and resumes growth of only 2.5 percent in 2010. After 2010, U.S. growth moves back toward a sustainable rate near 3 percent. Nonetheless, the U.S. share of global gross domestic product (GDP) falls to 25 percent by the end of the projections from 27 percent in 2007.

The return of global economic growth after 2009 and continued population gains are expected to boost food demand. The longer term increases in global purchasing power and population, competing against demand for biofuels and other domestic uses, are important factors shaping the projections for world trade, U.S. agricultural exports, and for commodity prices. Also supporting the outlook for U.S. agricultural exports is the cumulative effect of the depreciated U.S. dollar since 2002.

The global economic slowdown has dampened inflation. Even with the U.S. and world economies projected to move back toward stronger, sustainable growth, global inflation is projected at relatively low rates, averaging about 3 percent globally through 2018. The U.S. Federal Reserve Board and other major central banks are assumed to continue policies to balance growth against increasing inflation.

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



## **Global Economic Slowdown**

The U.S. recession and the world economic slowdown assumed for 2009 reflect the current global financial crisis. The U.S. housing market downturn, which began in late 2006, spread to the housing finance sector and then into the banking and financial sectors worldwide, significantly affecting the U.S. economy by the spring of 2008. By the third quarter of 2008, effects of the financial crisis had spread to much of the developed world. Numerous policy actions—lowering interest rates by the world's central banks, targeting activities by various agencies to aid homeowners, providing a fiscal stimulus package, and implementing rescue packages to support failing financial institutions—were designed to mitigate the size of the economic downturn. Despite these policies, the United States and most developed economies are in recession and economic growth in the developing world is slowing.

The global economic slowdown has been severe enough to reverse the sharp rise in oil prices, which likely contributed to the economic slowdown. Crude oil prices, which were near \$150 per barrel at their peak in mid-2008, fell to under \$50 per barrel by the end of the year. Other commodity prices slid as well. The U.S. dollar strengthened against major foreign currencies except the yen, reflecting a flight from risky assets.

U.S. farm operators entered the economic downturn in a strong financial position following a period of record farm incomes and rising farmland values. However, lower prices, in part brought on by the global economic downturn, will reduce U.S. farm income in 2009. Additionally, any declines in off-farm incomes could negatively affect the finances of farm households. Lenders specializing in farm lending are in relatively good financial shape with farm loan default and loss rates only recently creeping up. Small rural banks, which are major providers of farm operating credit, do not appear to have been large investors in the risky securities that have troubled larger banks. Nonetheless, a large share of farm credit comes from these larger banks.

The U.S. and world economies are assumed to improve after 2009. Growth prospects in 2010 are for a solid, but not stellar, economic rebound, with the U.S. dollar weakening somewhat and crude oil prices rising. By 2012, the macroeconomic assumptions largely reflect a return to expected long-term trends, with higher U.S. interest rates as the Federal Reserve Board boosts rates to forestall inflation.

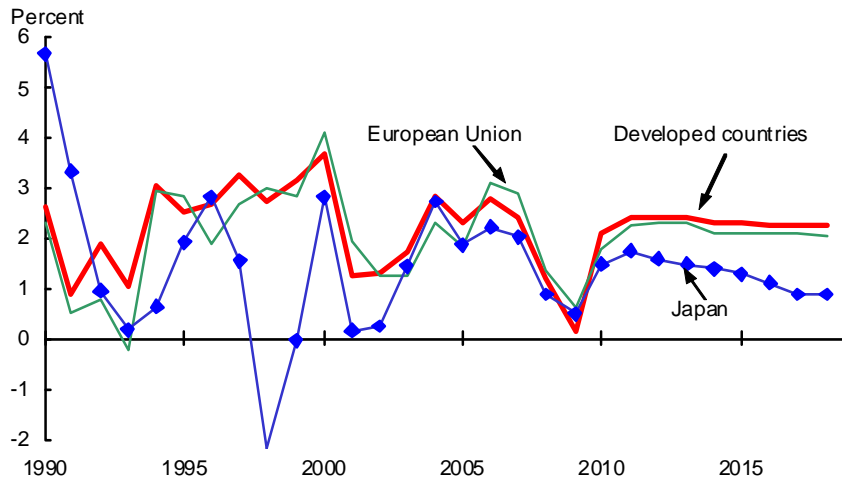
### **Macroeconomic Outlook Uncertainty**

There is significant uncertainty in the macroeconomic outlook. The decline in prices for oil and other commodities, low short-term interest rates, and the potential for conditions in credit markets to be eased could bring a shorter and shallower economic slowdown than in the macroeconomic assumptions. Rapid action by policymakers and regulators to address various aspects of the financial and housing crises provides further support for this alternative outcome.

However, there is also the possibility of a deeper and longer lasting U.S. recession than assumed. The recent declines in consumer spending, the large overhang of excess housing, and the spillover of the mortgage crisis into other domestic and international financial markets are some of the factors that could slow the economy further.

There is also a very small possibility of sustained and deep price deflation. Consistent with this scenario would be a sharp rise in the value of the U.S. dollar as a safe haven for international financial markets and a sharper and more protracted slowdown in world economic growth going into 2010. This situation, if realized, could have severe short-to-medium term repercussions for farm commodity prices as well as the volume and value of U.S. agricultural exports.

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

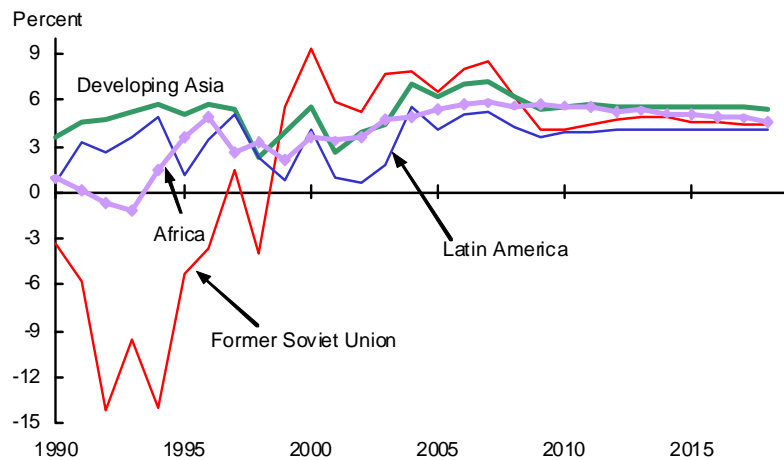


Developed economies are projected to grow at rates almost half a percentage point less than the 1970-2008 historical average, to an average around 2.2 percent in 2009-18. Economic growth rates for the European Union (EU) remain below 2 percent per year in the projection period, also around a 0.5 percentage point below their historical average. Japan is projected to have modest growth of 1.25 percent per year on average. As a consequence, both the EU and Japan account for smaller shares of global GDP.

- The EU does not grow as rapidly as the U.S. economy because of lingering structural rigidities, particularly inflexible labor laws and a very expensive social security system. Political difficulties also constrain the benefits of economic integration, particularly with continued restrictions on labor mobility between EU countries and a very cumbersome EU decisionmaking process. Unemployment rates decline from double-digit rates, however, indicating some progress in increasing employment flexibility.
- Japan continues to face constraints to economic growth, largely the result of long-term structural rigidities (such as legal constraints to new business entry), a difficult political process for economic reform, and a rapidly aging population. Japan's labor market liberalization partly offsets these constraints, aiding productivity growth. Japan's increasing integration with the other economies of Asia, especially China, further mitigates the growth constraints in the Japanese economy. The projections assume sustained economic growth in Japan of just over 1 percent per year, with the country's share of world GDP declining to 7.5 percent by 2018, down from almost 11 percent in 1991. While Japan's projected growth remains relatively low compared with most other countries, it represents a modest improvement from its growth in the 1990s.



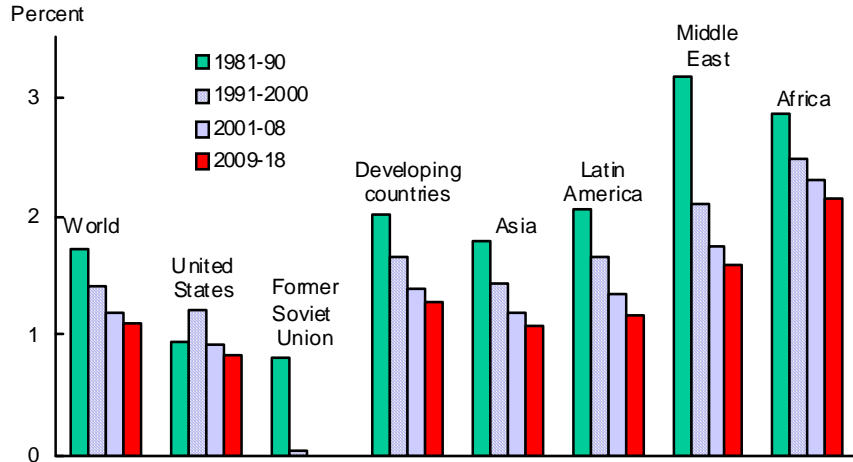
### GDP growth for developing economies and the former Soviet Union



Economic growth in developing countries is projected to average 5.6 percent annually during 2009-18. These countries will play an increasingly important role in global growth in food demand and will become a more important destination for U.S. agricultural exports. Relatively high income growth, along with large responsiveness of consumption and imports of food and feed to income growth in these countries, underlies this result. As incomes rise in developing countries, consumers generally diversify their diets, moving away from staple foods to include more meat, dairy products, fruits, vegetables, and processed foods (including vegetable oils). These consumption shifts increase import demand for feedstuffs and high-value food products.

- Continued strong growth in China, India, and the rest of Asia make this region an increasingly important part of the global economy, with Asia's share of world GDP rising to almost 30 percent by the end of the projection period. Relatively high oil prices, by historical standards, assumed in the projections modestly constrain Asia from even higher economic growth since the manufacturing sector in Asian countries is far more dependent on energy for GDP growth than more developed economies. China's economic growth has been consistently the strongest in Asia, exceeding 10 percent between 2003 and 2007. While some slowing is expected, China's growth is expected to average more than 7.5 percent over the next decade. India's projected average economic growth of 7.5 percent per year puts it in the top tier of high-growth countries. Nonetheless, India is still a low-income country, with real (inflation-adjusted) 2005-based per capita income of \$849 in 2008, compared with \$2,350 in China. Continued strong income growth is expected to bring India's real per capita income to more than \$1,500 by 2018 and is expected to move a significant number of people out of poverty. Projected growth for Southeast Asia exceeds 4.9 percent for the next decade while growth in developing countries of East Asia is projected to be 5.5 percent. Although large, these projected growth rates are below the very strong average economic growth in these regions in 1971-2008.
- Long-term growth of 4 percent is projected for Latin America. An overall improvement in macroeconomic policies has attracted foreign capital inflows (particularly foreign direct investment, notably to Chile, Colombia, and Brazil) and sustained growth in the region.
- Economic growth in the countries of the former Soviet Union (FSU) is projected to average 5.0 percent annually for the next decade as Russia, Ukraine, and other FSU countries benefit from their shift to more market-oriented economies. Russia and other energy-rich FSU countries also benefit from relatively high oil prices.

### Population growth continues to slow



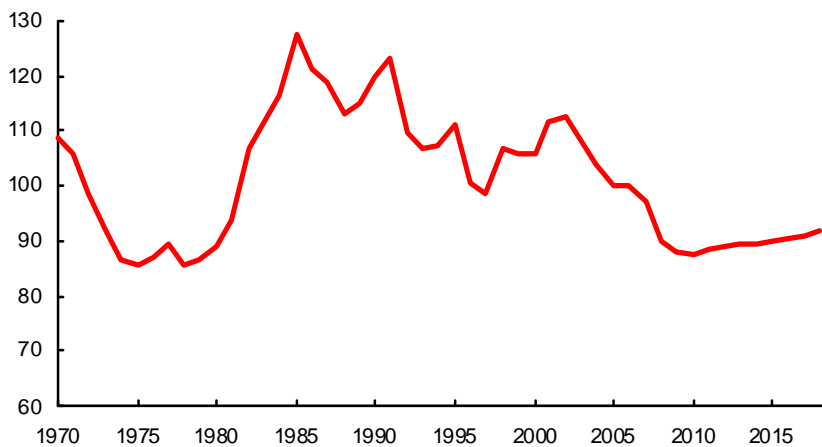
Source: U.S. Department of Commerce, U.S. Census Bureau and U.S. Department of Agriculture, Economic Research Service.

A continued slowing of population growth around the world limits increases in food and agricultural demand over the next decade. World population growth declines from an annual rate of 1.7 percent in the 1980s to an average of just over 1.1 percent per year for the projection period.

- Developed countries have very low projected rates of population growth, at 0.35 percent over 2009-18. Projected annual average population growth rate for the United States is the highest among developed countries, at 0.9 percent, in part reflecting large immigration.
- Overall, population in the former Soviet Union is projected to decline moderately. Population growth rates in developing economies are projected to be sharply lower than rates in the 1980s and 1990s, but remain above those in developed countries and the FSU. As a result, the share of world population accounted for by developing countries increases to nearly 84 percent by 2018, compared to 78 percent in the 1980s and 80 percent in the 1990s.
- China and India together account for more than one-third of the world's population. China's population growth rate slows from 1.5 percent per year in 1981-90 to 0.6 percent in 2009-18. The population growth rate in India, the world's second most populous nation, is projected to decline from 2.1 percent to 1.5 percent per year between the same periods.
- Brazil's population growth rate falls from 2.1 percent per year in 1981-90 to 1.1 percent annually in 2009-18. Sub-Saharan Africa's population growth rate declines from 2.9 percent to 2.3 percent per year between the same periods, leaving this impoverished region with the highest population growth rate in the world.
- There are a number of countries with declining populations, including Japan, Russia, Ukraine, and countries in Western and Central Europe. Additionally, several countries in Sub-Saharan Africa are projected to have declining populations resulting from the AIDS epidemic, including the Republic of South Africa.

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

Index values, 2005=100

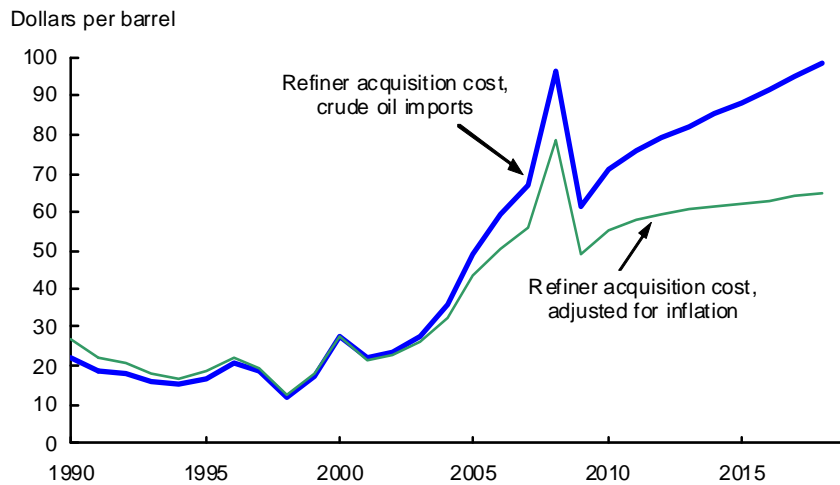


1/ Real U.S. agricultural trade-weighted dollar exchange rate, using U.S. agricultural export weights, based on 192 countries.

The U.S. dollar depreciated 20 percent between February 2002 and April 2008, a facilitating factor in the growth in U.S. agricultural exports. Since April 2008, the U.S. dollar has generally appreciated. On an annual basis, the U.S. dollar is projected to strengthen moderately from 2010 to 2018. Despite this projected appreciation, the dollar's low level relative to the early 2000s is likely to continue to positively impact U.S. exports.

- Strong GDP growth in the United States relative to the EU and Japan will tend to reverse the appreciation of the euro to the U.S. dollar and offsets some of the trade-driven appreciation of the yen.
- China initiated a process for appreciating its currency in 2005 after a long period of maintaining a fixed nominal exchange rate and an undervalued currency. The projections assume that China allows its real exchange rate to continue to appreciate, but at decreasing rates. The appreciation of China's currency also leads to some appreciation of other Asian currencies. These exchange rate developments will strengthen U.S. agricultural exports to Asian countries.
- Among agricultural products, U.S. exports of bulk commodities and horticultural products tend to be the most sensitive to swings in the U.S. dollar's value, because they face more global trade competition.

### U.S. crude oil prices



Crude oil prices rose sharply from late 2002 into 2008, much of which reflected increased crude oil demand due to a robust world economic growth and rapid manufacturing growth in China, India, and other countries in Asia. At its peak in July 2008, the refiner acquisition cost of crude oil imports reached \$147 a barrel. The weakening of the U.S. and global economies toward the end of 2008 and resulting decline in demand for petroleum and other energy supplies pushed crude oil prices down more than 70 percent from the peak values.

- Crude oil prices are assumed to rebound in 2009 and average about \$60 per barrel. Prices are then assumed to increase over the remainder of the projection period as global economic activity picks up. From 2010 through 2018, crude oil prices are expected to rise somewhat faster than the general inflation rate. By the end of the projection period, the refiner acquisition cost for crude oil imports is projected to be near \$100 per barrel.

Table 1. U.S. macroeconomic assumptions

Item	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
GDP, billion dollars												
Nominal	13,808	14,295	14,508	15,212	16,013	16,840	17,710	18,624	19,586	20,597	21,661	22,780
Real 2000 chained dollars	11,524	11,674	11,615	11,929	12,287	12,643	13,010	13,387	13,775	14,175	14,586	15,009
percent change	2.0	1.3	-0.5	2.7	3.0	2.9	2.9	2.9	2.9	2.9	2.9	2.9
Disposable personal income												
Nominal (billions)	10,171	10,516	10,737	11,263	11,838	12,441	13,076	13,743	14,444	15,180	15,954	16,768
percent change	5.5	3.4	2.1	4.9	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
Nominal per capita, dollars	33,666	34,486	34,883	36,255	37,757	39,324	40,959	42,666	44,447	46,306	48,245	50,270
percent change	4.5	2.4	1.2	3.9	4.1	4.2	4.2	4.2	4.2	4.2	4.2	4.2
Real (billion 2000 chained)	8,644	8,748	8,757	9,002	9,263	9,531	9,808	10,092	10,385	10,686	10,996	11,315
percent change	2.8	1.2	0.1	2.8	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
Real per capita, 2000 dollars	28,615	28,686	28,448	28,976	29,544	30,126	30,722	31,332	31,957	32,597	33,251	33,921
percent change	1.8	0.3	-0.8	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.2
Consumer spending												
Real (billion 2000 chained)	8,253	8,327	8,285	8,493	8,730	8,975	9,226	9,484	9,750	10,023	10,304	10,592
percent change	2.8	0.9	-0.5	2.5	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
Inflation measures												
GDP price index, chained, 2000=100	119.8	122.5	124.9	127.5	130.3	133.2	136.1	139.1	142.2	145.3	148.5	151.8
percent change	2.7	2.2	2.0	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
CPI-U, 1982-84=100	207.3	216.3	221.0	226.5	232.2	238.0	244.0	250.1	256.3	262.7	269.3	276.0
percent change	2.9	4.3	2.2	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
PPI, finished goods 1982=100	166.6	179.9	181.7	185.3	188.5	191.3	194.2	196.9	199.7	202.5	205.3	208.2
percent change	3.9	8.0	1.0	2.0	1.7	1.5	1.5	1.4	1.4	1.4	1.4	1.4
PPI, crude goods 1982=100	207.1	254.7	229.3	236.1	242.0	246.9	251.1	254.8	258.4	261.8	265.2	268.6
percent change	12.1	23.0	-10.0	3.0	2.5	2.0	1.7	1.5	1.4	1.3	1.3	1.3
Crude oil price, \$/barrel												
EIA refiner acq. cost, imports	67.1	96.3	61.0	70.7	75.5	79.0	82.0	85.1	88.3	91.5	94.9	98.4
percent change	14.0	43.5	-36.7	15.9	6.8	4.6	3.8	3.8	3.7	3.7	3.7	3.7
Real 2000 chained dollars	56.0	78.7	48.8	55.4	57.9	59.3	60.2	61.2	62.1	63.0	63.9	64.8
percent change	11.0	40.4	-37.9	13.5	4.5	2.4	1.6	1.5	1.5	1.5	1.5	1.5
Labor compensation per hour nonfarm business, 1992=100												
	175.3	182.0	187.8	193.4	198.6	204.0	209.5	215.2	221.0	226.9	233.1	239.4
percent change	4.1	3.8	3.2	3.0	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
Interest rates, percent												
3-month Treasury bills	4.4	1.5	0.9	2.0	3.6	4.8	4.8	4.8	4.8	4.8	4.8	4.8
3-month commercial paper	5.1	2.4	2.9	2.5	4.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
Bank prime rate	8.1	5.2	4.1	5.5	8.0	8.2	8.2	8.2	8.2	8.2	8.2	8.2
10-year Treasury bonds	4.6	3.7	3.6	4.0	5.0	5.8	5.8	5.8	5.8	5.8	5.8	5.8
Moody's Aaa bond yield index	5.6	5.7	6.0	6.0	5.5	6.2	6.2	6.2	6.2	6.2	6.2	6.2
Labor and population												
Civilian unemployment rate, percent	4.7	5.8	6.3	6.4	6.0	5.8	5.8	5.8	5.8	5.8	5.8	5.8
Nonfarm payroll emp., millions	137.7	137.8	137.6	138.5	139.5	140.6	141.9	143.2	144.4	145.7	147.1	148.4
percent change	1.1	0.1	-0.2	0.7	0.7	0.8	0.9	0.9	0.9	0.9	0.9	0.9
Total population, millions	302.1	304.9	307.8	310.7	313.5	316.4	319.2	322.1	325.0	327.8	330.7	333.6
percent change	1.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9

Domestic macroeconomic assumptions were completed in October 2008. CPI-U is the consumer price index for all urban consumers. PPI is the producer price index. EIA is the Energy Information Administration, U.S. Department of Energy.

Table 2. Global real GDP growth assumptions

Region/country	GDP, 2007	Share of world GDP		Per capita income,						Average		
		2005-2007	2007	2007	2008	2009	2010	2011	2012	1991-2000	2001-2008	2009-2018
	<i>Bil. 2005 dollars</i>	<i>Percent</i>	<i>2005 dollars</i>	<i>Percent change</i>								
World	48,327	100.0	7,292	3.8	2.7	1.7	3.1	3.5	3.5	2.7	3.0	3.2
Less United States	35,277	72.6	5,576	4.5	3.2	2.5	3.3	3.6	3.6	2.5	3.3	3.4
North America	14,325	30.1	42,878	2.1	1.2	-0.4	2.7	3.0	2.9	3.3	2.2	2.5
Canada	1,274	2.7	38,688	2.7	0.7	0.2	2.4	2.8	3.0	2.9	2.4	2.5
United States	13,050	27.4	43,337	2.0	1.3	-0.5	2.7	3.0	2.9	3.3	2.2	2.5
Latin America	3,027	6.2	5,293	5.2	4.2	3.7	4.0	4.0	4.2	3.1	3.4	4.0
Mexico	830	1.7	7,638	3.3	2.2	1.5	2.8	3.2	3.8	3.5	2.4	3.5
Caribbean & Central America	312	0.6	3,919	4.2	3.0	3.9	4.3	4.3	4.8	3.1	3.2	4.4
South America	1,885	3.8	4,913	6.3	5.3	4.5	4.4	4.2	4.2	3.0	3.9	4.2
Argentina	205	0.4	5,118	8.6	5.6	4.7	4.0	3.9	3.8	4.4	4.3	3.7
Brazil	1,016	2.2	5,526	5.4	5.1	4.1	4.0	3.8	4.0	2.6	3.5	4.0
Other	609	1.2	4,065	7.0	5.6	5.3	5.3	5.0	4.7	3.3	4.6	4.7
Europe	15,252	31.8	28,836	2.9	1.4	0.7	1.8	2.3	2.3	2.1	2.0	2.0
European Union-27	14,452	30.2	29,470	2.9	1.4	0.6	1.8	2.3	2.3	2.1	2.0	2.0
Other Europe	800	1.7	21,234	3.7	2.4	1.6	1.9	1.9	1.9	1.9	2.2	2.0
Former Soviet Union	1,202	2.4	4,334	8.5	6.2	4.0	4.1	4.5	4.8	-4.0	7.0	4.5
Russia	922	1.8	6,521	8.1	6.0	4.0	4.0	4.3	4.5	-3.6	6.5	4.5
Ukraine	97	0.2	2,102	7.7	5.0	2.6	3.0	4.0	5.0	-7.7	7.3	4.2
Other	183	0.4	2,037	11.2	8.1	5.0	5.0	5.5	5.9	-3.8	9.8	4.8
Asia and Oceania	11,980	24.3	3,239	5.9	4.6	3.8	4.5	4.8	4.7	3.7	4.6	4.5
East Asia	8,875	18.1	5,711	5.6	4.3	3.4	4.2	4.5	4.4	3.4	4.3	4.2
China	2,873	5.5	2,173	11.9	9.8	7.5	7.8	7.8	7.7	10.5	10.1	7.6
Hong Kong	197	0.4	28,276	6.4	4.8	4.8	5.2	5.0	4.6	4.5	4.9	4.4
Japan	4,468	9.4	35,060	2.0	0.9	0.5	1.5	1.8	1.6	1.2	1.5	1.2
Korea	933	1.9	19,343	5.0	3.9	3.0	4.0	4.7	4.4	6.2	4.6	4.0
Taiwan	389	0.8	17,035	5.7	4.0	3.8	4.3	4.5	4.3	6.5	4.3	4.0
Southeast Asia	1,073	2.2	1,860	6.4	5.4	4.9	5.2	5.2	5.1	5.2	5.1	4.9
Indonesia	335	0.7	1,428	6.3	6.0	4.9	5.4	5.2	5.0	4.4	5.2	4.8
Malaysia	152	0.3	6,116	6.3	6.0	4.8	5.0	5.3	5.0	7.2	5.1	4.8
Philippines	118	0.2	1,250	7.3	4.4	4.3	4.8	5.0	5.3	3.1	4.7	4.6
Thailand	206	0.4	3,173	4.8	5.3	5.2	5.1	5.0	5.0	4.6	5.0	4.9
Vietnam	61	0.1	720	8.4	6.7	6.5	7.8	7.9	8.0	7.4	7.6	7.4
South Asia	1,144	2.3	747	8.5	7.2	6.4	6.9	7.8	7.6	5.2	7.0	7.2
Bangladesh	61	0.1	404	6.5	6.2	5.8	6.6	6.5	6.3	4.8	5.7	5.9
India	906	1.8	802	9.0	7.5	6.5	7.3	8.3	8.0	5.5	7.4	7.5
Pakistan	129	0.3	760	6.4	5.7	6.0	4.8	5.4	5.4	4.0	5.5	5.4
Oceania	888	1.8	24,972	4.1	2.7	2.6	3.0	3.2	3.1	3.5	3.3	3.1
Australia	753	1.6	36,271	4.3	2.7	2.7	3.0	3.2	3.2	3.6	3.3	3.1
New Zealand	105	0.2	25,514	3.2	2.0	2.0	3.0	3.3	3.1	2.9	3.2	3.0
Middle East	1,406	2.9	5,286	4.9	5.8	5.2	4.7	4.8	4.9	4.4	3.9	4.8
Iran	58	0.1	884	6.6	5.8	5.4	5.5	4.8	4.7	4.0	5.9	4.6
Iraq	142	0.3	5,178	5.1	6.8	10.5	8.1	7.7	6.3	9.5	12.3	6.7
Saudi Arabia	334	0.7	12,112	3.4	6.8	5.9	5.2	5.2	5.2	2.6	4.3	5.3
Turkey	381	0.8	5,352	4.5	3.9	3.2	4.0	4.6	4.9	3.6	4.7	4.5
Other	491	1.0	6,601	6.1	6.3	4.6	3.7	3.8	4.1	4.8	5.0	4.1
Africa	1,135	2.3	1,194	5.9	5.7	5.7	5.6	5.5	5.3	2.0	4.9	5.2
North Africa	348	0.7	2,124	4.9	5.5	6.2	5.8	5.3	5.0	3.5	4.6	5.1
Algeria	105	0.2	3,148	3.4	3.6	5.8	6.0	5.7	5.0	1.7	4.1	5.0
Egypt	112	0.2	1,391	7.2	6.0	6.5	5.8	5.0	4.5	4.5	4.9	4.7
Morocco	57	0.1	1,684	2.2	6.1	5.6	5.4	5.3	5.2	2.4	4.6	5.0
Tunisia	31	0.1	3,044	6.3	5.6	5.9	6.1	6.0	5.9	4.8	4.9	5.8
Sub-Saharan Africa	787	1.6	1,000	6.3	5.8	5.5	5.5	5.6	5.4	1.3	5.0	5.2
Republic of South Africa	245	0.5	5,070	5.1	3.6	2.5	3.5	4.5	5.0	1.8	3.9	4.6
Other Sub-Saharan Africa	541	1.1	733	6.8	6.7	6.8	6.4	6.0	5.6	1.1	5.6	5.5

International macroeconomic assumptions were completed in October 2008.

Table 3. Population growth assumptions

Region/country	Population in 2007	2007	2008	2009	2010	2011	2012	Average		
								1991-2000	2001-2008	2009-2018
	<i>Millions</i>	<i>Percent change</i>								
World <sup>1</sup>	6,628	1.2	1.2	1.2	1.2	1.2	1.2	1.4	1.2	1.1
Less United States	6,326	1.2	1.2	1.2	1.2	1.2	1.2	1.4	1.2	1.1
North America	334	0.9	0.9	0.9	0.9	0.9	0.9	1.2	0.9	0.8
Canada	33	0.9	0.8	0.8	0.8	0.8	0.8	1.1	0.8	0.8
United States	301	0.9	0.9	0.9	0.9	0.9	0.9	1.2	0.9	0.9
Latin America	572	1.3	1.3	1.3	1.2	1.2	1.2	1.6	1.3	1.2
Mexico	109	1.2	1.2	1.1	1.1	1.1	1.1	1.6	1.2	1.1
Caribbean & Central America	80	1.5	1.5	1.5	1.5	1.5	1.4	1.7	1.5	1.4
South America	384	1.3	1.3	1.2	1.2	1.2	1.2	1.6	1.4	1.1
Argentina	40	1.1	1.1	1.1	1.1	1.0	1.0	1.2	1.0	1.0
Brazil	194	1.3	1.3	1.2	1.2	1.2	1.1	1.6	1.4	1.1
Other	150	1.4	1.4	1.3	1.3	1.3	1.3	1.9	1.4	1.3
Europe	529	0.2	0.1	0.1	0.1	0.1	0.1	0.3	0.2	0.1
European Union-27	490	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1
Other Europe	38	0.5	0.5	0.5	0.5	0.4	0.3	0.6	0.4	0.3
Former Soviet Union	277	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	0.0	-0.2	-0.1
Russia	141	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.1	-0.5	-0.5
Ukraine	46	-0.7	-0.7	-0.6	-0.6	-0.6	-0.6	-0.5	-0.8	-0.6
Other	90	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.6	0.7
Asia and Oceania	3,699	1.2	1.2	1.1	1.1	1.1	1.1	1.4	1.2	1.1
East Asia	1,554	0.5	0.5	0.6	0.6	0.6	0.6	0.9	0.5	0.5
China	1,322	0.6	0.6	0.6	0.7	0.7	0.7	1.0	0.6	0.6
Hong Kong	7	0.6	0.5	0.5	0.5	0.5	0.4	1.6	0.7	0.4
Japan	127	-0.1	-0.1	-0.2	-0.2	-0.3	-0.3	0.3	0.1	-0.3
Korea	48	0.3	0.3	0.3	0.3	0.2	0.2	0.9	0.4	0.2
Taiwan	23	0.3	0.3	0.2	0.2	0.2	0.2	0.9	0.4	0.2
Southeast Asia	577	1.3	1.3	1.2	1.2	1.2	1.2	1.7	1.4	1.1
Indonesia	235	1.2	1.2	1.2	1.1	1.1	1.1	1.6	1.3	1.0
Malaysia	25	1.8	1.8	1.7	1.7	1.7	1.7	2.2	1.9	1.7
Philippines	94	2.0	2.0	2.0	2.0	1.9	1.9	2.2	2.1	1.9
Thailand	65	0.7	0.7	0.6	0.6	0.6	0.6	1.1	0.7	0.5
Vietnam	85	1.0	1.0	1.0	1.0	1.0	1.0	1.6	1.1	1.0
South Asia	1,532	1.8	1.7	1.7	1.7	1.6	1.6	1.9	1.8	1.6
Bangladesh	150	2.1	2.1	2.0	2.0	1.9	1.9	1.7	2.1	1.8
India	1,130	1.6	1.6	1.6	1.5	1.5	1.5	1.8	1.7	1.5
Pakistan	169	2.1	2.0	2.0	1.9	1.9	1.9	2.5	2.1	1.8
Oceania	36	1.5	1.5	1.4	1.4	1.3	1.3	1.5	1.5	1.3
Australia	21	1.3	1.2	1.2	1.2	1.2	1.1	1.2	1.2	1.1
New Zealand	4	1.0	1.0	1.0	0.9	0.9	0.9	1.1	1.2	0.9
Middle East	266	1.7	1.7	1.7	1.7	1.7	1.7	2.1	1.7	1.6
Iran	65	0.6	0.7	0.8	0.9	1.0	1.0	1.1	0.5	1.0
Iraq	27	2.7	2.6	2.6	2.5	2.5	2.4	2.3	2.8	2.3
Saudi Arabia	28	2.2	2.0	1.9	1.8	1.7	1.6	3.7	2.5	1.5
Turkey	71	1.1	1.0	1.0	1.0	0.9	0.9	1.6	1.1	0.9
Other	74	2.8	2.7	2.7	2.7	2.6	2.6	3.2	2.9	2.5
Africa	951	2.3	2.3	2.2	2.2	2.2	2.2	2.5	2.3	2.1
North Africa	164	1.6	1.6	1.5	1.5	1.5	1.4	2.1	1.7	1.4
Algeria	33	1.2	1.2	1.2	1.2	1.2	1.2	1.9	1.3	1.1
Egypt	80	1.8	1.7	1.7	1.6	1.6	1.6	2.2	1.9	1.5
Morocco	34	1.6	1.5	1.5	1.5	1.4	1.4	2.0	1.6	1.4
Tunisia	10	1.0	1.0	1.0	1.0	1.0	1.0	1.5	1.0	0.9
Sub-Saharan Africa	787	2.4	2.4	2.4	2.4	2.4	2.3	2.6	2.4	2.3
Republic of South Africa	48	0.9	0.9	0.6	0.1	-0.2	-0.4	1.6	1.0	-0.1
Other Sub-Saharan Africa	738	2.5	2.5	2.5	2.5	2.5	2.5	2.7	2.5	2.4

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

Source: U.S. Department of Commerce, U.S. Census Bureau and U.S. Department of Agriculture, Economic Research Service. August 2008.

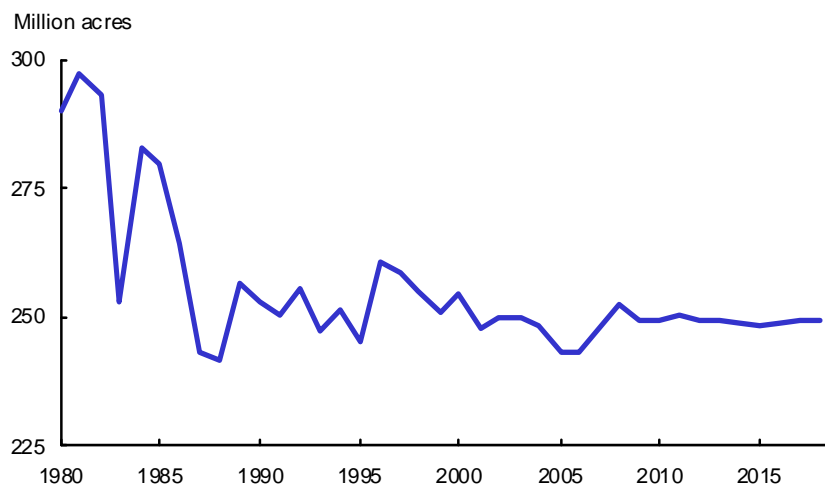
## Crops

Near-term weakness in the global economy diminishes demand growth for crops over the next several years. However, steady economic growth assumed later in the projections provides a more favorable demand setting. Although corn-based ethanol production in the United States is projected to slow, the large expansion in recent years keeps this use of corn high. In combination, these factors support longer run increases in global consumption and trade, with prices, although lower than in early 2008, remaining at historically high levels.

Projections for field crops reflect provisions of the Food, Conservation, and Energy Act of 2008 (2008 Farm Act), which are assumed to continue through the projection period. An important change in the 2008 Farm Act was the reduction in the maximum acreage enrollment in the Conservation Reserve Program (CRP). Rather than the previous cap on enrollment of 39.2 million acres, the new farm legislation sets the maximum at 32 million acres, beginning on October 1, 2009. With CRP enrollment at 34.8 million acres on September 30, 2008, this policy change provides some additional cropland for potential use in production rather than tightening cropland availability over the projection period.

Sustained high prices prompted by strong demand combined with reduced CRP enrollment keep U.S. cropland use high in the projections. Although declining somewhat from the high plantings in 2008 of over 252 million acres, projected plantings for the 8 major field crops remain near 250 million acres over the next 10 years.

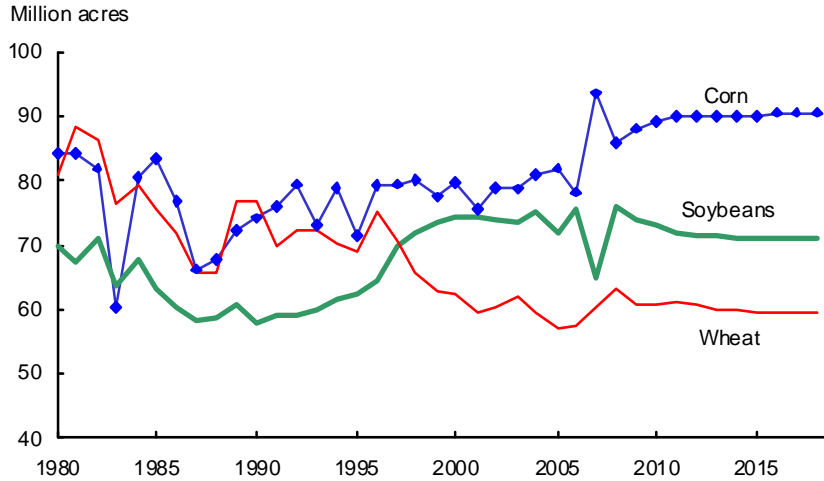
**U.S. planted area: Eight major crops 1/**



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



### U.S. planted area: Corn, wheat, and soybeans



Plantings of different crops are influenced by expected net returns. Net returns are determined by market prices, yields, and production costs, with returns augmented by marketing loan benefits when prices are low. Producer planting decisions are also affected by revenue protection available through the Federal Crop Insurance program and the new Average Crop Revenue Election (ACRE) program, which starts in 2009 under the 2008 Farm Act.

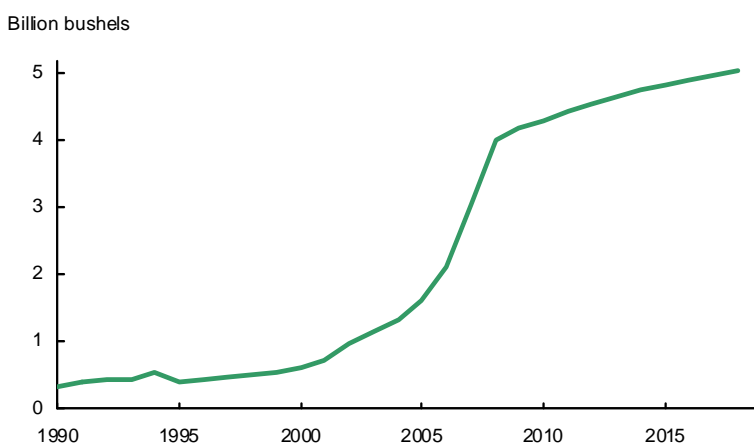
- A gradual shift to corn away from other crops reflects the high levels of domestic corn-based ethanol production and gains in exports that keep corn demand and producer returns strong. Following a decline in 2008, corn acreage increases to 90 million acres by 2011 and remains at or above that level over the remainder of the projection period.
- Soybean plantings decline over the next several years, but remain above 70 million acres as net returns remain favorable.
- Wheat plantings decline from the high level of 2008 as producer returns are lower. Wheat acreage falls below 60 million acres in the longer run as weak demand growth reduces the crop's competitiveness for land relative to other crops.

## Corn-based Ethanol Expansion Projected To Slow

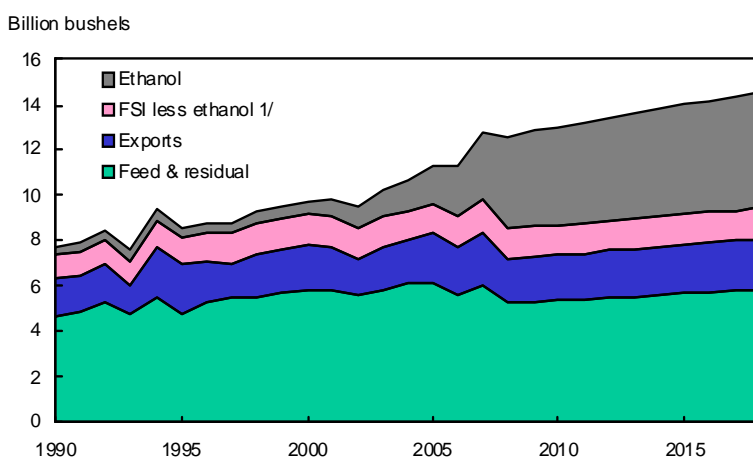
Ethanol production in the United States has increased rapidly over the past several years, from less than 3 billion gallons in 2003 to over 9 billion gallons in 2008. Most ethanol production in the United States currently uses corn as the feedstock, with close to a third of total corn use expected to go to ethanol production in the 2008/09 corn crop year.

These projections assume the tax credit available to blenders of ethanol and the 54-cent-per-gallon tariff on imported fuel ethanol remain in effect. While expansion in the ethanol industry continues, smaller gains for corn-based ethanol are projected, largely reflecting moderate growth in overall gasoline consumption in the United States. By the end of the projection period, ethanol production accounts for about 35 percent of corn use and corn-based ethanol production exceeds 9 percent of annual gasoline consumption. The continued presence of ethanol demand in the corn sector, in combination with other long-term factors, holds prices for corn and many other crops well above their historical levels, although season-average annual prices are not projected to reach the record highs seen in the first half of 2008.

**U.S. corn: Use for ethanol production**

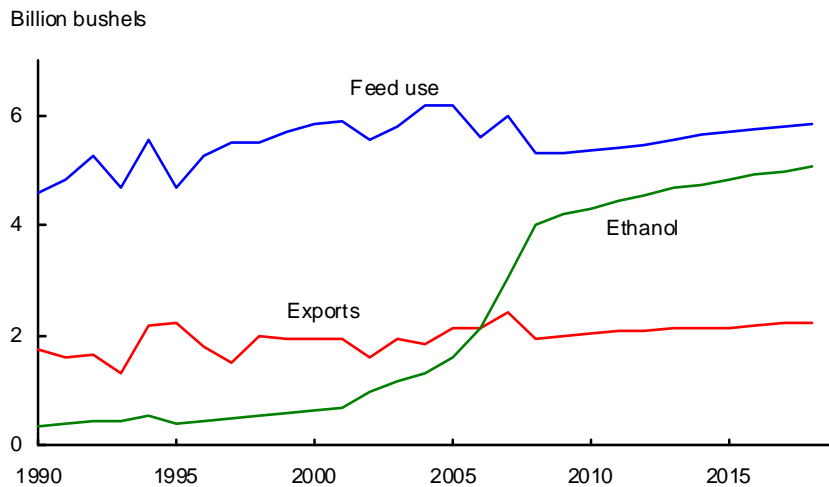


**U.S. corn use**



1/ Food, seed, and industrial use less ethanol.

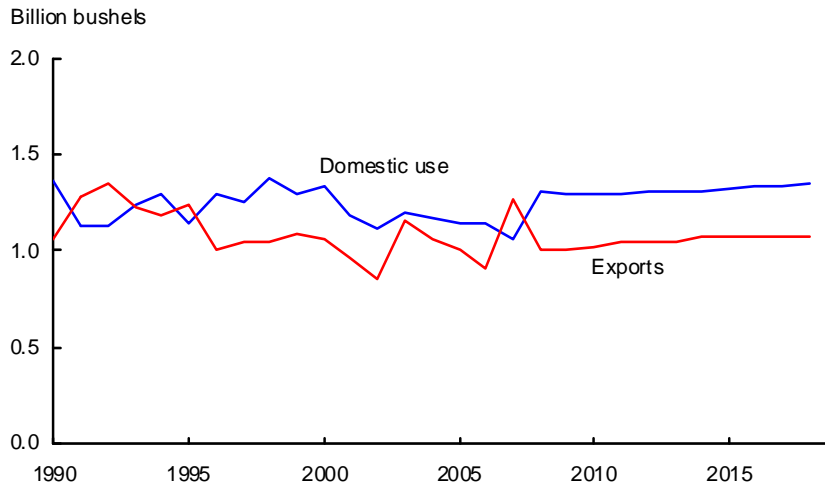
### U.S. corn: Feed use, ethanol, and exports



Domestic corn use grows throughout the projection period, largely reflecting increases in corn used in the production of ethanol. Global economic growth underlies increases in U.S. corn exports.

- Continued increases are projected for corn used to produce ethanol over the next 10 years, although the pace slows from the rapid gains of the past several years. Projected gains after 2009/10 are largely in line with moderate expected increases in overall gasoline usage in the United States.
- Feed and residual use of corn bottoms out in the initial years due to reduced meat production and increased feeding of distillers grains, a coproduct of dry mill ethanol production. Feed use rises through the rest of the projections as meat production picks up and growth in availability of distillers grains slows with the reduced pace of corn-based ethanol expansion.
- Gains in food and industrial uses of corn (other than for ethanol production) are projected to be smaller than increases in population. Consumer dietary concerns and other changes in tastes and preferences limit increases in the combined use of corn for high fructose corn syrup, glucose, and dextrose to about half the rate of population gain. Starch use initially declines due to the slowing U.S. economy, but grows moderately thereafter.
- U.S. corn exports rise in response to stronger global demand for feed grains to support growth in meat production, with the U.S. share of global corn trade holding in the 55-60 percent range.

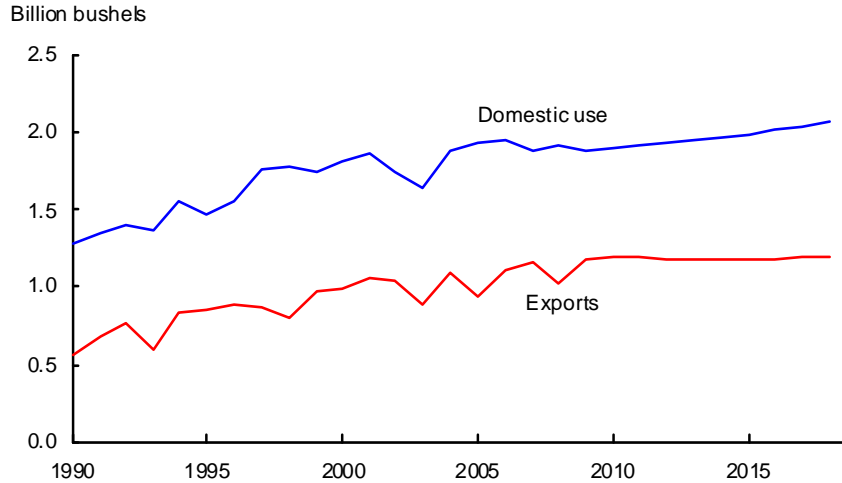
### U.S. wheat: Domestic use and exports



Overall demand in the U.S. wheat sector grows slowly through the projection period.

- Domestic demand for wheat reflects a relatively mature market. Food use of wheat is projected to show moderate gains, generally in line with population increases.
- Feed use of wheat, a lower value use of the crop, declines through the projection period from the relatively high levels of 2008/09.
- U.S. wheat exports increase slowly over the projection period as competition from the European Union (EU), Canada, Argentina, Australia, and the Black Sea region limits further gains. In particular, wheat prices are projected at levels high enough that the EU can export wheat without subsidies, thus permitting higher EU exports. Although the U.S. market share initially increases from 22 percent in 2008/09, it falls over the latter part of the projections to about 21 percent by 2018/19.

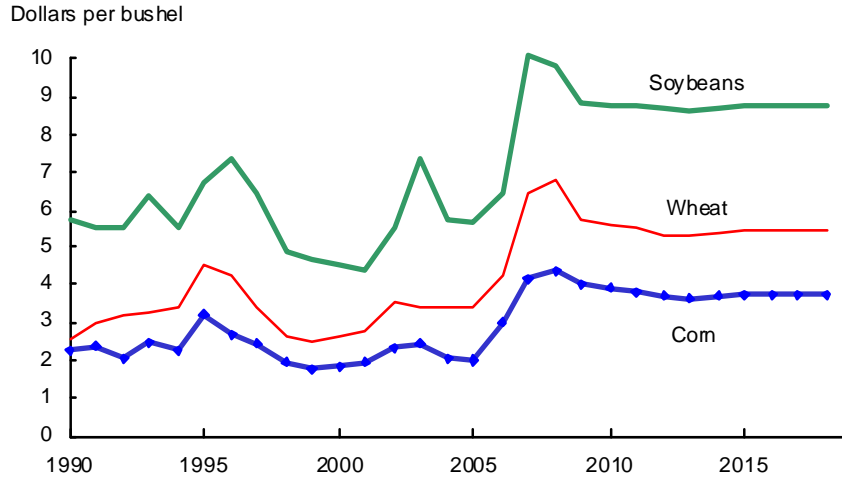
### U.S. soybeans: Domestic use and exports



Domestic use of soybeans continues to rise slowly. U.S. soybean exports remain high but with little growth as more soybeans are processed domestically.

- Declines in the livestock sector initially reduce demand for soybean meal for livestock feed, thereby lowering domestic soybean crush in the near term. However, once meat production gains resume, soybean crush will follow. Then, longrun growth in domestic soybean crush is mostly driven by increasing domestic soybean meal demand.
- U.S. soybean exports hold fairly flat near 1.2 billion bushels. While this is a historically high level of exports, competition from South America limits U.S. exports from further growth. Consequently, the U.S. market share of global soybean trade declines from 40 percent in 2009/10 to about 30 percent at the end of the projections.
- Strengthening competition from Argentina and Brazil, combined with increasing use for the growing U.S. livestock sector, lead to only small gains in U.S. soybean meal exports from 2009/10-2018/19, reducing the U.S. export share in global soybean meal trade. U.S. soybean oil exports similarly face increasing competition from South America.

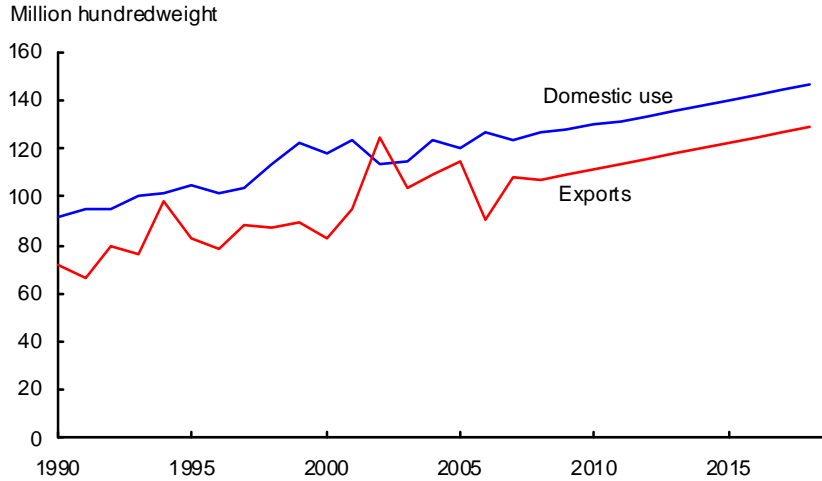
### U.S. farm-level prices: Corn, wheat, and soybeans



Projected farm-level prices for corn, wheat, and soybeans fall from the very high levels seen in 2007/08 and 2008/09 that reflected a number of short-term factors. However, prices are projected to remain historically high due to the influence of continuing longer term factors, including structural shifts that drive demand for these crops.

- Corn prices initially fall from their high 2008/09 level as increases in ethanol production slow and corn stocks build. In the longer run, corn prices remain higher than their pre-2006 levels due to continued demand for corn to produce ethanol as well as growth in feed use and exports.
- Land-use competition from corn keeps soybean acreage from rising and holds soybean prices high throughout the projections.
- As for other crops, wheat prices decline from current levels in the early years of the projections, although they remain historically high. Price increases in the latter years of the projections are moderate as yield gains mostly offset demand increases (despite falling acreage), keeping stocks relatively stable.

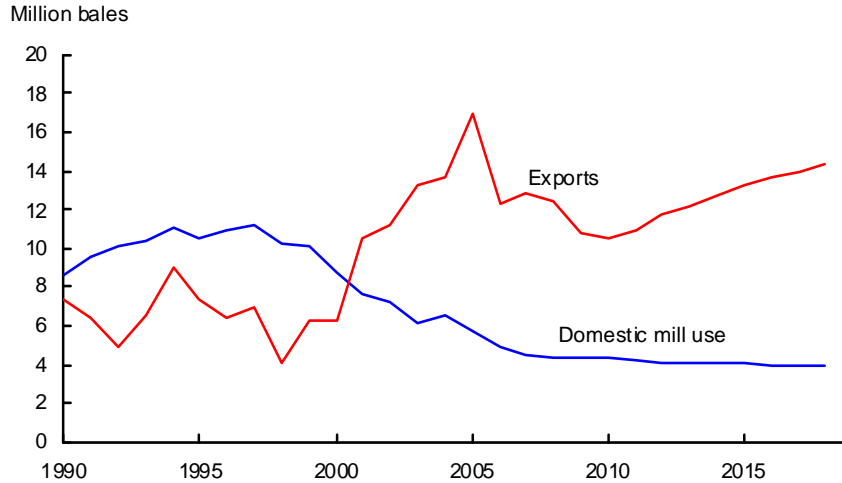
### U.S. rice: Domestic use and exports



Continued expansion in domestic food use of rice is projected over the next decade. U.S. rice exports increase as well, but somewhat slower than overall growth in global rice trade.

- Domestic use of rice is projected to grow somewhat faster than population growth. Imports of aromatic varieties of rice from Asia account for a growing share of domestic use in the projections.
- U.S. rice exports are projected to increase as the U.S. price difference over Asian competitors falls, increasing U.S. competitiveness in global markets. Exports of rough rice to Latin America are expected to continue increasing, and account for most of the U.S. export expansion.
- Stocks of rice gradually increase in the projection period, keeping the stocks-to-use ratio at 11-12 percent.
- Global rice prices fall over the next several years from recent highs. Over the latter part of the projections, global prices increase about 2.5 percent per year, approaching \$11 per hundredweight (rough basis) at the end of the projection period. These price increases largely reflect tightening global stocks due to slow yield growth and little ability to expand area in most producing countries. This effect is partially offset by declining global per capita disappearance, largely due to dietary shifts away from staple foods in Asia as incomes rise.
- U.S. rice prices follow a similar pattern to global prices, initially declining from the high levels of 2008/09 before rising in the latter years of the projections. By the end of the projection period, U.S. rice prices increase to \$12 per hundredweight.

### U.S. upland cotton: Domestic mill use and exports

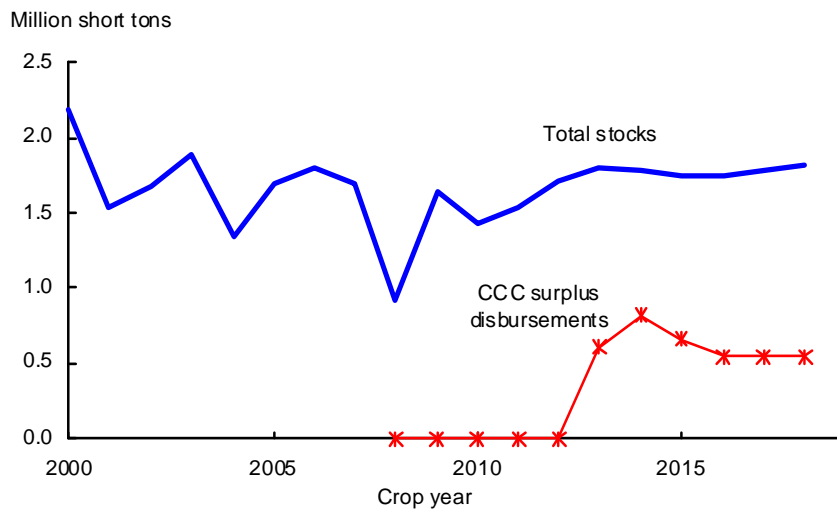


U.S. mill use of upland cotton continues to decline in the projections while upland cotton exports rise after 2010/11.

- The decline in mill use of cotton is projected to continue over the next decade. At the end of the projection period, domestic mill use is projected to represent less than one-fourth of total use. Underlying this projection, apparel imports by the United States increase over the next 10 years, reducing domestic apparel production and lowering the apparel industry's demand for fabric and yarn produced in the United States.
- U.S. upland cotton exports are projected to decline through 2010/11, reflecting a reduction in acreage and production and diminished availability of stocks. Exports then grow moderately, accounting for over three-fourths of U.S. cotton use by the end of the projection period. As a consequence, while the U.S. cotton trade share initially falls below 30 percent, it then rebounds to nearly 34 percent by the end of the projection period.
- Cotton stocks decline in the first several years of the projections as some acreage shifts to other crops. As projected cotton prices strengthen after 2009/10, improved net returns provide economic incentives for cotton acreage to rise, and stocks increase through the end of the projections.



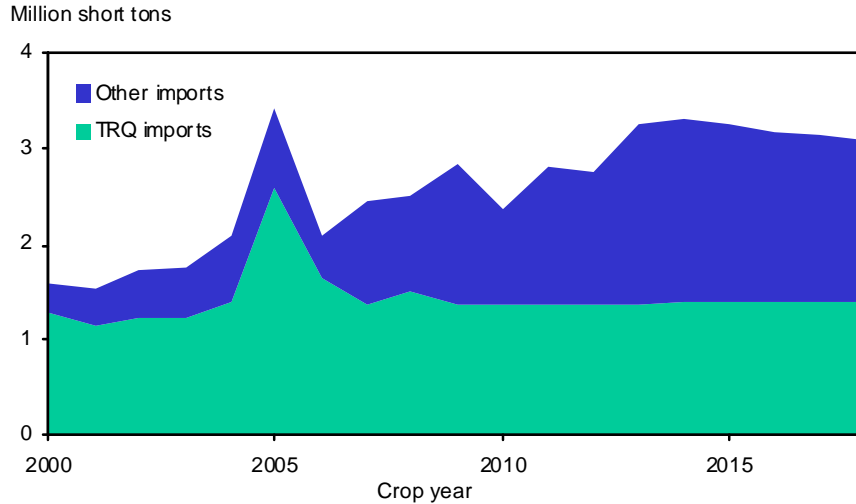
### U.S. sugar stocks



Two primary determinants of the U.S. sugar projections are implementation of the sugar and energy provisions of the 2008 Farm Act and increased imports of sugar from Mexico.

- The 2008 Farm Act increased the raw sugar loan rate from 18 cents per pound in the 2008 crop year to 18.25 cents per pound in the 2009 crop year, to 18.50 cents per pound in the 2010 crop year, and to 18.75 cents per pound in the 2011 and 2012 crop years. The refined beet sugar loan rate is specified to equal 128.5 percent of the raw cane sugar loan rate. Marketing allotments for sugar are set annually at a level not less than 85 percent of estimated sugar deliveries for domestic human consumption.
- Higher support prices help to keep sugar competitive with alternative crops. Beet sugar production averages 5.089 million short tons, raw value (STRV) per year over the projections, while cane sugar production averages 3.822 million STRV. Both of these projections are about 9 percent higher than production in the 6-year period covered by the 2002 Farm Act. Higher support prices also help to preserve processing capacity. Beet processing capacity is projected to increase 3.3 percent in the Red River Valley of the Northern Plains and 2.2 percent in the Pacific Northwest, while capacity in the Great Lakes and Great Plains regions are down marginally. Cane processing is about the same at the end of the projection period as it was at the beginning. (The proposed sale of sugarcane land by the U.S. Sugar Corporation in Florida was not included in these projections.)
- The 2008 Farm Act also introduced the Feedstock Flexibility Program, which requires the diversion of sugar from food use to ethanol producers, if needed, to keep sugar prices above levels at which sugar processors might otherwise forfeit sugar under loan to the Commodity Credit Corporation (CCC). Consequently, there are no sugar loan forfeitures projected because of USDA purchases of sugar under this program. These purchases are projected to begin in 2013/14, with the largest projected purchases in 2014/15. Purchase levels are then somewhat lower over the remaining years of the projections. From 2013/14 through the end of the projection period, U.S. sugar prices are at the minimum level to avoid forfeiture—about 21.30 cents per pound for raw sugar (No. 16 NY contract).

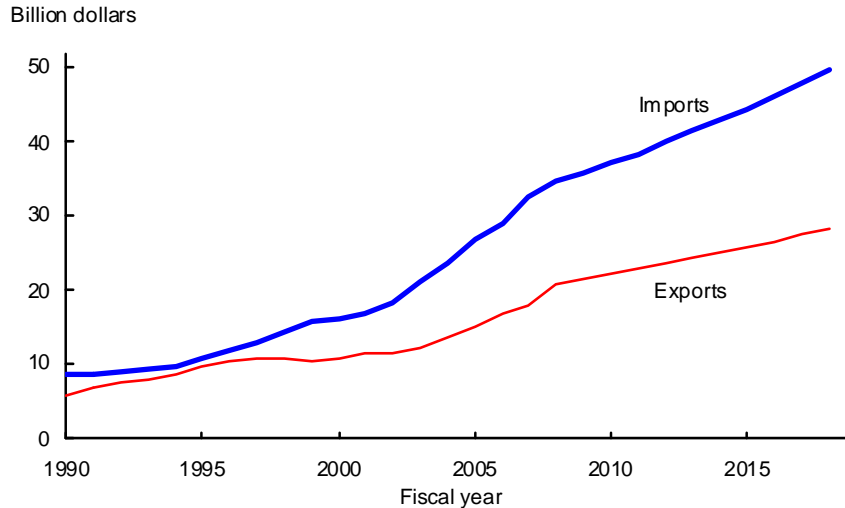
### U.S. sugar imports



Increased U.S. imports of sugar from Mexico are a result of increased use of high fructose corn syrup (HFCS) in Mexico and duty-free sweetener trade (sugar and HFCS) between the United States and Mexico. After a phase-in period, HFCS use by Mexico's beverage industry is assumed to be 75 percent of total sweetener demand by that industry.

- Although there are fluctuations in sugar exports from Mexico to the United States through 2014/15, on average these exports increase by 159,000 STRV per year. After this period, Mexican sugar consumption increases annually by about 50,000 tons (resulting in per capita consumption rising only slightly) and Mexican sugar exports to the United States drop by a corresponding amount.
- Raw and refined sugar tariff-rate quotas (TRQs) are established at the beginning of the marketing year at the minimum levels required to comply with international trade agreements approved by the U.S. Congress. There are no projections of any midyear increases in TRQs throughout the projection period.

### Value of horticultural trade



Farm sales of horticultural crops are projected to grow by 2.1 percent annually over the next decade, reaching \$71.6 billion in calendar year 2018, up from \$58 billion in 2008. U.S. horticultural trade continues to become increasingly important, both in terms of the export share of production and the import share of consumption.

- Within horticultural products, vegetables and melons continue to rank first in farm sales value over both fruits and nuts and greenhouse and nursery crops. Annual growth over the next 10 years is expected to be fastest for fruits and tree nuts, at 2.6 percent, followed by vegetables at 2.0 percent, and nursery crops at 1.6 percent.
- The volume of farm production of horticultural crops is projected to rise annually at 0.4 percent. Total vegetable production volume is projected to expand at 0.6 percent annually and fruit production is forecast to decline on average by 0.1 percent in the next decade. The gradual increases in U.S. vegetable production volume hold gains in producer prices for vegetables at an annual 1.3 percent rate through the next decade. Combined with average price increases of 2.7 percent for fruits and nuts, farm produce prices are estimated to increase by 1.9 percent annually in the projection period.
- The average growth of U.S. horticultural import value is forecast at 3.7 percent from fiscal year (FY) 2009 to 2018. The value of exports is forecast to grow at 3 percent, with both fruits and vegetables averaging 2.8 percent in the next 10 years. Import growth and export growth of fresh-market vegetables and fruits exceed that of their processed products. The U.S. trade deficit in horticulture crops and products increases from \$14 billion in FY 2008 to more than \$21 billion in FY 2018. Of the total \$28 billion U.S. exports of horticultural products in FY 2018, fruits and nuts contribute \$12.8 billion and vegetables represent \$6.5 billion. Total imports of \$50.5 billion in FY 2018 include \$16 billion worth of fruits and nuts, and \$12 billion of vegetables and vegetable products.
- Imports will increasingly supplement the domestic supply of horticulture crops and products. The share of imports in U.S. consumption of horticulture crops and products (based on dollar value) is projected to climb from 48 percent in 2008 to 54 percent by FY 2018. Horticultural exports are projected to increase their share of U.S. production value from 36 percent in FY 2008 to 39 percent in FY 2018. The import and export shares of fruits and nuts are about twice as large as the corresponding import and export shares of vegetables.

Table 4. Summary policy variables for major field crops, 2008-2018

	Direct payment rate	Marketing assistance loan rate		Target price		Counter-cyclical trigger	
		2008-2009	2010-2018	2008-2009	2010-2018	2008-2009	2010-2018
<i>Dollars<sup>1</sup></i>							
Corn	0.28	1.95	1.95	2.63	2.63	2.35	2.35
Sorghum	0.35	1.95	1.95	2.57	2.63	2.22	2.28
Barley	0.24	1.85	1.95	2.24	2.63	2.00	2.39
Oats	0.024	1.33	1.39	1.44	1.79	1.416	1.766
Wheat	0.52	2.75	2.94	3.92	4.17	3.40	3.65
Rice	2.35	6.50	6.50	10.50	10.50	8.15	8.15
Upland cotton	0.0667	0.52	0.52	0.7125	0.7125	0.6458	0.6458
Soybeans	0.44	5.00	5.00	5.80	6.00	5.36	5.56

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

Table 5. Conservation Reserve Program acreage assumptions

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
<i>Million acres</i>												
Crop allocation												
Corn	6.3	6.2	6.1	5.7	5.4	5.4	5.4	5.4	5.6	5.7	5.7	5.7
Sorghum	1.0	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.9	0.9	0.9
Barley	0.9	0.7	0.7	0.7	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7
Oats	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Wheat	8.8	8.9	8.7	8.2	7.8	7.7	7.7	7.8	8.0	8.2	8.2	8.2
Upland cotton	1.6	1.5	1.4	1.4	1.3	1.3	1.3	1.3	1.3	1.4	1.4	1.4
Soybeans	5.8	4.9	4.8	4.5	4.3	4.2	4.2	4.3	4.4	4.5	4.5	4.5
Subtotal	24.8	23.5	23.0	21.6	20.5	20.4	20.3	20.6	21.2	21.6	21.6	21.6
Other	12.0	11.3	11.0	10.3	9.8	9.8	9.8	9.9	10.2	10.3	10.4	10.4
Total	36.8	34.8	34.0	31.9	30.3	30.2	30.1	30.5	31.4	31.9	32.0	32.0

Table 6. Planted and harvested acreage for major field crops, long-term projections

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
<i>Million acres</i>												
Planted acreage, eight major crops												
Corn	93.6	85.9	88.0	89.0	90.0	90.0	90.0	90.0	90.0	90.5	90.5	90.5
Sorghum	7.7	8.3	7.8	7.6	7.6	7.5	7.5	7.4	7.4	7.4	7.4	7.3
Barley	4.0	4.2	4.1	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Oats	3.8	3.2	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
Wheat	60.4	63.0	60.5	60.5	61.0	60.5	60.0	60.0	59.5	59.5	59.5	59.5
Rice	2.8	2.9	3.0	3.0	3.0	3.0	3.1	3.1	3.1	3.1	3.1	3.1
Upland cotton	10.5	9.2	8.4	8.8	9.5	9.7	9.8	9.9	10.0	10.1	10.2	10.3
Soybeans	64.7	75.9	74.0	73.0	72.0	71.5	71.5	71.0	71.0	71.0	71.0	71.0
Total	247.5	252.6	249.2	249.3	250.5	249.6	249.3	248.8	248.4	249.0	249.1	249.1
Harvested acreage, eight major crops												
Corn	86.5	78.2	80.8	81.8	82.8	82.8	82.8	82.8	82.8	83.3	83.3	83.3
Sorghum	6.8	7.4	6.8	6.6	6.6	6.5	6.5	6.4	6.4	6.4	6.4	6.3
Barley	3.5	3.8	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Oats	1.5	1.4	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Wheat	51.0	55.7	51.4	51.4	51.9	51.4	51.0	51.0	50.6	50.6	50.6	50.6
Rice	2.7	2.9	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.1	3.1	3.1
Upland cotton	10.2	7.6	7.6	7.9	8.6	8.7	8.8	8.9	9.0	9.1	9.2	9.3
Soybeans	64.1	74.4	73.0	72.1	71.1	70.6	70.6	70.1	70.1	70.1	70.1	70.1
Total	226.3	231.4	227.6	227.8	229.0	228.0	227.7	227.2	226.9	227.6	227.7	227.7

Table 7. Selected supply, use, and price variables for major field crops, long-term projections

	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
<b>Yields<sup>1</sup></b>												
Corn	151.1	153.8	157.0	159.0	161.0	163.0	165.0	167.0	169.0	171.0	173.0	175.0
Sorghum	74.2	63.0	64.0	64.0	64.0	64.0	64.0	64.0	64.0	64.0	64.0	64.0
Barley	60.4	63.6	65.5	66.1	66.8	67.4	68.0	68.6	69.2	69.8	70.4	71.0
Oats	60.9	63.5	63.5	63.9	64.2	64.6	65.0	65.3	65.7	66.1	66.5	66.8
Wheat	40.5	44.9	43.0	43.3	43.6	43.9	44.2	44.5	44.8	45.1	45.4	45.7
Rice	7,185	6,959	7,138	7,209	7,281	7,353	7,414	7,481	7,548	7,603	7,664	7,725
Upland cotton	864	827	850	865	880	890	900	910	920	930	940	950
Soybeans	41.7	39.3	42.6	43.0	43.5	43.9	44.3	44.8	45.2	45.6	46.1	46.5
<b>Production<sup>2</sup></b>												
Corn	13,074	12,020	12,685	13,005	13,330	13,495	13,660	13,830	13,995	14,245	14,410	14,580
Sorghum	505	465	435	420	420	415	415	410	410	410	410	405
Barley	212	239	230	230	235	235	240	240	240	245	245	250
Oats	92	89	95	95	95	95	100	100	100	100	100	100
Wheat	2,067	2,500	2,210	2,225	2,265	2,255	2,255	2,270	2,265	2,280	2,295	2,310
Rice	197.5	203.5	213.0	215.1	217.3	219.4	224.9	227.0	229.0	234.4	236.3	238.2
Upland cotton	18,355	13,069	13,500	14,200	15,800	16,100	16,500	16,900	17,300	17,600	18,000	18,400
Soybeans	2,676	2,921	3,110	3,100	3,095	3,100	3,130	3,140	3,170	3,195	3,230	3,260
<b>Exports<sup>2</sup></b>												
Corn	2,436	1,900	2,000	2,025	2,050	2,075	2,100	2,125	2,150	2,175	2,200	2,225
Sorghum	278	140	140	140	145	150	160	170	180	190	200	210
Barley	41	25	25	25	25	25	25	25	25	25	25	25
Oats	3	3	3	3	3	3	3	3	3	3	3	3
Wheat	1,264	1,000	1,000	1,025	1,050	1,050	1,050	1,075	1,075	1,075	1,075	1,075
Rice	107.9	107.0	109.0	111.5	114.0	116.0	118.0	120.0	122.0	124.5	127.0	129.0
Upland cotton	12,820	12,500	10,800	10,500	11,000	11,700	12,200	12,700	13,200	13,600	14,000	14,400
Soybeans	1,161	1,020	1,175	1,200	1,200	1,180	1,180	1,175	1,175	1,180	1,190	1,200
Soybean meal	9,200	8,600	8,400	8,500	8,700	8,750	8,750	8,750	8,750	8,750	8,750	8,750
<b>Ending stocks<sup>2</sup></b>												
Corn	1,624	1,124	1,004	1,029	1,174	1,274	1,329	1,344	1,339	1,424	1,514	1,589
Sorghum	53	68	68	68	68	63	63	63	63	63	63	63
Barley	68	68	68	67	71	70	74	77	75	78	81	83
Oats	67	62	64	65	66	62	62	62	62	61	60	59
Wheat	306	603	616	620	640	647	645	640	621	613	611	620
Rice	29.4	25.4	27.9	29.0	28.9	27.9	29.3	30.0	29.6	31.2	31.3	30.2
Upland cotton	9,905	6,137	4,522	3,957	4,542	4,777	4,962	5,097	5,182	5,217	5,302	5,437
Soybeans	205	205	257	261	246	235	235	229	232	235	237	238
<b>Prices<sup>3</sup></b>												
Corn	4.20	4.40	4.00	3.90	3.80	3.70	3.65	3.70	3.75	3.75	3.75	3.75
Sorghum	4.08	3.80	3.50	3.45	3.40	3.30	3.25	3.30	3.35	3.35	3.35	3.35
Barley	4.02	5.00	4.30	4.15	4.00	3.90	3.85	3.90	3.95	3.95	3.95	3.95
Oats	2.63	2.90	2.50	2.45	2.40	2.35	2.30	2.35	2.35	2.35	2.35	2.35
Wheat	6.48	6.85	5.75	5.60	5.50	5.35	5.30	5.40	5.45	5.45	5.45	5.45
Rice	12.80	15.00	12.50	11.45	10.90	10.60	10.80	11.03	11.27	11.52	11.78	12.04
Upland cotton	0.593	0.500	0.500	0.550	0.600	0.605	0.610	0.615	0.620	0.625	0.630	0.635
Soybeans	10.10	9.85	8.85	8.75	8.75	8.70	8.60	8.70	8.75	8.75	8.75	8.80
Soybean oil	0.520	0.395	0.350	0.345	0.345	0.345	0.345	0.345	0.345	0.345	0.345	0.345
Soybean meal	335.9	285.0	260.0	255.0	252.5	251.0	246.0	249.0	250.5	250.5	250.5	252.0

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 upland cotton and soybean oil (per pound), rice (per hundredweight), and soybean meal (per ton).

Table 8. U.S. corn long-term projections

Item	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
Area (million acres):												
Planted acres	93.6	85.9	88.0	89.0	90.0	90.0	90.0	90.0	90.0	90.5	90.5	90.5
Harvested acres	86.5	78.2	80.8	81.8	82.8	82.8	82.8	82.8	82.8	83.3	83.3	83.3
Yields (bushels per acre):												
Yield/harvested acre	151.1	153.8	157.0	159.0	161.0	163.0	165.0	167.0	169.0	171.0	173.0	175.0
Supply and use (million bushels):												
Beginning stocks	1,304	1,624	1,124	1,004	1,029	1,174	1,274	1,329	1,344	1,339	1,424	1,514
Production	13,074	12,020	12,685	13,005	13,330	13,495	13,660	13,830	13,995	14,245	14,410	14,580
Imports	20	15	15	15	15	15	15	15	15	15	15	15
Supply	14,398	13,659	13,824	14,024	14,374	14,684	14,949	15,174	15,354	15,599	15,849	16,109
Feed & residual	5,974	5,300	5,300	5,350	5,400	5,450	5,525	5,600	5,675	5,725	5,775	5,850
Food, seed, & industrial	4,364	5,335	5,520	5,620	5,750	5,885	5,995	6,105	6,190	6,275	6,360	6,445
Ethanol for fuel	3,026	4,000	4,200	4,300	4,425	4,550	4,650	4,750	4,825	4,900	4,975	5,050
Domestic use	10,338	10,635	10,820	10,970	11,150	11,335	11,520	11,705	11,865	12,000	12,135	12,295
Exports	2,436	1,900	2,000	2,025	2,050	2,075	2,100	2,125	2,150	2,175	2,200	2,225
Total use	12,774	12,535	12,820	12,995	13,200	13,410	13,620	13,830	14,015	14,175	14,335	14,520
Ending stocks	1,624	1,124	1,004	1,029	1,174	1,274	1,329	1,344	1,339	1,424	1,514	1,589
Stocks/use ratio, percent	12.7	9.0	7.8	7.9	8.9	9.5	9.8	9.7	9.6	10.0	10.6	10.9
Prices (dollars per bushel):												
Farm price	4.20	4.40	4.00	3.90	3.80	3.70	3.65	3.70	3.75	3.75	3.75	3.75
Loan rate	1.95	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	226	301	308	305	309	312	316	319	322	326	330	334
Per bushel	1.50	1.95	1.96	1.92	1.92	1.92	1.91	1.91	1.91	1.91	1.91	1.91
Returns over variable costs (dollars per acre):												
Net returns	408	376	320	315	303	291	287	299	311	315	319	323

Note: Marketing year beginning September 1 for corn.

Table 9. U.S. sorghum long-term projections

Item	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
Area (million acres):												
Planted acres	7.7	8.3	7.8	7.6	7.6	7.5	7.5	7.4	7.4	7.4	7.4	7.3
Harvested acres	6.8	7.4	6.8	6.6	6.6	6.5	6.5	6.4	6.4	6.4	6.4	6.3
Yields (bushels per acre):												
Yield/harvested acre	74.2	63.0	64.0	64.0	64.0	64.0	64.0	64.0	64.0	64.0	64.0	64.0
Supply and use (million bushels):												
Beginning stocks	32	53	68	68	68	68	63	63	63	63	63	63
Production	505	465	435	420	420	415	415	410	410	410	410	405
Imports	0	0	0	0	0	0	0	0	0	0	0	0
Supply	537	518	503	488	488	483	478	473	473	473	473	468
Feed & residual	172	240	225	210	205	200	185	170	160	150	140	125
Food, seed, & industrial	35	70	70	70	70	70	70	70	70	70	70	70
Domestic	207	310	295	280	275	270	255	240	230	220	210	195
Exports	278	140	140	140	145	150	160	170	180	190	200	210
Total use	484	450	435	420	420	420	415	410	410	410	410	405
Ending stocks	53	68	68	68	68	63	63	63	63	63	63	63
Stocks/use ratio, percent	11.0	15.1	15.6	16.2	16.2	15.0	15.2	15.4	15.4	15.4	15.4	15.6
Prices (dollars per bushel):												
Farm price	4.08	3.80	3.50	3.45	3.40	3.30	3.25	3.30	3.35	3.35	3.35	3.35
Loan rate	1.95	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	132	166	159	160	163	166	168	170	172	174	177	179
Per bushel	1.77	2.64	2.48	2.50	2.55	2.59	2.62	2.65	2.69	2.73	2.76	2.80
Returns over variable costs (dollars per acre):												
Net returns	171	73	65	61	54	46	40	41	42	40	38	35

Note: Marketing year beginning September 1 for sorghum.



Table 10. U.S. barley long-term projections

Item	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
Area (million acres):												
Planted acres	4.0	4.2	4.1	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Harvested acres	3.5	3.8	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Yields (bushels per acre):												
Yield/harvested acre	60.4	63.6	65.5	66.1	66.8	67.4	68.0	68.6	69.2	69.8	70.4	71.0
Supply and use (million bushels):												
Beginning stocks	69	68	68	68	67	71	70	74	77	75	78	81
Production	212	239	230	230	235	235	240	240	240	245	245	250
Imports	32	25	25	25	25	25	25	25	25	25	25	25
Supply	312	333	323	323	327	331	335	339	342	345	348	356
Feed & residual	34	80	70	70	70	75	75	75	80	80	80	85
Food, seed, & industrial	168	160	160	161	161	161	161	162	162	162	162	163
Domestic	203	240	230	231	231	236	236	237	242	242	242	248
Exports	41	25	25	25	25	25	25	25	25	25	25	25
Total use	244	265	255	256	256	261	261	262	267	267	267	273
Ending stocks	68	68	68	67	71	70	74	77	75	78	81	83
Stocks/use ratio, percent	27.9	25.7	26.7	26.2	27.7	26.8	28.4	29.4	28.1	29.2	30.3	30.4
Prices (dollars per bushel):												
Farm price	4.02	5.00	4.30	4.15	4.00	3.90	3.85	3.90	3.95	3.95	3.95	3.95
Loan rate	1.85	1.85	1.85	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	111	141	141	141	143	145	147	149	150	152	154	156
Per bushel	1.84	2.22	2.15	2.13	2.14	2.15	2.16	2.16	2.17	2.18	2.19	2.20
Returns over variable costs (dollars per acre):												
Net returns	132	177	141	134	124	118	115	119	123	123	124	124

Note: Marketing year beginning June 1 for barley.

Table 11. U.S. oats long-term projections

Item	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
Area (million acres):												
Planted acres	3.8	3.2	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
Harvested acres	1.5	1.4	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Yields (bushels per acre):												
Yield/harvested acre	60.9	63.5	63.5	63.9	64.2	64.6	65.0	65.3	65.7	66.1	66.5	66.8
Supply and use (million bushels):												
Beginning stocks	51	67	62	64	65	66	62	62	62	62	61	60
Production	92	89	95	95	95	95	100	100	100	100	100	100
Imports	123	105	100	100	100	100	100	100	100	100	100	100
Supply	265	260	257	259	260	261	262	262	262	262	261	260
Feed & residual	121	120	115	115	115	120	120	120	120	120	120	120
Food, seed, & industrial	75	75	75	76	76	76	77	77	77	78	78	78
Domestic	196	195	190	191	191	196	197	197	197	198	198	198
Exports	3	3	3	3	3	3	3	3	3	3	3	3
Total use	199	198	193	194	194	199	200	200	200	201	201	201
Ending stocks	67	62	64	65	66	62	62	62	62	61	60	59
Stocks/use ratio, percent	33.7	31.3	33.2	33.5	34.0	31.2	31.0	31.0	31.0	30.3	29.9	29.4
Prices (dollars per bushel):												
Farm price	2.63	2.90	2.50	2.45	2.40	2.35	2.30	2.35	2.35	2.35	2.35	2.35
Loan rate	1.33	1.33	1.33	1.39	1.39	1.39	1.39	1.39	1.39	1.39	1.39	1.39
Variable costs of production (dollars):												
Per acre	82	106	107	107	109	110	112	113	114	116	118	119
Per bushel	1.34	1.67	1.68	1.67	1.69	1.70	1.72	1.73	1.74	1.76	1.77	1.79
Returns over variable costs (dollars per acre):												
Net returns	78	78	52	50	45	42	38	40	40	39	39	38

Note: Marketing year beginning June 1 for oats.

Table 12. U.S. wheat long-term projections

Item	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
Area (million acres):												
Planted acres	60.4	63.0	60.5	60.5	61.0	60.5	60.0	60.0	59.5	59.5	59.5	59.5
Harvested acres	51.0	55.7	51.4	51.4	51.9	51.4	51.0	51.0	50.6	50.6	50.6	50.6
Yields (bushels per acre):												
Yield/harvested acre	40.5	44.9	43.0	43.3	43.6	43.9	44.2	44.5	44.8	45.1	45.4	45.7
Supply and use (million bushels):												
Beginning stocks	456	306	603	616	620	640	647	645	640	621	613	611
Production	2,067	2,500	2,210	2,225	2,265	2,255	2,255	2,270	2,265	2,280	2,295	2,310
Imports	113	100	100	105	105	110	110	115	115	120	120	125
Supply	2,635	2,905	2,913	2,946	2,990	3,005	3,012	3,030	3,020	3,021	3,028	3,046
Food	948	960	965	974	983	992	1,001	1,010	1,019	1,028	1,037	1,046
Seed	88	82	82	82	82	81	81	80	80	80	80	80
Feed & residual	30	260	250	245	235	235	235	225	225	225	225	225
Domestic	1,066	1,302	1,297	1,301	1,300	1,308	1,317	1,315	1,324	1,333	1,342	1,351
Exports	1,264	1,000	1,000	1,025	1,050	1,050	1,050	1,075	1,075	1,075	1,075	1,075
Total use	2,330	2,302	2,297	2,326	2,350	2,358	2,367	2,390	2,399	2,408	2,417	2,426
Ending stocks	306	603	616	620	640	647	645	640	621	613	611	620
Stocks/use ratio, percent	13.1	26.2	26.8	26.7	27.2	27.4	27.2	26.8	25.9	25.5	25.3	25.6
Prices (dollars per bushel):												
Farm price	6.48	6.85	5.75	5.60	5.50	5.35	5.30	5.40	5.45	5.45	5.45	5.45
Loan rate	2.75	2.75	2.75	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94
Variable costs of production (dollars):												
Per acre	97	133	141	125	127	129	130	132	134	135	137	139
Per bushel	2.39	2.97	3.28	2.89	2.91	2.93	2.95	2.96	2.98	3.00	3.02	3.04
Returns over variable costs (dollars per acre):												
Net returns	166	185	111	118	113	106	104	108	111	110	110	110

Note: Marketing year beginning June 1 for wheat.

Table 13. U.S. soybean and products long-term projections

Item	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
<b>Soybeans</b>												
Area (million acres):												
Planted	64.7	75.9	74.0	73.0	72.0	71.5	71.5	71.0	71.0	71.0	71.0	71.0
Harvested	64.1	74.4	73.0	72.1	71.1	70.6	70.6	70.1	70.1	70.1	70.1	70.1
Yield/harvested acre (bushels)	41.7	39.3	42.6	43.0	43.5	43.9	44.3	44.8	45.2	45.6	46.1	46.5
Supply (million bushels)												
Beginning stocks, September 1	574	205	205	257	261	246	235	235	229	232	235	237
Production	2,676	2,921	3,110	3,100	3,095	3,100	3,130	3,140	3,170	3,195	3,230	3,260
Imports	10	7	5	5	5	5	5	5	5	5	5	5
Total supply	3,260	3,133	3,320	3,362	3,361	3,351	3,370	3,380	3,404	3,432	3,470	3,502
Disposition (million bushels)												
Crush	1,801	1,745	1,720	1,735	1,750	1,770	1,790	1,810	1,830	1,850	1,875	1,895
Seed and residual	92	162	168	166	165	166	166	166	167	167	168	169
Exports	1,161	1,020	1,175	1,200	1,200	1,180	1,180	1,175	1,175	1,180	1,190	1,200
Total disposition	3,055	2,928	3,063	3,101	3,115	3,116	3,136	3,151	3,172	3,197	3,233	3,264
Carryover stocks, August 31												
Total ending stocks	205	205	257	261	246	235	235	229	232	235	237	238
Stocks/use ratio, percent	6.7	7.0	8.4	8.4	7.9	7.5	7.5	7.3	7.3	7.4	7.3	7.3
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, fam	10.10	9.85	8.85	8.75	8.75	8.70	8.60	8.70	8.75	8.75	8.75	8.80
Variable costs of production (dollars):												
Per acre	105	130	132	132	134	135	136	138	139	140	141	143
Per bushel	2.51	3.32	3.10	3.08	3.08	3.08	3.08	3.07	3.07	3.07	3.07	3.07
Returns over variable costs (dollars per acre):												
Net returns	316	257	245	244	247	247	245	252	257	259	262	266
<b>Soybean oil (million pounds)</b>												
Beginning stocks, October 1	3,085	2,471	2,016	1,786	1,801	1,816	1,886	1,916	1,951	1,941	1,916	1,881
Production	20,568	19,895	19,610	19,795	19,985	20,230	20,480	20,725	20,970	21,220	21,525	21,775
Imports	65	50	60	70	80	90	100	110	120	130	140	150
Total supply	23,718	22,416	21,686	21,651	21,866	22,136	22,466	22,751	23,041	23,291	23,581	23,806
Domestic disappearance	18,272	18,100	18,000	18,100	18,350	18,550	18,750	18,950	19,150	19,375	19,600	19,850
For methyl ester <sup>1</sup>	2,983	3,100	3,100	3,200	3,300	3,300	3,300	3,300	3,300	3,300	3,300	3,300
Exports	2,975	2,300	1,900	1,750	1,700	1,700	1,800	1,850	1,950	2,000	2,100	2,100
Total demand	21,247	20,400	19,900	19,850	20,050	20,250	20,550	20,800	21,100	21,375	21,700	21,950
Ending stocks, September 30	2,471	2,016	1,786	1,801	1,816	1,886	1,916	1,951	1,941	1,916	1,881	1,856
Soybean oil price (dollars per lb)	0.520	0.395	0.350	0.345	0.345	0.345	0.345	0.345	0.345	0.345	0.345	0.345
<b>Soybean meal (thousand short tons)</b>												
Beginning stocks, October 1	346	294	300	300	300	300	300	300	300	300	300	300
Production	42,242	41,491	40,935	41,235	41,635	42,085	42,585	43,085	43,585	44,085	44,585	45,085
Imports	140	165	165	165	165	165	165	165	165	165	165	165
Total supply	42,728	41,950	41,400	41,700	42,100	42,550	43,050	43,550	44,050	44,550	45,050	45,550
Domestic disappearance	33,234	33,050	32,700	32,900	33,100	33,500	34,000	34,500	35,000	35,500	36,000	36,500
Exports	9,200	8,600	8,400	8,500	8,700	8,750	8,750	8,750	8,750	8,750	8,750	8,750
Total demand	42,434	41,650	41,100	41,400	41,800	42,250	42,750	43,250	43,750	44,250	44,750	45,250
Ending stocks, September 30	294	300	300	300	300	300	300	300	300	300	300	300
Soybean meal price (dollars per ton)	335.94	285.00	260.00	255.00	252.50	251.00	246.00	249.00	250.50	250.50	250.50	252.00
Crushing yields (pounds per bushel)												
Soybean oil	11.42	11.40	11.40	11.41	11.42	11.43	11.44	11.45	11.46	11.47	11.48	11.49
Soybean meal	46.90	47.56	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)	3.72	1.43	1.33	1.26	1.20	1.22	1.20	1.18	1.17	1.17	1.17	1.16

Note: Marketing year beginning September 1 for soybeans; October 1 for soybean oil and meal. 1/ Soybean oil used for methyl ester for production of biodiesel, history from the U.S. Department of Commerce.

Table 14. U.S. rice long-term projections, rough basis

Item	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
Area (thousand acres):												
Planted	2,761	2,940	3,000	3,000	3,000	3,000	3,050	3,050	3,050	3,100	3,100	3,100
Harvested	2,748	2,924	2,984	2,984	2,984	2,984	3,034	3,034	3,034	3,083	3,083	3,083
Yields (pounds per acre):												
Yield/harvested acre	7,185	6,959	7,138	7,209	7,281	7,353	7,414	7,481	7,548	7,603	7,664	7,725
Supply and use (million hundredweight):												
Beginning stocks	39.3	29.4	25.4	27.9	29.0	28.9	27.9	29.3	30.0	29.6	31.2	31.3
Production	197.5	203.5	213.0	215.1	217.3	219.4	224.9	227.0	229.0	234.4	236.3	238.2
Imports	23.9	25.5	26.4	27.3	28.3	29.3	30.3	31.3	32.4	33.6	34.8	36.0
Total supply	260.7	258.4	264.8	270.3	274.6	277.6	283.0	287.7	291.4	297.6	302.3	305.4
Domestic use and residual	123.3	126.0	127.9	129.8	131.7	133.7	135.7	137.7	139.8	141.9	144.0	146.2
Exports	107.9	107.0	109.0	111.5	114.0	116.0	118.0	120.0	122.0	124.5	127.0	129.0
Total use	231.2	233.0	236.9	241.3	245.7	249.7	253.7	257.7	261.8	266.4	271.0	275.2
Ending stocks	29.4	25.4	27.9	29.0	28.9	27.9	29.3	30.0	29.6	31.2	31.3	30.2
Stocks/use ratio, percent	12.7	10.9	11.8	12.0	11.8	11.2	11.6	11.6	11.3	11.7	11.5	11.0
Milling rate, percent	70.5	70.5	70.5	70.5	70.5	70.5	70.5	70.5	70.5	70.5	70.5	70.5
Prices (dollars per hundredweight):												
World price	11.53	13.50	11.00	10.00	9.50	9.25	9.50	9.78	10.02	10.27	10.53	10.79
Average market price	12.80	15.00	12.50	11.45	10.90	10.60	10.80	11.03	11.27	11.52	11.78	12.04
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	414	511	497	499	507	514	520	527	533	540	547	554
Per hundredweight	5.76	7.35	6.96	6.93	6.97	6.99	7.02	7.04	7.06	7.10	7.13	7.17
Returns over variable costs (dollars per acre):												
Net returns	506	532	396	326	286	265	280	299	318	336	356	377

Note: Marketing year beginning August 1 for rice.

Table 15. U.S. upland cotton long-term projections

Item	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
Area (million acres):												
Planted acres	10.5	9.2	8.4	8.8	9.5	9.7	9.8	9.9	10.0	10.1	10.2	10.3
Harvested acres	10.2	7.6	7.6	7.9	8.6	8.7	8.8	8.9	9.0	9.1	9.2	9.3
Yields (pounds per acre):												
Yield/harvested acre	864	827	850	865	880	890	900	910	920	930	940	950
Supply and use (thousand bales):												
Beginning stocks	9,338	9,905	6,137	4,522	3,957	4,542	4,777	4,962	5,097	5,182	5,217	5,302
Production	18,355	13,069	13,500	14,200	15,800	16,100	16,500	16,900	17,300	17,600	18,000	18,400
Imports	6	5	10	10	10	10	10	10	10	10	10	10
Supply	27,699	22,979	19,647	18,732	19,767	20,652	21,287	21,872	22,407	22,792	23,227	23,712
Domestic use	4,573	4,365	4,315	4,265	4,215	4,165	4,115	4,065	4,015	3,965	3,915	3,865
Exports	12,820	12,500	10,800	10,500	11,000	11,700	12,200	12,700	13,200	13,600	14,000	14,400
Total use	17,393	16,865	15,115	14,765	15,215	15,865	16,315	16,765	17,215	17,565	17,915	18,265
Ending stocks	9,905	6,137	4,522	3,957	4,542	4,777	4,962	5,097	5,182	5,217	5,302	5,437
Stocks/use ratio, percent	56.9	36.4	29.9	26.8	29.9	30.1	30.4	30.4	30.1	29.7	29.6	29.8
Prices (dollars per pound):												
Farm price	0.593	0.500	0.500	0.550	0.600	0.605	0.610	0.615	0.620	0.625	0.630	0.635
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	421	491	493	498	507	514	522	530	538	546	555	564
Per pound	0.49	0.59	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.59	0.59	0.59
Returns over variable costs (dollars per acre):												
Net returns <sup>1</sup>	205	150	152	151	170	174	178	183	188	193	198	203

Note: Marketing year beginning August 1 for upland cotton.

1/ Net returns include estimates of marketing loan benefits.

Table 16. U.S. sugar long-term projections

Item	Units	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
<b>Sugarbeets</b>													
Planted area	1,000 acres	1,269	1,080	1,408	1,306	1,261	1,301	1,311	1,310	1,297	1,287	1,296	1,300
Harvested area	1,000 acres	1,247	1,053	1,356	1,264	1,227	1,264	1,273	1,267	1,249	1,239	1,248	1,252
Yield	Tons/acre	25.6	26.6	26.0	25.7	25.7	25.8	25.9	25.9	26.0	26.1	26.3	26.4
Production	Mil. s. tons	31.9	28.0	35.2	32.5	31.5	32.6	32.9	32.9	32.5	32.4	32.8	33.0
<b>Sugarcane</b>													
Harvested area	1,000 acres	832	830	843	840	840	832	840	850	839	833	836	838
Yield	Tons/acre	35.1	34.7	34.3	34.6	34.6	34.7	34.7	34.7	34.8	34.9	35.0	35.1
Production	Mil. s. tons	29.2	28.8	29.0	29.0	29.1	28.9	29.2	29.5	29.2	29.1	29.3	29.4
<b>Supply:</b>													
Beginning stocks	1,000 s. tons	1,799	1,690	907	1,646	1,425	1,535	1,703	1,805	1,790	1,751	1,746	1,776
Production	1,000 s. tons	8,150	7,681	9,139	8,794	8,701	8,894	9,032	9,113	9,066	9,076	9,205	9,308
Beet sugar	1,000 s. tons	4,721	4,225	5,405	5,026	4,907	5,103	5,183	5,198	5,171	5,175	5,259	5,323
Cane sugar	1,000 s. tons	3,429	3,456	3,734	3,768	3,794	3,792	3,849	3,916	3,895	3,902	3,946	3,986
Total imports	1,000 s. tons	2,456	2,496	2,839	2,365	2,807	2,753	3,238	3,312	3,237	3,187	3,133	3,085
TRQ imports	1,000 s. tons	1,352	1,511	1,357	1,359	1,361	1,367	1,369	1,372	1,374	1,379	1,382	1,384
Other imports	1,000 s. tons	1,104	985	1,483	1,006	1,446	1,386	1,869	1,940	1,863	1,808	1,751	1,700
Total supply	1,000 s. tons	12,405	11,867	12,886	12,805	12,933	13,183	13,973	14,230	14,094	14,015	14,085	14,169
<b>Use:</b>													
Exports	1,000 s. tons	203	250	250	250	250	250	250	250	250	250	250	250
Domestic deliveries	1,000 s. tons	10,781	10,710	10,990	11,130	11,148	11,230	11,308	11,376	11,433	11,477	11,519	11,558
Miscellaneous	1,000 s. tons	-269	0	0	0	0	0	0	0	0	0	0	0
Total use	1,000 s. tons	10,715	10,960	11,240	11,380	11,398	11,480	11,558	11,626	11,683	11,727	11,769	11,808
CCC surplus disbursements	1,000 s. tons	0	0	0	0	0	0	609	815	660	541	540	544
Ending stocks	1,000 s. tons	1,690	907	1,646	1,425	1,535	1,703	1,805	1,790	1,751	1,746	1,776	1,817
<b>Raw sugar price:</b>													
New York (No. 16)	Cents/lb.	23.34	25.66	23.67	22.67	22.15	21.53	21.32	21.31	21.30	21.30	21.30	21.29
Raw sugar loan rate	Cents/lb.	18.00	18.00	18.25	18.50	18.75	18.75	18.75	18.75	18.75	18.75	18.75	18.75
Beet sugar loan rate	Cents/lb.	22.90	23.13	23.45	23.77	24.09	24.09	24.09	24.09	24.09	24.09	24.09	24.09
<b>Grower prices:</b>													
Sugarbeets	Dol./ton	39.70	46.83	41.33	38.91	39.27	38.14	37.36	37.24	37.31	37.38	37.45	37.52
Sugarcane	Dol./ton	29.25	31.35	31.77	31.13	30.82	30.48	30.39	30.48	30.60	30.73	30.85	30.96

CCC is the Commodity Credit Corporation, U.S. Department of Agriculture.

Table 17. Horticultural crops long-term supply and use projections, calendar years

Item	Unit	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
<b>Production area<sup>1</sup></b>													
Fruit, nuts, and vegetables	1,000 acres	10,928	10,707	10,906	10,917	10,955	10,994	11,035	11,076	11,120	11,165	11,211	11,259
Fruit and tree nuts	1,000 acres	3,908	3,897	3,895	3,894	3,893	3,893	3,893	3,894	3,894	3,896	3,898	3,900
Vegetables and melons	1,000 acres	7,020	6,810	7,011	7,023	7,061	7,101	7,141	7,183	7,225	7,269	7,313	7,359
<b>Supply</b>													
<b>Production, farm weight</b>													
Fruit and nuts	Mil. lbs.	59,047	64,369	64,249	64,142	64,043	63,954	63,875	63,804	63,743	63,691	63,648	63,614
Citrus	Mil. lbs.	20,934	25,994	25,604	25,220	24,842	24,469	24,102	23,741	23,384	23,034	22,688	22,348
Noncitrus	Mil. lbs.	34,129	34,300	34,471	34,643	34,817	34,991	35,166	35,342	35,518	35,696	35,874	36,054
Tree nuts	Mil. lbs.	3,984	4,076	4,174	4,278	4,385	4,495	4,607	4,722	4,840	4,961	5,085	5,212
Vegetables and melons	Mil. lbs.	141,158	135,778	136,562	137,858	138,712	139,576	140,451	141,337	142,233	143,140	144,059	144,988
Fresh market <sup>2</sup>	Mil. lbs.	60,700	59,950	59,659	60,358	61,066	61,784	62,510	63,247	63,992	64,748	65,513	66,288
Processing <sup>3</sup>	Mil. lbs.	35,777	34,774	34,370	34,542	34,473	34,404	34,335	34,267	34,198	34,130	34,062	33,994
Potatoes	Mil. lbs.	44,681	41,055	42,532	42,958	43,173	43,388	43,605	43,823	44,043	44,263	44,484	44,706
Pulses <sup>4</sup>	Mil. lbs.	4,535	4,550	4,641	4,734	4,828	4,925	5,024	5,124	5,227	5,331	5,438	5,546
Total fruit, nuts, vegetables	Mil. lbs.	200,470	200,412	201,074	202,263	203,018	203,793	204,588	205,403	206,238	207,093	207,968	208,864
<b>Imports</b>													
Fruit, nuts, and vegetables	Mil. lbs.	41,597	42,197	42,719	43,734	45,137	46,586	48,082	49,628	51,225	52,874	54,578	56,337
Fruit and tree nuts	Mil. lbs.	20,928	20,568	20,780	21,204	21,780	22,372	22,980	23,604	24,246	24,905	25,581	26,277
Vegetables & melons	Mil. lbs.	18,456	19,196	19,446	19,932	20,649	21,393	22,163	22,961	23,787	24,644	25,531	26,450
<b>Use</b>													
<b>Exports</b>													
Fruit, nuts, and vegetables	Mil. lbs.	20,019	23,034	23,800	24,197	24,602	25,014	25,435	25,865	26,303	26,749	27,205	27,670
Fruit and tree nuts	Mil. lbs.	7,817	9,238	9,553	9,689	9,827	9,968	10,111	10,257	10,406	10,558	10,713	10,871
Vegetables & melons	Mil. lbs.	10,552	11,927	12,285	12,481	12,681	12,884	13,090	13,299	13,512	13,728	13,948	14,171
<b>Domestic use<sup>5</sup></b>													
Fruit, nuts, and vegetables	Mil. lbs.	222,048	219,575	219,993	221,800	223,554	225,365	227,235	229,167	231,160	233,217	235,341	237,531
Fruit and tree nuts	Mil. lbs.	72,159	75,699	75,476	75,657	75,997	76,359	76,744	77,151	77,582	78,037	78,516	79,020
Vegetables & melons	Mil. lbs.	149,062	143,048	143,723	145,309	146,681	148,085	149,524	150,998	152,508	154,056	155,642	157,267
<b>Farm sales value<sup>6</sup></b>													
Fruit and nuts	\$ Mil.	17,765	18,449	18,922	19,409	19,909	20,424	20,954	21,498	22,059	22,636	23,229	23,839
Citrus	\$ Mil.	2,292	2,304	2,315	2,327	2,338	2,350	2,362	2,374	2,385	2,397	2,409	2,421
Noncitrus	\$ Mil.	11,502	12,032	12,345	12,667	12,997	13,335	13,682	14,038	14,404	14,779	15,164	15,559
Tree nuts	\$ Mil.	3,971	4,114	4,262	4,415	4,574	4,739	4,910	5,086	5,270	5,459	5,656	5,859
Vegetables and melons	\$ Mil.	20,865	21,878	22,313	22,759	23,213	23,676	24,149	24,631	25,123	25,626	26,138	26,661
Fresh market <sup>2</sup>	\$ Mil.	6,640	6,739	6,995	7,149	7,306	7,467	7,631	7,799	7,971	8,146	8,325	8,509
Processing <sup>3</sup>	\$ Mil.	2,592	2,833	3,032	3,086	3,142	3,198	3,256	3,314	3,374	3,435	3,497	3,560
Potatoes	\$ Mil.	2,960	3,233	3,039	3,096	3,155	3,215	3,276	3,339	3,402	3,467	3,533	3,600
Pulses <sup>4</sup>	\$ Mil.	878	966	898	923	948	973	999	1,026	1,054	1,083	1,112	1,142
Nursery and greenhouse <sup>7</sup>	\$ Mil.	17,179	17,453	17,733	18,016	18,305	18,597	18,895	19,197	19,505	19,817	20,134	20,456
Total horticulture crops <sup>8</sup>	\$ Mil.	56,387	58,362	59,553	60,771	62,017	63,291	64,593	65,926	67,289	68,683	70,109	71,567
<b>Producer prices<sup>9</sup></b>													
Fruit and tree nuts	2000=100	181.1	172.6	177.3	182.2	187.2	192.3	197.5	202.9	208.4	214.0	219.7	225.6
Citrus	2000=100	150.4	121.7	124.2	126.7	129.3	131.9	134.6	137.3	140.1	143.0	145.9	148.8
Noncitrus	2000=100	152.2	158.4	161.7	165.1	168.6	172.1	175.7	179.4	183.1	187.0	190.9	194.9
Tree nuts	2000=100	144.7	146.5	148.2	149.8	151.4	153.1	154.7	156.4	158.1	159.7	161.5	163.2
Vegetables and melons	2000=100	128.6	140.1	142.1	143.6	145.5	147.5	149.5	151.6	153.6	155.7	157.8	159.9
Fresh market	2000=100	110.1	113.1	118.0	119.2	120.4	121.6	122.9	124.1	125.4	126.6	127.9	129.2
Processing	2000=100	120.5	135.5	146.7	148.6	151.5	154.6	157.7	160.8	164.1	167.3	170.7	174.1
Potatoes	2000=100	147.8	175.7	159.4	160.8	163.1	165.3	167.6	170.0	172.4	174.8	177.2	179.7
Fruit, nuts, and vegetables	2000=100	145.7	152.1	155.0	157.6	160.6	163.6	166.6	169.8	172.9	176.2	179.4	182.8

1/ Bearing acreage for fruit and nuts; harvested area for vegetables. 2/ Includes melons, sweet potatoes, fresh mushrooms, and California specialty vegetables. 3/ Major processing vegetables and agaricus mushrooms. 4/ Includes edible dry beans and peas, lentils, and other peas. 5/ Calculated by adding farm weight production to imports, then subtracting exports. Stocks are not accounted for. 6/ Farm cash receipts except for major fresh market and processing vegetables, which are from production values. 7/ Includes floral crops, greenhouse vegetables such as tomatoes, cucumbers, and colored peppers, and fruit/vegetable transplants. 8/ Includes honey, maple syrup, hops, mint oils, and coffee. 9/ Based on cash receipts of U.S. farmers relative to their farm weight production.

Data source: USDA, National Agricultural Statistics Service; Foreign Agricultural Service; Economic Research Service.



Table 18. Horticultural crops long-term export and import projections, fiscal years

Item	Unit	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
<b>Exports</b>													
<b>Fruit and nuts</b>													
Fresh fruits	\$ Mil.	3,010	3,574	3,999	4,093	4,189	4,287	4,388	4,491	4,596	4,703	4,813	4,925
Citrus	\$ Mil.	668	856	1,194	1,199	1,202	1,205	1,207	1,208	1,208	1,207	1,205	1,202
Noncitrus	\$ Mil.	2,342	2,718	2,805	2,894	2,987	3,083	3,181	3,283	3,388	3,497	3,608	3,724
Processed fruits	\$ Mil.	2,013	2,355	2,414	2,474	2,536	2,599	2,664	2,731	2,799	2,869	2,941	3,014
Fruit juices	\$ Mil.	1,022	1,157	1,187	1,218	1,249	1,282	1,315	1,349	1,384	1,420	1,457	1,495
Tree nuts	\$ Mil.	3,025	3,487	3,600	3,726	3,856	3,991	4,131	4,276	4,425	4,580	4,741	4,906
Total fruit and nuts	\$ Mil.	8,048	9,415	10,013	10,293	10,581	10,878	11,183	11,497	11,820	12,153	12,494	12,846
<b>Vegetables</b>													
Fresh	\$ Mil.	1,775	1,941	2,001	2,063	2,127	2,193	2,261	2,331	2,403	2,478	2,555	2,634
Processed <sup>1</sup>	\$ Mil.	2,387	3,015	3,093	3,174	3,256	3,341	3,428	3,517	3,608	3,702	3,798	3,897
Total vegetables	\$ Mil.	4,162	4,956	5,094	5,237	5,383	5,534	5,689	5,848	6,012	6,180	6,353	6,531
<b>Other horticulture</b>													
Nursery and greenhouse	\$ Mil.	357	373	381	389	398	406	414	423	432	441	450	460
Essential oils	\$ Mil.	1,142	1,278	1,318	1,359	1,401	1,444	1,489	1,535	1,583	1,632	1,682	1,734
Wine	\$ Mil.	906	966	1,005	1,045	1,087	1,130	1,175	1,222	1,271	1,322	1,375	1,430
Beer	\$ Mil.	232	266	267	268	270	271	272	274	275	277	278	279
Other <sup>2</sup>	\$ Mil.	3,173	3,541	3,422	3,549	3,680	3,816	3,958	4,104	4,256	4,413	4,577	4,746
Total horticulture	\$ Mil.	18,020	20,795	21,500	22,140	22,799	23,479	24,180	24,903	25,649	26,417	27,209	28,027
Fresh <sup>3</sup>	\$ Mil.	4,786	5,515	6,000	6,156	6,316	6,480	6,649	6,822	6,999	7,181	7,368	7,559
Processed <sup>3</sup>	\$ Mil.	4,399	5,370	5,600	5,734	5,872	6,013	6,157	6,305	6,456	6,611	6,770	6,932
Export share of production <sup>4</sup>	Percent	32	36	36	36	37	37	37	38	38	38	39	39
<b>Imports</b>													
<b>Fruit and nuts</b>													
Fresh fruits	\$ Mil.	5,401	5,544	5,600	5,824	6,057	6,299	6,551	6,813	7,086	7,369	7,664	7,971
Citrus	\$ Mil.	499	417	288	321	356	393	432	474	518	565	615	668
Noncitrus	\$ Mil.	4,903	5,127	5,312	5,503	5,701	5,906	6,119	6,339	6,567	6,804	7,049	7,303
Processed fruits	\$ Mil.	3,416	3,984	4,400	4,572	4,750	4,935	5,128	5,328	5,535	5,751	5,976	6,209
Fruit juices	\$ Mil.	1,616	1,935	2,000	2,074	2,151	2,230	2,313	2,398	2,487	2,579	2,675	2,774
Tree nuts	\$ Mil.	1,078	1,277	1,400	1,457	1,517	1,579	1,644	1,712	1,782	1,855	1,931	2,010
Total fruit and nuts	\$ Mil.	9,896	10,805	11,400	11,853	12,324	12,814	13,323	13,852	14,403	14,975	15,570	16,189
<b>Vegetables</b>													
Fresh	\$ Mil.	4,165	4,442	4,500	4,698	4,905	5,121	5,346	5,581	5,827	6,083	6,351	6,630
Processed <sup>1</sup>	\$ Mil.	3,149	3,520	3,700	3,841	3,987	4,138	4,295	4,458	4,628	4,804	4,986	5,176
Total vegetables	\$ Mil.	7,314	7,962	8,200	8,539	8,891	9,259	9,641	10,040	10,455	10,887	11,337	11,806
<b>Other horticulture</b>													
Nursery and greenhouse	\$ Mil.	1,531	1,514	1,500	1,541	1,582	1,625	1,669	1,714	1,760	1,808	1,856	1,906
Essential oils	\$ Mil.	2,431	2,653	2,800	2,864	2,930	2,998	3,067	3,137	3,209	3,283	3,359	3,436
Wine	\$ Mil.	4,543	4,755	4,800	4,987	5,182	5,384	5,594	5,812	6,039	6,274	6,519	6,773
Beer	\$ Mil.	3,686	3,662	3,600	3,701	3,804	3,911	4,020	4,133	4,249	4,368	4,490	4,616
Other <sup>2</sup>	\$ Mil.	2,985	3,360	3,494	3,634	3,779	3,931	4,088	4,251	4,421	4,598	4,782	4,974
Total horticulture	\$ Mil.	32,386	34,712	35,794	37,119	38,493	39,920	41,401	42,939	44,535	46,193	47,913	49,700
Fresh <sup>3</sup>	\$ Mil.	9,567	9,986	10,100	10,522	10,962	11,420	11,897	12,394	12,912	13,452	14,015	14,601
Processed <sup>3</sup>	\$ Mil.	6,565	7,505	8,100	8,412	8,736	9,073	9,423	9,786	10,163	10,555	10,962	11,384
Import share of domestic use <sup>4</sup>	Percent	46	48	49	49	50	50	51	51	52	52	53	54

<sup>1/</sup> Includes dry edible beans, peas, lentils, and potatoes. <sup>2/</sup> Includes hops, ginseng, sauces, condiments, mixed food, yeast, starches, etc. that contain horticulture ingredients. <sup>3/</sup> Includes fruits and vegetables only. <sup>4/</sup> Percent shares are based on values.

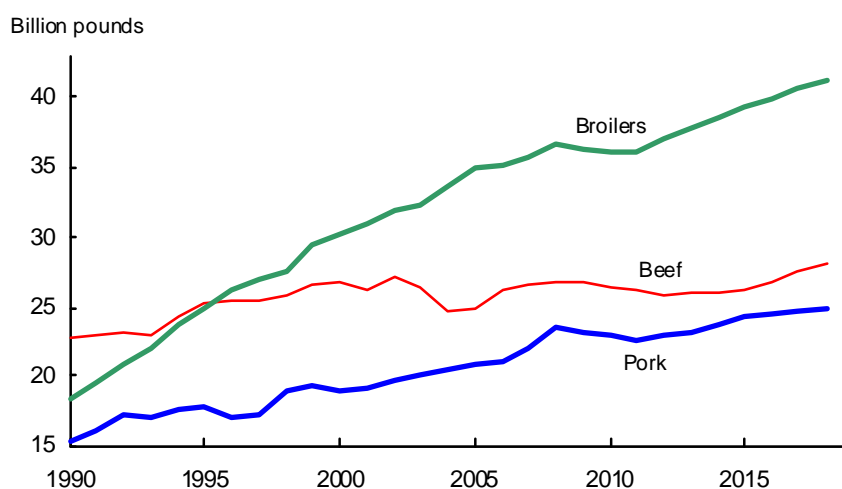
Exports are free alongside ship (FAS) value at U.S. port of exportation. Imports are customs value at U.S. port of entry.

Data source: U.S. Department of Commerce, Bureau of the Census.

## Livestock

Production adjustments in response to high grain and soybean meal prices in 2007 and 2008 continue to ripple through the livestock sector in the first several years of the projections. Additionally, demand is somewhat weakened due to the domestic recession and global economic slowdown. Thus, with producer returns squeezed in 2008 and rebounding only slightly over the next few years, total U.S. meat and poultry production declines through 2011. These production adjustments combine with strengthening meat exports to reduce domestic per capita consumption through 2012. The result is lower production at higher prices, with improving net returns providing economic incentives for moderate expansion in the sector toward the end of the projection period.

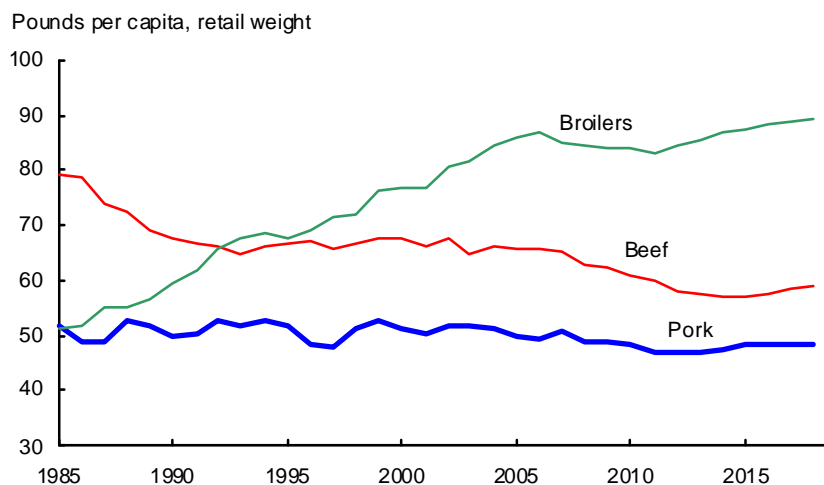
**U.S. red meat and poultry production**



Production of all meats declines in 2009 and 2010 in response to higher feed costs.

- Higher grain prices as well as effects of drought on pasture conditions in recent years hold down cattle inventories, pushing U.S. beef production down in 2009-12. Production then rises in the remainder of the projection period as returns improve and herds are rebuilt. The total cattle inventory drops below 94 million head before expanding to about 97 million at the end of the projection period. Rising slaughter weights also contribute to the moderate expansion of beef production beyond 2012. Continued high feed costs will result in stocker cattle remaining on pasture to heavier weights before entering feedlots.
- Pork production declines in 2009-11 in response to high feed prices and then grows for the remainder of the projections as higher hog prices improve returns. Production coordination and market integration between the United States and Canada continue in the hog sector. Canada is the major supplier of live swine imported by the United States.
- Poultry production declines in 2009-10 while adjusting to high feed costs, but then rises the most among the meats through the rest of the projection period, reflecting poultry being the most efficient feed converter.

### U.S. per capita meat consumption

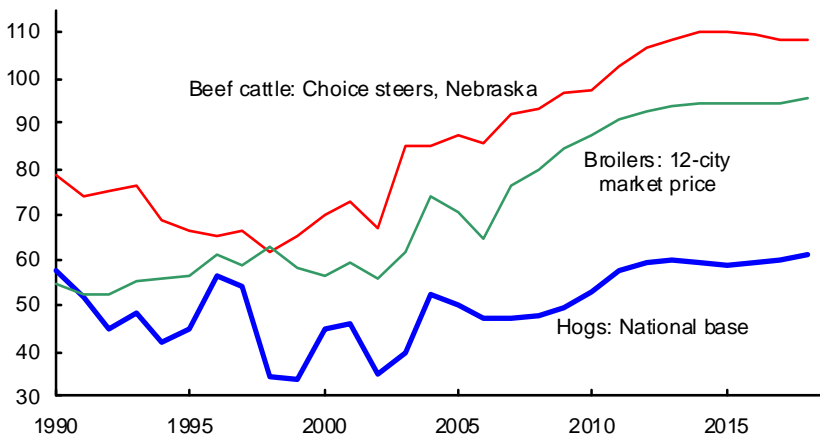


Livestock sector production adjustments to higher feed costs, as well as gains in meat and poultry exports, result in higher consumer prices and lower per capita consumption. Annual per capita consumption of red meats and poultry falls from 221 pounds in 2007 to less than 210 pounds in 2011 and 2012. Following the sector's production adjustments to lower levels, per capita consumption of red meats and poultry then resumes growth, to 217 pounds in 2018.

- Per capita beef consumption declines through the first half of the projection period, reflecting production adjustments in the industry to higher feed costs, before rebounding somewhat over the last several years of the projections. U.S. beef exports rise through the projection period, further limiting domestic per capita beef consumption. A gradual rebuilding of U.S. beef exports to Japan and South Korea is assumed. Demand for U.S. beef in export markets is primarily for high-quality beef.
- Higher feed costs lead to reductions in pork production, which combine with rising pork exports to push per capita pork consumption down through 2012. A gradual rebound in per capita pork consumption occurs over the remainder of the projection period as production gains strengthen.
- Due partly to higher feed conversion rates, poultry meat prices remain lower than red meat prices. Nonetheless, as returns are squeezed, lower production raises prices and results in per capita consumption declines in 2009-11. Following these adjustments, producer returns improve, production strengthens, and prices moderate. Consequently, per capita consumption grows slowly through the end of the projection period.

### Nominal U.S. livestock prices

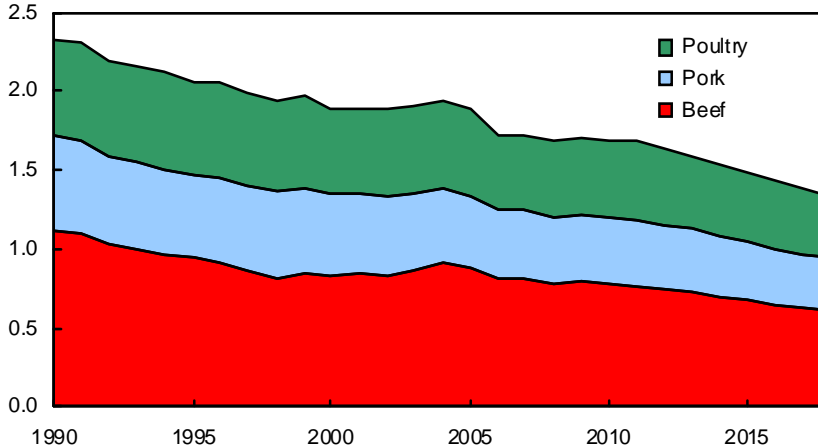
Dollars per hundredweight



Increasing livestock prices over the first half of the projection period result from lower production as the sector adjusts to higher feed costs. Once the production adjustments have occurred, prices level off at a new higher plane.

### U.S. spending on meat

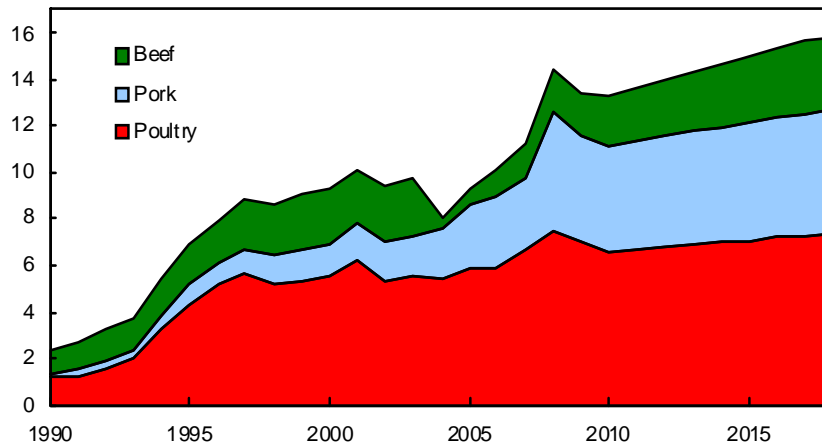
Percent of income



Even with higher meat prices and near term recession in the United States, rising U.S. incomes over most of the next decade facilitate gains in consumer spending on meat. Continuing a long-term trend, overall meat expenditures represent a declining proportion of disposable income.

## U.S. meat exports

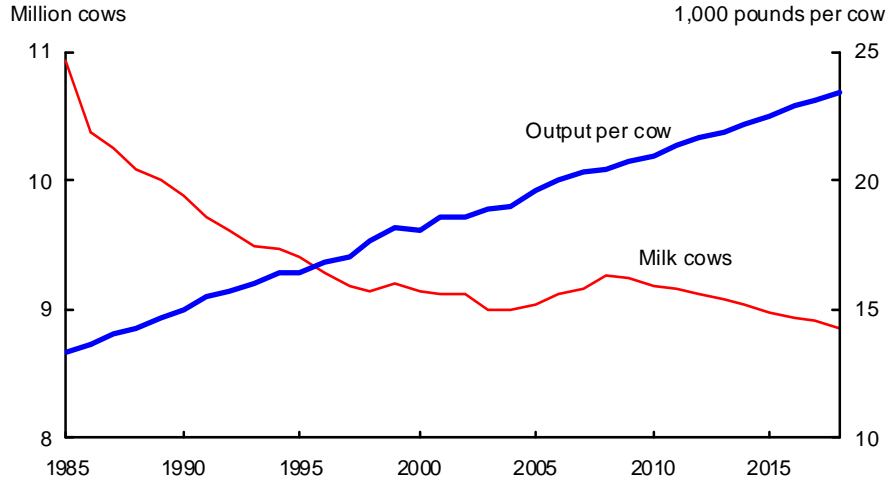
Billion pounds



Although the domestic market remains the dominant source of total meat demand, exports account for a growing share of U.S. meat use. The near-term economic slowdown and higher meat prices reduce overall U.S. meat and poultry exports in 2009 and 2010. Exports rise through the rest of the projection period as global economic growth resumes and the U.S. dollar remains relatively weak.

- U.S. beef exports primarily reflect demand for high-quality fed beef, with most U.S. beef exports typically going to Mexico, Canada, and markets in Pacific Rim nations. A gradual recovery in U.S. beef exports to Japan and South Korea is assumed, export markets that were lost following the first U.S. case of bovine spongiform encephalopathy (BSE) in December 2003.
- U.S. imports of processing beef from Australia and New Zealand increase in the projection period. With more beef demand in East Asian markets being met by the United States, exports from Australia and New Zealand to those markets are reduced, resulting in more of their product redirected to the United States.
- Pacific Rim nations and Mexico remain key markets for long-term growth of U.S. pork exports. Brazil is also a major pork exporter. However, no changes in the set of countries recognizing Brazil as free of foot-and-mouth disease (FMD) are assumed, thus limiting Brazilian pork producers' ability to compete in some markets. Consequently, Brazil's pork exports expand to markets such as Russia, Argentina, and Asian markets other than Japan and South Korea.
- Despite higher feed costs, increased efficiency in U.S. pork production enhances the competitiveness of U.S. pork products. Nonetheless, longer term gains in U.S. pork exports will be determined by costs of production and environmental regulations relative to competitors. Production costs tend to be lower in countries that are developing integrated pork industries, such as Brazil.
- After declining in 2009 and 2010, U.S. broiler exports rise through the rest of the projection period. Major U.S. export markets include China, Russia, and Mexico. Longer term gains in these markets reflect their economic growth and increasing consumer demand. Demand for poultry also remains strong due to its lower cost relative to beef and pork. U.S. producers continue to face strong competition from other major exporters, particularly Brazil. For most of the projection period, exports from avian influenza-affected countries are expected to be limited to fully cooked products.

### U.S. dairy herd and milk production per cow



Despite higher feed costs, strong farm-level milk prices in 2007 encouraged milk producers to increase cow numbers in 2008. Combined with an upward trend in output per cow, milk production rose relatively strongly. Milk production is projected to continue rising over the projection period, although at a slower pace than in the past several years.

- Milk cow numbers are expected to resume a more typical path of year-to-year declines after 2008. However, annual reductions are more moderate compared with past decades as increasing specialization of dairy farms over time slows exit rates from milk production.
- Milk output per cow is projected to increase, although some slowing in these gains occurs in 2008-10 in response to higher feed costs. Nonetheless, further development of specialized operations in most regions will contribute to a continuation of gains in output per cow.
- Domestic commercial use of dairy products increases somewhat faster than the growth in U.S. population over most of the next decade. Cheese demand benefits from greater consumption of prepared foods and increased away-from-home eating. However, per capita consumption of fluid milk is expected to continue to decline slowly.
- U.S. exports of dairy products decline from the levels reached in 2008, but remain high by historical standards. Global demand for dairy products has grown as incomes in developing countries have risen. Exports on a skim-solids basis fall less than fat basis exports due to commercial sales of non-fat dry milk.
- Farm-level milk prices fall from the high levels of 2007 and 2008, partly reflecting the reduction in U.S. dairy product exports from the 2008 peak. Milk prices rise over the latter part of the projection period, although increases are less than the general inflation rate largely due to efficiency gains in production.

Table 19. Per capita meat consumption, retail weight

Item	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
	<i>Pounds</i>											
Total beef	65.2	63.0	62.4	61.0	59.7	58.2	57.5	56.9	57.0	57.5	58.3	58.9
Total veal	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4
Total pork	50.8	48.7	49.0	48.3	46.9	46.8	47.1	47.7	48.3	48.4	48.4	48.5
Lamb and mutton	1.1	1.0	1.0	1.0	1.0	1.0	1.0	0.9	0.9	0.9	0.9	0.9
Total red meat	117.6	113.2	112.9	110.7	108.0	106.4	106.0	106.0	106.7	107.3	108.0	108.6
Broilers	85.1	84.8	84.2	83.7	83.2	84.7	85.6	86.6	87.5	88.2	88.9	89.4
Other chicken	1.1	1.4	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Turkeys	17.5	18.0	17.8	17.3	17.3	17.3	17.3	17.4	17.5	17.6	17.7	17.7
Total poultry	103.7	104.3	103.2	102.3	101.7	103.2	104.2	105.3	106.3	107.2	107.8	108.4
Red meat & poultry	221.3	217.5	216.1	213.1	209.7	209.6	210.2	211.2	213.0	214.4	215.9	217.0

Table 20. Consumer expenditures for meats

Item	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Beef, dollars per person	271.27	269.57	274.97	283.92	291.23	295.38	298.28	300.54	300.91	302.18	303.91	306.27
Percent of income	0.81	0.78	0.79	0.78	0.77	0.75	0.73	0.70	0.68	0.65	0.63	0.61
Percent of meat expenditures	46.96	46.39	46.18	46.26	46.13	45.88	45.72	45.55	45.42	45.46	45.51	45.50
Pork, dollars per person	145.73	142.15	147.43	150.19	153.02	156.12	158.37	160.49	161.75	162.80	163.67	164.77
Percent of income	0.43	0.41	0.42	0.41	0.41	0.40	0.39	0.38	0.36	0.35	0.34	0.33
Percent of meat expenditures	25.23	24.46	24.76	24.47	24.24	24.25	24.28	24.32	24.42	24.49	24.51	24.48
Broilers, dollars per person	140.43	147.29	150.51	157.21	164.47	169.77	173.38	176.84	178.29	178.93	179.98	182.60
Percent of income	0.42	0.43	0.43	0.43	0.44	0.43	0.42	0.41	0.40	0.39	0.37	0.36
Percent of meat expenditures	24.31	25.35	25.28	25.61	26.05	26.37	26.58	26.80	26.91	26.92	26.95	27.12
Turkeys, dollars per person	20.18	22.12	22.46	22.47	22.65	22.61	22.32	22.01	21.49	20.86	20.16	19.54
Percent of income	0.06	0.06	0.06	0.06	0.06	0.06	0.05	0.05	0.05	0.05	0.04	0.04
Percent of meat expenditures	3.49	3.81	3.77	3.66	3.59	3.51	3.42	3.34	3.24	3.14	3.02	2.90
Total meat, dollars per person	577.60	581.14	595.37	613.80	631.37	643.88	652.35	659.88	662.44	664.78	667.72	673.18
Percent of income	1.72	1.69	1.71	1.69	1.67	1.64	1.59	1.55	1.49	1.44	1.38	1.34

Table 21. Beef long-term projections

Item	Units	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Beginning stocks	Mil. lbs.	630	630	595	595	595	595	595	595	595	595	595	595
Commercial production	Mil. lbs.	26,421	26,699	26,650	26,364	26,107	25,763	25,794	25,828	26,191	26,761	27,395	27,952
Change from previous year	Percent	1.0	1.1	-0.2	-1.1	-1.0	-1.3	0.1	0.1	1.4	2.2	2.4	2.0
Farm production	Mil. lbs.	102	102	102	102	102	102	102	102	102	102	102	102
Total production	Mil. lbs.	26,523	26,801	26,752	26,466	26,209	25,865	25,896	25,930	26,293	26,863	27,497	28,054
Imports	Mil. lbs.	3,052	2,443	2,595	2,663	2,740	2,812	2,884	2,957	3,030	3,103	3,150	3,195
Total supply	Mil. lbs.	30,205	29,874	29,942	29,724	29,544	29,272	29,375	29,482	29,918	30,561	31,242	31,844
Exports	Mil. lbs.	1,434	1,841	1,920	2,075	2,231	2,389	2,547	2,707	2,867	3,029	3,111	3,194
Ending stocks	Mil. lbs.	630	595	595	595	595	595	595	595	595	595	595	595
Total consumption	Mil. lbs.	28,141	27,438	27,427	27,054	26,718	26,288	26,233	26,180	26,456	26,937	27,536	28,055
Per capita, carcass weight	Pounds	93.2	90.0	89.1	87.1	85.2	83.1	82.2	81.3	81.4	82.2	83.3	84.1
Per capita, retail weight	Pounds	65.2	63.0	62.4	61.0	59.7	58.2	57.5	56.9	57.0	57.5	58.3	58.9
Change from previous year	Percent	-0.9	-3.4	-1.0	-2.3	-2.1	-2.5	-1.1	-1.1	0.2	0.9	1.3	1.0
Prices:													
Beef cattle, farm	\$/cwt	90.02	90.81	94.27	94.95	99.91	103.82	105.50	107.60	107.19	106.74	105.85	105.52
Calves, farm	\$/cwt	122.25	116.25	122.43	119.72	129.87	137.91	141.81	145.93	144.32	142.62	140.64	139.70
Choice steers, Nebraska	\$/cwt	91.82	93.22	96.75	97.44	102.54	106.55	108.28	110.43	110.01	109.55	108.64	108.31
Yearling steers, Oklahoma City	\$/cwt	108.23	104.82	110.25	107.81	116.95	124.19	127.70	131.41	129.96	128.43	126.65	125.80
Costs and returns, cow-calf enterprise:													
Variable expenses	\$/cow	275.80	333.23	339.06	327.46	327.03	330.23	333.42	337.08	343.57	350.01	355.52	361.17
Fixed expenses	\$/cow	173.16	189.75	196.62	204.71	207.58	211.54	219.45	227.58	233.29	238.87	244.72	250.58
Total cash expenses	\$/cow	448.97	522.97	535.69	532.17	534.61	541.77	552.86	564.66	576.86	588.88	600.24	611.75
Returns above cash costs	\$/cow	94.03	11.44	32.11	33.37	87.74	129.66	147.78	167.00	156.95	146.40	134.85	128.67
Cattle inventory	1,000 head	97,003	96,669	96,200	95,600	94,055	93,241	93,073	93,652	94,524	95,787	96,847	97,448
Beef cow inventory	1,000 head	32,891	32,553	31,855	31,480	30,982	30,930	31,096	31,697	32,245	32,983	33,570	33,905
Total cow inventory	1,000 head	42,023	41,777	41,000	41,200	40,132	40,050	40,188	40,753	41,258	41,947	42,477	42,770



Table 22. Pork long-term projections

Item	Units	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Beginning stocks	Mil. lbs.	514	536	640	640	640	640	640	640	640	640	640	640
Commercial production	Mil. lbs.	21,943	23,452	23,075	22,951	22,599	22,803	23,184	23,680	24,177	24,440	24,677	24,915
Change from previous year	Percent	4.2	6.9	-1.6	-0.5	-1.5	0.9	1.7	2.1	2.1	1.1	1.0	1.0
Farm production	Mil. lbs.	19	19	19	19	19	19	19	19	19	19	19	19
Total production	Mil. lbs.	21,962	23,471	23,094	22,970	22,618	22,822	23,203	23,699	24,196	24,459	24,696	24,934
Imports	Mil. lbs.	968	832	850	950	1,000	1,025	1,050	1,075	1,100	1,125	1,150	1,175
Total supply	Mil. lbs.	23,444	24,839	24,584	24,560	24,258	24,487	24,893	25,414	25,936	26,224	26,486	26,749
Exports	Mil. lbs.	3,141	5,068	4,500	4,590	4,682	4,775	4,871	4,968	5,068	5,138	5,208	5,278
Ending stocks	Mil. lbs.	536	640	640	640	640	640	640	640	640	640	640	640
Total consumption	Mil. lbs.	19,767	19,131	19,444	19,330	18,936	19,072	19,382	19,806	20,228	20,446	20,638	20,831
Per capita, carcass weight	Pounds	65.4	62.7	63.2	62.2	60.4	60.3	60.7	61.5	62.2	62.4	62.4	62.4
Per capita, retail weight	Pounds	50.8	48.7	49.0	48.3	46.9	46.8	47.1	47.7	48.3	48.4	48.4	48.5
Change from previous year	Percent	2.8	-4.1	0.7	-1.5	-2.9	-0.2	0.7	1.3	1.2	0.2	0.1	0.1
Prices:													
Hogs, farm	\$/cwt	46.66	47.29	49.26	52.36	57.19	59.05	59.42	59.02	58.31	58.88	59.54	60.31
National base, live equivalent	\$/cwt	47.09	47.86	49.75	52.88	57.76	59.64	60.02	59.62	58.90	59.47	60.14	60.92
Costs and returns, farrow to finish:													
Variable expenses	\$/cwt	41.31	56.07	53.11	50.27	50.02	49.88	49.76	49.79	50.80	51.74	52.33	52.94
Fixed expenses	\$/cwt	9.19	6.81	7.65	7.80	7.63	7.69	7.59	7.55	7.43	7.23	7.05	6.86
Total cash expenses	\$/cwt	50.50	62.89	60.76	58.06	57.65	57.56	57.35	57.34	58.23	58.97	59.38	59.80
Returns above cash costs	\$/cwt	-0.61	-15.03	-11.01	-5.18	0.11	2.08	2.66	2.28	0.67	0.50	0.76	1.12
Hog inventory,													
December 1, previous year	1,000 head	62,490	68,173	67,200	66,858	65,888	66,451	67,499	68,865	70,234	70,960	71,612	72,265

Table 23. Young chicken long-term projections

Item	Units	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Beginning stocks	Mil. lbs.	732	719	700	690	690	690	690	690	690	690	690	690
Federally inspected slaughter	Mil. lbs.	36,126	37,142	36,740	36,344	36,561	37,467	38,204	38,957	39,692	40,366	40,981	41,566
Change from previous year	Percent	1.8	2.8	-1.1	-1.1	0.6	2.5	2.0	2.0	1.9	1.7	1.5	1.4
Production	Mil. lbs.	35,739	36,745	36,347	35,980	36,195	37,092	37,822	38,568	39,295	39,962	40,572	41,150
Total supply	Mil. lbs.	36,535	37,539	37,127	36,730	36,945	37,842	38,572	39,318	40,045	40,712	41,322	41,900
Change from previous year	Percent	1.2	2.7	-1.1	-1.1	0.6	2.4	1.9	1.9	1.9	1.7	1.5	1.4
Exports	Mil. lbs.	5,904	6,719	6,275	5,757	5,888	5,969	6,065	6,153	6,250	6,350	6,426	6,499
Ending stocks	Mil. lbs.	719	700	690	690	690	690	690	690	690	690	690	690
Consumption	Mil. lbs.	29,912	30,120	30,162	30,283	30,367	31,183	31,817	32,475	33,105	33,672	34,206	34,711
Per capita, carcass weight	Pounds	99.0	98.8	98.0	97.5	96.9	98.6	99.7	100.8	101.9	102.7	103.4	104.1
Per capita, retail weight	Pounds	85.1	84.8	84.2	83.7	83.2	84.7	85.6	86.6	87.5	88.2	88.9	89.4
Change from previous year	Percent	-1.8	-0.2	-0.8	-0.5	-0.6	1.8	1.1	1.2	1.0	0.8	0.7	0.6
Prices:													
Broilers, farm	Cents/lb.	44.3	47.4	50.1	52.0	54.1	54.9	55.5	56.1	56.1	56.0	56.1	56.7
12-city market price	Cents/lb.	76.4	79.8	84.5	87.6	91.1	92.5	93.6	94.5	94.5	94.4	94.5	95.5
Costs and returns:													
Total costs	Cents/lb.	70.87	81.76	80.31	78.98	79.16	79.47	79.87	80.32	81.50	82.67	84.13	85.61
Net returns	Cents/lb.	5.53	-1.96	4.19	8.65	11.93	13.03	13.69	14.17	13.03	11.72	10.39	9.87

Table 24. Turkey long-term projections

Item	Units	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Beginning stocks	Mil. lbs.	218	261	320	285	285	285	285	285	285	285	285	285
Federally inspected slaughter	Mil. lbs.	5,958	6,267	6,105	6,094	6,132	6,196	6,270	6,349	6,469	6,564	6,638	6,698
Change from previous year	Percent	4.9	5.2	-2.6	-0.2	0.6	1.0	1.2	1.3	1.9	1.5	1.1	0.9
Production	Mil. lbs.	5,880	6,185	6,025	6,015	6,052	6,115	6,188	6,267	6,384	6,479	6,552	6,611
Total supply	Mil. lbs.	6,108	6,457	6,357	6,312	6,349	6,412	6,485	6,564	6,681	6,776	6,849	6,908
Change from previous year	Percent	4.8	5.7	-1.5	-0.7	0.6	1.0	1.1	1.2	1.8	1.4	1.1	0.9
Exports	Mil. lbs.	547	643	605	640	654	663	674	684	694	706	714	722
Ending stocks	Mil. lbs.	261	320	285	285	285	285	285	285	285	285	285	285
Consumption	Mil. lbs.	5,300	5,494	5,467	5,388	5,410	5,464	5,526	5,595	5,702	5,785	5,850	5,901
Per capita	Pounds	17.5	18.0	17.8	17.3	17.3	17.3	17.3	17.4	17.5	17.6	17.7	17.7
Change from previous year	Percent	3.7	2.7	-1.4	-2.4	-0.5	0.1	0.2	0.3	1.0	0.6	0.2	0.0
Prices:													
Turkey, farm	Cents/lb.	52.0	57.5	58.9	62.3	64.9	66.6	67.2	67.7	66.9	66.0	65.0	64.5
Hen turkey (wholesale) East	Cents/lb.	82.1	89.0	91.3	96.5	100.7	103.2	104.2	105.0	103.7	102.3	100.8	100.0
Costs and returns:													
Total costs	Cents/lb.	68.47	80.28	79.13	76.63	76.56	76.62	76.73	76.86	77.88	78.80	78.41	78.00
Net returns	Cents/lb.	13.63	8.72	12.17	19.87	24.10	26.55	27.47	28.12	25.86	23.51	22.41	21.95

Table 25. Egg long-term projections

Item	Units	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Beginning stocks	Mil. doz.	13	11	16	13	13	13	13	13	13	13	13	13
Production	Mil. doz.	7,547	7,514	7,540	7,578	7,631	7,707	7,792	7,878	7,964	8,052	8,140	8,230
Change from previous year	Percent	-0.8	-0.4	0.3	0.5	0.7	1.0	1.1	1.1	1.1	1.1	1.1	1.1
Imports	Mil. doz.	14	15	14	14	14	14	14	14	14	14	14	14
Total supply	Mil. doz.	7,573	7,540	7,570	7,605	7,658	7,734	7,819	7,905	7,991	8,079	8,167	8,257
Change from previous year	Percent	-0.8	-0.4	0.4	0.5	0.7	1.0	1.1	1.1	1.1	1.1	1.1	1.1
Hatching use	Mil. doz.	1,015	1,000	1,016	1,008	1,009	1,022	1,038	1,053	1,067	1,081	1,093	1,104
Exports	Mil. doz.	250	205	221	224	227	230	233	236	239	242	245	248
Ending stocks	Mil. doz.	11	16	13	13	13	13	13	13	13	13	13	13
Consumption	Mil. doz.	6,297	6,320	6,320	6,360	6,409	6,469	6,535	6,603	6,672	6,743	6,816	6,892
Per capita	Number	250.1	248.7	246.4	245.6	245.3	245.4	245.6	246.0	246.4	246.8	247.4	247.9
Change from previous year	Percent	-3.0	-0.6	-0.9	-0.3	-0.1	0.0	0.1	0.1	0.2	0.2	0.2	0.2
Prices:													
Eggs, farm	Cents/doz.	93.0	106.7	103.8	97.1	96.3	96.3	97.1	97.9	99.6	101.3	102.5	103.8
New York, Grade A large	Cents/doz.	114.4	127.7	123.0	117.0	116.0	116.0	117.0	118.0	120.0	122.0	123.5	125.0
Costs and returns:													
Total costs	Cents/doz.	88.50	120.13	115.39	109.29	108.78	108.46	108.22	108.27	110.44	112.45	113.72	115.03
Net returns	Cents/doz.	25.90	7.57	7.61	7.71	7.22	7.54	8.78	9.73	9.56	9.55	9.78	9.97

Table 26. Dairy long-term projections

Item	Units	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Milk production and marketings:													
Number of cows	1,000	9,158	9,265	9,245	9,190	9,165	9,125	9,080	9,030	8,985	8,945	8,900	8,845
Milk per cow	Pounds	20,267	20,480	20,710	20,960	21,315	21,665	21,910	22,220	22,535	22,905	23,160	23,465
Milk production	Bil. lbs.	185.6	189.8	191.5	192.6	195.4	197.7	198.9	200.6	202.5	204.9	206.1	207.5
Farm use	Bil. lbs.	1.2	1.2	1.2	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Marketings	Bil. lbs.	184.4	188.6	190.3	191.5	194.3	196.6	197.8	199.5	201.4	203.8	205.0	206.4
Supply and use, milkfat basis:													
Beginning commercial stocks	Bil. lbs.	9.5	10.4	9.5	9.1	8.6	8.6	8.6	8.7	8.8	9.0	9.1	9.2
Marketings	Bil. lbs.	184.4	188.6	190.3	191.5	194.3	196.6	197.8	199.5	201.4	203.8	205.0	206.4
Imports	Bil. lbs.	4.6	3.4	3.6	3.6	3.7	3.8	3.9	4.0	4.2	4.3	4.4	4.5
Commercial supply	Bil. lbs.	198.6	202.3	203.4	204.2	206.6	209.0	210.3	212.2	214.4	217.1	218.5	220.1
Commercial use	Bil. lbs.	182.5	184.4	187.7	189.7	192.1	194.9	196.3	198.2	200.4	203.1	204.7	206.4
Commercial exports	Bil. lbs.	5.7	8.4	6.7	5.9	5.8	5.5	5.3	5.2	5.0	4.9	4.6	4.4
Ending commercial stocks	Bil. lbs.	10.4	9.5	8.9	8.6	8.6	8.6	8.7	8.8	9.0	9.1	9.2	9.3
Total utilization	Bil. lbs.	198.6	202.3	203.4	204.2	206.5	209.0	210.3	212.2	214.4	217.1	218.5	220.1
CCC net removals	Bil. lbs.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Supply and use, skim solids basis:													
Beginning commercial stocks	Bil. lbs.	9.1	9.9	10.2	10.0	9.9	10.0	10.0	10.1	10.1	10.1	10.1	10.2
Marketings	Bil. lbs.	184.4	188.6	190.3	191.5	194.3	196.6	197.8	199.5	201.4	203.8	205.0	206.4
Imports	Bil. lbs.	4.4	3.3	3.4	3.7	3.8	4.0	4.1	4.2	4.4	4.5	4.6	4.7
Commercial supply	Bil. lbs.	198.0	201.8	203.9	205.2	208.0	210.6	211.9	213.8	215.9	218.4	219.7	221.3
Commercial use	Bil. lbs.	163.6	164.5	169.9	172.7	176.3	180.2	181.9	184.1	186.0	188.6	190.0	192.0
Commercial exports	Bil. lbs.	24.5	26.3	23.5	22.2	21.3	20.1	19.7	19.5	19.6	19.6	19.4	19.2
Ending commercial stocks	Bil. lbs.	9.9	10.2	10.0	9.9	10.0	10.0	10.1	10.1	10.1	10.1	10.2	10.1
Total utilization	Bil. lbs.	198.0	201.0	203.3	204.8	207.6	210.3	211.7	213.7	215.7	218.3	219.6	221.3
CCC net removals	Bil. lbs.	0.0	0.9	0.6	0.3	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.0
Prices:													
All milk	\$/cwt	19.13	18.35	15.75	15.75	15.40	15.25	15.40	15.50	15.55	15.65	15.80	16.15

Dairy projections were completed in November 2008.

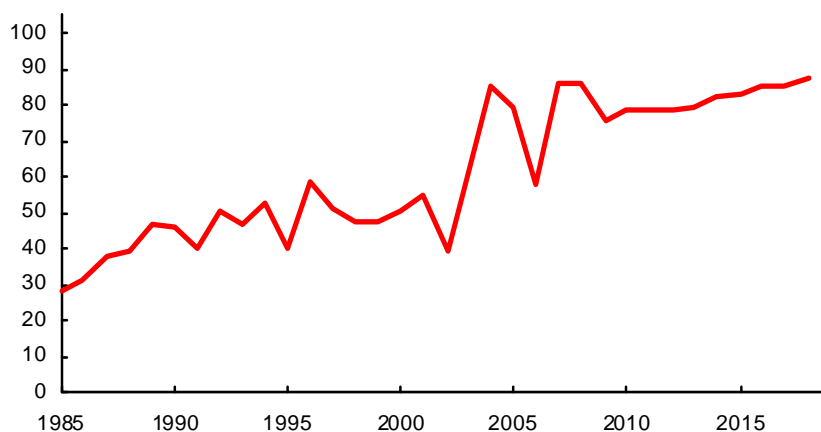
CCC is the Commodity Credit Corporation, U.S. Department of Agriculture.

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

The ongoing world economic slowdown underpins a retreat in global consumption, trade, and prices in the near term, reducing the U.S. agricultural trade value and farm income from 2008 levels. However, once global economies recover, steady domestic and international economic growth supports gains in the U.S. agricultural sector. In addition, longrun developments reflect continued demand for agricultural commodities for the production of biofuels. Thus, after declining in the near term, farm income and U.S. agricultural trade grow through the rest of the projection period. Retail food prices rise faster than the general inflation rate through 2011, partly reflecting higher meat prices due to livestock sector adjustments to increased feed costs.

### U.S. net farm income

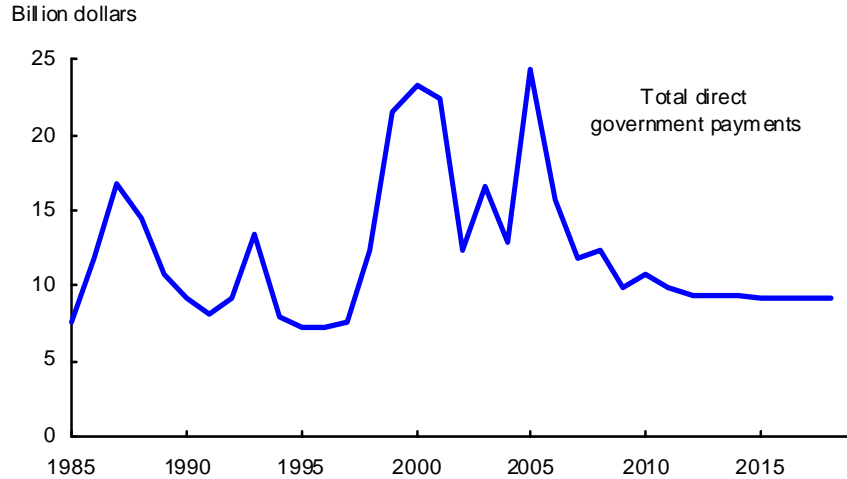
Billion dollars



Net farm income declines in the near term from the high levels of 2007 and 2008, but remains historically strong and rebounds to near-record levels by the end of the projections.

- Sustained biofuel demand and strengthening global food demand provide a major impetus for projections of rising cash receipts after 2009.
- Lower government payments and rising farm production expenses offset some of the gains in cash receipts and other sources of farm income.

## Direct government payments

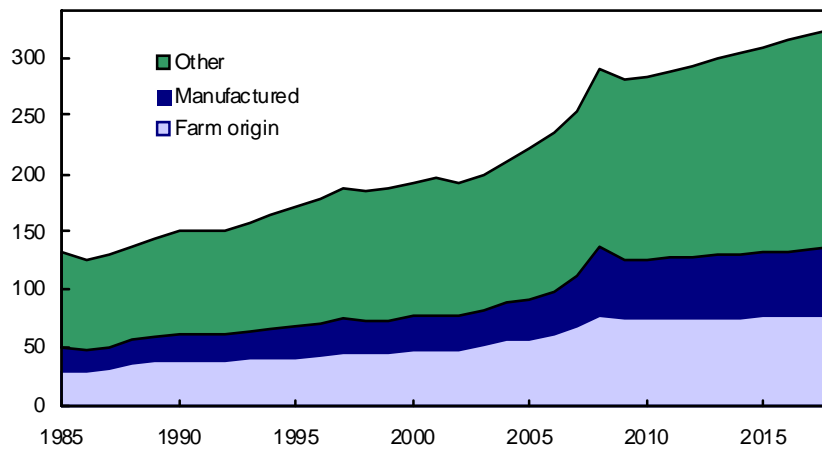


Direct government payments to farmers are projected to fall from \$12.4 billion in 2008 to an average of less than \$10 billion annually in 2009 to 2018. After 2010, price-dependent program benefits represent a declining share of payments.

- Strengthening domestic and international demand holds prices for most crops above levels that would result in marketing loan benefits or counter-cyclical payments. For example, even with stochastic considerations (included here to capture potential variation in farm program benefits due to variability in production yields), payments for marketing loan benefits and counter-cyclical payments for feed grains are minimal, totaling less than \$100 million from 2010 through 2018.
- Projections of government payments under the Average Crop Revenue Election (ACRE) program (assuming stochastic yield variability) exceed \$600 million in 2010 and reach almost \$400 million in 2011, reflecting reductions in prices from recent highs. Lower ACRE payments of less than \$200 million annually are projected for subsequent years, reflecting relative stability in agricultural commodity markets in the projections and assumed moderate levels of producer enrollment in the program.
- Sustained higher crop prices make the use of land for production more valuable, so rental rates for land in the Conservation Reserve Program (CRP) rise. Nonetheless, with reduced enrollment of acreage in the program due to the 2008 Farm Act's lowering of the maximum acreage permitted in the program, CRP payments rise only moderately and remain close to \$2 billion annually through the projection period.
- With higher prices, government payments have a smaller role in the agricultural sector's income. Government payments, which represented more than 8 percent of gross cash income in 2005, account for less than 3 percent during most of the projection period. Conversely, the sector relies on the market for more of its income. Cash receipts plus farm-related income rise to over 97 percent of gross cash income.

## U.S. farm production expenses

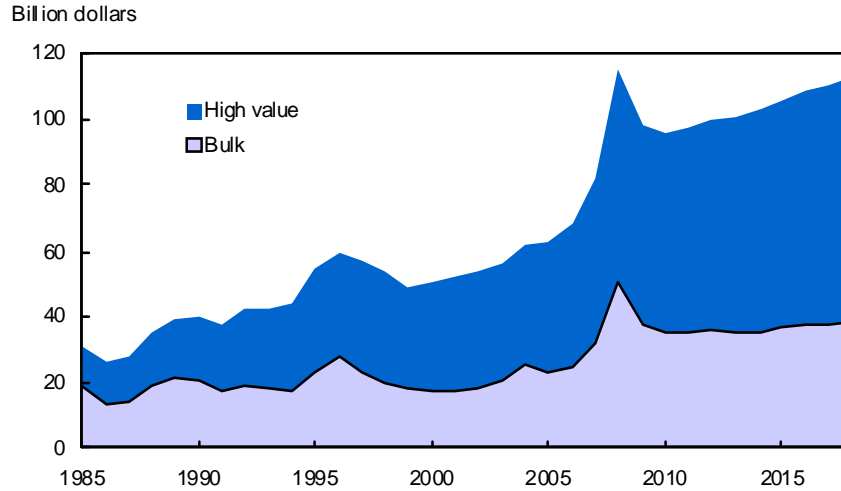
Billion dollars



Following the large runup in farm production expenses in 2008, expenses decline in 2009, largely due to reductions in energy-related costs. Production expenses then rise at close to the general inflation rate through the remainder of the projection period. Total farm production 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, net rent to nonoperator landlords, and other expenses).

- The largest percentage increase from 2009 to 2018 is for “other” expenses, 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 increased debt facilitated by higher income.
- Projected manufactured-input expenses decline in 2009 due to the reduction in crude oil prices from their peak in 2008. With crude oil prices then projected to rise over the remainder of the projection period, production expenses for manufactured inputs increase as well.
- Farm-origin expenses rise less than the general inflation rate. Feed expenses, which rose rapidly in recent years with higher corn prices, decline over the next several years as corn prices retreat and the livestock sector is reduced. Moderate increases in feed expenses are then projected as the livestock sector resumes growth. Seed expenses, which also rose sharply in 2008 with commodity prices, increase slowly in the projection period. Expenses for purchased livestock increase over the first half of the projections due to price increases as the sector contracts. As livestock production increases later in the projection period, prices decline and purchased-livestock expenses level off.
- Cash operating margins are projected to remain relatively stable at 75-77 percent as cash receipts and gross cash income rise at close to the same pace as cash expenses.

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

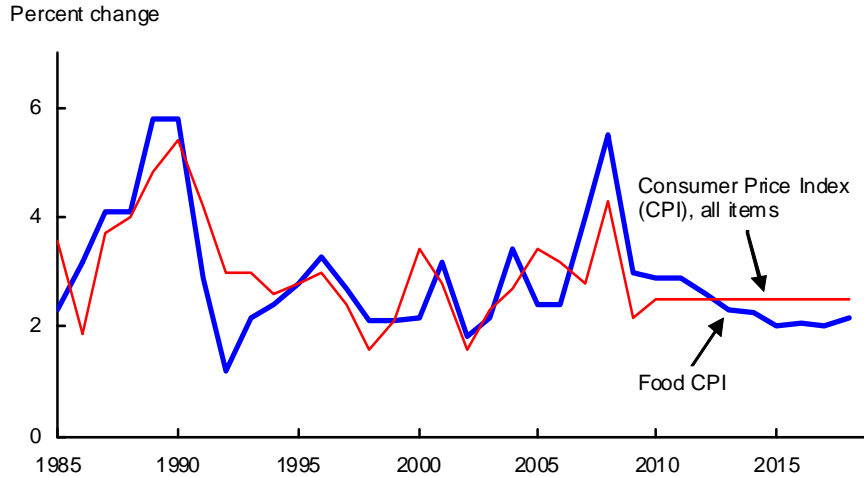


1/ Bulk commodities include wheat, rice, feed grains, soybeans, cotton, and tobacco. High-value products include semi-processed and processed grains and oilseeds, animals and animal products, horticultural products, and sugar and tropical products.

The value of U.S. agricultural exports declines over the next 2 years from the peak reached in fiscal year 2008, but then rises through the remainder of the projections due to increases in both export volumes and prices. A resumption of domestic economic growth boosts U.S. agricultural imports.

- The value of U.S. agricultural exports reached a record level exceeding \$115 billion in fiscal year 2008 as both trade volumes and prices were high. With lower volumes and declining prices, export values fall in 2009 and 2010. Agricultural export values are then projected to grow through the rest of the projection period, although they will fall short of the 2008 record. The continuing low value of the U.S. dollar is an important factor underlying recent export gains and the projected growth. And following the near-term adjustments, longer run global economic growth, particularly in developing countries, provides a foundation for gains in trade and U.S. agricultural exports. High commodity prices due to continued global biofuel demand also contribute to the gains in export values.
- Increases in bulk commodity prices and export volumes over the past several years have strengthened bulk export values, pushing the share of exports accounted for by high-value products (HVP) down from 64 percent in fiscal year 2006 to 56 percent in 2008. Over the projection period, however, HVP export values grow in importance again, initially because of declining bulk volumes and prices and then due to faster HVP growth. By the end of the projection period, HVP exports represent close to 66 percent of the value of U.S. exports. Much of the growth in HVP exports is for animal products and horticultural products.
- U.S. agricultural import values rise to \$110 billion in fiscal year 2018, boosted by gains in consumer income and demand for a large variety of foods. Strong growth in horticultural imports is assumed to continue, contributing about half of the overall agricultural import increase.
- With the large gains in bulk export volumes and increases in commodity prices in 2008, the overall U.S. agricultural trade surplus reached a record level of \$36 billion. The agricultural trade balance is projected to decline from this level over the projection period, but remains a surplus.

## U.S. food inflation

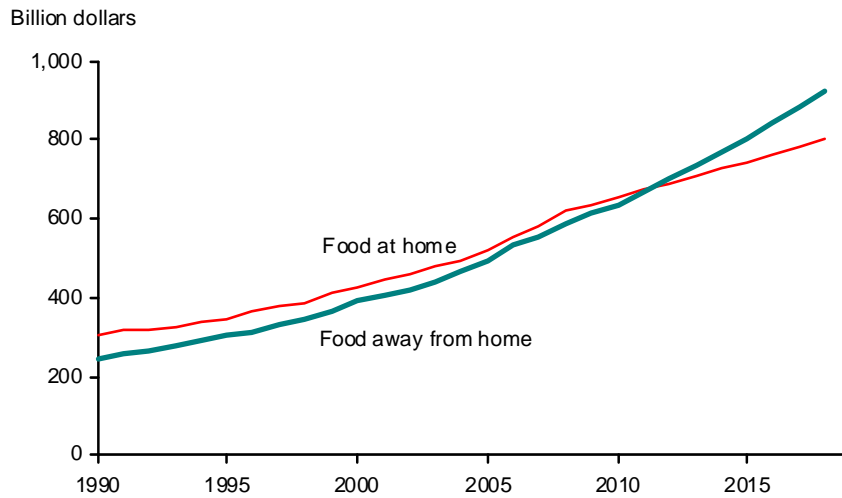


High prices for agricultural commodities and energy contributed to U.S. consumer food prices rising more than the general inflation rate in 2008. Retail food prices continue to rise faster than overall inflation through 2011, partly reflecting higher meat prices (particularly in 2010 and 2011) as the livestock sector adjusts to increased feed costs. Then consumer food prices in the United States return to the longer term relationship of rising less than the general inflation rate over the remainder of the projection period.

- Commodity price increases for food grains and oil-bearing crops were the primary cause of large retail price increases for cereals and bakery products and fats and oils in 2008. Projected retail prices for these foods over the projection period remain among the highest of foods purchased for consumption at home. Since these are generally highly processed foods, their prices in the longer run tend to reflect processing and marketing costs and, therefore, rise at rates near the general inflation rate.
- Prices for food away from home reflect the overall inflation rate as well as some linkage to prices for retail meat and poultry. A slowing of growth in food consumption away from home is expected in the near term, due to the economic recession in the United States. Once the economy rebounds, income growth supports continuing gains in prices for food consumed away from home. Nonetheless, competition in the fast-food and foodservice industries tends to moderate these price increases.



### U.S. food expenditures



The U.S. economic recession and the runup in energy-related consumer expenses in 2008 slowed growth in eating meals away from home in the United States. Moderate increases in food away from home expenditures are expected over the next several years, with stronger increases expected after domestic economic growth resumes.

- In the longer run, expenditures for meals prepared away from home resume stronger growth and account for a growing share of total food spending, reaching 53 percent of overall food expenditures in 2018.

Table 27. Farm receipts, expenses, and income, long-term projections

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
	<i>Billion dollars</i>											
Cash receipts:												
Crops	147.0	178.8	163.1	164.2	166.4	168.0	169.9	173.2	177.3	181.1	184.6	188.1
Livestock and products	137.9	142.7	139.9	139.6	143.7	146.8	149.4	152.0	153.3	155.2	157.0	159.5
All commodities	284.8	321.5	303.0	303.8	310.1	314.8	319.3	325.1	330.5	336.3	341.6	347.6
Farm-related income	16.6	17.7	18.1	18.6	19.0	19.5	20.0	20.5	21.0	21.5	22.0	22.5
Government payments	11.9	12.4	10.0	10.8	9.9	9.3	9.3	9.3	9.3	9.2	9.2	9.1
Gross cash income	313.4	351.6	331.1	333.2	339.0	343.7	348.6	354.9	360.8	367.0	372.8	379.2
Cash expenses	226.0	261.1	250.1	250.2	255.0	259.9	264.9	269.5	274.5	279.9	284.7	289.6
Net cash income	87.4	90.5	81.0	82.9	84.0	83.7	83.7	85.4	86.3	87.1	88.1	89.6
Value of inventory change	3.7	0.1	-1.5	0.5	0.1	0.0	0.8	1.4	1.7	2.3	1.9	1.4
Noncash income	24.0	25.4	27.2	27.4	27.9	28.5	29.0	29.5	30.0	30.6	31.1	31.7
Gross farm income	341.1	377.2	356.7	361.0	366.9	372.1	378.3	385.8	392.5	399.9	405.8	412.4
Noncash expenses	18.2	18.6	19.2	20.9	21.2	21.4	21.7	21.9	22.1	22.3	22.5	22.7
Operator dwelling expenses	10.2	11.2	11.7	11.8	11.9	12.1	12.2	12.4	12.5	12.7	12.8	13.0
Total production expenses	254.4	290.9	281.0	282.9	288.0	293.3	298.7	303.6	309.0	314.7	319.9	325.2
Net farm income	86.8	86.3	75.8	78.1	78.9	78.8	79.7	82.2	83.6	85.2	86.0	87.2

Table 28. Summary of U.S. agricultural trade long-term projections, fiscal years

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
	<i>Billion dollars</i>											
Agricultural exports (value):												
Livestock, dairy, and poultry	16.4	22.2	20.4	20.2	21.3	22.1	23.0	23.8	24.5	25.1	25.5	26.0
Livestock, poultry, and products	13.9	18.1	17.3	17.3	18.5	19.5	20.4	21.3	21.9	22.6	23.0	23.6
Dairy products	2.5	4.0	3.1	2.8	2.7	2.6	2.6	2.6	2.5	2.5	2.5	2.5
Grain and feeds	24.3	38.3	28.3	26.0	25.6	25.5	25.2	25.4	26.1	26.8	27.3	27.8
Coarse grains	9.8	15.8	10.9	10.4	10.2	10.1	10.0	10.0	10.3	10.6	10.7	10.9
Oilseeds and products	13.7	22.9	18.3	18.3	18.4	18.5	18.3	18.2	18.4	18.6	18.7	18.9
Soybeans and products	11.0	19.3	15.6	15.5	15.5	15.5	15.2	15.1	15.2	15.3	15.4	15.6
Horticultural products	18.0	20.8	21.5	22.1	22.8	23.5	24.2	24.9	25.6	26.4	27.2	28.0
Fruits and vegetables, fresh	4.8	5.5	6.0	6.2	6.3	6.5	6.6	6.8	7.0	7.2	7.4	7.6
Fruits and vegetables, processed	4.4	5.4	5.6	5.7	5.9	6.0	6.2	6.3	6.5	6.6	6.8	6.9
Cotton and linters	4.3	4.8	4.0	3.4	3.6	4.1	4.4	4.6	4.9	5.1	5.4	5.4
Other exports	5.6	6.5	6.0	5.6	5.8	6.0	6.1	6.3	6.4	6.6	6.7	6.8
Total agricultural exports	82.2	115.5	98.5	95.7	97.5	99.7	101.2	103.2	105.9	108.6	110.8	113.0
Bulk commodity exports	31.5	50.7	37.6	35.4	35.6	35.8	35.5	35.7	36.6	37.5	38.1	38.5
High-value product exports	50.6	64.8	60.9	60.2	62.0	63.8	65.6	67.5	69.3	71.1	72.7	74.4
High-value product share	61.6%	56.1%	61.8%	62.9%	63.6%	64.0%	64.9%	65.4%	65.4%	65.5%	65.6%	65.9%
	<i>Million metric tons</i>											
Agricultural exports (volume):												
Bulk commodity exports	125.4	139.4	112.8	119.4	121.3	122.8	123.2	124.4	125.9	127.4	129.2	131.0
	<i>Billion dollars</i>											
Agricultural imports (value):												
Livestock, dairy, and poultry	12.0	12.2	12.0	12.5	13.2	13.8	14.3	14.8	15.3	15.7	16.1	16.5
Livestock and meats	8.9	8.7	8.4	9.0	9.5	10.0	10.4	10.8	11.1	11.3	11.5	11.8
Dairy products	2.7	3.0	3.0	3.2	3.2	3.3	3.5	3.6	3.8	4.0	4.1	4.3
Grain and feeds	6.0	7.9	8.0	7.8	8.0	8.3	8.6	8.9	9.3	9.7	10.1	10.5
Grain products	3.9	4.6	4.6	4.8	5.0	5.3	5.5	5.8	6.1	6.4	6.7	7.1
Oilseeds and products	4.0	6.6	5.7	5.9	6.1	6.3	6.6	6.8	7.1	7.4	7.7	8.0
Vegetable oils	2.8	4.6	4.0	4.1	4.3	4.5	4.6	4.8	5.0	5.2	5.4	5.6
Horticultural products	32.4	34.7	36.1	37.3	38.7	40.2	41.8	43.4	45.1	46.9	48.7	50.6
Fruits and vegetables, fresh	9.6	10.0	10.2	10.5	10.9	11.3	11.8	12.3	12.7	13.2	13.8	14.3
Fruits and vegetables, processed	6.6	7.5	8.1	8.4	8.7	8.9	9.3	9.6	9.9	10.2	10.6	11.0
Wine and beer	8.2	8.4	8.5	8.8	9.2	9.6	10.0	10.5	11.0	11.5	12.0	12.5
Sugar and tropical products	14.1	16.4	17.4	17.8	17.9	18.7	19.3	20.3	20.8	21.4	22.0	22.6
Sugar and related products	2.8	3.0	3.3	3.4	3.0	3.3	3.4	3.9	3.8	3.8	3.9	3.9
Cocoa, coffee, and products	6.2	7.4	8.1	8.3	8.5	8.8	9.1	9.4	9.7	10.0	10.3	10.6
Other imports	1.5	1.6	1.7	1.7	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.9
Total agricultural imports	70.1	79.3	81.0	83.0	85.7	89.1	92.4	96.1	99.5	102.9	106.4	110.1
Net agricultural trade balance	12.1	36.2	17.5	12.6	11.9	10.5	8.8	7.1	6.4	5.7	4.4	2.9

Sources: U.S. Department of Agriculture and Bureau of Census, U.S. Department of Commerce.

Notes: The projections were completed in November 2008 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 includes tobacco, seeds, sugar and tropical products, and beverages and preparations. Bulk commodity exports covers wheat, rice, feed grains, soybeans, cotton, and tobacco. High-value product (HVP) exports is calculated as total exports less the bulk commodities. HVP's include semiprocessed and processed grains and oilseeds, animals and animal products, horticultural products, and sugar and tropical products. Other imports include cotton, tobacco, and planting seeds.

Table 29. Prices received by farmers, selected food commodities, long-term projections

CPI category	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Price indexes:	<i>1990-92=100</i>											
Food commodities <sup>1</sup>	138.0	146.0	145.6	143.8	146.8	149.1	150.3	152.2	153.0	153.7	154.3	155.6
Food grains	186.0	258.0	277.8	232.9	224.3	219.1	213.1	212.2	216.3	218.7	219.6	220.5
Oil-bearing crops	137.0	202.0	177.0	175.0	175.0	174.0	172.0	174.0	175.0	175.0	175.0	176.0
Vegetables <sup>2</sup>	150.6	152.0	166.5	168.2	170.5	172.8	175.2	177.6	180.0	182.4	184.9	187.3
Fruit and nuts	157.0	148.0	152.1	156.2	160.5	164.9	169.4	174.0	178.7	183.5	188.5	193.5
Meat animals	118.0	117.0	121.7	123.1	130.5	135.7	137.9	140.3	139.5	139.1	138.2	138.0
Dairy products	147.0	141.0	121.0	121.0	118.3	117.2	118.3	119.1	119.5	120.3	121.4	124.1
Poultry and eggs	140.0	151.0	154.7	156.2	160.4	162.4	164.0	165.6	166.0	166.2	166.5	167.8
Changes in price indexes:	<i>Percent</i>											
Food commodities <sup>1</sup>	17.9	5.8	-0.2	-1.2	2.1	1.5	0.8	1.3	0.5	0.5	0.4	0.8
Food grains	38.8	38.7	7.7	-16.2	-3.7	-2.3	-2.7	-0.4	1.9	1.1	0.4	0.4
Oil-bearing crops	37.0	47.4	-12.4	-1.1	0.0	-0.6	-1.1	1.2	0.6	0.0	0.0	0.6
Vegetables <sup>2</sup>	12.9	0.9	9.5	1.0	1.4	1.4	1.4	1.4	1.4	1.4	1.3	1.3
Fruit and nuts	1.9	-5.7	2.8	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
Meat animals	1.7	-0.8	4.0	1.2	6.0	4.0	1.6	1.7	-0.6	-0.3	-0.6	-0.1
Dairy products	48.5	-4.1	-14.2	0.0	-2.2	-1.0	1.0	0.6	0.3	0.6	1.0	2.2
Poultry and eggs	26.1	7.9	2.4	1.0	2.7	1.3	1.0	0.9	0.3	0.1	0.2	0.8

1/ The aggregate price index for food commodities is a weighted average using the NASS relative weights, which are based on average shares of farm cash receipts from 1990 to 1992. 2/ The price index for vegetables is a weighted average of the index for commercial vegetables and the index for potatoes and dry beans.

Sources: USDA, National Agricultural Statistics Service (NASS), Agricultural Prices Summary; Economic Research Service.

Table 30. Consumer food price indexes and food expenditures, long-term projections

CPI category	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
<i>1982-84=100</i>												
Consumer price indexes												
All food	202.916	214.106	220.5	226.9	233.4	239.5	245.0	250.6	255.7	261.0	266.3	272.1
Food away from home	206.659	215.769	224.0	231.2	238.6	245.8	252.7	259.8	266.8	274.0	281.4	289.0
Food at home	201.245	214.125	219.5	225.4	231.4	236.8	241.5	246.3	250.3	254.4	258.6	263.2
Meats	194.983	201.815	207.9	217.3	227.2	234.7	238.8	242.2	242.5	242.8	242.8	243.5
Beef and veal	211.060	220.586	227.2	239.7	251.3	261.4	266.9	272.0	271.8	270.5	268.5	267.9
Pork	180.912	185.034	189.7	196.1	205.9	210.5	212.0	212.1	211.2	212.1	213.1	214.4
Other meats	184.822	190.588	197.3	203.2	209.3	214.5	218.8	222.7	226.0	229.4	232.8	236.3
Poultry	191.360	200.901	204.5	215.3	224.9	227.4	228.5	229.2	227.3	224.9	223.0	223.2
Fish and seafood	219.087	232.122	242.6	251.1	258.6	266.4	274.4	282.6	291.1	299.8	308.8	318.1
Eggs	195.291	222.708	213.0	206.7	205.9	206.9	209.7	212.5	217.1	221.7	225.5	229.2
Dairy products	194.770	210.396	202.0	204.5	206.0	208.5	212.0	215.5	218.5	222.0	226.0	230.5
Fats and oils	172.921	196.751	202.6	207.1	211.4	216.0	221.1	226.3	231.4	236.8	242.5	248.4
Fruits and vegetables	262.628	278.932	289.8	295.7	301.9	308.1	314.7	321.3	328.0	334.9	341.9	349.1
Sugar and sweets	176.772	186.577	192.0	194.0	196.1	199.8	202.7	206.2	210.1	214.1	218.3	222.5
Cereals and bakery products	222.107	244.853	251.8	256.6	262.2	267.9	273.8	280.2	286.9	293.6	300.4	307.3
Nonalcoholic beverages	153.432	160.045	166.1	171.9	177.1	181.5	186.0	190.7	195.5	200.4	205.4	210.5
Other foods	188.244	198.103	206.2	212.4	218.2	223.7	228.9	234.2	239.5	245.0	250.7	256.4
<i>Billion dollars</i>												
Food expenditures:												
All food	1,139.4	1,203.6	1,243.1	1,287.9	1,337.0	1,389.5	1,442.1	1,496.9	1,551.6	1,608.6	1,668.3	1,731.3
Food at home	583.7	617.8	632.0	651.1	670.2	689.3	708.2	727.7	746.3	765.5	785.6	807.1
Food away from home	555.7	585.8	611.1	636.8	666.8	700.2	733.9	769.2	805.3	843.1	882.7	924.2
<i>Percent</i>												
Changes in consumer food prices:												
All food	4.0	5.5	3.0	2.9	2.9	2.6	2.3	2.3	2.0	2.1	2.0	2.2
Food away from home	3.6	4.4	3.8	3.2	3.2	3.0	2.8	2.8	2.7	2.7	2.7	2.7
Food at home	4.2	6.4	2.5	2.7	2.7	2.3	2.0	2.0	1.6	1.6	1.7	1.8
Meats	3.3	3.5	3.0	4.5	4.6	3.3	1.7	1.4	0.1	0.1	0.0	0.3
Beef and veal	4.4	4.5	3.0	5.5	4.8	4.0	2.1	1.9	-0.1	-0.5	-0.7	-0.2
Pork	2.0	2.3	2.5	3.4	5.0	2.2	0.7	0.0	-0.4	0.4	0.5	0.6
Other meats	2.3	3.1	3.5	3.0	3.0	2.5	2.0	1.8	1.5	1.5	1.5	1.5
Poultry	5.1	5.0	1.8	5.3	4.5	1.1	0.5	0.3	-0.8	-1.1	-0.8	0.1
Fish and seafood	4.6	5.9	4.5	3.5	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Eggs	29.2	14.0	-4.4	-3.0	-0.4	0.5	1.4	1.3	2.2	2.1	1.7	1.6
Dairy products	7.4	8.0	-4.0	1.2	0.7	1.2	1.7	1.7	1.4	1.6	1.8	2.0
Fats and oils	2.9	13.8	3.0	2.2	2.1	2.2	2.4	2.4	2.3	2.3	2.4	2.4
Fruits and vegetables	3.8	6.2	3.9	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
Sugar and sweets	3.1	5.5	2.9	1.0	1.1	1.9	1.5	1.7	1.9	1.9	2.0	1.9
Cereals and bakery products	4.4	10.2	2.8	1.9	2.2	2.2	2.2	2.3	2.4	2.3	2.3	2.3
Nonalcoholic beverages	4.1	4.3	3.8	3.5	3.0	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Other foods	1.8	5.2	4.1	3.0	2.7	2.5	2.3	2.3	2.3	2.3	2.3	2.3

## Agricultural Trade

Global economic growth slows during the beginning of the 2009-18 projection period, but recovers after 2010 and remains slightly above the historical average long-term growth rate during the last half of the period. This renewed growth provides a foundation for gains in world demand for agricultural products. Although the expansion in global biofuels production slows in the projections, it also adds to global demand for agricultural commodities.

Developing countries are the main source of growth in world demand and trade. Food consumption and feed use are particularly responsive to income growth in those countries, with movement away from staple foods and increased diversification of diets. Demand from developing countries is further reinforced by population growth rates that remain nearly twice that of developed countries.

Developing countries account for more than two-thirds of the projected increase in world meat imports. Generally, middle-income countries with increasing per capita incomes are expected to have the most rapid growth. However, large increases in poultry and beef imports are projected for Africa and the Middle East. Strong policy support for domestically produced meat is expected to motivate growth in feed grain imports in regions where limited land availability or agroclimatic conditions preclude expanding domestic crop production.

World consumption of aggregate grains and oilseeds exceeded production in 7 of the past 8 years. As a result, global stocks dropped sharply. Crop prices rose dramatically between 2003 and 2008. In response, world crop area for 2008 crops increased sharply and favorable weather caused world production of grains and oilseeds to jump nearly 5 percent. Although prices have plummeted since mid-2008, they are projected to remain above pre-2007 levels in the coming decade.

World agricultural production rises in response to high prices and technology enhancements. However, limited ability to expand planted area in many countries and slowing global productivity gains constrain production growth and raise uncertainties about future supply response.

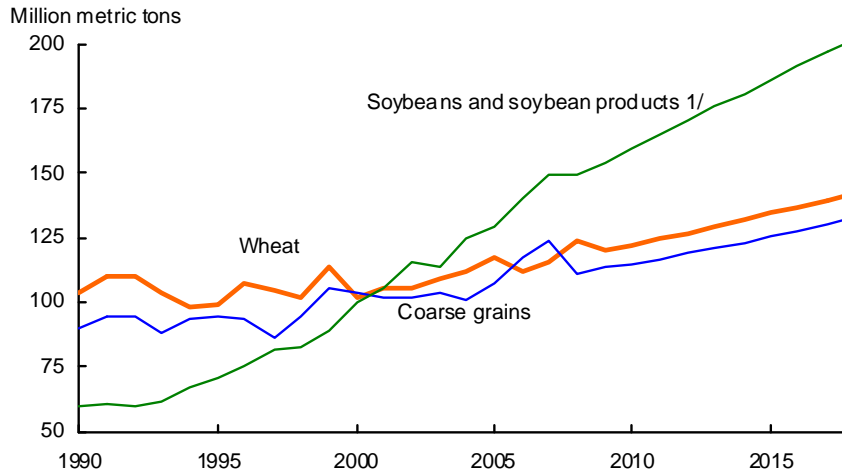
Traditional exporters of a wide range of agricultural commodities, such as Argentina, Australia, Canada, the European Union (EU), and the United States, remain important in the coming decade. But countries that are making significant investments in their agricultural sectors, including Brazil, Russia, Ukraine, and Kazakhstan, are expected to have an increasing presence in export markets for basic agricultural commodities.

### General International Assumptions

Trade projections to 2018 are founded on assumptions concerning trends in foreign area, yields, and use and on the assumption that countries comply with existing bilateral and multilateral agreements affecting agriculture and agricultural trade. The projections incorporate the effects of trade agreements and domestic policies in place or signed by November 2008. International macroeconomic assumptions were completed in October 2008.

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

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



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

Global trade in soybeans and soybean products has risen rapidly since the early 1990s, and has surpassed not only wheat—the traditional leader in agricultural commodity trade—but also total coarse grains (corn, barley, sorghum, rye, oats, millet, and mixed grains). Continued strong growth in global demand for vegetable oil and protein meal, particularly in China and other Asian countries, is expected to maintain soybean and soybean-product trade well above wheat and coarse grains trade throughout the next decade.

- Production of wheat, coarse grains, and oilseeds (including soybeans) compete with each other and with other crops for limited cropland. Higher prices for vegetable oils, as a result of increased demand for food use as well as for biodiesel and other industrial uses, are bringing previously uncropped land in Brazil, Indonesia, and Malaysia into soybean and palm oil production.
- In the projections, the growth in total area planted to all crops rises less than a half-percent per year in most countries. Area expansion occurs more rapidly in countries with a reserve of available land and policies that enable farmers to respond to higher world prices. Such countries include Brazil, some other South American countries, some Eastern European countries, Russia, and Ukraine. About two-thirds of the projected growth in global production is derived 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.
- The impact of slowing growth in total crop production is partially offset by declining growth in world population. Nonetheless, increasing population is a significant factor driving overall growth in demand for agricultural products. Additionally, rising per capita income in many countries augments population gains in the demand for vegetable oils, meats, and horticultural products.
- In the coming decade, overall gains in global grain trade come from a broad range of countries, particularly from countries in Africa and the Middle East.
- During the projection period, world average per capita use of vegetable oils is projected to rise 12 percent, compared with 5 percent for total coarse grains and 3 percent for meat. Per capita use is projected to decline nearly 3 percent for wheat and 2 percent for rice.

## Global Demand for Biofuel Feedstocks

Investment in biofuel production capacity is occurring in many countries. The main feedstocks used are corn and sugarcane for ethanol and rapeseed and soybean oil for biodiesel. Other feedstocks being used include barley, wheat, rye, wine, and cassava for ethanol production and a variety of other first-use vegetable oils and recycled oils and fats from the food industry for biodiesel.

### Biofuel Assumptions Used for the USDA Projections

The demand for biofuels feedstocks is projected to continue growing in a number of countries, although at a slower pace than in recent years. The projections are based on a combination of historical biofuel production data, USDA interpretation of statements by foreign governments about their plans for biofuel development, and other information about potential investments in biofuel production capacity.

### Country Assumptions

**EU:** The EU has a “target” to obtain 5.75 percent of transportation fuel from biofuels by 2010. Since the 5.75-percent “target” was set, the EU has established a “mandate” that biofuels account for 10 percent of transportation fuel use by 2020. The USDA projections assume the EU increases oilseed and vegetable oil imports from Russia and Ukraine to help boost biodiesel production. Nevertheless, progress toward the mandate is assumed to be behind schedule throughout the projection period.

**Brazil:** Sugarcane is the feedstock for nearly all of Brazil’s ethanol production. In southern Brazil, some land has already been shifted from grain and oilseeds production to sugarcane. The projections assume this trend continues, but at a slower pace. Biodiesel production is also projected to expand, using soybean oil as the feedstock.

**Canada:** Canadian biodiesel production is projected to expand between 2009 and 2018. Most of the increased production will be from rapeseed produced and processed in the Prairie Provinces. Ethanol production is also projected to continue expanding.

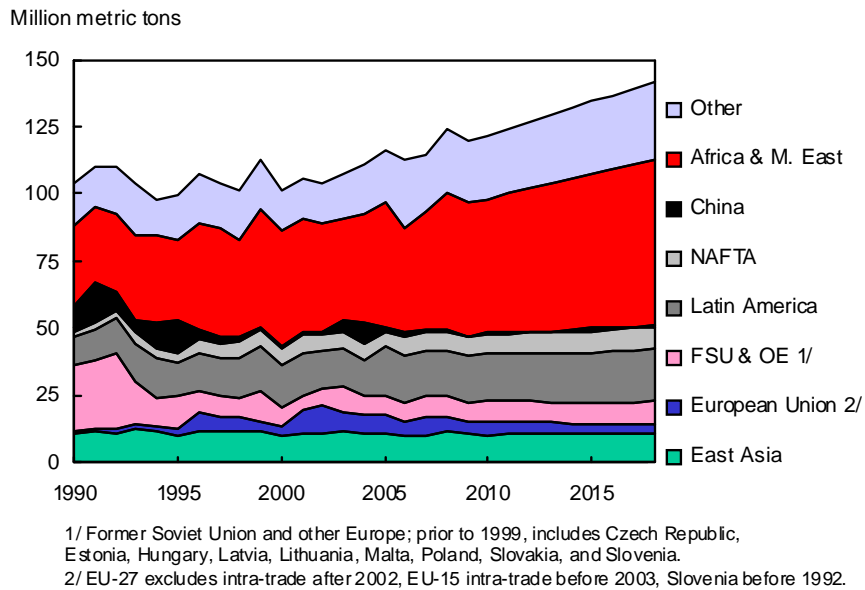
**Argentina:** The production of biodiesel in Argentina is assumed to more than double during the projection period. To effectively use its large crushing capacity, Argentina is projected to import some soybeans from other South American countries.

**Other Europe and the former Soviet Union:** This region is assumed to respond to the EU’s increasing demand for biodiesel by expanding rapeseed production. In Russia and Ukraine, rapeseed production rises more than 80 percent in the projections. Some of the production gains are destined for export to the EU, either as rapeseed oil or as rapeseed for crushing in the EU.

**China:** In 2008, approximately 3 million tons of corn were used to produce fuel ethanol in China. The government is trying to slow the growth in corn-based ethanol production, and is focusing on the use of nongrain feedstocks such as sweet potatoes and cassava.



## Global wheat imports

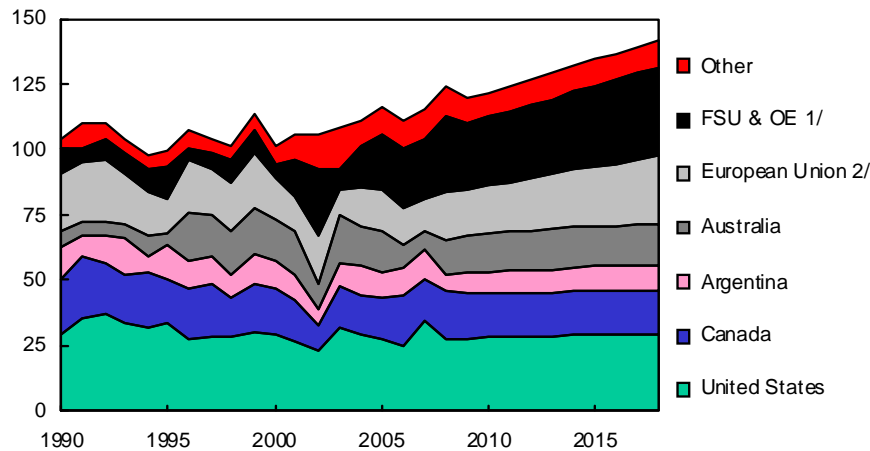


Growth in wheat imports is concentrated in those developing countries where income and population gains underpin increases in demand. Important growth markets include Sub-Saharan Africa, Egypt, Pakistan, Algeria, Indonesia, the Philippines, and Brazil. World wheat trade (including flour) expands by nearly 22 million tons (18 percent) between 2009 and 2018 to 141.6 million tons.

- Egypt maintains its position as the world's largest importing country, as imports climb slowly to more than 9 million tons. Imports by Brazil, Algeria, and Indonesia are each projected to exceed 7 million tons. Brazil's climate generally does not favor wheat, and in some key wheat-producing states, winter corn is expected to provide better producer returns than wheat.
- Imports by developing countries in Sub-Saharan Africa, North Africa, and the Middle East rise 11.6 million tons and account for 53 percent of the total increase in world wheat trade. Saudi Arabia has adopted a policy to phase out wheat production subsidies by 2016 because of water scarcity concerns, and imports are projected to jump by 3 million tons by the end of the projections.
- 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 will boost wheat imports by some major importing countries. In Indonesia, Vietnam, and some other Asian countries, strong economic growth and diversification of diets are projected to increase per capita wheat consumption.
- Lower wheat-to-corn price ratios during most of the projection period enable wheat to compete effectively with corn for feed use in a number of countries. Europe is expected to continue to account for about half of global wheat feeding.

## Global wheat exports

Million metric tons



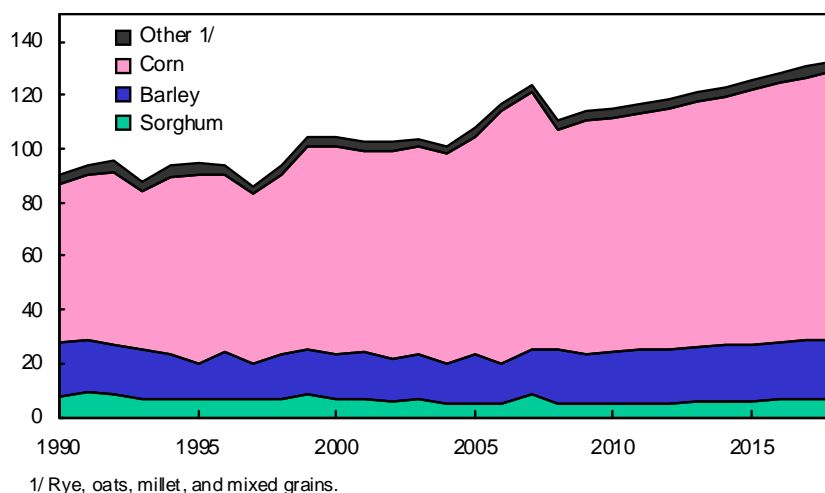
1/ Former Soviet Union and other Europe; prior to 1999, includes Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia, and Slovenia.  
 2/ EU-27 excludes intra-trade after 2002, EU-15 intra-trade before 2003, Slovenia before 1992.

The traditional five largest wheat-exporting nations (the United States, Australia, the EU, Argentina, and Canada) account for 70 percent of world trade in 2009-18. This is down from 89 percent in 1997/98, mostly due to increased exports from the Black Sea area. U.S. wheat exports are projected to account for less than 21 percent of global wheat trade at the end of the projection period, down from 26 percent in the past 5 years. By the end of 2007, the global stocks-to-use ratio had declined to the lowest level on record. A significant 2008/09 rebound in global production enabled stocks to jump and precipitated a decline in prices. However, after working down these larger stocks, much of it lower quality feed wheat, stocks are projected to continue to be lower than during the 1990s. Prices are projected to remain above pre-2007 average levels.

- Shares of the world wheat market held by Canada and the United States decline slightly, while shares increase for the EU, Ukraine, Russia, and Argentina.
- In Canada, increased demand for vegetable oils, especially rapeseed oil for human consumption and biodiesel production, and increasing demand for barley, are expected to reduce wheat area and limit any growth in wheat exports.
- Ukraine, Russia, and Kazakhstan have become significant wheat exporters in recent years. Low costs of production, new investment in their agricultural sectors, and generally favorable weather since 2001 have enabled their combined world market share to climb to about 20 percent in the last 3 years. Russia is expected to increase wheat production for domestic feed use. Exports from Ukraine and Russia are projected to continue gaining market share, more than offsetting a slight decline in the share held by Kazakhstan. However, because of the region's highly variable weather and yields, year-to-year volatility in production and trade can be expected.
- Wheat exports by Turkey and other smaller exporters change little or trend slowly downward during the projection period. Although India has exported some wheat in recent years, exports are expected to be minimal as domestic demand expands as fast as production.

### Global coarse grain trade, by type

Million metric tons

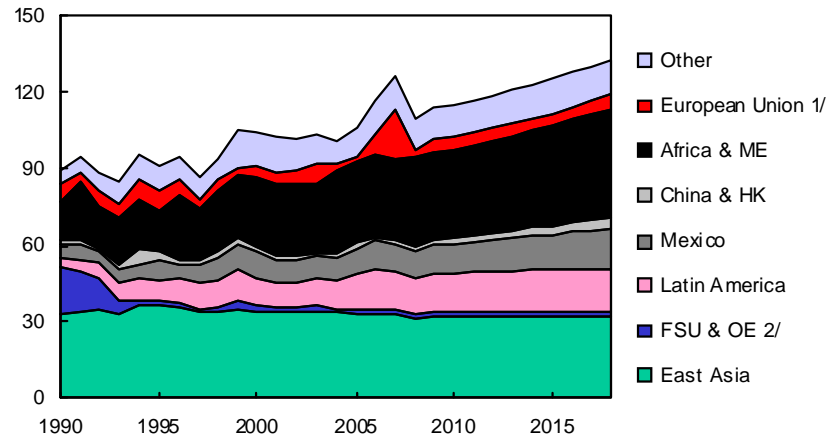


Growth in coarse grain trade is strongly linked to expansion of livestock production in regions unable to meet their own feed needs. Key growth markets include China, Mexico, North Africa, the Middle East, and Southeast Asia. Japan and South Korea are large but mature import markets for coarse grains.

- Corn is the dominant feed grain traded in international markets. Corn accounts for an average of 75 percent of all coarse grain trade through the projection period, followed by barley (17 percent) and sorghum (5 percent).
- Commercialization of livestock feeding has been a driving force behind the growing dominance of corn in international feed grain markets. 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, higher quality feeds are used, boosting the demand for corn and soybean meal.
- Mexico's corn imports rise throughout the projection period and sorghum imports resume growth after 2009/10. Mexico's imports of cracked corn are projected to be almost completely replaced by whole-grain corn. Cracked corn from the United States and Canada has had duty-free access to the Mexican market since 2003. However, effective January 1, 2008, Mexico ended its transitional tariff-rate quota on U.S. and Canadian corn, as part of the North American Free Trade Agreement (NAFTA). This change removed the incentive for Mexico to import cracked corn instead of whole-grain corn.

### Global coarse grain imports

Million metric tons



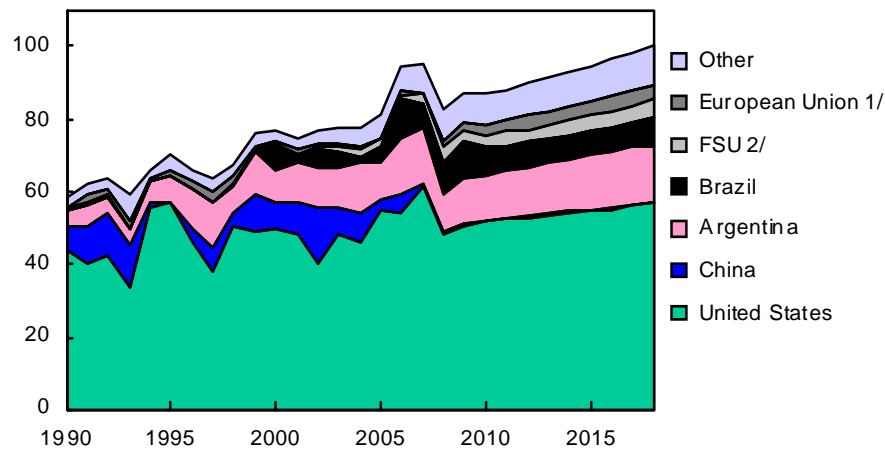
1/ EU-27 excludes intra-trade after 2002, EU-15 intra-trade before 2003, Slovenia before 1992.  
 2/ Former Soviet Union and other Europe; prior to 1999, includes Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia, and Slovenia.

World coarse grain trade expands nearly 19 million tons (16 percent) from 2009 to 2018. The share of global coarse grain production used as animal feed declines slightly from about 63 percent in recent years to 60 percent during the projections. Industrial uses, such as starch, ethanol, and malt production, are much smaller but growing. The share of coarse grains used for food has been declining during the last decade and is projected to continue doing so.

- World grain prices have risen during the last several years as global grain stocks declined sharply. Although the higher prices are expected to continue stimulating grain production, neither stocks-to-use ratios nor prices return to levels prevailing during the last three decades.
- Steady longrun growth in the livestock sectors of developing countries in Latin America, Asia, North Africa, and the Middle East is projected to account for much of the growth in world coarse grain imports during the next decade.
- Russia is expected to produce more coarse grains for domestic feed use.
- Mexico's corn imports are projected to rise from 9.1 million tons in 2009/10 to 11.5 million in 2018. With the conclusion of NAFTA's liberalization of U.S.-Mexico corn trade, growth in Mexican corn imports will be influenced by rising feed demand from Mexico's poultry sector.
- The North Africa and the Middle East region is expected to experience continued growth in import demand for grain and protein meals through 2018 as rising populations and increasing incomes sustain strong demand growth for domestically produced animal products. In Egypt, government policy has shifted toward allowing more poultry meat imports. Still, poultry production is projected to rise, boosting corn imports more than 2 million tons.
- In Japan, South Korea, and Taiwan, increasing imports of selected meat cuts constrain meat production, resulting in no growth in coarse grain imports.
- Countries in Southeast Asia raise corn imports 1.7 million tons (32 percent) during the projection period as their increased demand for livestock products exceeds their capacity to grow more feed grains.

## Global corn exports

Million metric tons



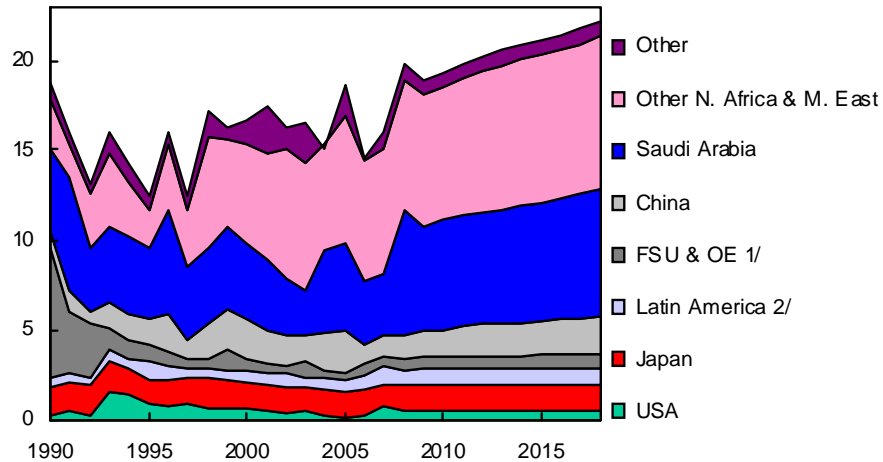
1/ EU-27 excludes intra-trade after 2002, EU-15 intra-trade before 2003, Slovenia before 1992.  
2/ Former Soviet Union.

The United States dominates world trade in coarse grains, particularly corn. However, increasing domestic corn use for ethanol, large competing supplies of feed wheat, and reduced world trade limit U.S. corn exports at the beginning of the projection period. As stocks of feed wheat are consumed and world corn trade recovers, U.S. corn exports are projected to resume growth after declining in 2008/09. The U.S. share of world corn trade remains between 55 and 60 percent.

- Argentina, with a small domestic market, remains the world's second-largest corn exporter. Due to higher export taxes on grains, Argentina shifts some cropland from corn to soybean production and corn exports increase slowly. Argentina and other South American countries increase corn exports to Chile to support its expanding pork exports.
- The EU becomes a more competitive corn exporter. Increases in area and yields enable it to more than double shipments during the projections. Exports from other European countries are also projected to climb steadily.
- Corn exports from some countries of the former Soviet Union (FSU), primarily Ukraine, rise to nearly 5 million tons by 2018. Favorable resource endowments, increasing economic openness, and greater investment in their agricultural sectors stimulate corn production. However, efforts to increase meat production and reduce meat imports, keep exports from growing more rapidly.
- Brazil's corn exports are near record high levels during the early years of the projections. In the last several years, Brazil has targeted the EU's demand for non-genetically modified grain. This marketing opportunity is assumed to diminish as Brazil legalizes planting of genetically modified corn varieties and the EU reduces imports. Also, strong growth in domestic demand from its livestock and poultry sectors and the profitability of growing soybeans limits corn production and exports.
- China becomes a net importer of about 2 million tons of corn at the end of the projections as imports grow slowly while exports remain small. China's strengthening domestic demand is driven by its expanding livestock and industrial sectors.

## Global barley imports

Million metric tons



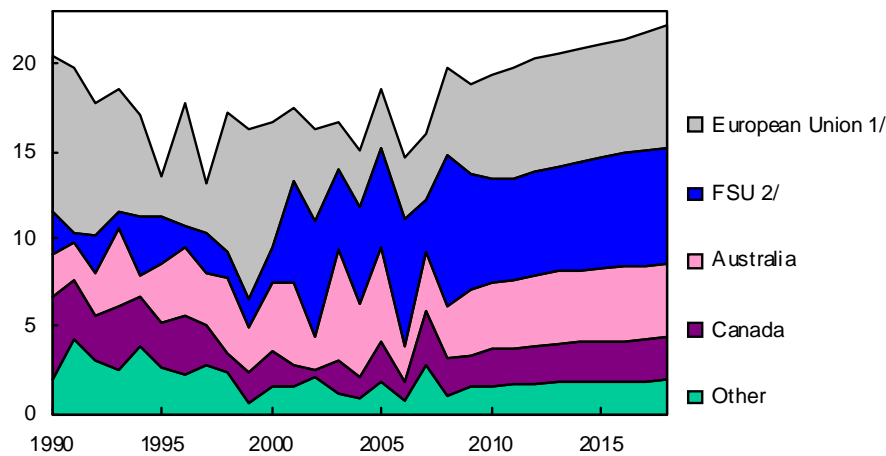
1/ Former Soviet Union and other Europe; prior to 1999, includes Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia, and Slovenia.  
2/ Includes Mexico.

Global barley trade expands 3.3 million tons (17 percent) during the projection period. Rising demand for both malting and feed barley underpin the increased trade.

- Feed barley imports by North African and Middle Eastern countries grow steadily over the next decade. 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-importing country—accounts for over 35 percent of world barley trade through the coming decade. Saudi Arabia's barley imports are used primarily as feed for camels, goats, and sheep.
- Iran is another Middle East country that is projected to increase barley imports during the coming decade.
- 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. Expansion in China's brewing capacity is being aided by foreign investment. Australia and Canada are China's main sources of malting barley imports.

## Global barley exports

Million metric tons



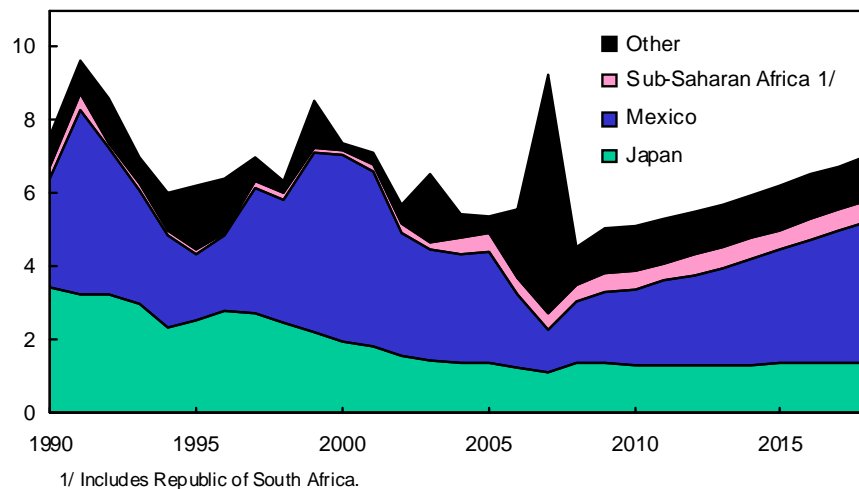
1/ EU-27 excludes intra-trade after 2002, EU-15 intra-trade before 2003, Slovenia before 1992.  
2/ Former Soviet Union.

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 projection period.

- In the EU, reform of the Common Agricultural Policy abolished EU intervention for rye and stimulated the allocation of more area to barley production. EU exports to non-EU countries are projected to climb more than 30 percent to 7 million tons over the projection period, and account for 30 percent of world trade.
- The FSU remains a major barley exporter throughout the coming decade as exports remain around 6 million tons. Together, the FSU and EU account for about 60 percent of world barley exports by 2018.
- Malting barley is a different quality than feed barley and commands a substantial price premium over feed barley. This premium is expected to influence planting decisions in Canada and Australia and, in both countries, malting barley's share of total barley area is expected to rise during the projection period. An increase in Canada's total barley area offsets a decline in the area planted to wheat and minor coarse grains.

## Global sorghum imports

Million metric tons

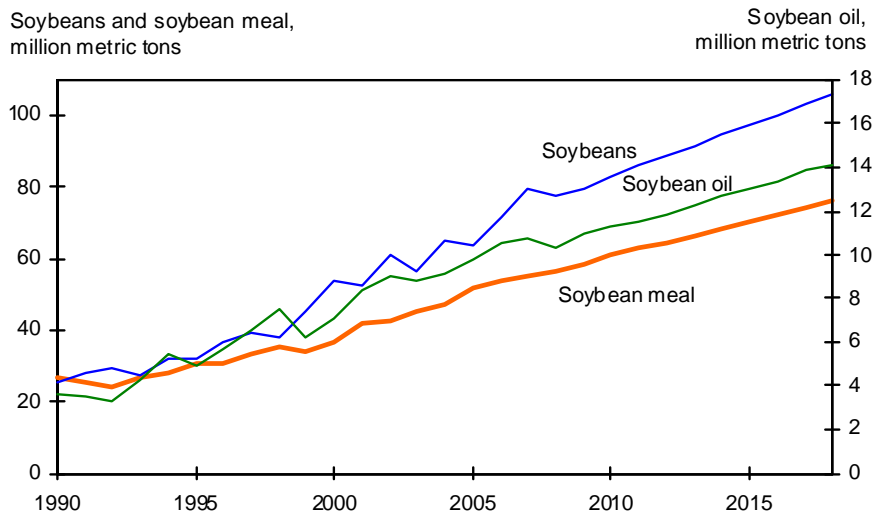


World sorghum trade, which averaged nearly 6.7 million tons during the last decade, declines to 5 million tons in the early years of the projection period before rising to 7 million tons at the end. Sorghum trade is driven mostly by U.S. exports to Mexico and Japan.

- The EU normally imports small quantities of sorghum as part of the Spain-Portugal Accession Agreement, but because of domestic and global corn production shortfalls and limited availability of nongenetically modified corn to import, it became the world's largest sorghum importer in 2007/08. EU corn production returned to normal levels in 2008 and its future imports of both corn and sorghum are projected to be modest.
- Mexico has accounted for about half of world sorghum imports until the most recent years. Mexico's sorghum imports are projected to increase to nearly 4 million tons by 2018. At this import level, Mexico again accounts for more than 50 percent of world sorghum imports.
- Japan imports a fairly constant 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 more than 80 percent of world trade in 2000-05. During the early part of the projection period, U.S. exports, and its share of world trade decline. During the latter half of the period, U.S. exports and its share of world trade recover but remain near the levels of the past two years.
- The primary sorghum markets for Argentina, the world's second largest exporter, are Japan, Chile, and Europe. In Argentina, prices and profitability are expected to favor planting soybeans and corn, so sorghum exports remain relatively flat during the projection period.
- Brazil has begun to export small quantities of sorghum and the volume is projected to rise during the projection period. In the Central-West region of Brazil, sorghum is increasingly planted during the dry season between crops of soybeans or cotton.



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

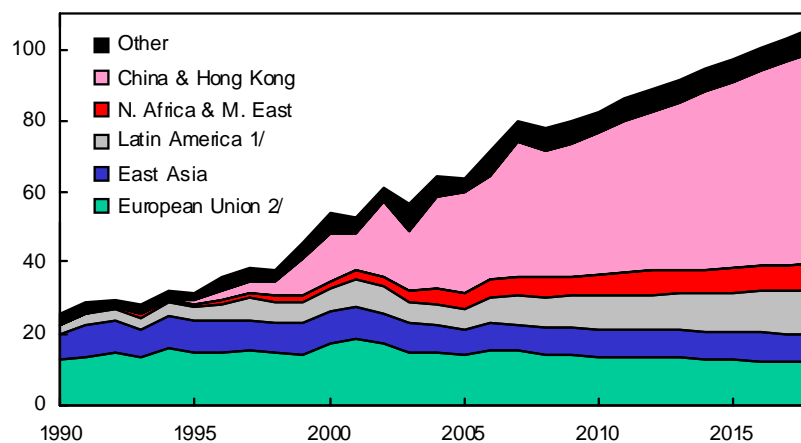


Strong income and population growth in developing countries generate increasing demand for vegetable oils for food consumption and for protein meals used in livestock production. Demand for vegetable oils to be used as feedstocks for biodiesel is also projected to increase. Because a number of countries prefer to import oilseeds for crushing, rather than import soybean meal or soybean oil, world trade in soybeans expands more rapidly than for soybean meal or soybean oil.

- Prices for vegetable oils rise due to increasing consumer demand in developing countries and the expansion of biodiesel production. As demand increases for vegetable oils faster than for protein meals, vegetable oil prices rise more rapidly than for oilseeds and protein meals.
- 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, import demand for soybeans and rapeseed grows rapidly. However, strong competition in international protein meal markets is expected to shift some of the import demand from oilseeds to cheaper meals.
- China's expansion of domestic crushing capacity significantly influences the composition of world trade by raising global import demand for soybeans and other oilseeds rather than for oilseed products.
- In Argentina, uncertainties about grain policies cause farmers to shift some land to soybean production. However, future soybean expansion is constrained by slower rates of conversion of pasture land to cropland.
- Brazil's rapidly increasing soybean area 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 rises from about 30 percent in recent years to 33 percent by 2018.
- EU rapeseed area increases early in the projections in response to the demand for rapeseed oil for biodiesel production. Only small amounts of soybean oil are used for biodiesel production.

## Global soybean imports

Million metric tons



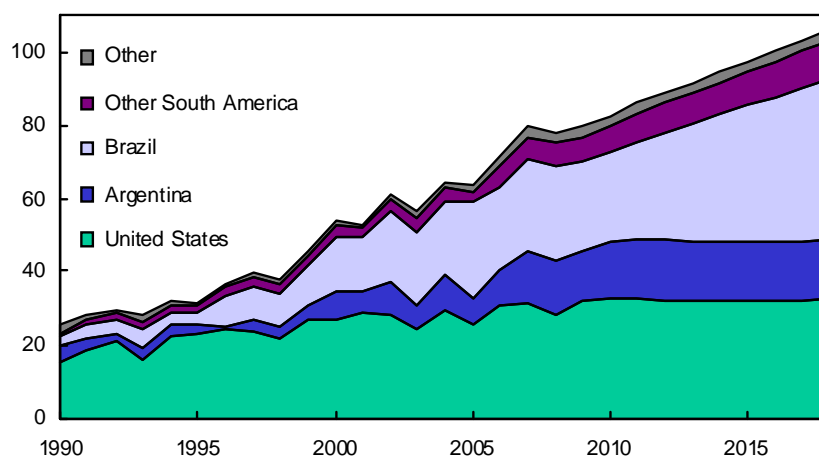
1/ Includes Mexico. 2/ EU-27 excludes intra-trade after 2002, EU-15 intra-trade before 2003, Slovenia before 1992.

World soybean trade is projected to rise rapidly, climbing nearly 27 million tons (33 percent) during the next decade.

- The EU was the world's leading importer of soybeans until 2002. However, increases in grain and rapeseed meal feeding and rising imports of soybean meal have resulted in declining soybean imports since then. These trends are projected to continue.
- China's soybean imports have risen sharply and now account for nearly half of world trade. China will face policy decisions regarding tradeoffs in producing or importing corn and soybeans. The projections assume that Chinese policies will support maintaining domestic corn production and importing soybeans. Thus, China accounts for more than 80 percent of the projected 27-million-ton growth in global 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. The use of vegetable oils for biofuels production is assumed to have a negligible impact on China's total vegetable oil use.
- 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 does not rise during the coming decade despite rising meat consumption.
- Mexico's soybean imports are projected to increase by about one-third during the projection period. These imports will support the production of soybean meal for the Mexican poultry industry and soybean oil for domestic food consumption.
- For Argentina to operate its expanding crushing facilities at full capacity, it is expected to import 5 million tons of soybeans from Brazil, Paraguay, Uruguay, and Bolivia by the end of the period.

## Global soybean exports

Million metric tons

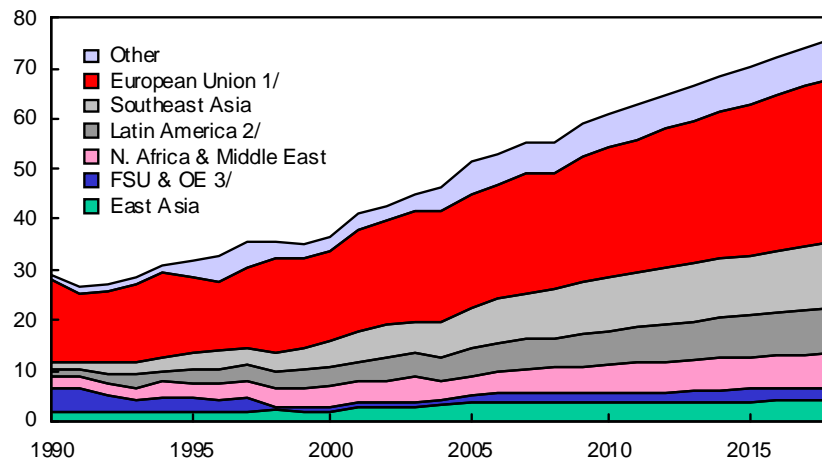


The three leading soybean exporters—the United States, Brazil, and Argentina—have accounted for more than 90 percent of world trade in recent years. Their market share is projected to decline to slightly less than 90 percent as exports rise from other exporting countries, such as Uruguay, Paraguay, and Bolivia.

- With continuing area gains, Brazil maintains its position as the world's leading exporter of soybeans and soybean products. Combating soybean rust disease increases production costs. However, because of the increased domestic demand for soybean meal for livestock feed and soybean oil for human consumption and biodiesel production, soybeans remain more profitable than other crops in most areas of Brazil. It is assumed that some land in southern Brazil will shift from oilseed to corn production during the middle of the projection period in response to higher corn prices and more limited competition from U.S. corn exports. Still, with expanded soybean plantings in the Cerrado regions, the growth rate for Brazil's soybean planted area is projected to average more than 3.5 percent per year, reaching more than 30 million hectares by 2018. Soybean exports are projected to rise more than 80 percent.
- Argentina's export tax rates are higher for soybeans than for soybean products, which favors domestic crushing of whole seeds and exporting the products. However, in response to world demand for soybeans for crushing, Argentina's soybean exports have risen sharply and remain above 14 million tons throughout the projection period.
- Other South American countries, principally Uruguay, Paraguay, and Bolivia, expand exports nearly 50 percent to more than 10 million tons. Five million tons are destined for the crushing industry in Argentina.
- Russia and Ukraine respond to higher international market prices for oilseeds by increasing production of rapeseed and soybeans. Although rapeseed production will be most affected, Ukrainian soybean exports are projected to increase somewhat.
- In the United States, reduced soybean acreage and increased domestic crush limit exportable supplies, but their competitiveness is aided by the dollar's value remaining below the early 2000s level.

## Global soybean meal imports

Million metric tons

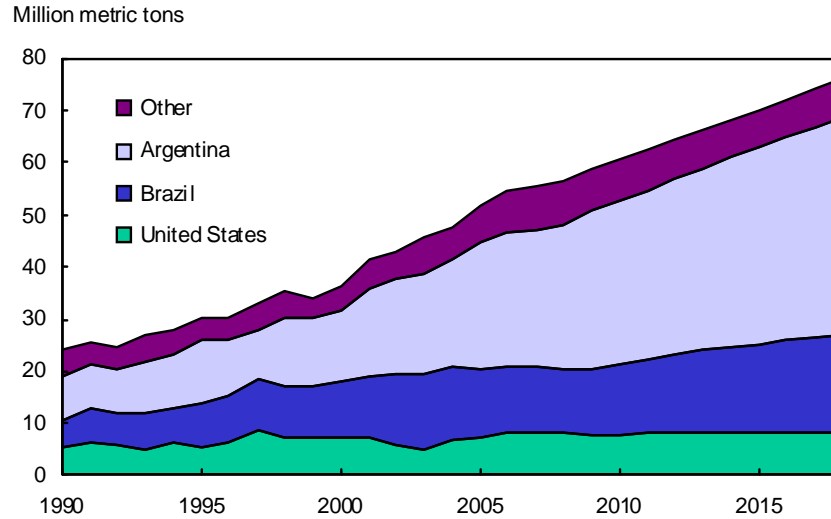


1/ EU-27 excludes intra-trade after 2002, EU-15 intra-trade before 2003, Slovenia before 1992.  
2/ Includes Mexico. 3/ Former Soviet Union and other Europe; prior to 1999, includes Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia, and Slovenia.

World trade in soybean meal grows briskly during the projections, rising more than 17 million tons (nearly 30 percent) by 2018. Continuing growth in the demand for livestock products, limited capability to increase oilseed production, and relatively lower world prices for protein meals boost demand for soybean meal by a number of countries with rising middle-income populations. Lower import prices for soybean meal relative to soybeans and grains provide incentives for countries to use imported soybean meal at a higher rate in livestock feed rations.

- The EU remains the world's largest destination for soybean meal throughout the projection period, despite increased domestic feeding of grains and rapeseed meal. Although there will be abundant supplies of low-cost rapeseed meal available for feed as a result of the biofuels expansion, there are technical limits on the amount of rapeseed meal that can be incorporated in livestock rations. As a result, growth in soybean meal imports is expected to continue. Also, an increase in the dairy production quota increases soybean meal feeding.
- The regions of Southeast Asia, Latin America, and North Africa and the Middle East all become larger importers of soybean meal due to increasing demand for livestock feed in many countries.
- Mexico's strong growth in demand for protein feed and vegetable oils is projected to continue.

### Global soybean meal exports

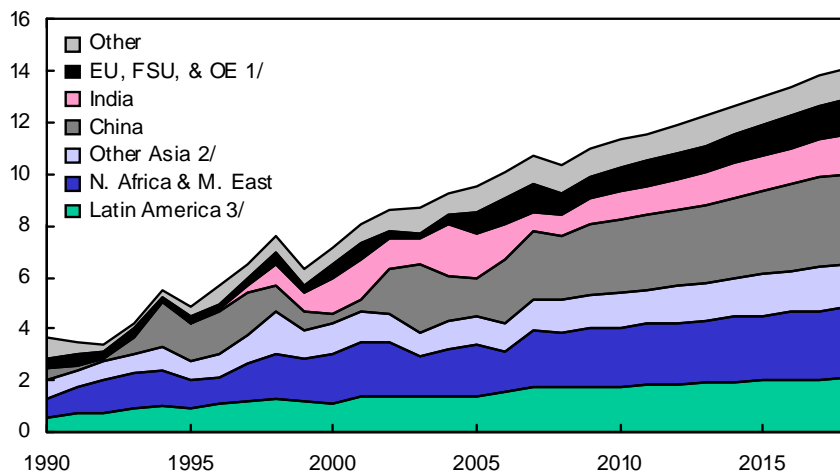


Argentina, Brazil, and the United States remain the three major exporters in international soybean meal markets. Together, they account for nearly 90 percent of total world soybean meal trade during the next 10 years. Argentina, the world's largest soybean meal exporter, increases its share of the world market from around 45 percent in recent years to 55 percent. Brazil's share of world exports remains in the 20-25 percent range while the shares held by the United States and other exporters fall.

- Argentina imposes higher export taxes on soybeans than on soybean products. This has provided an incentive for the country to develop a large oilseed crushing capacity. Argentina maintains high utilization of its growing crushing capacity by importing soybeans from Brazil and other South American countries.
- In Brazil, strong growth in domestic meal consumption due to rapid expansion of the poultry and pork sectors limits increases in soybean meal exports. Also, domestic soybean crushing capacity is not expected to grow as fast as soybean production because Brazil's differential export tax structure favors exporting soybeans rather than soybean meal or soybean oil.
- U.S. soybean meal exports hold steady at around 8 million tons throughout the projections, but the U.S. share of world trade declines steadily from more than 14 percent in recent years to less than 11 percent by 2018.
- The EU continues to be a small but steady exporter of soybean meal to Russia and other East European countries. India remains an exporter, although export volume declines as domestic use, especially for poultry feed, rapidly expands.

## Global soybean oil imports

Million metric tons



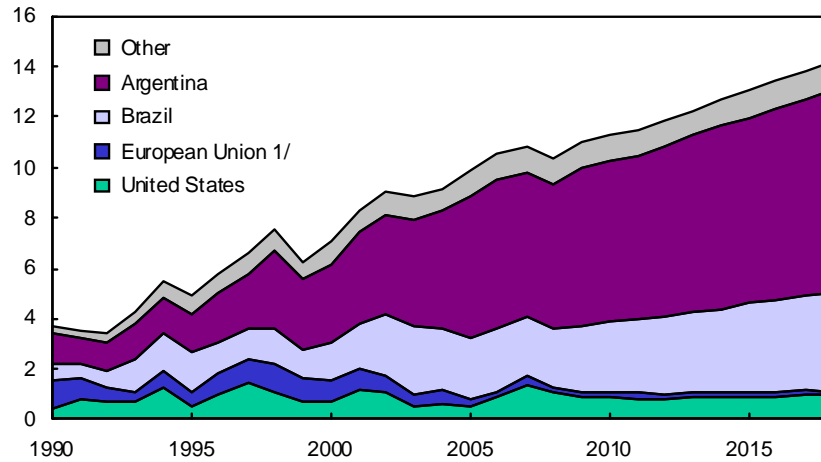
1/ European Union, former Soviet Union, and other Europe.  
 2/ Asia excluding India and China. 3/ Includes Mexico.

World demand for soybean oil imports climbs 3.2 million tons (29 percent) in the projections, bolstered by rising food use and increased demand for use in biofuel production. China and India are the world's two largest soybean oil importers, primarily for food use. In recent years, their combined imports have been around 3.5 million tons, more than a third of total world imports. The growth in soybean oil trade will be constrained by competition with palm oil, which claims the top ranking in world vegetable oil trade.

- Import demand for soybean oil rises in nearly all countries and regions. Income and population growth in North Africa, the Middle East, and Latin America contribute to gains in soybean oil imports. Although rising international prices for soybean oil will temper consumption, especially in developing countries, imports by the North Africa and the Middle East region are projected to be exceeded only by those of China.
- India remains one of the world's largest soybean oil importers. Factors that contribute to continued growth in imports include burgeoning domestic demand for vegetable oils and limited capacity for domestic production of oilseeds. Low yields, associated with erratic rainfed growing conditions and low input use, inhibit growth of oilseed production in India. India sharply reduced edible oil tariffs to zero in 2008 in response to high world prices. Since then, soybean oil tariffs have been raised. However, the projections assume that the tariff rates will return to near traditional relationships, and eliminate a tariff disadvantage for soybean oil relative to palm and other oils.
- China experiences a growing demand for vegetable oils. However, land-use competition from other crops constrains area planted to oilseed crops. Even with strong increases in soybean imports for crush, domestic demand outpaces vegetable oil production and fuels a moderate expansion in soybean oil imports.
- The EU imports more soybean oil to replace some of the rapeseed oil that is used in the production of biodiesel, although imports of sunflowerseed oil and palm oil will also be in great demand.

## Global soybean oil exports

Million metric tons



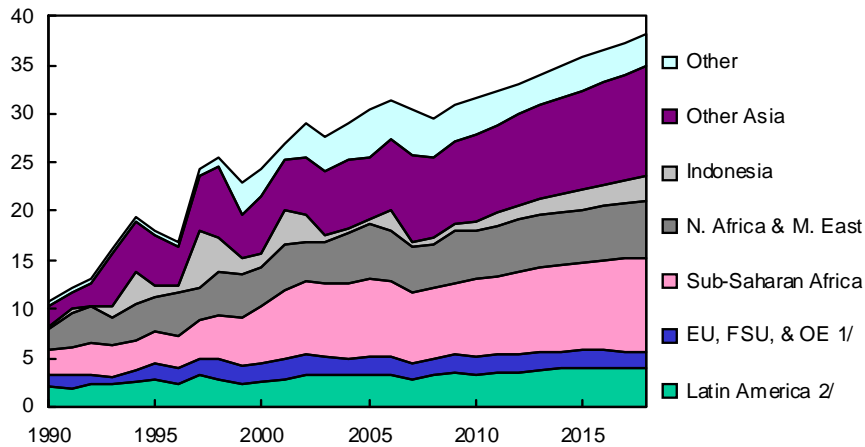
1/ EU-27 excludes intra-trade after 2002, EU-15 intra-trade before 2003, Slovenia before 1992.

Argentina's and Brazil's combined share of world soybean oil exports rises slowly from around 80 percent early in the projections to nearly 85 percent by the end of the projections.

- Argentina is the leading exporter of soybean oil, reflecting the country's large crushing capacity, its small domestic market for soybean oil, and an export tax structure that favors exports of soybean products rather than soybeans. Increases in soybean crush and soybean oil exports are supported by gains in Argentine soybean production due to extensive double-cropping, further adjustments in crop-pasture rotations, and the addition of marginal lands in the northwest part of the country. Argentina also increases soybean imports from other South American countries in order to more fully utilize its crushing capacity. Despite continued expansion in Argentina's biodiesel production, soybean oil exports are also expected to rise strongly.
- 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. U.S. soybean oil exports are constrained by increased use for biodiesel production, and the U.S. share of world trade is projected to fall below the average of recent years. However, U.S. exports will be supported as imports supplement the domestic edible oil supply. U.S. imports of canola oil from Canada and palm oil from Southeast Asia are projected to continue to grow strongly.
- In the EU, exportable supplies of vegetable oils are limited by the growth in biodiesel production.

### Global rice imports

Million metric tons



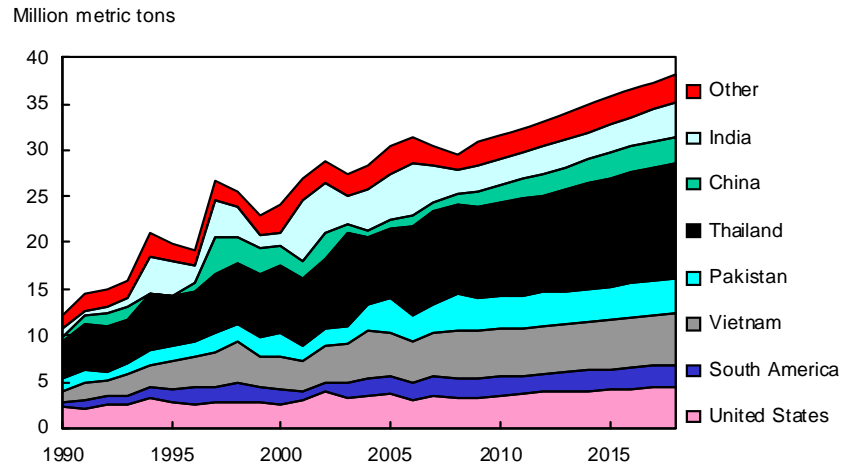
1/ European Union, former Soviet Union, and other Europe. 2/ Includes Mexico.

Global rice trade is projected to grow 2.4 percent per year from 2009 to 2018. By 2018, global rice trade exceeds 38 million tons, 22 percent above the 2006 record. The main factors driving the expansion in global trade are a steady growth in demand—largely due to population growth in developing countries—and the inability to significantly boost production in key importing nations.

- Long-grain varieties account for around three-fourths of global rice trade and are expected to account for the bulk of trade growth over the next decade. Medium- and short-grain varieties account for 10-12 percent of global trade, with Northeast Asia the largest market. Aromatic rice, primarily basmati and jasmine, makes up most of the rest of global rice trade.
- Indonesia, the Philippines, and Bangladesh become the three largest rice-importing countries by the end of the projection period. By 2018, each country is projected to import 2.3 million tons of rice or more. These three countries have limited ability to expand production and are expected to account for nearly half of the increase in global rice imports over the next decade.
- In Sub-Saharan Africa and the Middle East, strong demand growth is driven by rapidly expanding populations. Production growth is limited by climate in the Middle East and by infrastructure deficiencies in Sub-Saharan Africa. Sub-Saharan Africa accounts for 29 percent of the increase in world rice trade between 2009 and 2018. Iraq and Saudi Arabia account for most of the increase in imports by the Middle East.
- The Central America and Caribbean region is projected to expand imports over the next decade, increasing almost 0.5 million tons to more than 2.1 million by 2018. Population growth and rising per capita incomes boost rice consumption and raise this region's imports.
- The EU will remain a major market for rice, although import growth will be modest. Consumption growth will be driven by a larger immigrant population. North American imports will also expand over the next decade, with both total and per capita consumption rising.
- Imports by the former Soviet Union are projected to decline as a result of strong production growth and stagnant demand.



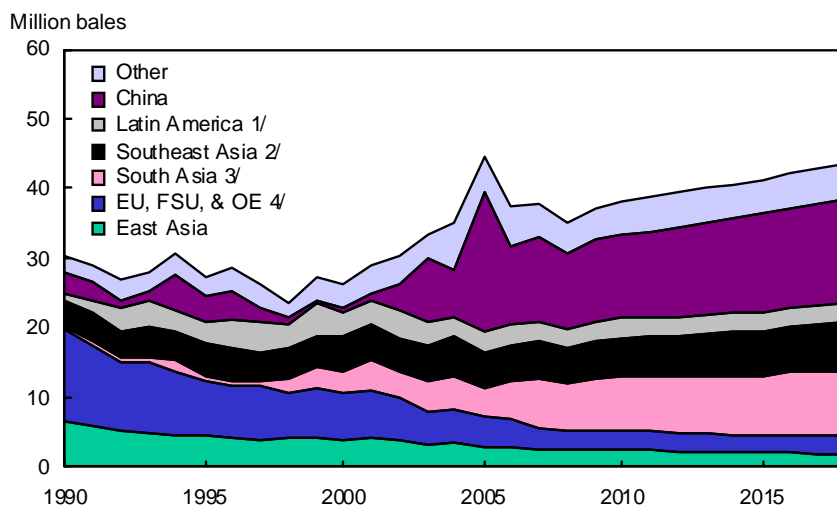
### Global rice exports



Asia remains the largest rice-exporting region throughout the projection period.

- Thailand and Vietnam, the world's largest rice-exporting countries, account for half of all rice exports and more than 40 percent of the growth in world exports in the coming decade. Thailand's exports increase 2.6 million tons to more than 12 million by 2018. Both area and yield are projected to increase in Thailand. Vietnam's export expansion is smaller, rising from 5.1 to 5.6 million tons. Per capita consumption declines for both exporters.
- Pakistan is currently the world's third-leading rice exporter and exports are projected to slightly increase over the next decade to 3.8 million tons by 2018. Pakistan has sharply boosted rice area and production in the past few years. In 2008, Pakistan gained markets due to India's ban on exports of non-basmati rice. Pakistan's agricultural sector is confronting a growing water shortage and a decaying infrastructure, limiting production and export gains.
- The United States is currently the fourth-largest rice-exporting country. The United States is expected to increase exports from 3.3 million tons early in the projections to 4.2 million by 2018. A slight area expansion, continued yield growth, and slow growth in domestic use result in larger exportable supplies. The United States becomes the third-largest exporting country early in the projection period.
- India has typically been the third- or fourth-largest rice exporter since the mid-1990s, although export levels have been rather volatile, primarily due to fluctuating stock levels and government policies. India's exports are currently limited by a ban on non-basmati sales. Exports are projected to increase about 700,000 tons to 3.6 million by 2018 as production growth outpaces consumption and India's current export ban is removed. India's production is constrained by slow progress in raising average yields.
- China, the sixth-largest rice-exporting country, is projected to raise exports by 1.1 million tons to 2.8 million tons by 2018. The increase in exports is primarily due to a decline in per capita consumption. Little change in production or total disappearance is expected. Higher yields are projected to offset declining area. Reductions in per capita consumption, a result of continued diet diversification resulting from higher incomes, are expected to offset population growth.
- Australia virtually exits the rice export market due to competing demands for water and, thus, uncertainty regarding availability of irrigation water.

### Global cotton imports

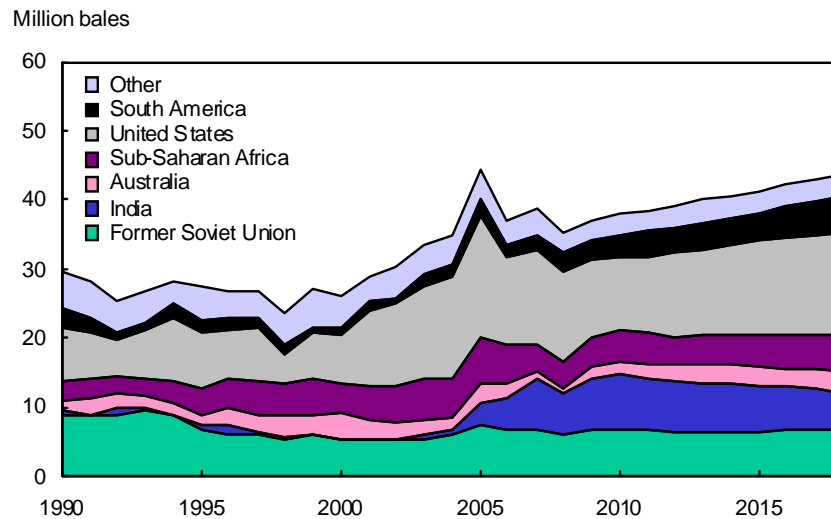


1/ Includes Mexico. 2/ Malaysia, Indonesia, Philippines, Thailand, and Vietnam. 3/ Bangladesh, India, and Pakistan. 4/ European Union, former Soviet Union, and other Europe.

With global cotton consumption growing dramatically, international trade has become increasingly important in world cotton markets. During the last decade, world consumption climbed at a 3.8-percent annual growth rate while world trade rose 4.2 percent a year. Not only has textile trade liberalization boosted world cotton demand through increased efficiency, but geographic shifts in mill use of cotton have increased the role of trade in meeting the global textile industry's need for cotton. Trade's importance has rebounded in recent years as the textile sectors in China and Pakistan have grown substantially faster than their domestic cotton production. Imports are expected to increase in a number of other Asian countries as well. Asia's share of world cotton imports is projected to rise from less than 72 percent in 2009 to more than 76 percent in 2018.

- The textile industries in China, India, and Pakistan have been the major beneficiaries of textile trade liberalization as a result of the elimination of Multifiber Arrangement (MFA) quotas in 2005.
- China has been importing record amounts of cotton as its textile industry's growth rapidly accelerated with a booming economy and World Trade Organization (WTO) accession. Both its textile industry and its cotton imports are expected to grow more slowly than the rapid increases since 2001. However, during the next decade, the increase in cotton imports by China is projected to account for half of the global increase in cotton imports.
- Pakistan has emerged as a major importer in recent years and is projected to be the world's second largest importing country during the next 10 years.
- In recent years, Turkey's textile industry has benefited from favorable trade access to the EU, its major market for textile and apparel exports. However, the end of the MFA quotas gives lower cost competitors more favorable access to EU markets. Turkey's cotton imports are projected to rise slowly over the next 10 years, but not enough to keep its share of world trade from falling slightly.
- 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 countries with lower wages and other costs.

## Global cotton exports

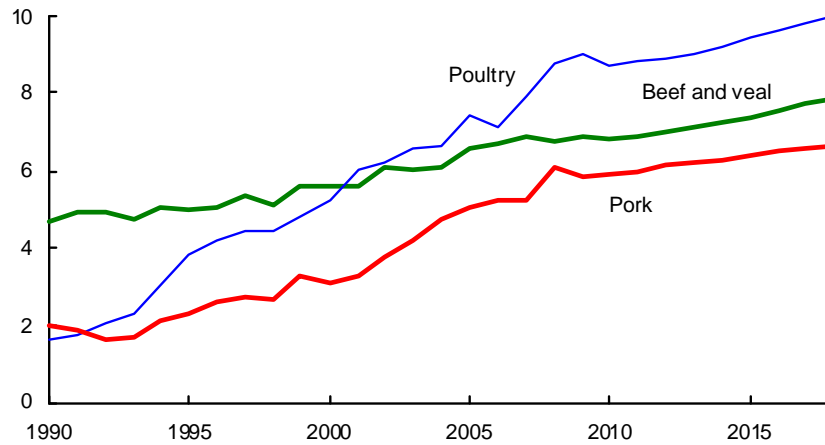


Globalization is expected to continue to move raw cotton production to countries with favorable resource endowments and technology. Traditional producers with large land bases suitable for cotton production continue to benefit from post-MFA trade patterns. Such producer/exporter regions include the United States, Sub-Saharan Africa, and Brazil. The importance of technology has been highlighted by the impact of India's rapid adoption of genetically modified cotton, nearly all *Bacillus thuringiensis* (Bt) cotton.

- The United States continues as the world's leading cotton exporter throughout the projections. Exports climb 32 percent to more than 15 million bales by 2018/19, reaching one-third of overall world trade. However, the U.S. share of world exports is still well below the 40-percent average realized for the first half of this decade.
- The Central Asian countries of the former Soviet Union have been the principal U.S. competitors since the early 1990s. However, government policies in Central Asia promoting investment in textiles have resulted, to some extent, in exports of textile products rather than exports of raw cotton. Furthermore, the region's cotton production is expected to grow only slowly.
- Sub-Saharan Africa's exports rose rapidly during much of the last decade, but since 2006, low world prices and the strength of the Euro have led to lower output and exports by West Africa. The 2008 planted area in the member countries of the Communauté Financière Africaine (CFA) has fallen to its lowest level since just after the 1994 devaluation of the CFA franc. Some rebound in output is expected as these economies develop and as Bt cotton is adopted by the region's producers. The region's exports are projected to rise more than 20 percent during the next 10 years.
- Improved cotton yields in India, largely due to the adoption of hybrid cotton containing the Bt gene, have raised India's production and exports in recent years. Yield growth is projected to continue as the area planted to Bt cotton expands. The increase in cotton output is expected to enable India to increase domestic textile production and remain a major cotton exporter and competitor to the United States in world markets.

### Meat exports 1/

Million metric tons



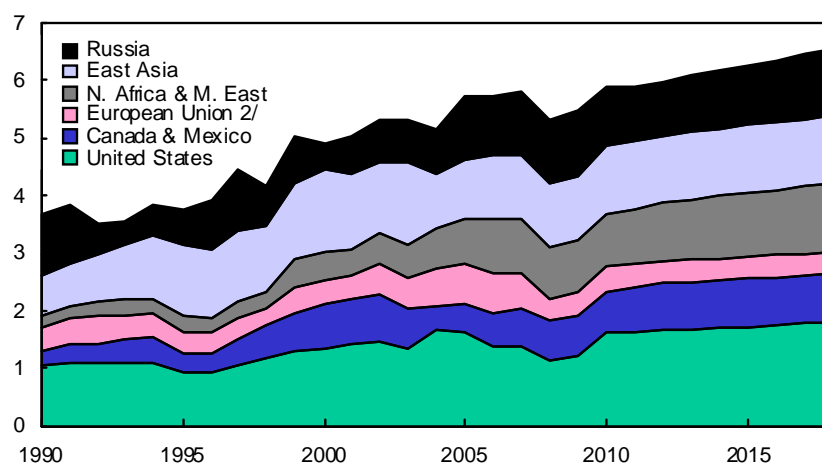
1/ Major exporters.

The growth in world per capita meat consumption slows during the coming decade to about a third of a percent per year. Still, meat shipments from major exporters trend upwards at 1.3 percent per year. Growth rates of exports from major exporters of beef, pork, and poultry meat average 1.4, 1.7, and 0.9 percent per year, respectively, between 2009 and 2018. During this period, exports rise 0.9 million tons for beef, 0.9 million for pork, and 0.7 million for poultry. Rising per capita incomes combined with population growth in a number of countries are the driving forces behind the projected growth in global meat demand.

- Canadian beef exports are projected to rise slowly during the next decade. However, they do not reach the record set in 2002, prior to the Canada's first case of Bovine spongiform encephalopathy (BSE).
- In response to Russia's policies to stimulate meat production, net imports of meat decline slowly during the coming decade.
- China became a pork net importer in 2008 due to swine disease problems and imports for the Olympics. China is projected to resume being a small net exporter within several years.
- EU beef exports remain well below the annual WTO limit on subsidized exports (817,000 tons) as policy changes lower beef production. These factors limit the EU's competitiveness in international markets.
- Argentine beef exports declined sharply after the peak in 2005. Export taxes on beef and changes in other policies have made Argentina's exports less competitive. Beef exports are projected to continue their downward trend as growth in consumption exceeds production.
- The projections assume no changes in the set of countries recognizing Brazil as free of foot-and-mouth disease (FMD), thus limiting Brazil's ability to compete in some markets for pork. However, exports from Brazil's expanding pork sector are expected to be competitive in price-sensitive markets such as Russia and Asian countries other than Japan and South Korea.
- Canada is projected to remain the world's third largest pork exporter.
- During the coming decade, Brazil is expected to continue to be the largest exporter of poultry products, bolstered by low production costs and competitive export prices.
- U.S. poultry meat exports are projected to increase, due in part to the U.S. dollar's low level relative to the early 2000s.

## Beef imports 1/

Million metric tons



1/ Selected importers.

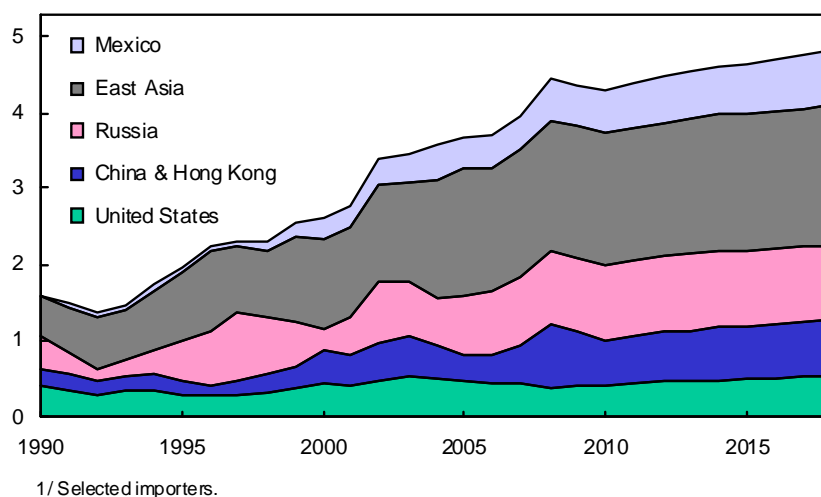
2/ EU-27 excludes intra-trade after 2002, EU-15 intra-trade before 2003, Slovenia before 1992.

Beef imports by major importers expand nearly 1 million tons (19 percent) between 2009 and 2018. Traditionally, developed countries were the primary importers of beef. However, Brazil has become a large exporter of lower priced grass-fed beef that is imported by lower income countries. The projections assume gradual recovery of U.S. exports to South Korea and Japan.

- Grain-fed beef imports are projected to rise slowly in higher income countries. U.S. beef exports to these countries are projected to rebuild over the next 10 years.
- Rapid import growth is projected for a number of middle-income countries in northern Africa and the Middle East. Faster growth in population and per capita incomes stimulate demand.
- U.S. beef imports, primarily of grass-fed lean beef from Australia and New Zealand for use in ground beef and processed products, rise slightly through the period. Also, strong Asian imports of beef enable Australia and New Zealand to maintain significant levels of exports over the projection period.
- After declining in 2009, Mexico is projected to increase beef imports. Much of Mexico's imports are of higher valued grain-fed beef from the United States.
- The projections assume that Russia's tariff-rate quota (TRQ) for beef, first imposed in 2003, remains in effect until 2009. In the longer run, the growth in Russia's beef imports resumes as rising consumer demand outpaces gains in domestic production. Russia remains a large market for EU and South American beef exports. In recent years, Russia has imported more beef from Uruguay, Paraguay, and Australia as shipments from Argentina have declined.

### Pork imports 1/

Million metric tons

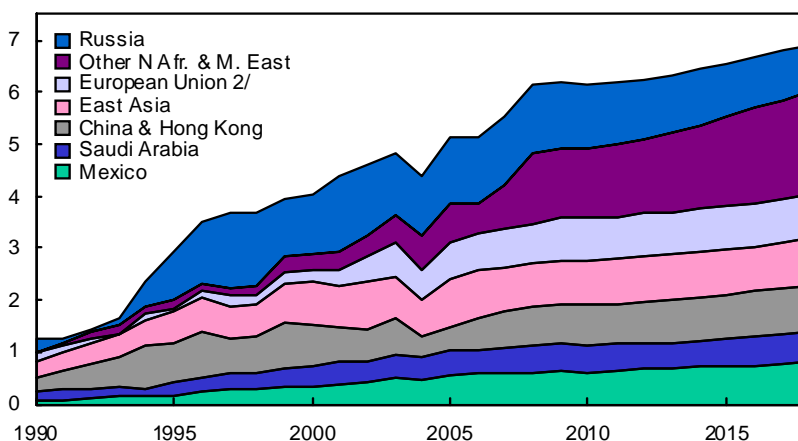


The major pork importers are projected to increase trade by about 500,000 tons (11 percent) between 2009 and 2018.

- Mexican pork imports increase more than 190,000 tons (36 percent) between 2009 and 2018, making Mexico one of the fastest growing pork importers. Increases in income and population are the primary drivers of Mexico's increasing demand for pork. Mexico accounts for more than a third of the growth in global pork trade during the coming decade.
- Some higher income countries in East Asia increase pork imports to satisfy demand for selected cuts of pork, especially pork bellies. The increase in South Korea's imports accounts for nearly one-fourth of the increase in world pork imports during the projections.
- As with beef, the projections assume the TRQ that Russia imposed for pork in 2003 remains in effect until 2009. Although the TRQ initially lowered pork imports, Russian imports of competitively priced pork from the EU and Brazil have risen as demand growth continues to exceed Russian pork production gains. During the last half of the projection period, Russia's policies to stimulate grain and livestock production are projected to cause pork imports to begin to decline.
- In China, increasing incomes boost per capita pork consumption and raise imports in the projections. Although China's pork production and exports have declined since 2006 due, in part, to swine disease problems, they are projected to resume growth within the next couple of years. The country resumes being a small net exporter for the rest of the projection period. Hong Kong's pork imports are expected to rise steadily during the coming decade.

## Poultry imports 1/

Million metric tons



1/ Selected importers.

2/ EU-27 excludes intra-trade after 2002, EU-15 intra-trade before 2003, Slovenia before 1992.

Poultry meat imports by major importers are projected to increase by about 0.7 million tons (11 percent) from 2009 to 2018. Declines in imports by Russia, non-EU Europe, and Japan are more than offset by large increases in imports by the rest of the world.

- Poultry imports by Egypt, Saudi Arabia, and other countries in the North Africa and Middle East region now account for 35 percent of major trader imports and are projected to rise more than imports by all other countries combined. Economic and population growth will boost demand. Ongoing animal disease concerns in a number of countries are expected to slow growth in domestic production and increase demand for imports.
- Rising consumer incomes increase poultry demand and imports in Mexico and a number of Central American and Caribbean countries. Poultry products remain relatively less expensive than beef or pork, further stimulating demand. Mexico's domestic poultry production continues to increase, but lags rising consumer demand, and imports rise nearly 140,000 tons (21 percent) from 2009-2018.
- Russia's poultry imports decline during the projections, but it remains the world's largest poultry importer. Policies that reduce the poultry TRQ and stimulate grain production boost poultry production and restrain poultry imports. Slower growth in per capita income and consumption of poultry also reduce the need for imports.
- South Korea's imports of poultry meat rise more than 75 percent during the coming decade. Although imports start from a low base level, increasing per capita consumption combined with environmental restrictions on expanding production boost imports.
- Because of avian influenza, some major poultry-exporting countries such as Thailand and China have shifted most of their exports to fully cooked products. Due to their higher costs, these cooked poultry products will be marketed to developed or high-income countries in Asia, Europe, and the Middle East.
- China's rising consumption of poultry meat is met by expanding domestic production, while the country's poultry imports and exports each grow by about 100,000 tons.

Table 31. Coarse grains trade long-term projections

	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
	<i>Imports, million metric tons</i>											
<b>Importers</b>												
Former Soviet Union <sup>1</sup>	0.8	0.7	0.8	0.8	0.8	0.8	0.9	0.9	0.9	1.0	1.0	1.0
Other Europe	1.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.8
European Union <sup>2</sup>	19.8	2.8	4.4	4.5	4.6	4.7	4.8	4.9	5.0	5.1	5.2	5.3
North Africa & Middle East	30.6	33.4	33.3	33.4	34.1	34.9	35.9	36.7	37.5	38.3	39.4	40.4
Sub-Saharan Africa <sup>3</sup>	1.8	1.6	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.9
Japan	19.3	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6
South Korea	9.4	7.3	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6
Taiwan	4.4	4.4	4.4	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
China	1.2	1.4	1.7	1.9	2.3	2.6	2.9	3.3	3.6	4.0	4.3	4.7
Other Asia & Oceania	4.1	5.0	5.2	5.2	5.3	5.5	5.7	5.9	6.1	6.4	6.6	6.9
Mexico	10.6	10.9	11.2	11.5	11.8	12.3	12.8	13.5	13.9	14.6	15.1	15.7
Central America & Caribbean	5.1	5.1	5.4	5.4	5.5	5.6	5.7	5.9	6.1	6.2	6.3	6.5
Brazil	0.9	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8
Other South America	8.9	8.7	8.8	8.8	8.9	9.0	9.0	9.1	9.1	9.2	9.2	9.3
Other foreign <sup>4</sup>	5.5	4.8	4.6	4.6	4.5	4.5	4.5	4.5	4.4	4.4	4.4	4.3
United States	3.5	2.9	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
<b>Total trade</b>	<b>126.7</b>	<b>110.1</b>	<b>114.1</b>	<b>114.7</b>	<b>116.5</b>	<b>118.5</b>	<b>120.8</b>	<b>123.2</b>	<b>125.3</b>	<b>127.8</b>	<b>130.2</b>	<b>132.7</b>
	<i>Exports, million metric tons</i>											
<b>Exporters</b>												
European Union <sup>2</sup>	4.6	7.5	8.1	9.3	10.0	10.4	10.6	10.7	10.9	11.1	11.4	11.7
China	0.9	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Argentina	17.0	12.1	13.6	14.1	14.6	15.0	15.3	15.8	16.2	16.7	17.1	17.5
Australia	4.0	3.3	4.1	4.4	4.5	4.7	4.7	4.8	4.9	4.9	4.9	5.0
Canada	6.5	4.4	4.6	4.9	4.9	4.9	5.1	5.1	5.2	5.3	5.3	5.2
Republic of South Africa	2.0	2.5	1.8	2.2	2.0	2.1	2.3	2.5	2.6	2.7	2.8	3.0
Other Europe	0.1	0.9	1.0	1.3	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0
Former Soviet Union <sup>1</sup>	5.4	12.5	9.5	9.2	9.4	9.7	10.0	10.4	10.8	11.2	11.4	11.8
Other foreign	16.4	13.9	15.7	13.1	12.9	12.6	12.6	12.7	12.7	12.9	13.2	13.5
United States	69.9	52.4	54.9	55.6	56.3	57.1	58.0	58.9	59.8	60.7	61.6	62.4
	<i>Percent</i>											
<b>U.S. trade share</b>	<b>55.1</b>	<b>47.6</b>	<b>48.2</b>	<b>48.5</b>	<b>48.3</b>	<b>48.2</b>	<b>48.0</b>	<b>47.8</b>	<b>47.7</b>	<b>47.5</b>	<b>47.3</b>	<b>47.1</b>

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

2/ Covers EU-27, excludes intra-EU trade.

3/ Includes Republic of South Africa.

4/ Includes unaccounted.

The projections were completed in November 2008.



Table 32. Corn trade long-term projections

	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
<i>Imports, million metric tons</i>												
<b>Importers</b>												
European Union <sup>1</sup>	13.5	2.0	3.6	3.7	3.8	3.9	4.0	4.1	4.2	4.3	4.4	4.5
Former Soviet Union <sup>2</sup>	0.5	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5
Egypt	4.2	4.3	5.0	4.8	4.9	5.0	5.3	5.5	5.7	5.9	6.1	6.3
Algeria	2.3	2.3	2.3	2.3	2.3	2.4	2.5	2.6	2.7	2.8	2.9	2.9
Morocco	1.7	1.7	1.8	1.8	1.8	1.8	1.9	1.9	2.0	2.0	2.0	2.1
Iran	2.7	2.5	2.8	2.8	2.8	2.9	2.9	3.0	3.1	3.2	3.3	3.4
Saudi Arabia	2.0	2.2	2.3	2.3	2.4	2.5	2.6	2.7	2.9	3.0	3.1	3.3
Turkey	1.1	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.3
Other N. Africa & Middle East	6.0	5.7	5.6	5.6	5.7	5.8	5.9	6.0	6.1	6.1	6.2	6.3
Japan	16.6	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5
South Korea	9.3	7.2	8.5	8.5	8.5	8.5	8.5	8.4	8.4	8.4	8.4	8.4
Taiwan	4.2	4.2	4.2	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
China	0.0	0.1	0.2	0.4	0.6	0.9	1.1	1.4	1.7	2.0	2.3	2.5
Indonesia	0.2	0.5	0.6	0.6	0.6	0.6	0.7	0.8	0.8	0.9	0.9	1.0
Malaysia	2.5	2.6	2.6	2.7	2.8	2.8	2.9	3.0	3.1	3.2	3.2	3.3
Other Asia & Oceania	1.4	1.9	1.9	1.8	1.9	1.9	2.0	2.1	2.2	2.3	2.4	2.6
Canada	3.2	1.6	1.7	1.7	1.7	1.6	1.6	1.6	1.6	1.5	1.5	1.5
Mexico	9.2	9.0	9.1	9.2	9.3	9.7	9.9	10.3	10.6	10.9	11.2	11.5
Central America & Caribbean	5.1	5.1	5.4	5.4	5.5	5.6	5.7	5.9	6.1	6.2	6.3	6.5
Brazil	0.6	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	8.2	8.1	8.1	8.2	8.3	8.3	8.4	8.5	8.5	8.5	8.6	8.7
Sub-Saharan Africa <sup>3</sup>	1.1	1.0	1.1	1.0	1.0	1.0	1.0	1.1	1.1	1.1	1.1	1.1
Other foreign <sup>4</sup>	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
United States	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Total trade	98.1	81.9	86.8	86.8	88.0	89.4	91.0	92.9	94.5	96.3	98.2	100.1
<i>Exports, million metric tons</i>												
<b>Exporters</b>												
European Union <sup>1</sup>	0.5	2.0	2.5	3.1	3.3	3.5	3.6	3.8	3.9	4.1	4.2	4.4
China	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Argentina	15.0	10.5	12.1	12.5	13.0	13.4	13.8	14.3	14.7	15.1	15.5	15.9
Brazil	7.0	9.0	10.6	7.7	7.4	6.9	6.8	6.9	6.8	6.8	7.0	7.1
Republic of South Africa	2.0	2.5	1.8	2.2	2.0	2.1	2.3	2.5	2.6	2.7	2.8	2.9
Other Europe	0.1	0.9	1.0	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0
Former Soviet Union <sup>2</sup>	2.2	3.7	2.6	3.2	3.4	3.7	3.9	4.1	4.3	4.5	4.7	4.9
Other foreign	8.9	4.6	5.0	5.2	5.2	5.3	5.4	5.5	5.6	5.7	5.7	5.8
United States	61.9	48.3	50.8	51.4	52.1	52.7	53.3	54.0	54.6	55.2	55.9	56.5
<i>Percent</i>												
U.S. trade share	63.0	58.9	58.5	59.2	59.2	59.0	58.6	58.1	57.8	57.3	56.9	56.5

1/ Covers EU-27, 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 2008.

Table 33. Sorghum trade long-term projections

	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
<i>Imports, million metric tons</i>												
Importers												
Japan	1.2	1.4	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Mexico	1.1	1.7	2.0	2.0	2.3	2.4	2.6	2.9	3.1	3.4	3.6	3.9
North Africa & Middle East	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2
South America	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Sub-Saharan Africa <sup>1</sup>	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6
Other <sup>2</sup>	6.1	1.2	1.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
Total trade	9.2	5.0	5.0	5.1	5.3	5.5	5.7	6.0	6.2	6.5	6.7	7.0
<i>Exports, million metric tons</i>												
Exporters												
Argentina	1.1	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5
Australia	0.3	0.2	0.3	0.3	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5
Brazil	0.2	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.3	0.4	0.4	0.4
Other foreign	0.5	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
United States	7.1	3.6	3.6	3.6	3.7	3.8	4.1	4.3	4.6	4.8	5.1	5.3
<i>Percent</i>												
U.S. trade share	76.8	71.8	70.7	69.8	69.4	69.5	71.4	72.5	73.9	74.4	75.4	76.1

1/ Includes the Republic of South Africa.

2/ EU-27 and the rest of the world. Excludes intra-EU trade. Includes unaccounted. The projections were completed in November 2008.

Table 34. Barley trade long-term projections

	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
<i>Imports, million metric tons</i>												
Importers												
Former Soviet Union <sup>1</sup>	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5
Japan	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
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	1.1	1.3	1.5	1.5	1.7	1.7	1.8	1.8	1.9	2.0	2.1	2.1
European Union <sup>2</sup>	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Latin America <sup>3</sup>	1.0	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
Algeria	0.1	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Saudi Arabia	7.0	7.3	7.3	7.4	7.6	7.9	8.0	8.1	8.2	8.3	8.4	8.5
Morocco	0.3	1.0	0.8	0.8	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.9
Tunisia	0.5	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8
Republic of South Africa	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Iran	0.7	1.5	1.4	1.7	1.8	1.9	1.9	2.0	2.0	2.0	2.1	2.1
Other N. Africa & M. East	1.5	2.9	2.3	2.2	2.3	2.3	2.3	2.4	2.4	2.5	2.5	2.5
Other foreign <sup>4</sup>	0.9	1.1	1.0	1.0	1.0	1.0	1.1	1.1	1.1	1.1	1.1	1.2
United States	0.7	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Total trade	16.0	19.8	18.9	19.4	19.8	20.3	20.6	20.9	21.2	21.5	21.8	22.2
<i>Exports, million metric tons</i>												
Exporters												
European Union <sup>2</sup>	3.9	5.0	5.2	5.9	6.3	6.5	6.5	6.5	6.5	6.5	6.7	6.9
Australia	3.5	3.0	3.7	3.8	4.0	4.1	4.1	4.2	4.2	4.2	4.2	4.2
Canada	3.0	2.1	1.8	2.1	2.0	2.1	2.2	2.3	2.3	2.4	2.4	2.4
Russia	1.0	2.5	1.8	2.0	1.9	1.9	1.9	2.1	2.1	2.1	2.1	2.1
Ukraine	1.0	5.5	4.3	3.5	3.4	3.5	3.5	3.5	3.5	3.6	3.7	3.7
Other Former Soviet Union <sup>5</sup>	0.8	0.6	0.6	0.5	0.4	0.5	0.5	0.6	0.7	0.7	0.8	0.9
Turkey	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3
Other foreign	1.9	0.5	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.2	1.2	1.2
United States	0.9	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
<i>Percent</i>												
U.S. trade share	5.6	2.8	2.9	2.8	2.7	2.7	2.6	2.6	2.6	2.5	2.5	2.5

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

2/ Covers EU-27, 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 2008.

Table 35. Wheat trade long-term projections

	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
	<i>Imports, million metric tons</i>											
<b>Importers</b>												
Algeria	5.9	5.6	5.8	6.0	6.2	6.4	6.6	6.8	7.0	7.1	7.3	7.4
Egypt	7.7	7.8	7.9	8.1	8.4	8.6	8.8	8.9	9.0	9.2	9.4	9.5
Morocco	4.2	4.0	3.5	3.6	3.6	3.5	3.6	3.6	3.7	3.8	3.8	3.9
Iran	0.2	4.5	2.6	1.8	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Iraq	3.4	3.7	3.9	3.9	4.0	4.1	4.2	4.3	4.5	4.6	4.7	4.8
Tunisia	2.3	1.5	1.5	1.6	1.6	1.6	1.7	1.7	1.7	1.7	1.7	1.7
Other N. Africa & Middle East	9.5	11.1	10.3	10.7	11.1	11.7	12.3	12.9	13.5	13.7	13.9	14.1
Sub-Saharan Africa <sup>1</sup>	10.0	12.3	13.1	13.5	14.0	14.5	14.9	15.4	15.8	16.3	16.7	17.2
Mexico	3.1	3.6	3.7	3.7	3.8	3.9	4.0	4.0	4.1	4.2	4.2	4.3
Central America & Caribbean	3.4	3.7	3.6	3.6	3.7	3.7	3.8	3.8	3.8	3.8	3.8	3.9
Brazil	7.0	7.0	6.0	6.5	6.7	6.8	7.0	7.1	7.2	7.3	7.4	7.5
Other South America	6.0	6.6	6.9	6.8	6.8	6.9	7.0	7.0	7.1	7.2	7.2	7.2
European Union <sup>2</sup>	6.9	5.0	4.3	4.6	4.5	4.2	3.8	3.7	3.6	3.5	3.4	3.6
Other Europe	1.8	1.7	1.7	1.8	1.8	1.8	1.8	1.9	1.9	1.9	2.0	2.0
Former Soviet Union <sup>3</sup>	5.9	5.8	6.0	6.1	6.1	6.2	6.2	6.3	6.3	6.4	6.4	6.5
Japan	5.7	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.4	5.4
South Korea	3.1	4.6	3.8	3.6	3.7	3.7	3.8	3.8	3.9	3.9	3.9	3.9
Philippines	2.3	2.8	2.9	2.9	3.0	3.1	3.2	3.2	3.3	3.4	3.5	3.6
Indonesia	5.2	5.6	5.7	5.9	6.1	6.2	6.4	6.5	6.7	6.9	7.1	7.3
China	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2
Bangladesh	1.5	2.0	2.2	2.2	2.3	2.3	2.3	2.3	2.4	2.4	2.4	2.4
Malaysia	1.3	1.5	1.4	1.4	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.6
Thailand	1.1	1.2	1.3	1.3	1.3	1.3	1.3	1.4	1.4	1.4	1.4	1.5
Vietnam	1.1	1.5	1.6	1.7	1.8	1.9	2.0	2.0	2.1	2.2	2.3	2.4
Pakistan	1.5	2.5	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Other Asia & Oceania	8.8	7.7	7.1	7.2	7.6	7.9	8.2	8.5	8.7	9.0	9.3	9.6
Other foreign <sup>4</sup>	2.9	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.9	3.2	3.2
United States	3.1	2.7	2.7	2.9	2.9	3.0	3.0	3.1	3.1	3.3	3.3	3.4
<b>Total trade</b>	<b>114.9</b>	<b>124.3</b>	<b>119.8</b>	<b>121.6</b>	<b>124.2</b>	<b>126.7</b>	<b>129.1</b>	<b>131.9</b>	<b>134.4</b>	<b>136.6</b>	<b>139.1</b>	<b>141.6</b>
	<i>Exports, million metric tons</i>											
<b>Exporters</b>												
European Union <sup>2</sup>	12.2	19.0	17.0	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
Canada	16.1	18.5	17.8	17.1	16.7	16.8	16.8	16.6	16.7	16.7	16.7	16.8
Australia	7.5	13.5	14.3	15.0	15.1	15.2	15.3	15.4	15.5	15.6	15.7	15.8
Argentina	10.5	5.8	8.0	8.1	8.3	8.5	8.7	8.9	9.1	9.4	9.6	9.8
Russia	12.2	14.0	13.0	13.0	13.4	13.9	14.4	14.8	15.3	15.7	16.2	16.7
Ukraine	1.2	9.0	6.0	6.1	6.2	6.5	6.7	6.9	7.1	7.3	7.6	7.9
Other Former Soviet Union <sup>5</sup>	8.4	5.6	6.5	6.6	6.8	7.0	7.3	7.5	7.7	7.9	8.2	8.5
Other Europe	0.7	0.6	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.7	0.7	0.7
India	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
China	2.8	2.0	2.2	2.4	2.6	2.8	3.0	3.2	3.3	3.4	3.5	3.6
Turkey	1.3	1.0	1.2	1.2	1.1	1.1	1.1	1.0	1.0	0.9	0.9	0.8
Other foreign	7.4	8.0	6.0	5.8	5.8	5.7	5.7	5.7	5.7	5.7	5.7	5.7
United States	34.4	27.2	27.2	27.9	28.6	28.6	28.6	29.3	29.3	29.3	29.3	29.3
	<i>Percent</i>											
U.S. trade share	29.9	21.9	22.7	22.9	23.0	22.5	22.1	22.2	21.8	21.4	21.0	20.7

1/ Includes Republic of South Africa.

2/ Covers EU-27, excludes intra-EU trade.

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

4/ Includes unaccounted which can be negative.

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

The projections were completed in November 2008.

Table 36. Soybean trade long-term projections

	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
	<i>Imports, million metric tons</i>											
Importers												
European Union <sup>1</sup>	15.1	14.2	13.9	13.7	13.5	13.3	13.1	12.8	12.6	12.4	12.2	12.0
Japan	4.0	4.1	4.1	4.0	4.0	4.1	4.1	4.1	4.1	4.1	4.1	4.2
South Korea	1.2	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Taiwan	2.3	2.4	2.4	2.4	2.4	2.4	2.4	2.5	2.5	2.5	2.5	2.5
Mexico	3.7	3.6	3.7	3.8	3.9	4.1	4.2	4.3	4.4	4.5	4.6	4.7
Former Soviet Union <sup>2</sup>	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Other Europe	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
China	37.8	36.0	37.3	40.1	42.8	45.2	47.6	49.9	52.3	54.7	57.0	59.4
Malaysia	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Indonesia	1.2	1.3	1.3	1.3	1.4	1.4	1.5	1.5	1.5	1.6	1.6	1.7
Other	12.8	13.8	14.1	14.6	15.1	15.7	16.2	16.8	17.4	17.9	18.5	19.0
Total imports	79.4	77.9	79.4	82.5	85.8	88.7	91.6	94.5	97.3	100.2	103.1	106.0
	<i>Exports, million metric tons</i>											
Exporters												
Argentina	13.8	15.2	13.9	15.6	16.4	16.6	16.4	16.4	16.6	16.2	16.3	16.3
Brazil	25.4	25.7	24.1	24.4	26.5	29.3	31.9	34.6	36.9	39.5	41.6	43.7
Other South America	6.2	6.6	7.0	7.3	7.6	8.0	8.4	8.7	9.1	9.5	9.9	10.3
China	0.5	0.5	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Other foreign	2.1	2.1	2.2	2.2	2.3	2.4	2.5	2.5	2.6	2.6	2.7	2.8
United States	31.6	27.8	32.0	32.7	32.7	32.1	32.1	32.0	32.0	32.1	32.4	32.7
Total exports	79.4	77.9	79.4	82.5	85.8	88.7	91.6	94.5	97.3	100.2	103.1	106.0
	<i>Percent</i>											
U.S. trade share	39.8	35.6	40.3	39.6	38.1	36.2	35.1	33.9	32.9	32.0	31.4	30.8

1/ Covers EU-27, excludes intra-EU trade.

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

The projections were completed in November 2008.

Table 37. Soybean meal trade long-term projections

	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
<i>Imports, million metric tons</i>												
<b>Importers</b>												
European Union <sup>1</sup>	23.9	22.8	25.2	26.0	26.8	27.6	28.4	29.2	30.0	30.8	31.6	32.4
Former Soviet Union <sup>2</sup>	1.3	1.2	1.3	1.3	1.4	1.4	1.5	1.5	1.6	1.7	1.7	1.8
Other Europe	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7
Canada	1.5	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
Japan	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
Southeast Asia	9.1	9.7	10.1	10.4	10.7	11.0	11.4	11.7	12.0	12.3	12.7	13.0
Latin America	7.4	7.7	8.1	8.5	8.8	9.2	9.5	9.9	10.2	10.6	10.9	11.3
North Africa & Middle East	4.7	4.9	5.2	5.4	5.6	5.8	6.0	6.2	6.4	6.6	6.8	7.0
Other	4.8	4.9	5.0	5.2	5.3	5.6	5.7	5.9	6.0	6.1	6.3	6.4
<b>Total imports</b>	<b>55.2</b>	<b>55.4</b>	<b>58.8</b>	<b>60.7</b>	<b>62.6</b>	<b>64.6</b>	<b>66.5</b>	<b>68.4</b>	<b>70.2</b>	<b>72.1</b>	<b>74.0</b>	<b>75.9</b>
<i>Exports, million metric tons</i>												
<b>Exporters</b>												
Argentina	26.4	27.7	30.5	31.4	32.5	33.8	35.0	36.4	37.8	39.0	40.4	41.9
Brazil	12.1	12.5	12.6	13.6	14.3	15.1	15.8	16.5	17.1	17.8	18.5	18.9
Other South America	1.9	2.2	2.1	2.2	2.2	2.2	2.3	2.3	2.3	2.4	2.4	2.5
China	0.6	0.6	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
India	4.8	4.5	4.4	4.2	4.0	3.9	3.7	3.6	3.4	3.3	3.2	3.0
European Union <sup>1</sup>	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Other foreign	0.6	0.6	0.5	0.5	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5
United States	8.3	7.8	7.6	7.7	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9
<b>Total exports</b>	<b>55.3</b>	<b>56.1</b>	<b>58.8</b>	<b>60.7</b>	<b>62.6</b>	<b>64.6</b>	<b>66.5</b>	<b>68.4</b>	<b>70.2</b>	<b>72.1</b>	<b>74.0</b>	<b>75.9</b>
<i>Percent</i>												
U.S. trade share	15.1	13.9	13.0	12.7	12.6	12.3	11.9	11.6	11.3	11.0	10.7	10.5

1/ Covers EU-27, excludes intra-EU trade.

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

The projections were completed in November 2008.

Table 38. Soybean oil trade long-term projections

	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
<i>Imports, million metric tons</i>												
<b>Importers</b>												
China	2.7	2.5	2.8	2.8	2.8	2.9	3.0	3.1	3.2	3.3	3.4	3.4
India	0.7	0.9	1.0	1.1	1.2	1.2	1.3	1.3	1.4	1.4	1.5	1.6
Other Asia	1.2	1.3	1.3	1.3	1.4	1.4	1.5	1.5	1.5	1.6	1.7	1.7
Latin America	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	2.0	2.0	2.1	2.1
North Africa & Middle East	2.2	2.0	2.3	2.3	2.4	2.4	2.5	2.5	2.6	2.6	2.7	2.7
European Union <sup>1</sup>	1.0	0.7	0.7	0.8	0.8	0.9	1.0	1.0	1.1	1.1	1.2	1.3
Former Soviet Union & Other Europe <sup>2</sup>	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Other	1.1	1.1	1.0	1.1	1.1	1.1	1.1	1.1	1.2	1.2	1.2	1.2
<b>Total imports</b>	<b>10.7</b>	<b>10.3</b>	<b>11.0</b>	<b>11.3</b>	<b>11.5</b>	<b>11.9</b>	<b>12.2</b>	<b>12.6</b>	<b>13.0</b>	<b>13.4</b>	<b>13.8</b>	<b>14.1</b>
<i>Exports, million metric tons</i>												
<b>Exporters</b>												
Argentina	5.7	5.8	6.3	6.4	6.5	6.7	7.0	7.2	7.4	7.6	7.9	8.1
Brazil	2.4	2.3	2.6	2.9	3.0	3.1	3.2	3.4	3.5	3.6	3.8	3.8
European Union <sup>1</sup>	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1
Other foreign	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.1	1.1	1.1	1.1
United States	1.3	1.0	0.9	0.8	0.8	0.8	0.8	0.8	0.9	0.9	1.0	1.0
<b>Total exports</b>	<b>10.8</b>	<b>10.3</b>	<b>11.0</b>	<b>11.3</b>	<b>11.5</b>	<b>11.9</b>	<b>12.2</b>	<b>12.6</b>	<b>13.0</b>	<b>13.4</b>	<b>13.8</b>	<b>14.1</b>
<i>Percent</i>												
U.S. trade share	12.5	10.1	7.9	7.0	6.7	6.5	6.7	6.6	6.8	6.8	6.9	6.7

1/ Covers EU-27, excludes intra-EU trade.

2/ Includes intra-FSU trade.

The projections were completed in November 2008.

Table 39. Rice trade long-term projections

	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
<i>Imports, million metric tons</i>												
<b>Importers</b>												
Canada	0.34	0.35	0.35	0.36	0.36	0.37	0.38	0.38	0.39	0.39	0.40	0.40
Mexico	0.60	0.60	0.58	0.61	0.63	0.65	0.65	0.67	0.69	0.71	0.73	0.75
Central America/Caribbean	1.38	1.53	1.65	1.66	1.74	1.81	1.90	1.96	2.02	2.06	2.10	2.13
Brazil	0.50	0.60	0.73	0.75	0.75	0.80	0.82	0.80	0.76	0.70	0.63	0.56
Other South America	0.45	0.53	0.60	0.35	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31
European Union <sup>1</sup>	1.10	1.20	1.17	1.21	1.25	1.30	1.32	1.34	1.37	1.40	1.42	1.45
Former Soviet Union <sup>2</sup>	0.39	0.40	0.46	0.44	0.44	0.43	0.42	0.40	0.38	0.35	0.31	0.28
Other Europe	0.10	0.10	0.10	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.12	0.12
Bangladesh	1.80	1.30	1.40	1.50	1.60	1.70	1.80	1.90	2.00	2.10	2.20	2.30
China	0.30	0.33	0.31	0.31	0.32	0.31	0.27	0.35	0.41	0.46	0.53	0.61
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	0.25	0.29	0.31	0.33	0.35	0.37	0.39	0.41	0.41	0.41	0.41	0.41
Indonesia	0.50	0.80	0.79	0.92	1.27	1.67	1.77	1.90	2.01	2.20	2.39	2.56
Malaysia	0.80	0.88	0.94	0.94	0.98	1.03	1.08	1.11	1.14	1.17	1.20	1.22
Philippines	2.70	2.50	2.50	2.80	2.75	2.82	2.89	3.03	3.07	3.14	3.24	3.33
Other Asia & Oceania	2.33	2.32	2.28	2.32	2.31	2.36	2.40	2.42	2.45	2.47	2.50	2.54
Iraq	0.90	0.90	0.87	0.92	0.96	1.00	1.05	1.08	1.12	1.16	1.20	1.24
Iran	0.90	0.90	1.24	0.93	0.98	0.99	0.97	0.96	0.95	0.94	0.93	0.91
Saudi Arabia	0.96	1.02	1.29	1.32	1.35	1.38	1.41	1.43	1.46	1.48	1.50	1.53
Other N. Africa & M. East	1.82	1.69	1.79	1.78	1.83	1.88	1.92	1.96	2.00	2.04	2.08	2.13
Sub-Saharan Africa <sup>3</sup>	6.38	6.20	6.53	6.99	7.27	7.47	7.70	7.90	8.10	8.30	8.50	8.70
Republic of South Africa	0.85	0.85	0.86	0.87	0.89	0.90	0.91	0.92	0.94	0.96	0.97	0.99
Other foreign <sup>4</sup>	3.54	2.78	2.53	2.64	2.34	1.82	1.84	1.80	1.95	1.94	1.93	1.90
United States	0.76	0.81	0.84	0.87	0.90	0.93	0.96	1.00	1.03	1.07	1.10	1.14
<b>Total imports</b>	<b>30.34</b>	<b>29.56</b>	<b>30.79</b>	<b>31.60</b>	<b>32.36</b>	<b>33.09</b>	<b>33.94</b>	<b>34.85</b>	<b>35.75</b>	<b>36.56</b>	<b>37.38</b>	<b>38.18</b>
<i>Exports, million metric tons</i>												
<b>Exporters</b>												
Australia	0.02	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Argentina	0.52	0.55	0.59	0.59	0.60	0.60	0.61	0.63	0.66	0.69	0.72	0.75
Other South America	1.67	1.52	1.44	1.48	1.43	1.44	1.47	1.53	1.61	1.65	1.70	1.76
European Union <sup>1</sup>	0.15	0.15	0.15	0.16	0.16	0.16	0.16	0.16	0.17	0.17	0.17	0.17
China	1.00	1.30	1.69	1.89	2.07	2.30	2.51	2.59	2.65	2.72	2.76	2.79
India	4.10	2.50	2.90	2.90	2.90	2.90	2.95	3.00	3.10	3.25	3.45	3.65
Pakistan	3.00	4.00	3.48	3.53	3.52	3.51	3.50	3.50	3.55	3.65	3.70	3.80
Thailand	10.00	9.50	9.86	10.10	10.40	10.60	10.90	11.40	11.75	12.00	12.26	12.50
Vietnam	4.75	5.20	5.10	5.15	5.20	5.25	5.30	5.35	5.40	5.45	5.50	5.60
Egypt	0.45	0.80	0.75	0.78	0.90	0.95	0.99	1.02	1.08	1.09	1.12	1.15
Other foreign	1.26	0.89	1.49	1.56	1.61	1.64	1.67	1.69	1.73	1.75	1.77	1.79
United States	3.42	3.13	3.33	3.45	3.58	3.74	3.87	3.97	4.06	4.14	4.22	4.22
<b>Total exports</b>	<b>30.34</b>	<b>29.56</b>	<b>30.79</b>	<b>31.60</b>	<b>32.36</b>	<b>33.09</b>	<b>33.94</b>	<b>34.85</b>	<b>35.75</b>	<b>36.56</b>	<b>37.38</b>	<b>38.18</b>
<i>Percent</i>												
U.S. trade share	11.3	10.6	10.8	10.9	11.1	11.3	11.4	11.4	11.4	11.3	11.3	11.1

<sup>1/</sup> Covers EU-27, excludes intra-EU trade.

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

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

<sup>4/</sup> Includes unaccounted.

The projections were completed in November 2008.

Table 40. All cotton trade long-term projections

	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
<i>Imports, million bales</i>												
<b>Importers</b>												
European Union <sup>1</sup>	1.6	1.4	1.7	1.6	1.5	1.4	1.3	1.3	1.3	1.3	1.3	1.2
Former Soviet Union <sup>2</sup>	1.3	1.3	1.2	1.3	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Indonesia	2.3	2.2	2.3	2.3	2.4	2.4	2.4	2.5	2.5	2.5	2.6	2.6
Thailand	1.9	1.7	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9
India	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.8	0.8
Brazil	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Other Europe	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Other Asia & Oceania	4.5	4.7	4.9	5.1	5.3	5.5	5.7	6.0	6.2	6.4	6.7	6.9
Pakistan	3.8	3.3	3.8	4.0	4.1	4.1	4.2	4.2	4.3	4.4	4.5	4.6
Japan	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
South Korea	1.0	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.7
China	11.5	10.5	11.3	11.7	12.0	12.5	12.8	13.2	13.6	13.9	14.3	14.7
Taiwan	1.0	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.7
Turkey	3.3	2.9	2.5	2.6	2.6	2.6	2.6	2.6	2.7	2.7	2.8	2.8
Mexico	1.5	1.3	1.4	1.4	1.4	1.4	1.4	1.4	1.3	1.3	1.3	1.3
Other	2.9	2.7	3.0	3.1	3.1	3.1	3.2	3.2	3.2	3.3	3.3	3.3
<b>Total imports</b>	<b>38.0</b>	<b>35.2</b>	<b>37.2</b>	<b>38.1</b>	<b>38.7</b>	<b>39.2</b>	<b>39.9</b>	<b>40.6</b>	<b>41.2</b>	<b>42.2</b>	<b>43.0</b>	<b>43.7</b>
<i>Exports, million bales</i>												
<b>Exporters</b>												
Former Soviet Union <sup>2</sup>	6.6	5.9	6.6	6.8	6.6	6.4	6.4	6.4	6.5	6.6	6.6	6.7
Australia	1.2	0.9	1.5	1.8	2.2	2.4	2.6	2.6	2.7	2.8	2.8	2.9
Argentina	0.0	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1
Pakistan	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
India	7.4	5.9	7.7	7.9	7.6	7.4	7.3	7.0	6.7	6.4	6.0	5.6
Egypt	0.6	0.4	0.3	0.3	0.4	0.4	0.5	0.5	0.5	0.5	0.6	0.6
Brazil	2.2	2.4	2.5	2.8	3.3	3.4	3.5	3.7	3.8	4.2	4.6	4.9
Other Latin America	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Sub-Saharan Africa <sup>3</sup>	3.9	4.0	4.4	4.6	4.3	4.1	4.2	4.3	4.5	4.8	5.1	5.3
Other foreign	2.5	1.9	2.2	2.2	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2
United States	13.7	13.0	11.1	10.8	11.3	12.0	12.5	13.0	13.5	13.9	14.3	14.7
<b>Total exports</b>	<b>38.7</b>	<b>35.2</b>	<b>37.2</b>	<b>38.1</b>	<b>38.7</b>	<b>39.2</b>	<b>39.9</b>	<b>40.6</b>	<b>41.2</b>	<b>42.2</b>	<b>43.0</b>	<b>43.7</b>
<i>Percent</i>												
<b>U.S. trade share</b>	<b>35.3</b>	<b>36.9</b>	<b>29.9</b>	<b>28.4</b>	<b>29.3</b>	<b>30.7</b>	<b>31.4</b>	<b>32.1</b>	<b>32.8</b>	<b>33.0</b>	<b>33.3</b>	<b>33.7</b>

1/ Covers EU-27, excludes intra-EU trade.

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

3/ Includes Republic of South Africa.

The projections were completed in November 2008.

Table 41. Beef trade long-term projections

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
<i>Imports, thousand metric tons, carcass weight</i>												
Importers												
Japan	686	675	690	699	694	700	706	711	701	698	689	693
South Korea	308	320	340	344	348	357	362	368	373	377	381	385
Taiwan	102	100	95	106	107	107	108	107	108	108	109	110
Philippines	153	175	165	175	187	202	217	233	248	261	275	289
European Union <sup>1</sup>	641	400	420	432	415	407	400	393	391	387	384	378
Russia	1,030	1,010	1,030	925	890	833	861	873	909	950	991	1,031
Other Europe	88	103	95	111	109	107	102	99	101	103	104	106
Egypt	293	225	240	257	271	276	278	280	281	283	287	290
Mexico	403	440	435	468	492	532	553	565	574	582	587	588
Canada	242	260	265	272	272	272	272	272	272	272	272	272
United States	1,384	1,131	1,213	1,604	1,632	1,657	1,669	1,694	1,718	1,742	1,765	1,776
Major importers	5,330	4,839	4,988	5,393	5,417	5,450	5,528	5,595	5,676	5,763	5,843	5,919
<i>Exports, thousand metric tons, carcass weight</i>												
Exporters												
Australia	1,400	1,386	1,350	1,320	1,314	1,307	1,314	1,319	1,328	1,338	1,351	1,365
New Zealand	496	515	497	492	486	488	491	494	497	500	503	506
Other Asia	938	1,032	974	968	986	1,007	1,037	1,070	1,101	1,131	1,160	1,182
European Union <sup>1</sup>	140	100	100	103	108	109	110	108	107	110	112	114
Argentina	534	400	480	444	397	369	354	344	338	333	327	323
Brazil	2,189	1,925	2,015	2,098	2,171	2,225	2,272	2,310	2,345	2,377	2,406	2,435
Canada	457	465	470	486	478	484	493	503	518	534	548	560
United States	650	851	934	868	912	958	1,012	1,059	1,107	1,157	1,212	1,268
Major exporters	6,804	6,674	6,820	6,777	6,852	6,947	7,081	7,207	7,340	7,481	7,619	7,753

<sup>1/</sup> Covers EU-27, excludes intra-EU trade.

The projections were completed in November 2008.

Table 42. Pork trade long-term projections

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
<i>Imports, thousand metric tons, carcass weight</i>												
Importers												
Japan	1,210	1,248	1,242	1,243	1,239	1,231	1,227	1,226	1,227	1,232	1,233	1,228
China	198	480	360	185	200	215	230	238	245	254	266	277
Hong Kong	302	367	385	400	412	422	434	446	455	464	473	481
South Korea	447	460	455	466	479	497	509	528	539	553	565	575
Russia	894	940	960	992	1,005	1,013	1,012	1,006	988	970	959	947
Mexico	451	540	535	558	571	596	616	636	655	676	701	726
Canada	171	215	225	230	234	237	239	240	241	242	243	243
United States	439	378	386	431	454	465	477	488	499	511	522	533
Major importers	4,112	4,628	4,548	4,504	4,593	4,676	4,744	4,807	4,849	4,902	4,961	5,012
<i>Exports, thousand metric tons, carcass weight</i>												
Exporters												
Brazil	730	675	705	702	708	717	729	746	757	773	787	798
Canada	1,033	1,075	1,080	1,029	1,015	1,017	1,022	1,019	1,016	1,016	1,020	1,025
Mexico	80	85	90	93	96	99	103	106	110	113	117	121
European Union <sup>1</sup>	1,285	1,525	1,515	1,539	1,584	1,629	1,659	1,701	1,725	1,768	1,814	1,852
China	350	198	170	183	225	247	265	275	285	295	305	315
United States	1,426	2,300	2,043	2,083	2,125	2,167	2,211	2,255	2,300	2,332	2,364	2,396
Major exporters	4,904	5,858	5,603	5,628	5,754	5,876	5,990	6,102	6,194	6,298	6,407	6,506

<sup>1/</sup> Covers EU-27, excludes intra-EU trade.

The projections were completed in November 2008.



Table 43. Poultry trade long-term projections<sup>1</sup>

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
<i>Imports, thousand metric tons, ready to cook</i>												
<b>Importers</b>												
Russia	1,297	1,315	1,270	1,208	1,185	1,153	1,108	1,057	1,020	981	932	876
European Union <sup>2</sup>	743	785	800	804	808	812	816	820	824	828	833	837
Other Europe	37	37	37	31	29	25	22	18	13	9	8	8
Canada	135	142	148	149	151	153	155	156	158	160	162	164
Mexico	595	632	661	638	660	674	685	701	728	752	777	799
Central America/Caribbean	205	280	300	316	308	304	297	309	330	352	359	365
Japan	696	680	680	679	675	677	672	669	667	666	665	662
Hong Kong	215	240	250	251	253	255	258	260	262	265	267	270
China	512	500	510	528	538	544	553	565	578	590	604	619
South Korea	60	70	70	72	79	84	90	96	101	108	116	124
Saudi Arabia	470	490	500	502	489	497	513	528	541	557	572	586
Other N. Africa & M. East	850	1,336	1,347	1,336	1,403	1,448	1,531	1,615	1,703	1,796	1,896	2,006
Major importers	5,815	6,507	6,573	6,513	6,576	6,625	6,698	6,794	6,927	7,062	7,190	7,314
<i>Exports, thousand metric tons, ready to cook</i>												
<b>Exporters</b>												
European Union <sup>2</sup>	749	745	730	625	621	605	589	575	586	598	614	635
Brazil	3,099	3,540	3,895	3,880	3,915	3,938	3,998	4,070	4,154	4,241	4,331	4,414
China	358	275	283	293	306	321	332	343	354	366	375	383
Thailand	296	350	360	336	330	345	360	381	395	406	417	430
United States	2,926	3,312	3,134	2,901	2,967	3,008	3,057	3,101	3,150	3,201	3,239	3,276
Major exporters	7,428	8,222	8,402	8,037	8,139	8,217	8,336	8,470	8,639	8,811	8,976	9,136

<sup>1/</sup> Broilers and turkeys only.

<sup>2/</sup> Covers EU-27, excludes intra-EU trade.

The projections were completed in November 2008.

## List of Tables

		Page
Table 1.	U.S. macroeconomic assumptions.....	15
Table 2.	Global real GDP growth assumptions .....	16
Table 3.	Population growth assumptions.....	17
Table 4.	Summary policy variables for major field crops, 2008-2018.....	30
Table 5.	Conservation Reserve Program acreage assumptions .....	30
Table 6.	Planted and harvested acreage for major field crops, long-term projections .....	31
Table 7.	Selected supply, use, and price variables for major field crops, long-term projections .....	32
Table 8.	U.S. corn long-term projections .....	33
Table 9.	U.S. sorghum long-term projections .....	34
Table 10.	U.S. barley long-term projections .....	35
Table 11.	U.S. oats long-term projections .....	36
Table 12.	U.S. wheat long-term projections.....	37
Table 13.	U.S. soybean and products long-term projections.....	38
Table 14.	U.S. rice long-term projections, rough basis .....	39
Table 15.	U.S. upland cotton long-term projections.....	40
Table 16.	U.S. sugar long-term projections.....	41
Table 17.	Horticultural crops long-term supply and use projections, calendar years.....	42
Table 18.	Horticultural crops long-term export and import projections, fiscal years.....	43
Table 19.	Per capita meat consumption, retail weight.....	49
Table 20.	Consumer expenditures for meats .....	49
Table 21.	Beef long-term projections .....	50
Table 22.	Pork long-term projections .....	51
Table 23.	Young chicken long-term projections .....	51
Table 24.	Turkey long-term projections .....	52
Table 25.	Egg long-term projections .....	52
Table 26.	Dairy long-term projections .....	53
Table 27.	Farm receipts, expenses, and income, long-term projections.....	60
Table 28.	Summary of U.S. agricultural trade long-term projections, fiscal years .....	61
Table 29.	Prices received by farmers, selected food commodities, long-term projections .....	62
Table 30.	Consumer food price indexes and food expenditures, long-term projections .....	63
Table 31.	Coarse grains trade long-term projections.....	90
Table 32.	Corn trade long-term projections.....	91
Table 33.	Sorghum trade long-term projections .....	92
Table 34.	Barley trade long-term projections .....	92
Table 35.	Wheat trade long-term projections .....	93
Table 36.	Soybean trade long-term projections.....	94
Table 37.	Soybean meal trade long-term projections .....	95
Table 38.	Soybean oil trade long-term projections.....	95
Table 39.	Rice trade long-term projections .....	96
Table 40.	All cotton trade long-term projections .....	97
Table 41.	Beef trade long-term projections.....	98
Table 42.	Pork trade long-term projections .....	98
Table 43.	Poultry trade long-term projections.....	99