



United States
Department of
Agriculture

Office of the
Chief Economist

World Agricultural
Outlook Board

Long-term
Projections Report
OCE-2015-1

February 2015

USDA Agricultural Projections to 2024

Interagency Agricultural Projections Committee

World Agricultural Outlook Board, Chair
Economic Research Service
Farm Service Agency
Foreign Agricultural Service
Agricultural Marketing Service
Office of the Chief Economist
Office of Budget and Program Analysis
Risk Management Agency
Natural Resources Conservation Service
National Institute of Food and Agriculture

USDA Long-term Projections



Long-term Projections on the Internet

USDA Agricultural Projections to 2024 is available in both pdf and Microsoft Word formats at:

www.usda.gov/oce/commodity/projections/

and also at:

www.ers.usda.gov/publications/oce-usda-agricultural-projections/oce151.aspx

Data from the new USDA long-term projections are available electronically at:

usda.mannlib.cornell.edu/MannUsda/viewDocumentInfo.do?documentID=1192

Information on USDA's long-term projections process may be found at:

www.ers.usda.gov/topics/farm-economy/agricultural-baseline-projections/usdas-long-term-projections-process.aspx

USDA Agricultural Projections to 2024. Office of the Chief Economist, World Agricultural Outlook Board, U.S. Department of Agriculture. Prepared by the Interagency Agricultural Projections Committee. Long-term Projections Report OCE-2015-1, 97 pp.

Abstract

This report provides projections for the agricultural sector to 2024. Projections cover agricultural commodities, agricultural trade, and aggregate indicators of the sector, such as farm income. The projections are based on specific assumptions about macroeconomic conditions, policy, weather, and international developments, with no domestic or external shocks to global agricultural markets. The Agricultural Act of 2014 is assumed to remain in effect through the projection period. The projections are one representative scenario for the agricultural sector for the next decade and reflect a composite of model results and judgment-based analyses. The projections in this report were prepared during October through December 2014.

In the near term, the agricultural sector will adjust to lower prices for most farm commodities. For crops, production response to lower prices will result in reduced acreage planted. In the livestock sector, lower feed costs will provide economic incentives for expansion. Longer run developments for global agriculture reflect steady world economic growth and continued global demand for biofuel feedstocks, which combine to support increases in consumption, trade, and prices of agricultural products. Thus, following reductions in 2015 and 2016, farm cash receipts grow through the remainder of the projection period. Although farm production expenses also increase beyond 2016, net farm income remains above its 2001-10 average. Similarly, the value of U.S. agricultural exports falls in 2015 due to lower crop prices, but then rises over the rest of the projection period.

Keywords: Projections, crops, livestock, biofuel, ethanol, biodiesel, trade, farm income, U.S. Department of Agriculture, USDA

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USDA Long-term Projections: Background

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 projections in this report were prepared during October through December 2014, with the Agricultural Act of 2014 assumed to remain in effect through the projection period. 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 other specific assumptions. 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 report assumes that there are no domestic or external shocks that would affect global agricultural supply and demand. Normal weather is assumed. Changes in any of these assumptions can significantly affect the projections, and actual conditions that emerge will alter the outcomes.

The report uses as a starting point the short-term projections from the November 2014 *World Agricultural Supply and Demand Estimates* report. The macroeconomic assumptions were completed in October 2014.

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 had 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 National Institute of Food and Agriculture.

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Acknowledgments

The report coordinators, on behalf of the Interagency Agricultural Projections Committee, thank the many analysts in different agencies of USDA for their contributions to the long-term projections analysis and to the preparation and review of this report.

USDA Agricultural Projections to 2024

Interagency Agricultural Projections Committee

Introduction and Projections Overview

This report provides longrun projections for the agricultural sector to 2024. 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.

The projections are a conditional scenario based on specific assumptions about the macroeconomy, agricultural and trade policies, the weather, and international developments. The report assumes that there are no domestic or external shocks that would affect global agricultural markets. Normal weather with trend crop production yields is generally assumed. Provisions of the Agricultural Act of 2014 are assumed to remain in effect through the projection period. Thus, the projections are not intended to be a forecast of what the future will be, but instead are a description of what would be expected to happen under these very specific assumptions and circumstances. As such, the projections provide a neutral reference scenario that can serve as a point of departure for discussion of alternative farm-sector outcomes that could result under different domestic or international conditions.

The projections in this report were prepared during October through December 2014 and reflect a composite of model results and judgment-based analyses. Short-term projections used as a starting point in this report are from the November 2014 *World Agricultural Supply and Demand Estimates* report. The macroeconomic assumptions were completed in October 2014.

Over the next several years, the agricultural sector will adjust to lower prices for most farm commodities. For crops, production response to lower prices will result in reduced acreage planted. In the livestock sector, lower feed costs will provide economic incentives for expansion, although the timing of expansion for beef will be delayed by the building of beef cow inventories and biological lags. Following those near-term adjustments, longrun developments for global agriculture reflect steady world economic growth and continued global demand for biofuel feedstocks. Those factors combine to support longer run increases in consumption, trade, and prices of agricultural products. Reflecting these market adjustments and price projections, export values decline in 2015 and farm cash receipts fall in 2015-16 before both grow over the rest of the projection period. Farm production expenses also increase after 2016, so net farm income declines from recent record highs.

Key Assumptions and Implications

Major assumptions underlying the projections and selected implications include:

Economic Growth

- Global real economic growth is assumed to average 3.5 percent annually over the next decade. The strongest growth is assumed in developing countries. India and China are expected to remain among the world's fastest growing economies. Robust economic growth is also anticipated across developing regions, including Latin America, the Middle East, Africa, and other countries in Asia. As a result, developing countries become a larger part of the world economy.
- In contrast, developed countries are assumed to have relatively weak longrun real growth, especially in Japan and the European Union (EU). Japan's economy continues the slow growth the country has had since the 1990s. Growth in the EU will be constrained structural rigidities, including inflexible labor laws and an expensive social security system.
- The U.S. economy is projected to grow at an average rate of about 2.7 percent in real terms over the next decade. The U.S. share of global gross domestic product (GDP) falls from about 23 percent in 2015 to less than 21 percent at the end of the projection period.
- 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 traditional staple foods and increased diversification of diets.

Population

- Economic growth over the next decade contributes to the continued slowing of population gains around the world as birth rates decline. Growth in global population is projected to average about 1.0 percent per year compared with an average annual rate of 1.2 percent in 2001-10.
- Population growth rates in most developing countries are projected to slow, although they remain above those in the rest of the world. As a consequence, the share of world population accounted for by developing countries continues to rise, accounting for 83 percent in 2024.
- 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. Populations in developing countries, in contrast to those in more-developed countries, tend to be both younger and undergoing more rapid urbanization, factors that generally lead to the expansion and diversification of food consumption.

Value of the U.S. Dollar

- Following a 10-year depreciation of the U.S. dollar from 2002 to 2011, a moderate appreciation occurred in 2012 and 2013. Although further appreciation is projected for the next decade, the dollar is assumed to remain relatively weak compared to the past two decades.
- Continued weakness of the dollar will be a facilitating factor for gains in U.S. agricultural exports. Although trade competition will continue to be strong, the United States is projected to remain competitive in global agricultural markets, with export gains contributing to long-term increases in cash receipts for U.S. farmers.

Oil Prices

- Nominal crude oil prices are projected to fall through 2016 reflecting global crude oil production outstripping consumption. Beyond 2016, nominal crude oil prices are assumed to increase as global economic activity improves. Increases are faster than the general inflation rate in the second half of the projection period. By 2024, the nominal refiner acquisition cost for crude oil imports is projected to be close to \$120 per barrel.
- Increases in crude oil prices raise production costs in the agricultural sector.

U.S. Agricultural Policy

- The Agricultural Act of 2014 is assumed to be in effect through the projection period.
- Acreage enrolled in the Conservation Reserve Program (CRP) is assumed to fall slightly below its legislated maximum under the 2014 Farm Act of 24 million acres.
- Lower crop prices projected over the next several years lead to higher direct Government payments to farmers in 2015 through 2017, mostly reflecting payments under the Agriculture Risk Coverage (ARC) and Price Loss Coverage (PLC) programs of the 2014 Farm Act. Beyond 2017, direct Government payments are lower and below the average of 2001-10. Payments under the CRP, ARC, and PLC programs are the largest Government payments to the U.S. agricultural sector over the projection period.

U.S. Biofuels

- Ethanol production in the United States is projected to be relatively flat over the next decade, with most production using corn as the feedstock. About 35 percent of total corn use is projected to go to ethanol production.
- The 10-percent ethanol “blend wall” and projected declines in overall gasoline consumption in the United States are assumed to constrain domestic ethanol production over the next decade. Most gasoline in the United States continues to be a 10-percent ethanol blend (E10). Infrastructural and other constraints severely limit growth in the E15 (15-percent ethanol blend) market. The E85 (85-percent ethanol blend) market, while growing, remains very small. Only moderate gains are projected for U.S. ethanol exports.
- The \$1-per-gallon tax credit for blending biodiesel, which was extended through 2014 in December 2014, is assumed to be unavailable in the projections.

- The biomass-based diesel use mandate, as administered by the U.S. Environmental Protection Agency (EPA), rose to 1.28 billion gallons for 2013 and is assumed to remain at that level throughout the projection period. Some production of biodiesel and renewable diesel above the biomass-based diesel mandate is assumed to meet a portion of the nonspecific advanced biofuel mandate.
- Soybean oil is assumed to account for about half of total biodiesel production made from methyl esters. Other feedstocks used to produce biodiesel include corn oil extracted from distillers grains, other first-use vegetable oils, animal fats, and recycled vegetable oils.

International Policy

- Agricultural trade projections assume trade agreements, sanitary and phytosanitary restrictions, and domestic policies in place in November 2014.
- The projections assume that the current geopolitical crisis involving Russia and Ukraine is short run in nature and does not lead to longrun consequences for economic and agricultural development and policymaking for those countries.
- The ban Russia has imposed on agricultural imports from Western countries (such as the EU, United States, and Canada) is assumed to last only the stated year from August 2014 to August 2015. However, the projections assume that Russia will continue to use policies to stimulate its domestic pork and poultry production and to limit its reliance on imports.

International Biofuels

- Global expansion of biofuel production is projected to continue during the next decade, although at a slower pace than over the last half decade. As a result, demand for biofuel feedstocks also grows more slowly.
- The largest biofuels producers include the United States, Brazil, the EU, Argentina, and Indonesia. The EU remains the world's largest importer of biofuels throughout the projection period. Argentina, Brazil, and the United States are the largest biofuel exporters.

Prices

- Prices for many major crops have generally fallen over the last two years as U.S. and global production responded to relatively high prices. As markets adjust to these lower prices, the projections indicate that prices will bottom out and then rise again, reflecting long-term growth in global demand for agricultural products, a relatively low-valued dollar, and continued biofuel feedstock demand. As a result, despite declining from recent highs, crop prices remain above pre-2007 levels.
- Prices in the livestock sector initially reflect production responses to reduced feed costs as improved livestock-sector net returns provide economic incentives for expansion. Additionally, pork prices reflect a rebound in U.S. pork production from 2014 reductions that were largely due to effects of the Porcine Epidemic Diarrhea virus (PEDv). Thus,

prices for hog and broilers decline through most of the projection period as production levels for those meats rise. In contrast, beef cattle prices initially rise as beef production continues to decline while beef cow inventories are built. Beef cattle prices then fall for several years starting in 2018 when beef production increases. Nominal farm-level milk prices decline in 2015-18 as lower feed costs encourage increased production. Milk prices remain flat in 2019 and 2020 and then are projected to gradually rise over the rest of the projection period, with increases less than the overall rate of inflation largely reflecting efficiency gains in production.

- Lower prices for most major crops, hogs, poultry, and milk over the next several years result in declines in export values for 2015 and farm cash receipts through 2016. Export values and cash receipts then grow over the rest of the projection period as prices increase. Although farm production expenses also increase beyond 2016, net farm income remains above its 2001-10 average.

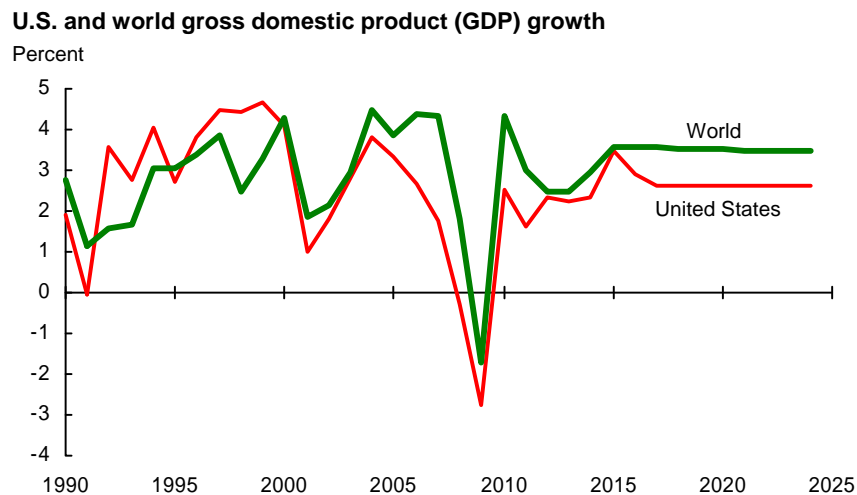
Macroeconomic Assumptions

Macroeconomic assumptions underlying USDA’s long-term projections show stable world growth over the next decade. While growth slows in developing countries, it is still relatively strong compared to growth in developed countries. As a result, developing countries continue to become a larger part of the world economy. In contrast, developed countries continue to have weak long-run growth, especially in Japan and the European Union (EU).

Real global gross domestic product (GDP) is projected to increase at an average annual rate of around 3.5 percent over the next decade. The strongest growth is anticipated in developing countries. India and China are expected to remain among the world’s fastest growing economies. Robust economic growth is also anticipated across developing regions, including Latin America, the Middle East, Africa, and other countries in Asia. The developing countries’ share of global real GDP is projected to rise to 44 percent in 2024 from 38 percent in 2015.

Macroeconomic Assumptions Note

The macroeconomic assumptions were completed in October 2014. Since then, several macroeconomic indicators have changed. First, a worsening economic outlook for several countries—notably in Europe, Russia, China, Argentina, Brazil and Japan—suggests global growth in the short term will be less than assumed here. Second, U.S. economic conditions relative to the rest of the world suggest a faster near-term strengthening of the dollar than assumed for these projections. Third, there has been a sharp decline in energy prices, including those for crude oil and natural gas. Nonetheless, the agricultural projections in this report are longer term in nature, so these near-term macroeconomic changes are not expected to significantly alter the underlying longrun direction of the agricultural sector projections over the next decade.



U.S. economic growth averaged 2.2 percent in 2010-14. Stronger growth for the U.S. economy exceeding 3 percent is assumed for 2015, before moving to longer term growth of 2.6 percent in 2017 and beyond. With U.S. growth slower than in the rest of the world throughout the projection period, the U.S. share of world GDP falls from 23 percent in 2015 to less than 21 percent in 2024.

The slow recovery in the United States and other developed economies has several important implications. Inflation is likely to remain subdued for some years to come because of excess capacity remaining in many of these economies. Interest rates are also likely to remain relatively low, before moving back toward historical averages. Following a long-term depreciation from 2002 to 2011, the U.S. dollar is expected to appreciate slowly, but remain at a low level compared with the past two decades.

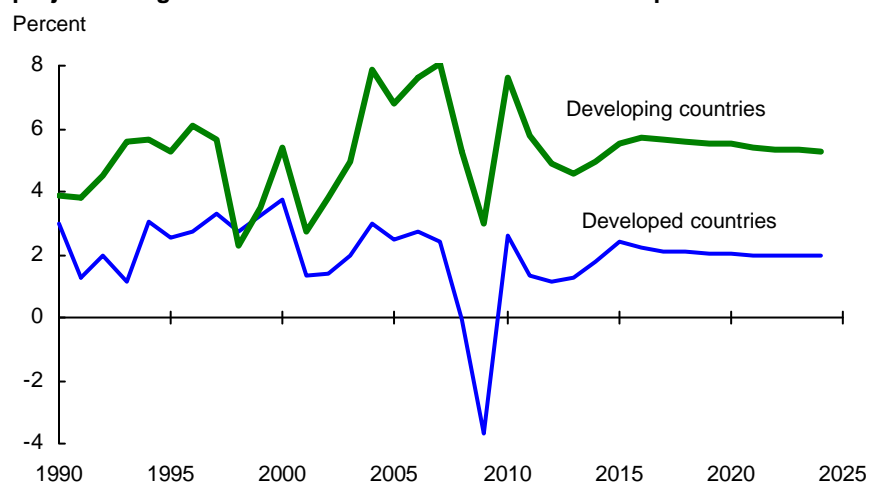
Agricultural Implications

World economic growth is concentrated in developing countries, with growth in those countries projected at more than twice the rate of developed countries in 2015-24. High income-related propensities for consumption of food and agricultural products in developing countries combine with population gains to boost global food and feed demand over the projection period.

Supporting the outlook for U.S. agricultural exports are the cumulative effects of depreciation of the U.S. dollar from 2002 to 2011 and its continued relatively low value through the projection period.

- Developing countries are projected to have a growing role in the global economy and food demand. As a result, they also will account for most of the growth in U.S. agricultural exports. High income growth, along with associated gains in consumption and imports of food and feed, drives this result. As incomes rise in developing countries and more consumers enter the middle class, diets tend to be diversified, with increased relative consumption of meat, dairy products, and processed foods (including vegetable oils). These consumption changes move import demand toward feedstuffs and high-value food products.
- The overall depreciation of the dollar during the past decade has made U.S. agricultural exports more competitive in international markets. Continued weakness of the dollar in the projections creates an environment conducive to strong U.S. export growth.

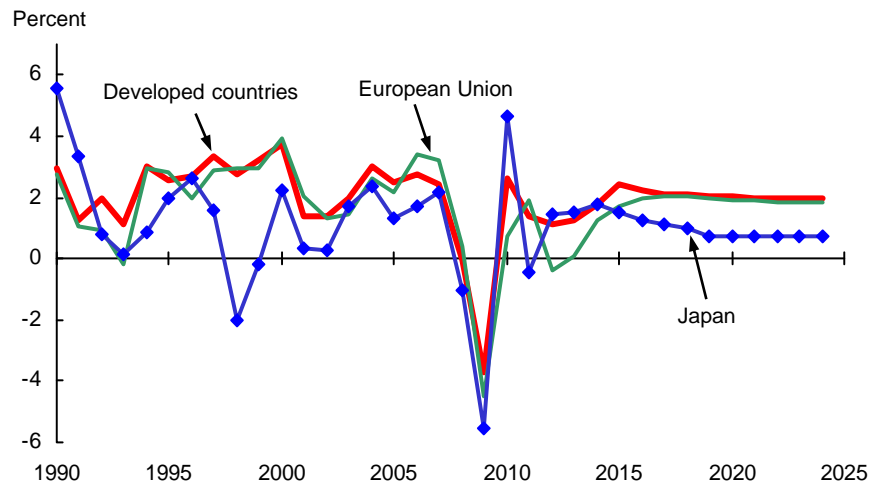
Gross domestic product (GDP) growth: Developing countries are projected to grow at more than double the rate of developed countries



Economic growth in developing countries is projected to average 5.5 percent annually during 2015-24. Among groups of developing countries and countries of the former Soviet Union (FSU), Asian countries are projected to grow the fastest, African countries the next fastest, and Latin American and FSU countries the slowest. However, all developing regions are projected to grow faster than any developed country. Average annual growth is projected at 7.1 percent for China and 7.5 percent for India, while the rest of the developing economies averages 4.3 percent annual growth over the projection period.

- Continued growth in China, India, and the rest of Asia make this region an increasingly important part of the global economy, with developing Asia's share of world GDP rising to 27 percent by the end of the projection period. An assumption in the projections of relatively high oil prices by historical standards modestly constrains economic growth in developing Asia. The manufacturing sector in Asian countries is more dependent on energy for GDP growth than are the more developed economies.
- China's economic growth is projected to slow over the next decade, with growth less than 7 percent per year toward the end of the projection period. Nonetheless, the country is expected to account for about 16 percent of the world economy in 2024, up from about 11 percent currently.
- India's projected average economic growth is strong at 7.5 percent per year. Nonetheless, India remains a relatively low-income country.
- Economic growth in Africa, the poorest region in the world, is projected to average over 5 percent a year in the projection period, with broad-based growth across a wide spectrum of countries and sub-regions. This high growth rate (by historical standards) is likely to improve standards of living and limit the growth of poverty.
- Latin America is projected to grow an average of less than 4 percent a year, with near-term weakness potentially further limiting gains, particularly in Argentina and Brazil. Growth in Mexico is projected to average 4.1 percent per year.
- The countries of the FSU are projected to have economic growth averaging 3.3 percent annually for the next decade, a significant slowing from over 5 percent in 2001-10.

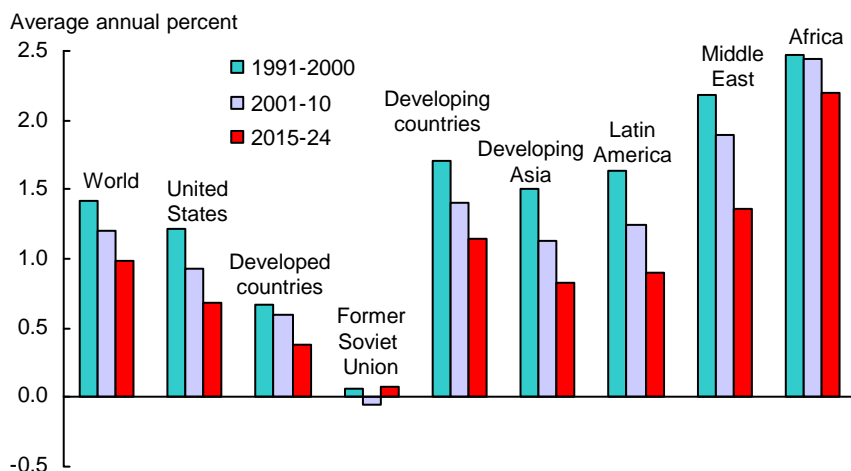
Growth in gross domestic product (GDP) for developed countries, European Union, and Japan



Developed economies are projected to grow at 2.1 percent annually, on average, in 2015-24. Prospects are for both the EU and Japan to grow at lower rates than the United States in coming years. Canada's growth is projected to be similar to that of the United States.

- Economic growth for the EU is projected at about 1.9 percent per year in the next decade. Even though the Eurozone financial problems decrease, structural rigidities, particularly inflexible labor laws and an expensive social security system, constrain the outlook for EU economic growth.
- The projections assume economic growth in Japan averages less than 1 percent per year, a continuation of the slow growth and deflationary environment that Japan has experienced since the 1990s. Results from economic initiatives to boost growth and overcome deflation have been limited to date. Government deficits and the size of accumulated debts remain a serious limitation on Government capacity to stimulate the economy. Monetary easing as a means for ending deflation has had only limited success. Japan continues to be faced with a declining working-age population. Increasing integration with the other economies of Asia, especially China, will mitigate some of the growth constraints in the Japanese economy. Nonetheless, Japan is a heavily trade-dependent country and its trade-dependent sectors have declined significantly over the past 20 years. A doubling of the consumption tax, which is scheduled to be phased in during 2014-17, could be a further negative shock to the economy. Slow growth prospects in Japan relative to high growth for the other major Asian countries suggest that Japan's importance in the global economy will diminish throughout the projection period.

Population growth continues to slow



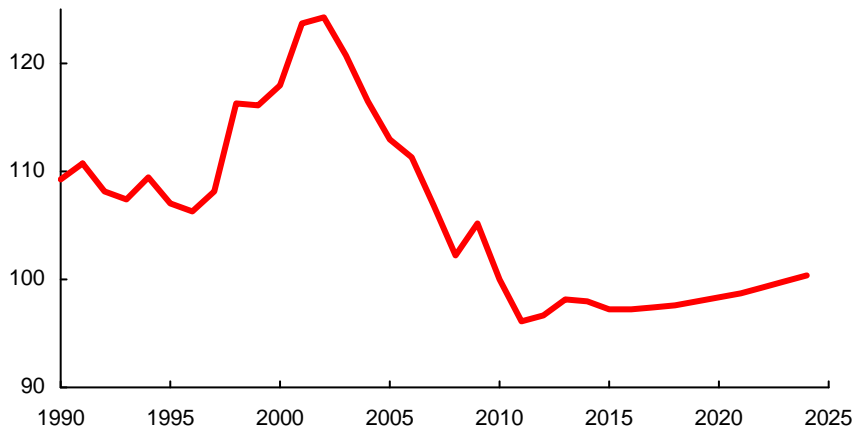
Source: U.S. Department of Commerce, U.S. Census Bureau, International Data Base at <http://www.census.gov/population/international/data/idb/informationGateway.php>

World population growth is projected to continue slowing over the next decade, rising about 1.0 percent per year for the projection period compared to an annual rate of 1.2 percent in 2001-10.

- Developed countries have very low projected rates of population growth, at 0.4 percent over 2015-24. The projected annual average population growth rate for the United States is about 0.7 percent, in part reflecting immigration. Only small population increases are projected for the EU, averaging 0.1 percent over the next decade. Population in Japan is projected to continue falling.
- Population growth rates in developing economies are projected to be sharply lower than rates in 1990-2010, but remain above those in the rest of the world at more than 1 percent per year in 2024. As a result, the share of global population accounted for by developing countries increases to 83 percent by 2024, compared to 79 percent in 2000.
- China and India together accounted for 36 percent of the world's population in 2014. China's population growth rate slows from 1.0 percent per year in 1991-2000 to 0.3 percent in 2015-24, with its share of global population falling. The population growth rate in India is projected to decline from 1.8 percent to 1.1 percent per year over the same period. Nonetheless, India's share of world population increases over the next decade.
- Brazil's population growth rate falls from 1.6 percent per year in 1991-2000 to 0.7 percent annually in 2015-24. The population growth rate in Indonesia is projected to decline from 1.7 percent to 0.8 percent per year over the same period. Although Sub-Saharan Africa's population growth rate declines somewhat from 2.6 percent to 2.3 percent per year between the same periods, this region continues to have the highest population growth rate of any region in the world and its population growth rate decline is modest relative to other regions of the world.

U.S. agricultural trade-weighted dollar remains low

Index values, 2010=100,
foreign currency per dollar



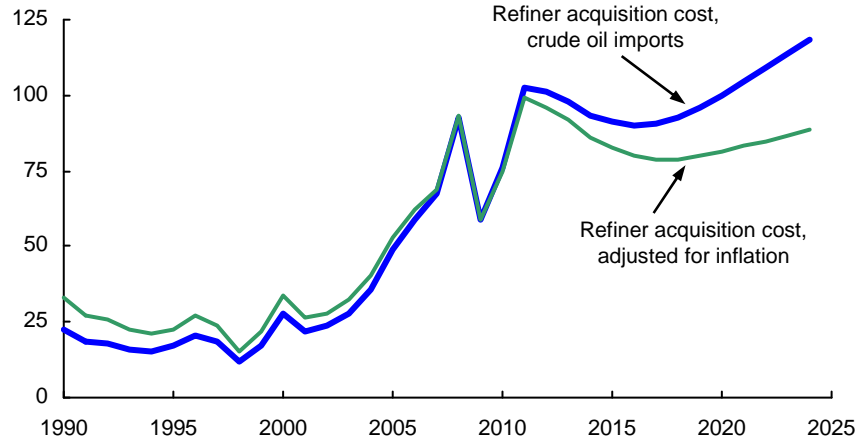
Note: Real U.S. agricultural trade-weighted dollar exchange rate, using U.S. agricultural export weights, based on 192 countries.

The U.S. dollar is projected to strengthen over the next decade, although it generally maintains a relatively low value compared to 1990-2010.

- The U.S. trade-weighted dollar depreciated between 2002 and 2011. In 2012 and 2013 the dollar appreciated, mostly due to the weakness of the euro. The value of the dollar is projected to trend upward during the projection period. Strong GDP growth in the United States relative to the EU and Japan will tend to mitigate any tendencies toward appreciation of the euro and yen relative to the U.S. dollar. The euro is assumed to stabilize as Eurozone financial problems diminish. The yen is projected to depreciate relative to the U.S. dollar over the projection period as the Bank of Japan continues to fight deflation.
- In June 2010, the Chinese Central Bank announced that it would allow increased flexibility in the exchange rate of the yuan relative to the U.S. dollar. From July 2010 to January 2014, there was more than a 16-percent real appreciation of the yuan. The projections assume that China allows its real exchange rate to continue to appreciate at a measured pace, largely reflecting inflation in China exceeding that in the United States. The nominal yuan is likely to remain fairly stable. With the continued growth of China and reforms to their financial system, the yuan will likely also play a larger role in trade finance in Asia, which could further strengthen the yuan in the longer run.

U.S. crude oil prices

Dollars per barrel



Due to the reemergence of the United States as a major oil producer, the projections assume a decline in U.S. oil prices for several years followed by a rise over the rest of next decade.

- Oil prices are projected to initially fall through 2016. Increased domestic oil and natural gas production using horizontal drilling and hydraulic fracturing (fracking) technology is expected to increase domestic supply.
- In the absence of U.S. raw crude oil exports, domestic oil prices will be below world crude oil prices. Crude oil importers will continue to offer discounts to U.S. fuel refiners to compete with lower-priced U.S. crude. U.S. businesses, including farmers and manufacturers, will benefit from relatively low diesel and gasoline prices.
- Later in the projections, expanding domestic oil product use results in projected increases in oil prices in 2017 to 2024.

Table 1. U.S. macroeconomic assumptions

Item	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Gross Domestic Product												
Nominal, billion dollars	16,768	17,433	18,367	19,259	20,155	21,113	22,139	23,237	24,390	25,599	26,869	28,202
Real, billion 2009 chain-weighted dollars	15,710	16,075	16,637	17,120	17,565	18,022	18,490	18,971	19,464	19,970	20,490	21,022
percent change	2.2	2.3	3.5	2.9	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Disposable personal income												
Nominal, billion dollars	12,505	13,030	13,669	14,311	14,984	15,688	16,441	17,247	18,092	18,978	19,908	20,884
percent change	1.0	4.2	4.9	4.7	4.7	4.7	4.8	4.9	4.9	4.9	4.9	4.9
Nominal per capita, dollars	39,515	40,887	42,592	44,285	46,046	47,878	49,832	51,917	54,091	56,357	58,719	61,181
percent change	0.3	3.5	4.2	4.0	4.0	4.0	4.1	4.2	4.2	4.2	4.2	4.2
Real, billion 2009 chain-weighted dollars	11,651	11,954	12,324	12,669	13,011	13,350	13,697	14,053	14,418	14,793	15,178	15,572
percent change	-0.2	2.6	3.1	2.8	2.7	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Real per capita, 2009 chained dollars	36,815	37,509	38,403	39,204	39,985	40,742	41,514	42,303	43,108	43,929	44,767	45,621
percent change	-0.9	1.9	2.4	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9
Personal consumption expenditures												
Real, billion 2009 chain-weighted dollars	10,700	10,978	11,384	11,703	11,995	12,295	12,603	12,918	13,241	13,572	13,911	14,259
percent change	2.4	2.6	3.7	2.8	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Inflation measures												
GDP chained price index, 2009=100	106.7	108.4	110.4	112.5	114.7	117.2	119.7	122.5	125.3	128.2	131.1	134.2
percent change	1.5	1.6	1.8	1.9	2.0	2.1	2.2	2.3	2.3	2.3	2.3	2.3
CPI-U, 1982-84=100	233.0	236.9	240.9	246.0	251.4	257.2	263.1	269.4	275.9	282.5	289.3	296.2
percent change	1.5	1.7	1.7	2.1	2.2	2.3	2.3	2.4	2.4	2.4	2.4	2.4
PPI, finished goods 1982=100	196.6	200.8	203.8	207.8	212.0	216.2	220.6	225.0	229.5	234.1	238.7	243.5
percent change	1.2	2.1	1.5	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
PPI, crude goods 1982=100	246.6	252.1	246.3	246.3	247.5	250.0	253.7	258.5	263.5	268.5	273.6	278.8
percent change	2.2	2.2	-2.3	0.0	0.5	1.0	1.5	1.9	1.9	1.9	1.9	1.9
Crude oil price, \$/barrel												
EIA refiner acquisition cost, imports	98.1	93.4	91.1	90.1	90.5	92.4	95.9	100.0	104.4	108.9	113.6	118.6
percent change	-2.9	-4.8	-2.4	-1.2	0.5	2.1	3.7	4.3	4.3	4.3	4.3	4.3
Real 2009 chain-weighted dollars	91.9	86.1	82.6	80.1	78.9	78.9	80.1	81.7	83.3	85.0	86.7	88.4
percent change	-4.4	-6.3	-4.2	-3.0	-1.5	0.0	1.5	2.0	2.0	2.0	2.0	2.0
Labor compensation per hour nonfarm business, 2005=100												
percent change	1.1	3.4	3.7	3.2	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
Interest rates, percent												
3-month Treasury bills	0.06	0.04	0.3	1.0	1.8	3.2	4.0	4.0	4.0	4.0	4.0	4.0
3-month AA nonfinancial commercial paper	0.11	0.10	0.6	1.5	2.3	3.8	4.7	4.7	4.7	4.7	4.7	4.7
Bank prime rate	3.25	3.25	3.5	4.5	5.4	6.2	7.0	7.0	7.0	7.0	7.0	7.0
10-year Treasury bonds	2.35	2.70	3.3	4.3	4.8	5.3	5.6	5.6	5.6	5.6	5.6	5.6
Moody's Aaa bond yield index	4.24	4.30	4.6	5.3	5.8	6.3	6.4	6.4	6.4	6.4	6.4	6.4
Labor and population												
Civilian unemployment rate, percent	7.4	6.4	6.0	5.7	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
Nonfarm payroll employees, millions	136.4	138.8	143.0	144.8	146.2	147.3	148.5	149.7	150.9	152.1	153.3	154.5
percent change	1.7	1.8	3.0	1.3	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Total population, millions	316.5	318.7	320.9	323.2	325.4	327.7	329.9	332.2	334.5	336.8	339.0	341.3
percent change	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7

Domestic macroeconomic assumptions were completed in October 2014. 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, 2013	GDP share 2011-13	Per capita GDP, 2013	2013	2014	2015	2016	2017	2018	Average		
										1991-2000	2001-2010	2015-2024
	<i>Bil. 2010</i>		<i>2010</i>									
	<i>dollars</i>	<i>Percent</i>	<i>dollars</i>									
												<i>Percent change in real GDP</i>
World	69,656	100.0	9,888	2.5	2.9	3.6	3.6	3.6	3.5	2.8	2.8	3.5
North America	17,619	25.4	50,192	2.2	2.3	3.4	2.9	2.6	2.6	3.4	1.7	2.7
Canada	1,717	2.5	49,670	2.0	2.0	2.8	2.8	2.7	2.6	2.9	1.9	2.5
United States	15,902	22.9	50,249	2.2	2.3	3.5	2.9	2.6	2.6	3.4	1.7	2.7
Latin America	5,802	8.3	9,600	2.6	2.9	3.5	3.8	3.9	4.0	3.1	3.3	3.9
Mexico	1,149	1.7	9,674	1.1	4.0	4.2	4.1	4.1	4.1	3.6	1.8	4.1
Caribbean & Central America	469	0.7	5,619	3.1	3.2	3.7	3.7	3.7	3.5	3.2	2.9	3.6
South America	4,183	6.0	10,406	2.9	2.6	3.3	3.8	3.9	4.0	3.0	3.7	3.9
Argentina	524	0.8	12,301	3.0	2.5	3.0	3.7	4.1	4.4	4.7	4.0	4.1
Brazil	2,280	3.3	11,343	2.5	3.5	4.0	4.0	4.0	4.0	2.6	3.6	4.0
Other	1,379	1.9	8,706	3.7	1.0	2.4	3.4	3.7	3.8	3.2	3.9	3.7
Europe	17,669	26.0	32,723	0.1	1.3	1.7	2.0	2.0	2.0	2.2	1.4	1.9
European Union	16,560	24.4	32,450	0.1	1.2	1.7	2.0	2.0	2.0	2.2	1.3	1.9
Other Europe	1,109	1.6	37,434	1.4	1.5	1.9	1.8	1.7	1.7	1.9	1.8	1.7
Former Soviet Union	2,231	3.2	7,887	2.2	0.8	1.8	2.7	3.8	3.7	-4.0	5.4	3.3
Russia	1,666	2.4	11,693	1.3	0.4	1.0	2.0	3.6	3.3	-3.6	4.9	2.9
Ukraine	146	0.2	3,279	1.9	-4.9	-0.8	1.7	2.5	4.0	-7.7	4.6	3.3
Other	419	0.6	4,370	5.7	4.6	5.7	5.7	5.0	4.8	-3.3	8.5	4.5
Asia and Oceania	21,215	29.8	5,458	4.6	4.8	5.0	5.1	5.0	5.0	3.7	4.8	5.0
East Asia	15,096	21.2	9,679	4.7	4.8	4.9	5.0	4.9	4.8	3.4	4.6	4.7
China	7,514	10.3	5,567	7.7	7.3	7.5	7.6	7.5	7.4	10.0	10.5	7.1
Hong Kong	250	0.4	35,359	2.9	4.1	5.0	4.6	3.9	3.6	4.0	4.1	3.7
Japan	5,632	8.2	44,257	1.5	1.8	1.5	1.3	1.1	1.0	1.1	0.8	0.9
South Korea	1,195	1.7	24,416	3.0	3.0	4.0	3.8	3.5	3.5	6.6	4.4	3.2
Taiwan	454	0.7	19,487	2.1	4.0	4.9	4.7	4.0	3.6	6.2	3.9	3.6
Southeast Asia	2,278	3.2	3,620	5.0	5.6	5.7	5.5	5.3	5.1	5.1	5.1	5.1
Burma	115	0.2	2,093	7.5	7.7	7.6	7.5	7.4	7.3	6.5	5.2	6.7
Cambodia	14	0.0	909	7.5	7.3	8.2	8.0	8.0	7.9	6.9	8.1	7.8
Indonesia	849	1.2	3,380	5.8	6.1	6.4	6.1	5.7	5.2	4.4	5.2	5.3
Malaysia	288	0.4	9,713	4.7	5.1	4.9	4.7	4.6	4.6	7.2	4.6	4.6
Philippines	237	0.3	2,240	7.2	5.5	5.4	5.0	4.9	4.8	2.9	4.8	4.9
Thailand	350	0.5	5,181	1.8	5.7	5.1	5.0	4.8	4.7	4.6	4.4	4.7
Vietnam	137	0.2	1,483	5.4	6.4	7.1	6.9	6.6	6.6	7.6	6.6	6.6
South Asia	2,412	3.4	1,451	5.2	5.5	6.1	6.6	6.9	7.2	5.3	7.0	7.2
Bangladesh	121	0.2	737	6.0	6.0	6.2	6.5	6.6	6.5	4.8	5.8	6.2
India	1,989	2.8	1,629	5.0	5.4	6.2	6.8	7.3	7.6	5.6	7.5	7.5
Pakistan	201	0.3	1,040	6.1	5.4	5.6	5.0	3.7	4.4	4.0	4.2	4.7
Oceania	1,429	2.0	39,314	2.7	3.3	3.0	2.7	2.6	2.6	3.3	3.0	2.7
Australia	1,242	1.8	55,777	2.7	3.3	2.8	2.7	2.6	2.6	3.3	3.0	2.6
New Zealand	154	0.2	35,245	2.5	2.9	3.0	2.9	2.8	2.7	3.0	2.5	2.6
Middle East	3,036	4.3	10,036	2.3	3.5	4.1	4.4	4.8	4.2	4.1	4.4	4.2
Iran	422	0.6	5,288	-5.8	1.5	2.0	3.1	3.2	3.0	3.8	5.2	3.2
Iraq	177	0.2	5,567	4.0	4.4	5.1	8.1	11.9	6.6	12.1	5.2	6.8
Saudi Arabia	628	0.9	23,318	3.8	4.3	4.6	4.7	4.7	4.5	2.8	5.4	4.5
Turkey	845	1.2	10,473	4.0	4.1	4.9	5.0	4.7	4.2	3.7	4.0	4.2
Other	963	1.4	11,581	3.3	3.3	3.8	3.7	4.1	4.0	5.1	4.2	3.8
Africa	2,083	2.9	1,934	3.6	4.5	5.7	6.1	5.4	5.3	2.6	5.3	5.1
North Africa	611	0.9	3,534	1.6	2.2	5.8	6.5	4.7	4.5	3.8	4.5	4.6
Egypt	232	0.3	2,725	2.1	2.6	4.7	4.7	4.6	4.5	4.3	4.9	4.4
Morocco	102	0.1	3,126	4.4	2.7	5.0	5.2	5.0	4.4	2.5	4.9	4.0
Sub-Saharan Africa	1,472	2.1	1,628	4.5	5.4	5.6	6.0	5.7	5.7	2.1	5.7	5.3
South Africa	395	0.6	8,122	1.9	3.5	3.8	3.9	4.0	4.3	1.8	3.6	4.3
West African Community	576	0.8	1,765	4.0	4.1	4.8	5.1	5.0	4.9	2.3	6.0	4.9
Other Sub-Saharan Africa	501	0.7	947	3.6	5.6	5.9	5.9	5.8	6.0	2.1	5.9	5.6

Source: Historical data from various sources; compiled in the International Macroeconomic Data Set, U.S. Department of Agriculture, Economic Research Service. International macroeconomic assumptions were based on information available in August 2014.

Table 3. Population growth assumptions

Region/country	Population in							Average		
	2013	2013	2014	2015	2016	2017	2018	1991-2000	2001-2010	2015-2024
	<i>Millions</i>							<i>Percent change</i>		
World ¹	7,045	1.1	1.1	1.1	1.1	1.0	1.0	1.4	1.2	1.0
North America	351	0.7	0.7	0.7	0.7	0.7	0.7	1.2	0.9	0.7
Canada	35	0.8	0.8	0.8	0.7	0.7	0.7	1.1	0.8	0.7
United States	316	0.7	0.7	0.7	0.7	0.7	0.7	1.2	0.9	0.7
Latin America	604	1.1	1.0	1.0	1.0	1.0	0.9	1.6	1.2	0.9
Mexico	119	1.3	1.2	1.2	1.2	1.1	1.1	1.7	1.3	1.1
Caribbean & Central America	84	1.0	1.0	1.0	1.0	1.0	1.0	1.7	1.2	0.9
South America	402	1.0	1.0	0.9	0.9	0.9	0.9	1.6	1.2	0.8
Argentina	43	1.0	1.0	0.9	0.9	0.9	0.9	1.2	1.0	0.8
Brazil	201	0.8	0.8	0.8	0.8	0.7	0.7	1.6	1.2	0.7
Other	158	1.2	1.2	1.1	1.1	1.1	1.1	1.8	1.3	1.0
Europe	540	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2
European Union	510	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.1
Other Europe	30	0.4	0.4	0.3	0.3	0.3	0.3	0.0	0.2	0.3
Former Soviet Union	283	0.2	0.2	0.2	0.1	0.1	0.1	0.1	-0.1	0.1
Russia	143	0.0	0.0	0.0	0.0	-0.1	-0.1	-0.1	-0.3	-0.1
Ukraine	45	-0.6	-0.6	-0.6	-0.6	-0.7	-0.7	-0.5	-0.8	-0.7
Other	96	0.8	0.8	0.8	0.8	0.8	0.7	0.6	0.7	0.7
Asia and Oceania	3,887	1.0	0.9	0.9	0.9	0.9	0.8	1.4	1.1	0.8
East Asia	1,560	0.4	0.4	0.4	0.3	0.3	0.3	0.9	0.5	0.2
China	1,350	0.5	0.5	0.4	0.4	0.4	0.3	1.0	0.5	0.3
Hong Kong	7	0.5	0.4	0.4	0.4	0.3	0.3	1.6	0.5	0.3
Japan	127	-0.1	-0.1	-0.1	-0.2	-0.2	-0.2	0.3	0.1	-0.3
South Korea	49	0.2	0.2	0.2	0.1	0.1	0.1	0.9	0.4	0.1
Taiwan	23	0.3	0.3	0.2	0.2	0.2	0.2	0.9	0.4	0.1
Southeast Asia	629	1.2	1.1	1.1	1.1	1.0	1.0	1.8	1.4	1.0
Burma	55	1.1	1.0	1.0	1.0	1.0	1.0	1.6	1.2	0.9
Cambodia	15	1.7	1.7	1.6	1.6	1.5	1.5	2.8	1.6	1.4
Indonesia	251	1.0	1.0	0.9	0.9	0.9	0.8	1.7	1.3	0.8
Malaysia	30	1.5	1.5	1.5	1.4	1.4	1.4	2.6	2.0	1.3
Philippines	106	1.9	1.8	1.8	1.8	1.7	1.7	2.2	2.1	1.7
Thailand	67	0.4	0.4	0.3	0.3	0.3	0.3	1.2	0.6	0.3
Vietnam	92	1.0	1.0	1.0	1.0	0.9	0.9	1.6	1.2	0.9
South Asia	1,662	1.4	1.4	1.3	1.3	1.3	1.3	2.0	1.6	1.2
Bangladesh	164	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.7	1.6
India	1,221	1.3	1.3	1.2	1.2	1.2	1.2	1.8	1.5	1.1
Pakistan	193	1.5	1.5	1.5	1.5	1.5	1.4	2.5	1.9	1.4
Oceania	36	1.2	1.2	1.2	1.2	1.1	1.1	1.4	1.4	1.1
Australia	22	1.1	1.1	1.1	1.1	1.0	1.0	1.2	1.2	1.0
New Zealand	4	0.9	0.8	0.8	0.8	0.8	0.8	1.1	1.1	0.8
Middle East	303	1.4	1.5	1.5	1.5	1.5	1.4	2.2	1.9	1.4
Iran	80	1.2	1.2	1.2	1.2	1.2	1.1	1.7	1.1	1.1
Iraq	32	2.3	2.3	2.2	2.2	2.1	2.1	2.3	2.7	2.0
Saudi Arabia	27	1.5	1.5	1.5	1.5	1.5	1.4	2.9	1.9	1.4
Turkey	81	1.2	1.1	1.1	1.1	1.0	1.0	1.8	1.5	1.0
Other	83	1.4	1.7	1.9	1.9	1.9	1.9	3.0	2.9	1.7
Africa	1,077	2.4	2.3	2.3	2.3	2.3	2.2	2.5	2.4	2.2
North Africa	173	1.9	1.7	1.7	1.6	1.5	1.5	1.7	1.8	1.4
Egypt	85	1.9	1.9	1.8	1.8	1.7	1.7	1.7	2.1	1.6
Morocco	33	1.1	1.0	1.0	1.0	1.0	1.0	1.6	1.2	0.9
Sub-Saharan Africa	904	2.5	2.5	2.4	2.4	2.4	2.4	2.6	2.6	2.3
South Africa	49	-0.4	-0.5	-0.2	0.1	0.1	0.1	1.6	0.9	0.1
West African Community	326	2.6	2.6	2.5	2.5	2.5	2.5	2.6	2.7	2.5
Other Sub-Saharan Africa	529	2.7	2.7	2.6	2.5	2.5	2.5	2.8	2.7	2.4

1/ Totals for the world include countries not otherwise listed in the table.

Source: U.S. Department of Commerce, U.S. Census Bureau, <http://www.census.gov/population/international/data/idb/informationGateway.php>. The population assumptions were completed in August 2014 based on the December 2013 update from the U.S. Census Bureau.

Agricultural Trade

Global demand for agricultural products is projected to continue rising from 2015 through 2024. At the same time, world production of agricultural products is projected to increase more rapidly than world population, enabling a small increase in average world per capita use of most agricultural products. During this period, world trade in agricultural products is projected to maintain strong growth.

Most agricultural prices have fallen from recent high levels and are projected to fall further during the initial years of the projections, before gradually increasing over the remainder of the coming decade. The main contributing factors are rising per capita incomes, urbanization and improved infrastructures, increasing access to modern food markets, changing diets, and increasing populations in low- and middle-income countries. Together, these factors stimulate world demand for grains, oilseeds, cotton, and livestock products.

World agricultural production is projected to continue rising in the coming decade as yield growth through technological enhancements, and area expansion continue. However, early years in the projections exhibit slower growth in area as low prices induce some countries to reduce planting on marginal cropland. While some countries have the potential to expand arable land, many countries have a limited ability to expand planted area. For this latter group of countries, when expansion does occur, it is often on less-productive land with higher production costs.

The growth rate for world average crop yields has been slowing for nearly 2 decades and is projected to slow further in the next 10 years. Reduced public funding for research and development over the last 25 years may have contributed to this slowdown. Increasing demand for higher quality food grain varieties can result in lower yields for specific countries. Also, water constraints in some countries are impeding the expansion of irrigation. Where irrigation water is pumped from deep wells, the cost of pumping is projected to continue to increase due to falling water tables.

Global stocks have increased for most commodities during the past few years. A number of factors are driving these increases. World production of most crops has increased faster than use, increasing stocks and easing price levels. Following the volatility in commodity prices since 2008, policies have also tended to support higher stock levels. In China, policies supporting producers have led to the accumulation of large stocks of grains and cotton. Similarly, Thailand now holds large rice stocks, and India has large stocks of rice and wheat, in part due to policies aimed at

General International Assumptions

Trade projections to 2024 are based on economic relationships and assumptions concerning trends in foreign area, yields, and use. The development and use of technology and changes in consumer preferences are assumed to continue evolving based on past performance and consensus judgment of USDA analysts regarding future developments. The projections also reflect effects of trade agreements, sanitary and phytosanitary restrictions, and domestic policies in place or authorized by November 2014. International macroeconomic assumptions were completed in October 2014.

supporting producers and ensuring food security. Government held stocks are a significant portion of total stocks for some countries. Projected changes in these stock levels affect the path of global grain and cotton markets over the first 3 to 4 years of the projection period. As a result, world stocks of many commodities have begun to rise from low levels.

Low- and middle-income countries are the main sources of growing food and feed demand and are projected to account for most of the projected increase in world agricultural consumption and import demand over the next decade. Major drivers of demand by developing countries are relatively high rates of population and income growth, large numbers of relatively low-income consumers with propensity to spend new income on more and better food, and urbanization that tends to increase demand for more diverse diets through exposure to new foods and, in some cases, to modern retail food outlets.

Global meat consumption continues to rise throughout the projection period. Consumption of poultry meat, the lowest priced meat, increases the fastest, at 2.2 percent annually. Beef consumption grows at 1.3 percent annually and pork increases by 1.2 percent annually. Developing countries account for about 81 percent of the projected increase in global consumption of meat, 87 percent of the increase in demand for grains and oilseeds, and virtually all of the growth in cotton consumption. The annual growth rates for consumption of meat for developed and developing countries are 0.7 percent and 1.9 percent, respectively, over the projection period.

Demand for agricultural products and especially meat in developing countries increases faster than production, resulting in increasing imports for meat products and feeds, both grains and oilseeds. Developing country coarse grain consumption and imports are projected to grow 2.1 percent annually through 2024, while coarse grain consumption grows just 1.0 percent annually in developed countries.

The combined region of Africa and the Middle East is projected to have relatively strong growth in food demand and agricultural trade over the coming decade. Population growth in the Middle East is projected at 1.4 percent annually, and projected population growth in Africa is the highest in the world at 2.2 percent annually. Annual growth in real gross domestic product (GDP) in the Middle East is expected to average 4.2 percent during 2015-24, while growth in Africa is projected to average 5.1 percent. The region is projected to account for over two-fifths of the increase in world poultry imports and almost one-fifth of the growth in beef imports. Strong policy support for domestically produced meat also motivates growth in feed grain and protein meal imports, especially by countries where land constraints or agro-climatic conditions limit an expansion of domestic crop production. As a result, the region's share of the increase in world imports is projected to be about 25 percent for coarse grains, 42 percent for wheat, 73 percent for rice, and almost 20 percent for soybean meal.

Mexico is projected to be another large growth market for imports of meat, grains, and oilseeds. A sustained increase in Mexico's per capita meat demand over the next decade provides incentives to expand livestock production in that country as well as to import more meat and animal feed. Beef imports are projected to more than double, while pork and poultry imports rise by 36 and 52 percent, respectively. Mexico is the second largest corn importer over the next 10 years, increasing by 32 percent, and its projected imports match those of Japan in 2024, the world's largest corn importer.

China has been a net importer for at least the last decade for cotton, soybeans, rapeseed, barley, soybean oil, and palm oil. Since 2008/09, China also has become a sustained net importer of pork, beef, corn, wheat, rapeseed meal, and rapeseed oil, and a net rice importer in since 2011/12. In the

projections, China's net imports of all of these commodities continue to rise, except for rice. China's aggregate net imports for coarse grains and soybeans are projected to rise 46 and 40 percent by 2024, respectively. China is, and will continue to be, the largest importer of soybeans, increasing its imports from 65 to 71 percent of world's import share by 2024. China cotton imports will more than double from current low levels, which are attributable to recent policies, but still fall short of the record level of imports in 2011/12. For meats, net imports of beef and pork for combined China and Hong Kong are projected to increase 71 and 41 percent by 2024, respectively. China is a net exporter of poultry and its exports increase by 12 percent over the projections.

China has recently had a large impact on a few of the less-traded grains, including barley and sorghum. China has emerged as the major importer of sorghum in the last 3 years, with 4.2 million tons imported in 2013/14, and, since sorghum is a low cost feed substitute for corn, China is projected to remain a large sorghum importer in the next decade. China's barley imports doubled from 2.2 million tons in 2012/13 to 4.9 million tons in 2013/14 and are projected to remain large through 2024. Barley demand is for both feed and malting brewery.

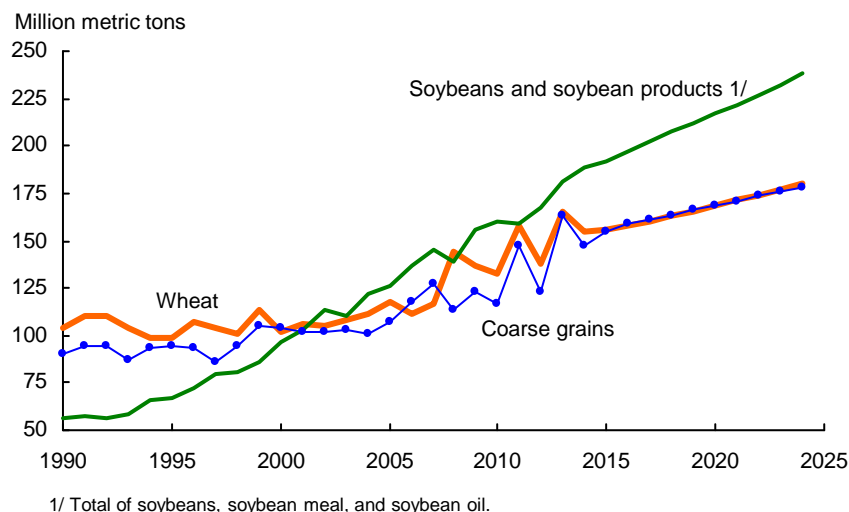
Increasing global demand for agricultural commodities, especially by developing countries, lead to higher production and exports by major exporting countries through the projection period to 2024. Countries that have traditionally exported a large quantity and a wide range of agricultural products, such as Argentina, Australia, Brazil, Canada, the European Union (EU), and the United States, are expected to remain important exporters during the coming decade. But countries that have made significant investments in their agricultural sectors and are pursuing policies intended to encourage agricultural production, including Russia, Ukraine, and Kazakhstan, are expected to have an increasing presence in export markets for agricultural commodities. India has emerged as a major exporter of rice, cotton, and beef over the last decade, and is expected to remain important in each of these markets in the projections. Both Burma and Cambodia have expanded rice production and expected to significantly increase rice exports over the projection period.

Global expansion of biofuel production is projected to continue during the next decade, although at a slower pace than over the last half decade. As a result, demand for biofuel feedstocks also continues to grow, but more slowly. The largest biofuel producers include the United States, Brazil, the EU, and Argentina. Indonesia and Malaysia continue to increase production of biofuel production from palm oil and the Philippines is expanding copra use for biofuel.

The EU remains the world's largest importer of biofuels throughout the projection period. Biodiesel accounts for the majority of the EU's biofuel imports. Brazil supplies much of the EU's ethanol imports. The EU is also projected to import oilseeds and vegetable oils for use as biodiesel feedstocks, mainly from Ukraine, Russia, and Indonesia.

Argentina, Brazil, and the United States are the world's largest biofuel exporters, with Argentina specializing in soybean oil-based biodiesel, Brazil in sugarcane-based ethanol, and the United States in corn-based ethanol. Exports from Argentina and Brazil grow steadily in the projections but exports are constrained as both countries increase their domestic use of biofuels.

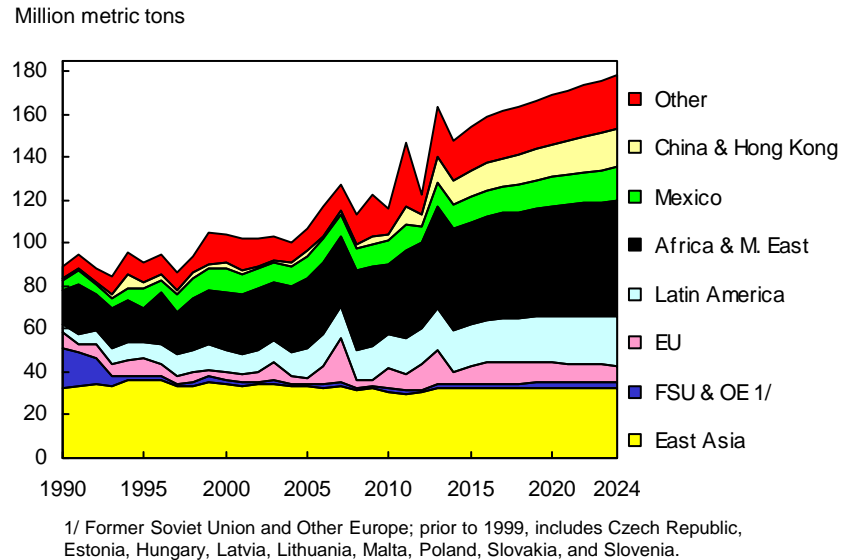
Global trade: Wheat, coarse grains, and soybeans and soybean products



Global trade in soybeans and soybean products has risen rapidly since the early 1990s and surpassed global trade in either wheat or 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-products trade well above either wheat or coarse grain trade throughout the next decade.

- Globally, the total area planted to grains, annual oilseeds, and cotton is projected to expand at an average annual rate of 0.5 percent, from 2015 to 2024, from 934 to 982 million hectares. Area expands more rapidly in countries with a reserve of available land and policies that allow farmers to respond to prices. Such countries include Russia, Ukraine, Brazil, Argentina, some other countries in South America, and some countries in Sub-Saharan Africa. In many other countries, area expansion is slower and area cultivated contracts in some countries. Over half of the projected growth in global production of grains, oilseeds, and cotton (1.3 percent per year to 2024) is obtained from rising yields, even though growth in crop yields is projected to continue slowing.
- The market impact of slower yield growth is partially offset by slower growth in world population. Nonetheless, population growth is a significant factor driving overall growth in demand for agricultural products. Additionally, rising per capita income in most countries supplements population gains in the demand for vegetable oils, meats, horticulture, dairy products, and grains. World consumption of oilseeds is projected to rise 21 percent over the next 10 years, compared with 15 percent for meats, 15 percent for total coarse grains, and 8 percent for wheat and rice. In contrast to total consumption, per capita food use of wheat decreases marginally, and per capita rice consumption drops 1 percent.
- Increasing demand for grains, oilseeds, and other crops provides incentives to expand global area under cultivation and the cropping intensity, although projected lower prices will constrain expansion. The largest projected increases in the area planted to field crops are in the countries of the former Soviet Union (FSU) and Sub-Saharan Africa. Large expansions are also projected for Brazil, Argentina, and Indonesia, including some uncultivated land brought into soybean and palm oil production in response to increased world demand for vegetable oils.

Global coarse grain imports

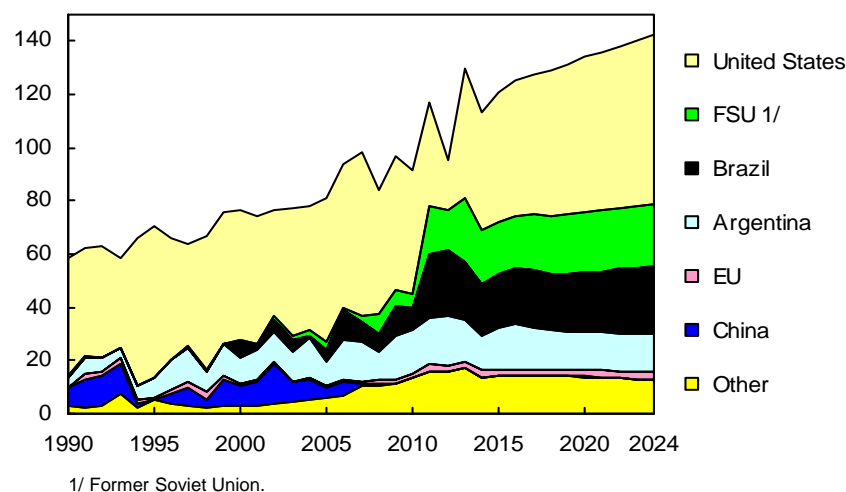


World coarse grain trade is projected to increase by 23.8 million tons (15 percent) between 2015/16 and 2024/25. Corn is expected to gain an increasing share of world coarse grain trade. Expansion of livestock production in feed-deficit countries continues to be the principal driver of growth in coarse grain imports. Key growth markets include China, Mexico, Africa, and the Middle East.

- China's corn imports are projected to increase gradually and reach 7.2 million tons by 2024/25. China's strengthening domestic demand for corn is driven by structural change and growth in its livestock sectors, as well as by rising industrial use. China's current large domestic supplies of corn will limit the growth of corn imports in the near future. China's sorghum imports have increased sharply over the past 2 to 3 years, and continued growth is projected from 2015/16's level of 4.8 million tons.
- Together, imports by Africa and the Middle East account for about 25 percent of the growth in world coarse grain trade through 2024/25, as rising populations and incomes sustain strong demand growth for livestock products and limited arable land and water constrain domestic grain and oilseed production.
- Mexico's corn imports are projected to rise from 11.4 million tons in 2015/16 to 15 million in 2024/25, reaching the level of projected imports by Japan – the current global leader. Mexico's sorghum imports decreased in 2013/14 to 162 thousand tons and are projected to remain low as China's demand for sorghum keep prices less competitive with corn. Altogether, the growth in Mexico's corn imports represents one-sixth of the increase in global coarse grain trade during the coming decade. This reflects increased meat consumption, which stimulates an expansion in domestic meat production and grain imports.
- Southeast Asian and Oceania corn imports rise 42 percent to 14.2 million tons by 2024/25 in response to increased demand from livestock producers and transition to modern feed rations. These two regions account for 19 percent of the growth in world corn imports.
- In East Asia, environmental constraints on expanding livestock production limit the growth in demand for coarse grain imports. The region currently accounts for nearly one-fourth of world coarse grain imports, but this share is projected to fall.

Global corn exports

Million metric tons

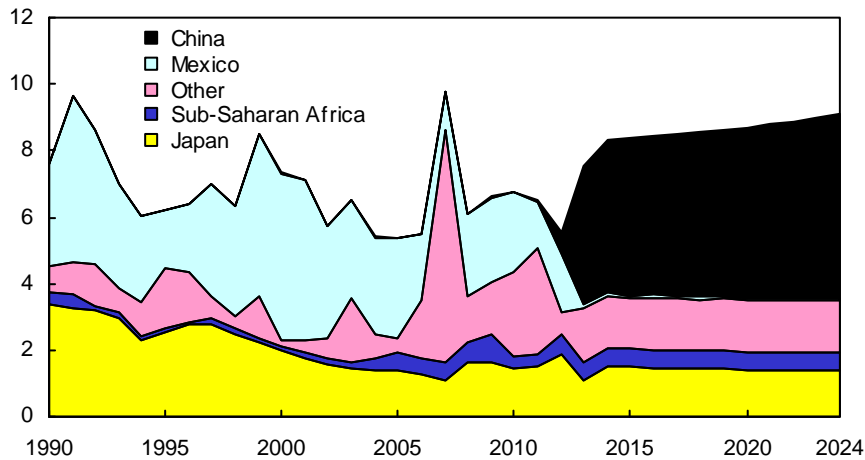


U.S. corn exports are expected to expand steadily over the projection period, recovering part of the market share lost in recent years because of tight supplies. Annual U.S. corn exports are expected to increase to 63.5 million tons by 2024/25. However, the U.S. share of world corn exports only rises to 45 percent, well below the 59 percent averaged during 2001/02 through 2010/11 period. The U.S. share dropped off sharply in 2011/12 and 2012/13, because of weather-related yield problems, particularly the 2012 drought.

- Annual corn exports by the countries of the FSU, mostly from Ukraine, rise 4 million tons (21 percent) to nearly 23.4 million tons by 2024/25. Favorable resource endowments, increasing economic openness, wider use of hybrid seed, and greater investment in agriculture all stimulate corn production in this region. Although FSU feed use of corn rises rapidly in the projections, the region's corn exports increase as much as those of major competitors such as Brazil. The FSU is the world's third-largest corn exporter, after the United States and Brazil.
- Argentina's corn production is projected to increase only slightly, mostly through increasing yields. Corn area is discouraged by an expected continuation of quantitative export controls. Exports vary within a range of 14 to 17 million tons through the projection period.
- Brazil's corn exports during the last several years have been double the pre-2011/12 levels. Production of second-crop corn following soybeans, a large share of which is produced in Mato Grosso, continues to increase with expansion onto new cropland. This corn is not in a good location to meet domestic demand, however, and tends to be exported when port capacity is not strained by soybean shipments. Further growth in Brazil's corn exports is somewhat constrained in the near term by high transport costs. However, during the latter part of the projection period, corn exports are projected to increase in response to improved export infrastructure and increasing world prices. Exports increase by 21 percent to 25.3 million tons by 2024/25.
- EU corn imports are projected to peak in the middle years at nearly 10 million tons. Exports grow slowly to end of the period at 2.6 million tons, as the EU takes advantage of its lower transportation costs to parts of North Africa and the Middle East.
- Corn exports from the Other Europe (OE) region, mostly from Serbia to the EU, continue to rise, with an increase of 12 percent to 2.8 million tons by 2024/25.

Global sorghum imports

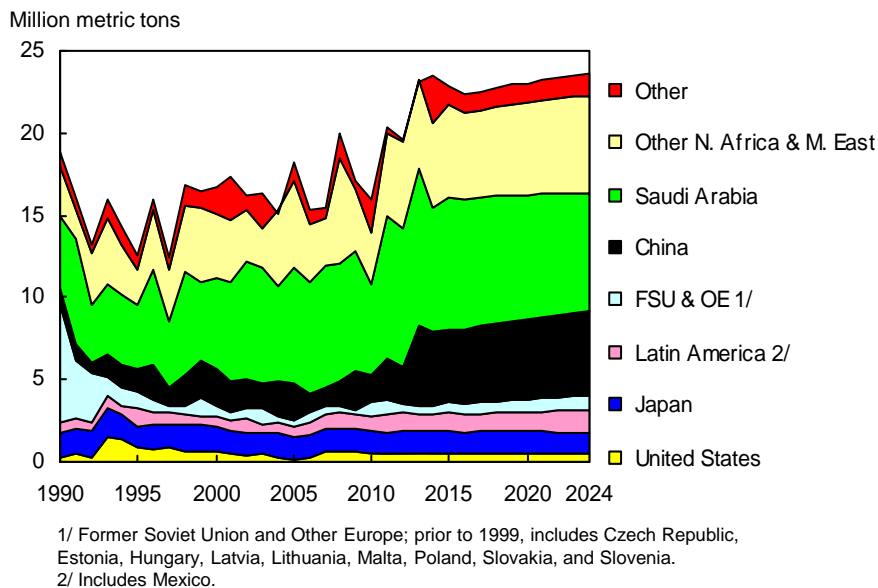
Million metric tons



World sorghum trade is expected to increase during the coming decade by 8 percent. Exporters' supplies are constrained by sorghum's low profitability compared to alternative crops. World sorghum imports are projected to trend slowly upward from around 8.4 million tons in 2015/16 to 9.1 million tons in 2024/25. U.S. exports to China have increased significantly and, with Japan, account for the bulk of world sorghum trade. Argentine exports have also risen in recent years and are projected to increase their share of world exports.

- China's sorghum imports jumped in the past 2 years and are projected to grow 1.7 percent per year over the next decade. Imports increase from 4.8 million tons in 2015/16 to 5.6 million tons by 2024/25. Increasing sorghum imports are driven by feed demand and the high price of corn in China, resulting from restricted corn imports and domestic policies that support the domestic corn industry and Chinese farmers' income.
- Sorghum imports by Japan—currently the world's second-largest importers—are projected to stabilize over the next decade at about 1.4 million tons per year.
- Mexico's sorghum imports have decreased significantly the past couple of years as prices of alternative feed commodities, especially corn, decreased. Imports averaged over 2 million tons per year from 2003/04 through 2012/13, but are projected to average 68 thousand tons from 2015/16 through 2024/25. Historically, many Mexican livestock producers have had a slight preference for feeding sorghum, thus facilitating U.S. sorghum shipments to Mexico from the southwestern area of the United States. Historical patterns of trade have been changed by China's increased demand for sorghum and Mexico's resulting switch in demand to corn.
- U.S. sorghum exports rebounded in 2013/14 from low levels during the preceding 2 years and are projected to remain close to 6 million tons during the next 10 years, supported by China's demand.
- Argentina is expected to continue to be the world's second-largest sorghum exporter during the coming decade. Argentina's exports are projected to rise very slowly to 1.7 million tons. Production of new sorghum varieties with lower tannin content enables Argentina to gain a slightly larger share of the international trade market. The primary markets for Argentine sorghum are Japan, Chile, Europe, and other countries in South America.
- Australia's sorghum exports are projected to increase slightly to 1 million tons by 2024/25, with the country remaining the world's third largest sorghum exporter.

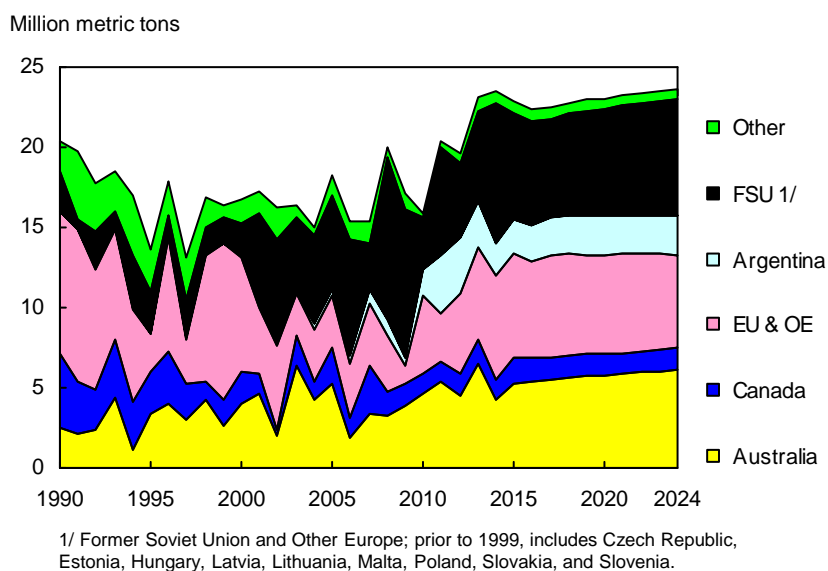
Global barley imports



Global barley trade initially falls, but then is projected to expand, reaching 23.6 million tons by 2024/25. Rising demand for both malting and feed barley began in 2013/14, supported by demand growth in China, and trade remains at these higher levels.

- Feed barley imports by North Africa and Latin America are expected to rise over the next decade. Barley imports increase by 27 percent for North Africa and 20 percent for Latin America by 2024/25.
- Saudi Arabia remains the world's leading importer of barley, but decreasing imports lower its share of world imports from 35 percent in 2015/16 to 30 percent by 2024/25. Saudi Arabia's barley imports are used primarily as feed for sheep, goats, and camels. Saudi Arabia is expected to use more balanced feed rations and rely less on barley for its feed grains. Among other countries in the Middle East, only Egypt, Turkey, and Iraq are projected to experience growth in barley imports over the next decade.
- International demand for malting barley is boosted by strong growth in beer demand in some developing countries, most notably China. China's domestic production of malting barley is relatively flat, so rising brewery demand is met by imports, making China the world's largest malting-barley importer. Australia and Canada are China's main sources of malting barley imports. China also has rising demand for feed barley as a substitute for corn in livestock rations since domestic corn prices are greater than international prices and corn import restrictions are maintained. Some of this feed barley demand is met by imports and some from China's domestic production. As a result of this projected growth for both brewery and feed demand, China's barley imports, which only occasionally exceeded 2 million metric tons prior to 2011/12, rise from 4.5 million tons in 2015/16 to more than 5 million tons toward the end of the projection period.

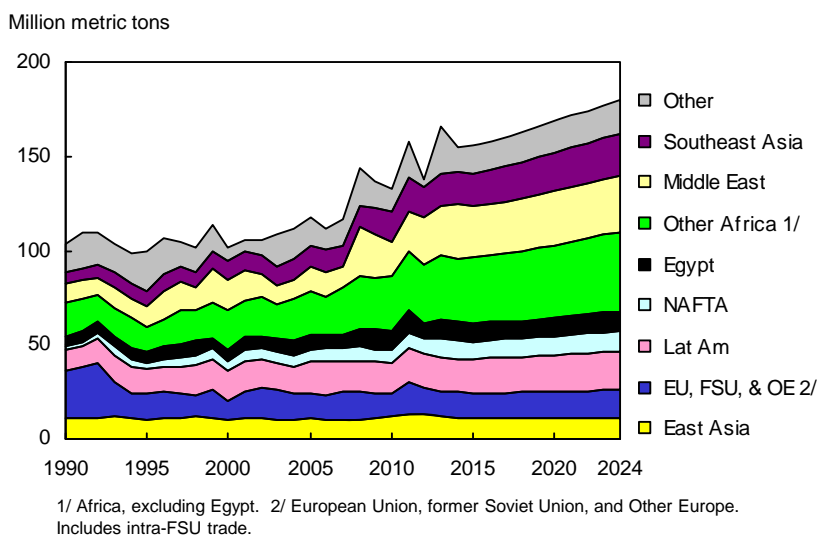
Global barley exports



The EU, Australia, Russia, Ukraine, and Argentina are expected to be the major barley exporters during the coming decade.

- EU's barley exports for 2015/16 are projected at 6.5 million tons and are expected to decrease slightly to 5.8 million tons by the end of the period, in part due to reduced barley demand from Saudi Arabia.
- Australia's annual barley exports are expected to rise slowly during the coming decade to 6.1 million tons, almost 0.8 million tons higher than in 2015/16. Australia is projected to become the world's largest barley exporter, surpassing the EU by 2024/25.
- Argentina's barley exports have risen sharply in recent years and are projected to remain large in the coming decade. Export restrictions for wheat have caused a shift in winter grain production from wheat to barley. Expansion in barley area has occurred in the southern part of the country, and barley has been double-cropped with soybeans in the central region. Other South American countries and Saudi Arabia are the main buyers of Argentina's feed barley. Argentine malting barley is mostly exported to Brazil.
- Barley exports by the FSU countries are projected to increase slightly from 6.7 million tons in 2015/16 to 7.3 million tons by 2024/25. Russia's barley exports are projected at 3.2 million tons and Ukraine's at 3.1 million tons by the end of the period. Kazakhstan is also expected to increase its exports, especially to Iran.
- Malting barley commands a substantial price premium over feed barley. This price premium is expected to influence planting decisions in Canada and Australia, where malting barley's share of total barley area is expected to rise during the next 10 years. However, Canada's total area planted to all barley continues to decline as demand for canola increases and canola remains more profitable.

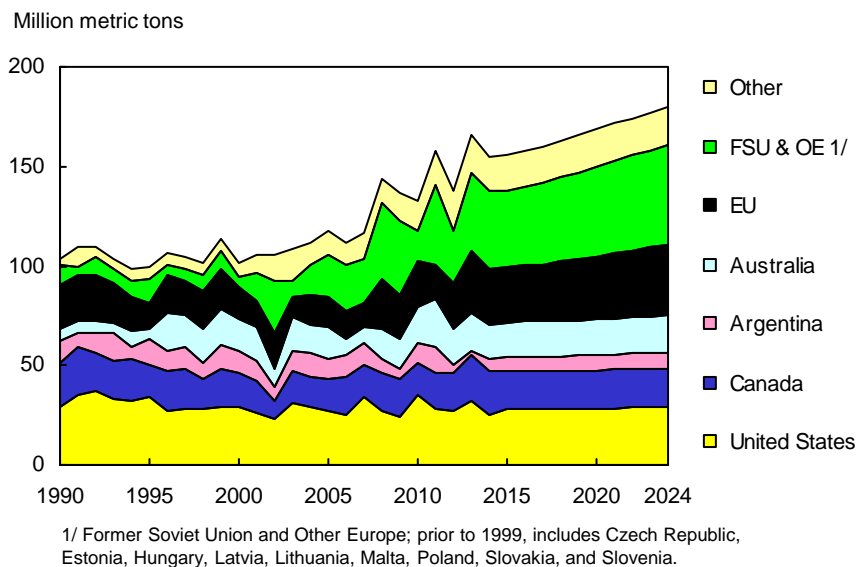
Global wheat imports



Annual world wheat trade (including flour) is projected to expand by nearly 24.5 million tons (16 percent) between 2015/16 and 2024/25, reaching 180 million tons. Growth in wheat imports is concentrated in those developing countries where income and population gains drive increases in demand. The largest growth markets include the 15 countries of the Economic Community of West African States, other Sub-Saharan Africa countries, Egypt, other countries in the North Africa and the Middle East region, Indonesia, and Pakistan.

- In many developing countries, almost no change in per capita wheat consumption is expected, but imports are projected to expand modestly because of population growth and limited potential to expand domestic wheat production. As incomes rise in Indonesia, Vietnam, and some other Asian countries, demand for instant noodles and bakery products increases.
- Egypt and Indonesia remain the world's largest wheat-importing countries, with annual imports climbing to about 10.5 million tons in each country by 2024/25. Imports by Indonesia grow rapidly as increased consumption of instant noodles continues. Brazil is the third largest wheat importing country at 7.7 million tons by 2024/25.
- Imports by China, Vietnam, Thailand, Bangladesh, and the Philippines are all projected to rise rapidly, with the annual total for these countries increasing by 4.8 million tons. Imports are driven by rising incomes and populations, with consumption becoming diversified with urbanization. China, for instance has increasing demand for higher quality wheat used in bakery and specialty products, catering to higher incomes households.
- Wheat imports by countries in Africa and the Middle East increase by 10.4 million tons over the projection period and account for 43 percent of the total increase in world wheat trade. In this region, only Iran has projected decreases in imports. Saudi Arabia has adopted a policy to phase out wheat production by 2016 because of water scarcity. Saudi Arabia's annual imports are projected to increase to 4 million tons by 2024/25.
- Historically, India has been a large wheat importer in some years and a large exporter in others. In the 2012/13 and 2013/14, India exported significant amounts of wheat, partially as a result of price-support policies and accumulation of government stocks. Although India's wheat stocks have fallen from their peak, India is expected to be a net wheat exporter over the projection period, shipping 2.5 to 2.7 million tons annually.

Global wheat exports

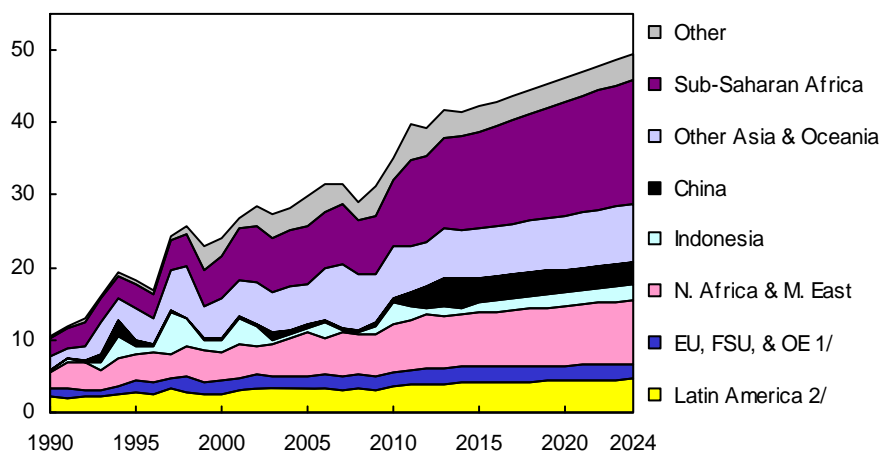


The five largest traditional wheat exporters (United States, Australia, EU, Argentina, and Canada) are projected to account for 62 percent of world trade in 2024/25, compared with about 70 percent during the last decade. This decrease in share is mostly due to increased exports from the FSU, which account for a projected 27 percent of world trade in 2024/25.

- U.S. wheat exports are projected to rise slowly but steadily from 27.7 million tons to 29 million tons during the coming decade. However, the U.S. share of world exports declines over the projection period, from 17.8 percent in 2015/16 to 16.1 percent in 2024/25.
- Wheat exports from Russia, Ukraine, and Kazakhstan have recovered from droughts in 2010 and 2012. Exports from these countries have increased nearly threefold from the recent lows in 2010/11 and are expected to climb to 49 million tons by 2024/25, accounting for nearly half of the projected increase in world wheat trade. Rising domestic feed use prevents even more rapid export growth. Although not explicitly reflected in the projections, year-to-year volatility in FSU wheat production and trade is likely because of the region's highly variable weather and yields.
- Canada's wheat area declines slowly in response to more favorable returns for canola. As a result, little change is projected for Canadian wheat exports. Eliminating the Canadian Wheat Board's state trading monopoly is assumed to redirect some of Canada's wheat exports to the United States due to transportation and market considerations.
- In Argentina, total area devoted to wheat remains roughly unchanged although some area traditionally planted with wheat shifts to barley in response to government policies and increased double-cropping of barley. Exports rebound from low levels in 2012/13 and 2013/14, with little growth after 2016/17.
- The EU is the only traditional wheat exporter whose market share is projected to increase, rising from 18 to 20 percent. EU wheat exports are projected to trend upward and surpass 35 million tons by 2024/25, as less wheat is fed to livestock due to relatively low feed grain prices.

Global rice imports

Million metric tons



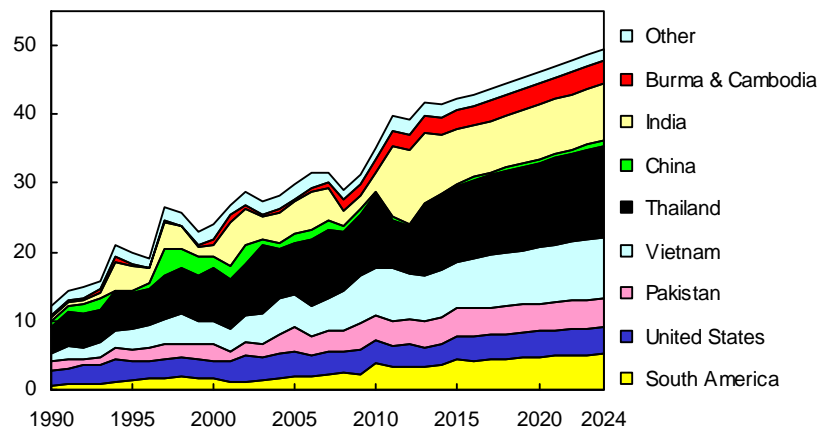
1/ European Union, former Soviet Union, and Other Europe. 2/ Includes Mexico.

Global rice trade is projected to grow 1.8 percent per year from 2015/16 to 2024/25, reaching 49.5 million tons at the end of the projection period, which is an increase of 41 percent from the previous decade average. The main factors driving this expansion in trade are a steady growth in demand—largely due to population and income growth in developing countries—and the inability of several key importing countries to boost production significantly, especially in Africa. Since the early 1990s, world trade as a share of world consumption has risen from 4 percent to 8.6 percent currently. This upward trend is expected to continue, with the trade share of global consumption projected to reach 9.5 percent by 2024/25.

- In Africa and the Middle East, strong demand growth is driven by rapidly expanding population and income, while production growth is limited. In North Africa and the Middle East, production is primarily limited by climate. In Sub-Saharan Africa, production growth is constrained by infrastructure deficiencies and resource limitations. Altogether, the Africa and Middle East region accounts for three-fourths of the increase in world rice trade during the projections. In the West African Community region, Nigeria is the world's second largest rice importing country.
- China remains the largest rice importing country throughout the projection period. Over the coming decade, China's imports are projected to trend slowly downward, but remain historically large as China imports lower-priced rice, primarily from Southeast Asia. After China and Nigeria, the next largest importers are Indonesia, Iran, and the Philippines, each purchasing about 1.9-2.2 million tons a year by the end of the projection period. For all three countries, production growth cannot keep pace with rising use. Bangladesh's annual imports rise rapidly from 0.6 million tons in 2015/16 to almost 1.5 million tons in 2024/25, an annual growth rate exceeding 10 percent, due to strong population growth and limited land for expanding area planted to rice.
- Iraq and Saudi Arabia each import more than 1.5 million tons per year, while South Africa and Malaysia each import more than 1 million tons. Saudi Arabia and South Africa—which do not grow rice—are expected to show strong consumption growth over the next decade. Little expansion is expected in Iraq's production. Malaysia's production, consumption, and trade vary little over the next decade.
- Japan and South Korea maintain minimum market access.
- In Canada and the United States, immigration continues to support slightly higher per capita consumption and modest import growth, with aromatics accounting for the bulk of U.S. imports.

Global rice exports

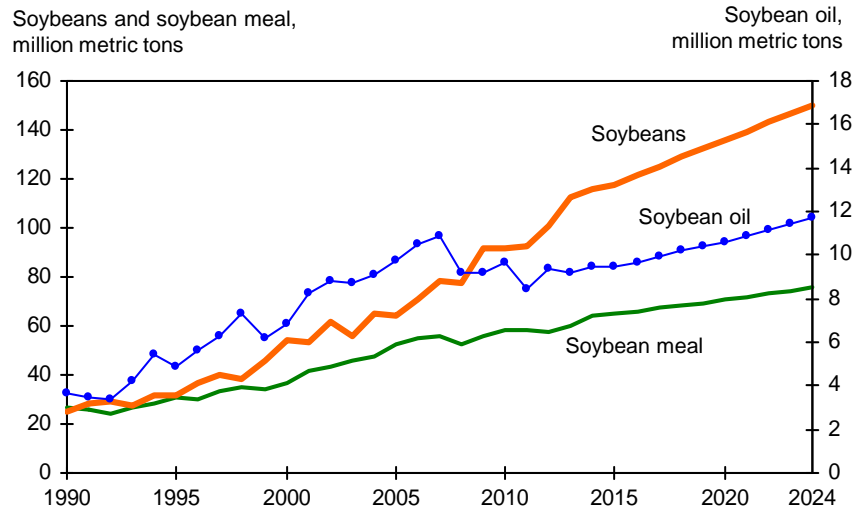
Million metric tons



Asia continues to supply most of the world's rice exports throughout the projection period.

- Thailand and Vietnam, typically the world's largest rice-exporting countries, account for about 45 percent of world rice exports and about 60 percent of the growth in world exports in the coming decade. In Thailand, increasing production and a drawdown of large stocks enable exports to rise 2.4 million tons, to 13.3 million by 2024/25. Vietnam's exports expand 2.1 million tons, rising from 6.8 million tons to almost 9.0 million tons over the projection period. In both countries, per capita consumption declines as rising incomes support shifts from rice toward a more diversified diet with increased meat consumption.
- India's rice exports have been volatile, primarily due to government policies and fluctuating stock levels. In September 2011, the Indian Government eased an export ban on non-basmati rice, and exports jumped, making India the leading rice exporter for several years. India is projected to be the second largest exporter through 2016/17 and then is projected to drop to third place behind Vietnam. India's exports increase after 2017/18, reaching 8.3 million tons.
- Pakistan has been exporting between 3 and 4 million tons in recent years. Pakistan's modest yield growth and near-steady per capita consumption enable it to achieve a minor increase in rice exports during the first half of the projection period prior to leveling off. Pakistan maintains market share and is the world's fourth largest rice exporter.
- The United States is the fifth-largest rice exporter. Modest expansion in U.S. rice exports through the projection period, about 1.0 percent per year, is attributable to a slight increase in area, increasing yields, and slow growth in domestic use. The U.S. export market share is projected at about 8 percent during the coming decade. The United States exports both long-grain and medium- and short-grain rice.
- Burma and Cambodia are projected to increase production over the next decade. Annual rice exports of each country are projected at 1.6-1.8 million tons by 2024/25.
- Exports from South America—primarily Argentina, Brazil, Guyana, Paraguay, and Uruguay—expand over the next decade and account for almost 11 percent of global trade.
- Australia's rice area is expected to recover from current drought-reduced levels, facilitating a slight export expansion after 2015/16. However, Australia's exports remain well below levels of the past 5 years. Egypt's exports slowly decline after 2017/18 as production cannot keep pace with rising domestic demand. Australia and Egypt export medium- and short-grain rice.

Global exports: Soybeans, soybean meal, and soybean oil

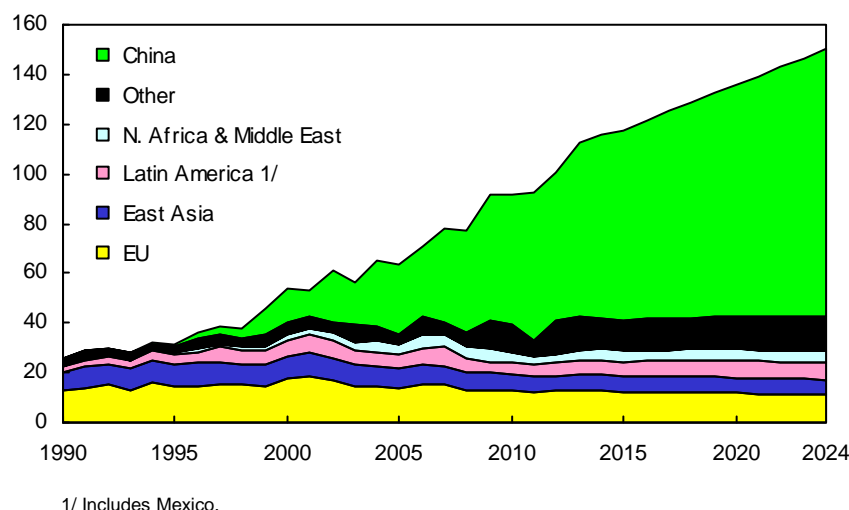


Increasing incomes, urbanization, development of modern food markets and outlets, and continued population growth in developing countries are projected to boost demand for vegetable oils for food consumption and for protein meals used in livestock production. Global vegetable oil use for biodiesel production also is projected to increase, although at a slower pace than in recent years.

- Many countries with increasing feed demand and limited opportunities to expand oilseed production, such as some countries in North Africa, the Middle East, and South East Asia, have invested in crushing capacity. As a result, their import demand for oilseeds has grown rapidly, and this growth is projected to continue. During the next decade, global soybean trade is projected to increase by 28 percent, soybean meal trade by 17 percent and soybean oil trade by 23 percent.
- China will maintain its pattern of importing soybeans to be crushed domestically due to robust domestic demand for both vegetable oil and oilseed meals. China also imports large volumes of oils. China is the world's second largest importer of palm oil after India; most of these imports originate in Indonesia and Malaysia. Palm oil is used in China for food and in numerous consumer products.
- Argentina, Brazil, and the United States currently account for almost 85 percent of the world's aggregate exports of soybeans, soybean meal, and soybean oil. This share is projected to climb to 87 percent by 2024/25. Brazil's share of world exports of soybeans and soybean products (mostly soybeans) climbs from 33 percent to 37 percent, as area expansion and yield growth result in faster production growth than in any other soybean-exporting country. In Argentina, escalating production costs for grains and uncertainties about grain policies are expected to cause farmers to keep more land in soybean production. Argentina's share of world exports of soybeans and soybean products (mostly products) climbs to 24 percent.
- The U.S. share of global exports of soybeans and soybean products is projected to decline from 31 percent to 26 percent by 2024/25.
- The EU is expected to continue to expand biodiesel production, but at a slower pace than in recent years. Production of rapeseed oil, the EU's primary biodiesel feedstock, increases with rapeseed production and imports also rising. Small increases in the EU's imports of soybean meal and soybean oil also are projected.

Global soybean imports

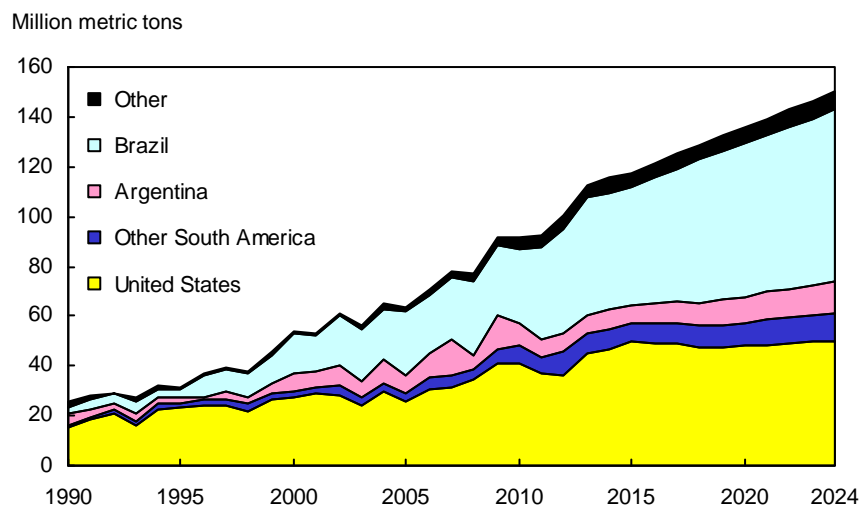
Million metric tons



World soybean trade is projected to rise rapidly during the next 10 years, climbing nearly 33 million tons (28 percent) to 150 million tons. China accounts for this growth in soybean trade.

- China's soybean imports have risen sharply since the late 1990s and now account for about 64 percent of world soybean trade. These imports are projected to increase from 76.7 million to 107.7 million tons in 2024/25. The projections assume that China's domestic agricultural policies continue to emphasize the production of grains over soybeans, allowing increases in soybean imports to fill the shortfall in domestic soybean production. China continues to add oilseed crushing capacity that will further contribute to strong gains in soybean imports. Some surplus soybean meal will be exported to other Asian countries.
- The EU's soybean imports declined over the past decade due to decreases in internal EU grain prices and increases in grain and rapeseed meal feeding. These trends are projected to continue, although at a slower pace, over the next decade.
- Imports of soybeans and soybean meal by East Asia (Japan, South Korea, and Taiwan) are influenced by a continuing shift from importing feedstuffs for domestic meat production to importing meat and other livestock products. As a result, the region's projected small expansion in soybean and soybean meal imports reflects slowly rising livestock production.
- Egypt is projected to increase soybean imports slowly in an effort to improve feed efficiency and to meet increased per capita demand for vegetable oils. Many other countries in the North Africa and Middle East region also have a limited ability to expand soybean production, so they increase imports to fill their growing feed and food needs.
- Mexico's soybean imports are projected to increase 11 percent to 4.5 million tons by 2024/25. These imports will support the production of soybean meal for the Mexican poultry and hog industries and of soybean oil for domestic food consumption.
- Indonesian soybean imports increase by 21 percent to 2.8 million tons by 2024/25. In Indonesia, soybeans are used for food consumption in the form of tempeh and tofu. Thus, population growth is a major factor driving Indonesia demand for soybeans. Indonesia has no crushing industry for soybeans and imports all of the soybean meal that the country consumes.

Global soybean exports

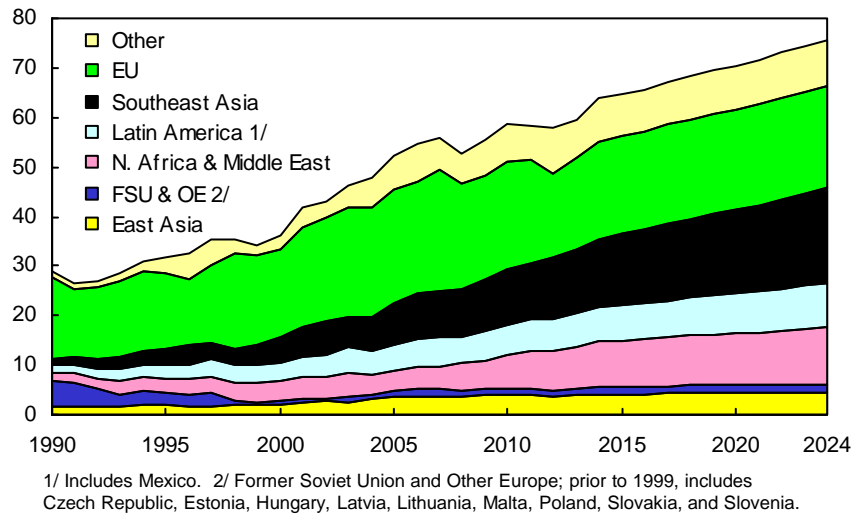


The three leading soybean exporters—the United States, Brazil, and Argentina—are projected to account for about 88 percent of world trade over the next decade.

- Brazil’s annual soybean exports are projected to rise 21.8 million tons (46 percent) to 69 million tons during the projection period (2015/16 to 2024/25), enabling the country to strengthen its position as the world’s leading soybean exporter. Soybeans remain more profitable to produce than other crops in most areas of Brazil. With increasing plantings in the Cerrado region and production extending into the “Amazon Legal” region, the increase in area planted to soybeans is projected to average about 1.8 percent per year during the coming decade.
- Argentina’s export tax rates are higher for soybeans than for soybean products, a policy that favors domestic crushing of soybeans and exporting of the resulting products. However, in response to increasing world demand for soybeans for crushing, Argentina’s annual soybean exports have risen sharply and are projected to continue doing so, rising about 60 percent to more than 12.4 million tons by 2024/25. Most of Argentina’s soybean exports go to China. Nonetheless, Argentina remains a distant third to Brazil and the United States as a soybean exporter.
- Other South American countries, principally Uruguay, Paraguay, and Bolivia, also are projected to expand their area planted to soybeans. Exports by these countries increase 52 percent to 11.2 million tons by 2024/25.
- Although Ukraine’s soybean exports are small, the country is expected to respond to international oilseed prices. Thus, soybean production initially falls but output then rises over the rest of the projection period. Ukraine’s soybean exports are projected to rise nearly 73 percent to 2.3 million tons.

Global soybean meal imports

Million metric tons

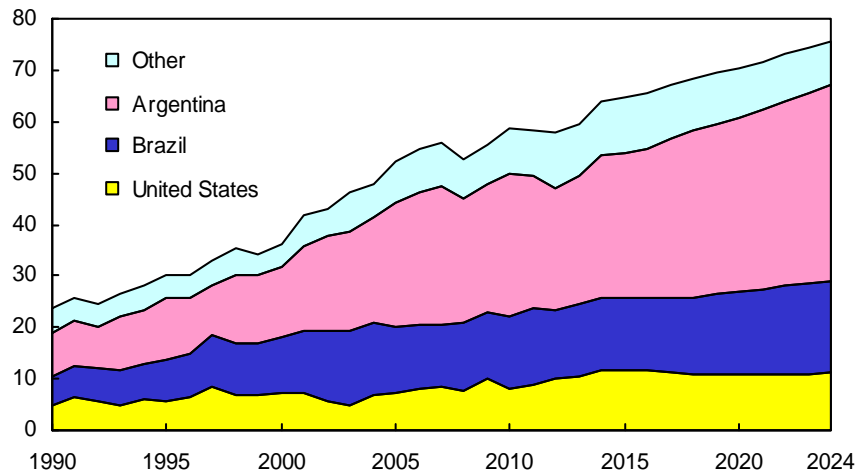


World soybean meal trade is projected to climb by 11 million tons (17 percent) to 75.8 million tons by 2024/25. In a number of countries, soybean meal imports are boosted by continued growth in livestock production and movement toward modern feed rations. Additionally, many countries have limited capability to increase domestic oilseed production.

- The EU remains the world's largest soybean meal importer throughout the projections, despite increased domestic feeding of grains and rapeseed meal. Although abundant supplies of low-cost rapeseed meal are expected to be available as a result of EU biodiesel production, nutritional considerations limit the inclusion of rapeseed meal in livestock rations. As a result, the EU is expected to continue large imports of soybean meal, but with little increase over the projection period, increasing by less than 1 million tons by 2024/25.
- The regions of Southeast Asia, Latin America, North Africa, and the Middle East become larger importers of soybean meal due to increasing demand for livestock feed. Imports by Vietnam, Indonesia, Thailand, the Philippines, and Malaysia climb rapidly, a 4.7 million-ton increase by 2024/25, and account for 43 percent of the projected increase in world soybean meal trade. Annual imports by countries in North Africa and the Middle East are projected to rise 2.2 million tons, and account for 20 percent of the increase in world trade. Annual soybean meal imports by Latin American countries other than Argentina, Brazil, and Mexico increase by 1.9 million tons, with much of that trade occurring within the region.
- Strong growth in soybean meal imports is also projected for many other countries. Mexico's growing demand for protein feed is expected to boost annual imports from 1.4 to 1.7 million tons by 2024/25. Russia's rising soybean meal imports are linked to policies designed to expand livestock production with larger, more modern facilities.

Global soybean meal exports

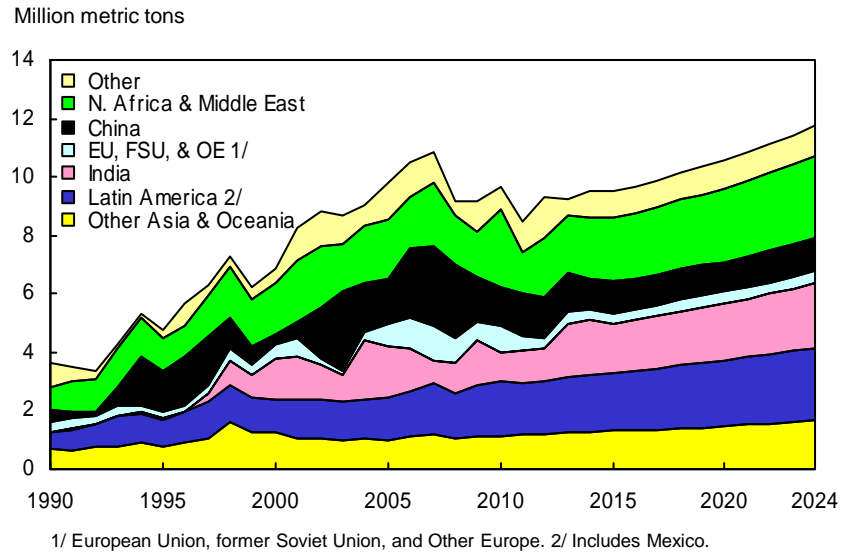
Million metric tons



Argentina, Brazil, and the United States remain the three largest exporters of soybean meal. Together, their share of world exports rises to 89 percent over the next 10 years. Argentina, the world's largest soybean meal exporter, increases its share of the world market from about 43 percent in 2015/16 to 50 percent in 2024/25.

- Argentina imposes higher export taxes on soybeans than on soybean products. That policy has provided an incentive for the country to develop a large oilseed-crushing capacity. With Argentina's low costs of production for soybeans and its export incentives for soybean products, the country's soybean meal exports are projected to continue their robust growth at 3.4 percent per year. Argentina's annual soybean meal exports are projected to rise by almost 10 million tons over the next decade, reaching 38 million tons by 2024/25.
- In Brazil, strong growth in soybean meal consumption due to the rapid expansion of poultry and pork production limits increases in soybean meal exports. Annual exports of soybean meal increase by 4.1 million tons (29 percent) over the projected decade. Brazil's soybean-crushing capacity is expected to expand at a slower rate due to strong trade competition from Argentina. As a result, Brazil's share of world soybean meal exports remains in the 22-24 percent range.
- U.S. soybean meal exports are projected to decrease slightly to 11.1 million tons by 2024/25. The U.S. share of world soybean meal exports declines from 18 percent in 2015/16 to slightly less than 15 percent by 2024/25.
- India's soybean meal exports are projected to decline as domestic use strengthens and export competition from South America intensifies. Exports fall from around 3.8 million tons in 2015/16 to 1.7 million in 2024/25, as use for poultry, egg, and milk production grow more rapidly than India's domestic soybean meal production.
- The EU continues to be a small but steady exporter of soybean meal to Russia and other countries in Eastern Europe, where livestock production is expected to increase significantly. The EU's annual soybean meal exports hold steady at 0.6 million tons through 2024/25.

Global soybean oil imports

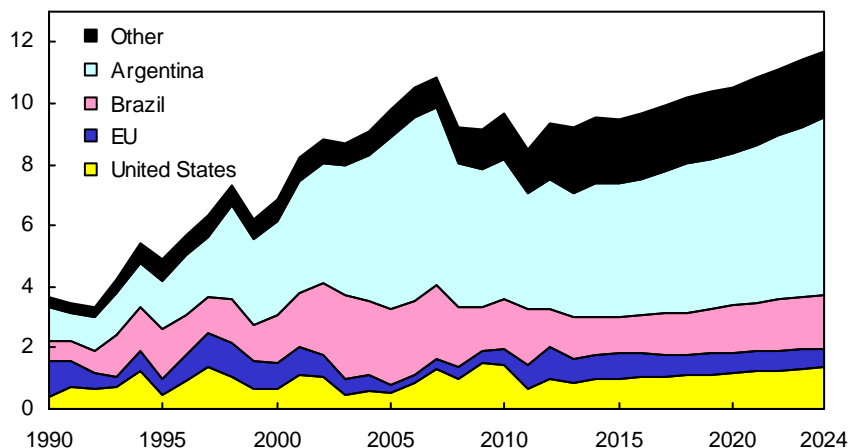


Annual world soybean oil imports are projected to climb 2.2 million tons (23 percent) to 11.7 million tons over the 2015/16 to 2024/25 projection period, bolstered by rising food and industrial use. Growth in world soybean oil trade is expected to continue to be constrained by competition with palm oil, which is the leading vegetable oil traded internationally.

- Although palm oil continues to account for the largest share of India's vegetable oil imports, India surpassed China in 2013/14 to become the world's largest soybean oil importing country. In the projections, India's annual soybean oil imports climb 32 percent to 2.2 million tons in 2024/25. Factors contributing to the continued growth of India's soybean oil imports include burgeoning demand for vegetable oils and limited area for expanding oilseed production. Low yields, associated with episodic excessive monsoon rainfall and low input use, also inhibit growth of oilseed production.
- In 2008, in response to high domestic food price inflation and high world prices, India reduced to zero the crude edible oil import tariffs. Previously, these tariffs equaled 40 percent for soybean oil and as high as 85 percent for other oils. For the projections, it is assumed that India's tariffs on crude soybean oil and other vegetable oils will rise moderately but remain well below pre-2008 levels.
- With a rapid increase in China's soybean imports for crushing in recent years, the country's soybean oil imports declined to about 1.1 million tons in 2014/15. China's annual soybean oil imports are projected to remain around 1.1 million tons in the coming decade.
- Income and population growth in North Africa, the Middle East, and Latin America contribute to gains in soybean oil demand and imports. Combined, North Africa and Middle East is projected to remain the largest importing region, followed by Latin America.

Global soybean oil exports

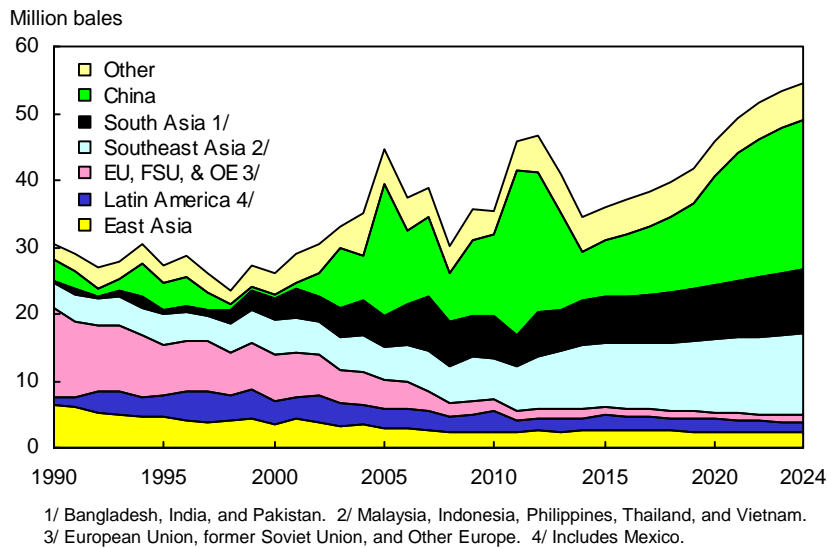
Million metric tons



Argentina and Brazil are the world's first and second largest soybean oil exporters, respectively. Their combined shipments are projected to account for almost two-thirds of world soybean oil exports during the coming decade.

- Soybean oil exports from Argentina are projected to climb to 5.8 million tons by 2024/25, a 34-percent increase from 2015/16. Argentina's strength as a soybean oil exporter reflects 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. Gains in Argentine soybean production due to extensive double cropping, further adjustments in crop-pasture rotations, and expansion onto marginal lands in the northwest part of the country also contribute to increasing soybean crushing. Although Argentina's soybean oil exports rise, growth is slowed as more soybean oil will be used to produce biodiesel.
- Brazil's projected increase in annual soybean oil exports, 0.6 million tons, accounts for much of the rest of the global increase in soybean oil trade. Brazil is projected to use more soybean oil for biodiesel production, but the expansion of soybean production into new areas of cultivation is expected to enable the country to increase soybean oil exports as well.
- U.S. soybean oil exports rise steadily in the projections and reach 1.4 million tons in 2024/25. The United States is expected to remain the world's third-largest soybean oil exporter. U.S. imports of canola oil from Canada and palm oil from Southeast Asia are projected to continue to grow strongly, augmenting U.S. edible oil supplies.

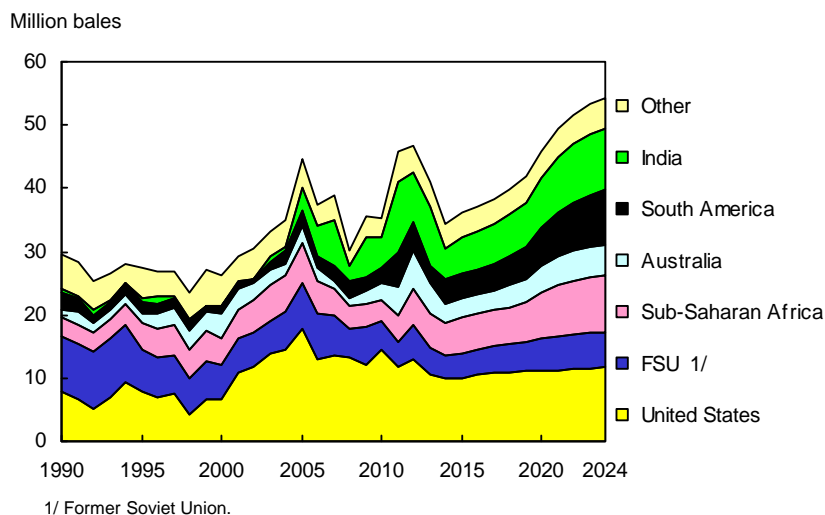
Global cotton imports



World cotton trade is projected to trend upward at a rapid 4.6-percent annual growth rate between 2015/16 and 2024/25 as it recovers from a sharp decline in 2013/14 and 2014/15 that reflected reduced imports by China. World cotton trade rises throughout the decade as China's trade policy evolves in response to changing levels of reserve stocks. By 2021/22 world cotton trade reaches a record high and continues to rise through the remainder of the projection period.

- China's cotton imports are expected to increase throughout the projection period, with several years of accelerated growth in the second half of the decade. After a sharp decline in recent years, China's cotton imports are expected to resume growth in 2015/16, with an average annual increase of 11.2 percent to 2024/25. China increases imports by about 14 million bales with imports at 22 million bales by 2024/25.
- In 2014, China signaled its intention to reform its cotton price supports, likely reversing its accumulation of cotton stocks. China's reforms are expected to allow it to recover part of the share of world cotton consumption lost between 2009 and 2013, when some of China's textile production shifted to other countries. India, Pakistan, and Vietnam have been major beneficiaries of this shift. Bangladesh became the world's second-largest cotton importer in 2014/15 and is projected to maintain this position as its textile industry continues growing rapidly.
- Vietnam and Turkey are expected to be the third largest and fourth largest cotton importers throughout the projection period. Vietnam quadrupled its share of world consumption between 2003/04 and 2014/15. Vietnam's textile sector and cotton imports are expected to grow 4.5 percent annually in the coming decade. Turkey's share of world consumption has strengthened recently, but is expected to maintain slow growth at 1.7 percent per year through the projection period.
- Indonesia is the fifth largest importer in the world. Indonesia's imports are projected to grow at an annual average rate of 2 percent. Pakistan's cotton imports are projected to remain high, keeping it as the sixth largest importer, even though new *Bacillus thuringiensis* (*Bt*) cotton varieties specific to Pakistan's cotton-growing conditions stimulate additional production.

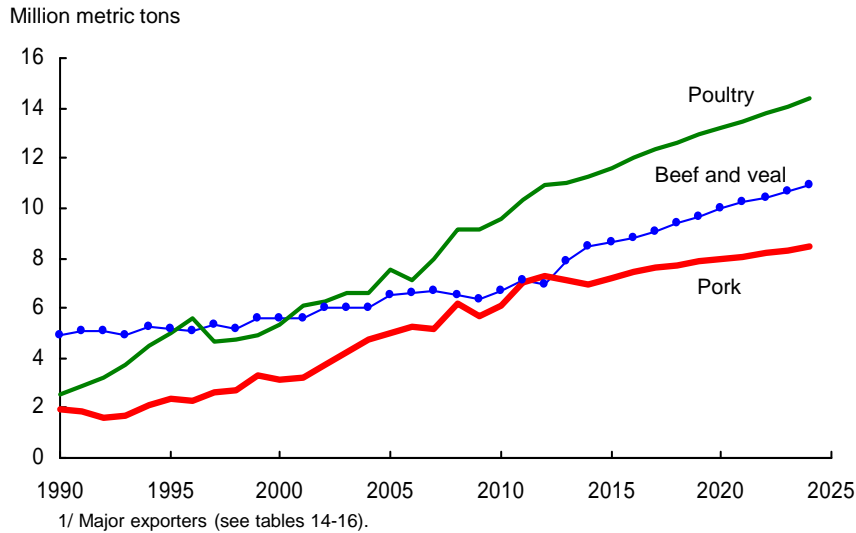
Global cotton exports



Globalization is expected to continue to move raw cotton production to countries with favorable resource endowments and technology. Expansion is projected for traditional producers with large amounts of land suitable for cotton production, including the United States, Brazil, Sub-Saharan Africa, and western China, as well as for the traditional low-cost producing countries of India and Pakistan.

- The U.S. share of world cotton production has fallen sharply with the spread of new technology around the world in recent years, and its share is expected to continue falling. Even with production lower than historical levels, the United States remains the world's leading cotton exporter as exports rise marginally throughout the projections. U.S. exports grow by 1.1 percent annually to 11.6 million bales by 2024/25. However, the U.S. share of world cotton trade continues its recent decline. By 2024/25, the U.S. share of 21.3 percent is about half of its 2010/11 share of 40.6 percent.
- India's cotton exports grow by 6 percent annually, reaching 9.6 million bales by 2024/25. Improved yields in India, in part due to the adoption of *Bt* cotton, have raised India's production and exports. Projected yield growth reflects gains from *Bt* cotton that are further enhanced by continued improvement in cultivation practices. The increase in output is expected to enable India to continue its role as the world's second-largest cotton exporter, adding 3.9 million bales by 2024/25.
- Brazil's cotton exports are projected to increase the greatest amount, adding 4.3 million bales by 2024/25. Area planted to cotton in Brazil continues a long-term, upward trend. By 2019/20, Brazil overtakes Central Asia as the world's third-largest source of cotton exports.
- Exports from the 15 countries of the Economic Community of West African States are projected to experience sustained growth during the coming decade, at an average annual rate of about 5 percent. Improvements in technical and financial infrastructure and the adoption of *Bt* cotton will help boost production and exports. Exports from the other countries in Sub-Saharan Africa also are projected to increase. In total, Sub-Saharan Africa is expected to account for about 15 to 16 percent of world trade, compared with 10 percent during 2009-13.
- Government policies in the major cotton producing Central Asian countries of the FSU are promoting investment in textile industries and contributing to more exports of textile products rather than exports of raw cotton. Expected lower grain prices than in recent years will provide incentives to shift some land back to cotton, leading to increased cotton exports. Exports grow by 4 percent annually to 5.7 million bales by 2024/25, adding 1.7 million bales but still below the peak exports in 2005/06 of 7.3 million bales.

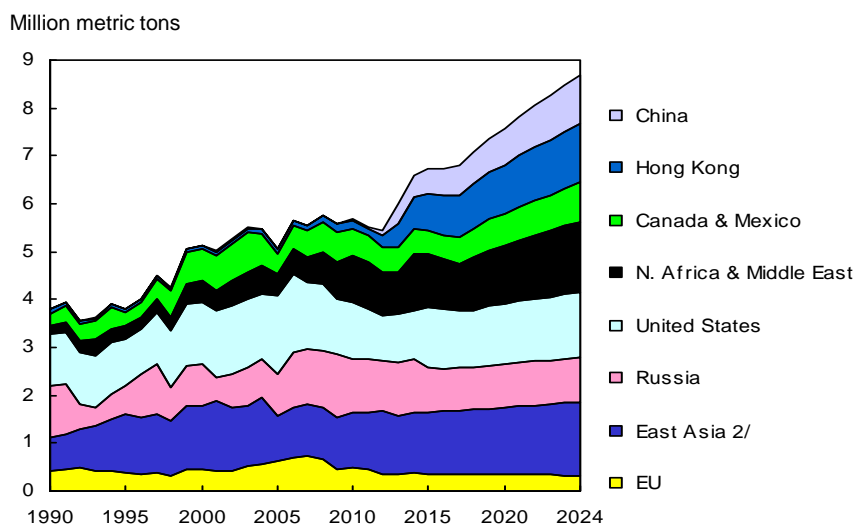
Meat exports 1/



Global meat consumption is projected to continue to increase with poultry consumption rising faster than pork and beef consumption. World meat consumption is projected to increase about 1.6 percent per year during 2015-2024, driven primarily by rising incomes and population in developing countries, along with increased urbanization and diet diversification. Meat shipments from major exporters rise 2.2 percent per year. The projected growth rates of exports from major exporters of beef, pork, and poultry meat are 2.7, 1.6, and 2.2 percent per year, respectively. During this period, exports rise by 2.2 million tons for beef, 1.1 million for pork, and 2.2 million for poultry.

- Beef exports from Asian countries, mostly India, increased sharply after 2009. Developing countries' demand for India's lower priced beef is projected to continue rising rapidly. India becomes the world's largest beef exporter in 2017. India's rising exports (5 percent annually) add 1.3 million tons by 2024, an increase of 62 percent from 2015.
- Australia has historically been among the world's largest beef exporters. Australia's beef herd is in a rebuilding phase and the country's beef exports were surpassed by those from India in 2012. Australia is projected to be the third-largest exporter after India and Brazil. The United States remains the fourth-largest exporter of beef throughout the projection.
- Canada's cow herd contracted significantly in recent years but producers are projected to rebuild herds in response to improved expected returns. As a result, Canada's beef exports are projected to rise steadily after 2017, although not surpassing levels of the previous decade.
- Argentina's beef herd is recovering after a sharp contraction following 2005 export restrictions. Exports are expected to rise 3 percent annually in the projection period.
- The projections assume no changes in Brazil's foot-and-mouth-disease (FMD) status. However, Brazil's pork exports are expected to be competitive in price-sensitive markets such as Russia, China, and Hong Kong. Brazil is projected to remain the largest exporter of poultry products due to competitive production costs, adding almost 1.1 million tons in poultry exports over the projection period, a 28 percent increase.
- Russia's aggregate meat imports decline, reflecting policies that stimulate domestic meat production and curb imports.

Beef imports 1/

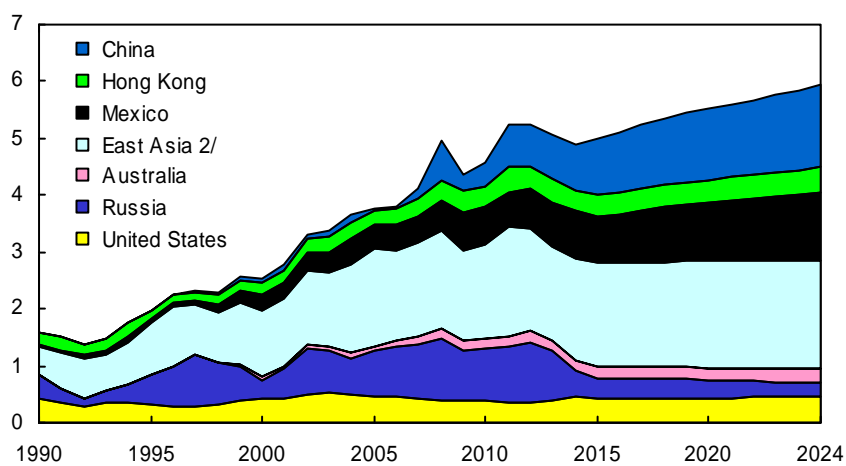


Between 2015 and 2024, beef imports by the major beef importing countries are projected to increase by 2.6 million tons, reaching 10.1 million tons in 2024. Exports of lower-priced beef from India and Brazil, mostly to a number of low- and middle-income countries, account for almost three-quarters of the projected increase in exports by the major beef traders.

- Russian beef imports are projected to bounce back in 2016 from the low levels of 2015 resulting from Russia's 1-year ban on imports from some countries. Over the remainder of the projection period, Russia's beef import continue to increase as rising consumer demand exceeds expanding Russian beef production. Russia imports will reach almost 1.1 million tons by 2024. Following the ban, Russia will again be a market for EU and U.S. beef exports.
- Beef imports by China and Hong Kong are projected to increase 71 percent in the coming decade, as rising demand for beef outpace growth in production. This increase accounts for the largest growth in imports among major beef importing countries.
- Imports of grain-fed beef, mainly by higher-income countries, are projected to rise steadily. U.S. beef exports increase by 38 percent from 2015 to 2024.
- U.S. beef imports, primarily of grass-fed, lean beef for use in ground beef and processed products, rise slowly during the projection period. The United States is projected to remain the world's largest beef importer, with beef imports up by 12 percent over the next decade.
- The Middle East and North Africa region, with fast population and income growth, is projected to increase beef imports from 1.2 million tons in 2015 to over 1.6 million by 2024.
- Strong growth in Mexican beef imports is projected to resume over the next several years. Much of Mexico's imports consist of higher valued, grain-fed beef from the United States. Mexico's beef imports will more than double over the projection period.
- The Philippines and the Other Asia region exhibit rapid income growth, with beef imports increasing by 62 percent, from almost 0.7 million tons in 2015 to 1.1 million tons by 2024.

Pork imports 1/

Million metric tons



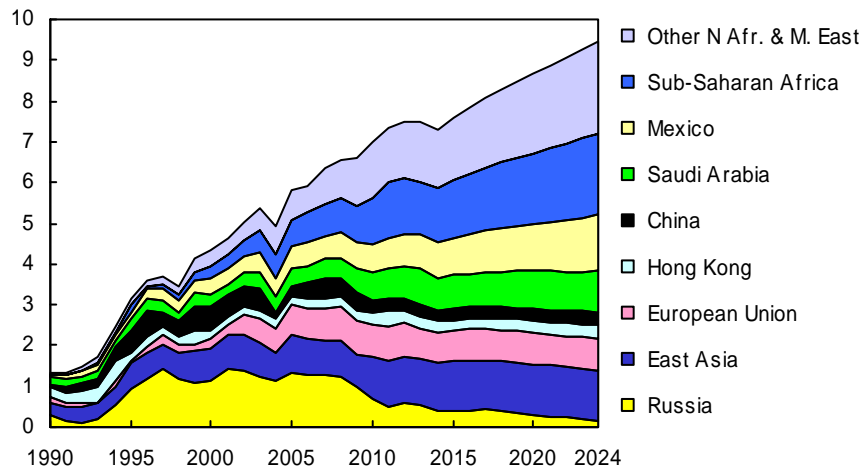
1/ Selected importers. 2/ Japan, Korea, & Taiwan.

Imports by major pork importing countries are projected to continue to rise, increasing by almost 1 million tons (19 percent) from 2015 to 2024. China and Mexico exhibit the strongest growth in import demand for pork over the projection period.

- China's pork imports have risen sharply since 2009 and are projected to increase steadily by about 41 percent from 2015 to 2024, to 1.4 million tons. As a result, China is projected to become the world's largest pork importer by 2022, surpassing Japan. Hong Kong's imports increase by 19 percent over the projection period.
- Mexico is projected to become the third largest importer during the projection period, after China and Japan. Mexico's pork imports continue to rise rapidly, increasing by more than 0.3 million tons (37 percent) between 2015 and 2024. Increases in income and population are the primary drivers of Mexico's increasing pork demand. Mexico's pork imports surpassed Russian imports in 2014.
- After a partial recovery in 2016 following the 1-year ban on imports from some countries, Russia's pork imports are projected to decline steadily during the rest of the projection, reflecting the country's policies to stimulate domestic meat production and reduce reliance on imports. Russia's pork imports are projected to decline by 18 percent from 2016 to 2024.
- South Korea increases pork imports to satisfy demand for selected cuts of pork, with imports rising by 13 percent over the projection period.
- Japan's import growth is the lowest among the major importers at 2 percent over the projection period, due to an aging and declining population.

Poultry imports 1/

Million metric tons



1/ Selected importers.

Poultry meat imports by major importing countries are projected to increase by 1.9 million tons (23 percent) during the projection period, reaching nearly 9.9 million tons by 2024. Strong import growth is projected for much of the world except, most notably, Russia (where policies constrain imports) and Japan.

- Poultry meat imports by Africa and the Middle East regions are projected to grow 54 percent and 29 percent, respectively, over the projection period. Projected gains in income and population boost demand, while ongoing animal-disease concerns in a number of countries in these regions are expected to slow growth in production, thereby increasing demand for imports.
- Rising incomes increase poultry meat demand and imports in Mexico and in the Central America and Caribbean region. Poultry products remain less expensive than beef or pork, further stimulating demand. Mexico's domestic poultry production continues to increase during the projection period, but rises less than consumption, with the result that imports rise by about 0.5 million tons (52 percent).
- Following post-ban increases in Russia's poultry imports in 2016-17, imports fall steadily over the rest of the projection period. The projections assume that Russian policies will limit poultry imports to stimulate domestic production. Relatively high poultry prices and slower income growth further inhibit growth in per capita poultry consumption.
- China's rising consumption of poultry meat is met by expanding domestic production. China is a net exporter through 2024 and only imports about 2 percent of consumption. China's poultry exports and imports increase by 31 percent and 12 percent, respectively.
- Fully cooked products are projected to account for most poultry exports from China and Thailand. With higher unit costs, these products tend to be marketed to higher income countries in Asia, Europe, and the Middle East. In addition, Thailand's poultry meat exports to the EU and Japan are expected to rise because trade to those countries in uncooked chicken has been reopened. Thailand poultry exports increase by from almost 0.6 million tons in 2015 to nearly 0.9 million tons by 2024.

Table 4. Coarse grains trade long-term projections

	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
<i>Imports, million metric tons</i>												
Importers												
Former Soviet Union ¹	0.7	0.8	1.0	1.2	1.2	1.3	1.3	1.3	1.4	1.4	1.5	1.5
Other Europe	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.0	1.0	1.0	1.0
European Union	16.3	6.2	8.8	9.6	10.0	9.8	9.6	9.5	9.1	8.7	8.3	7.8
Middle East	26.5	27.6	26.8	26.9	27.2	27.4	27.6	27.8	27.9	28.1	28.2	28.4
North Africa	17.9	16.9	17.9	18.2	18.4	18.7	19.0	19.3	19.6	19.9	20.2	20.5
Sub-Saharan Africa ²	3.0	2.9	3.0	3.1	3.3	3.5	3.7	3.9	4.1	4.3	4.5	4.8
Japan	17.6	18.3	18.1	18.1	18.0	17.9	17.9	17.9	17.8	17.8	17.8	17.8
South Korea	10.5	9.7	9.9	10.2	10.2	10.3	10.4	10.4	10.5	10.6	10.6	10.7
Taiwan	4.6	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
China	12.4	11.7	12.3	12.8	13.3	13.8	14.4	15.0	15.7	16.4	17.2	18.0
Other Asia & Oceania	10.8	9.7	10.2	10.6	11.0	11.4	11.9	12.4	12.8	13.4	13.9	14.4
Mexico	11.3	11.2	11.6	12.5	12.7	12.9	13.2	13.7	14.1	14.5	14.9	15.3
Central America & Caribbean	5.4	5.7	5.5	5.6	5.7	5.8	5.9	6.0	6.1	6.2	6.2	6.3
Brazil	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.3
Other South America	12.2	12.2	12.7	13.0	13.3	13.6	14.0	14.4	14.7	15.0	15.4	15.7
Other foreign ³	8.8	5.4	7.3	7.5	7.6	7.5	7.6	7.6	7.6	7.6	7.6	7.6
United States	3.4	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
Total trade	163.6	147.8	154.7	158.9	161.6	163.7	166.3	168.8	171.1	173.7	176.1	178.5
<i>Exports, million metric tons</i>												
Exporters												
European Union	8.6	9.4	9.3	8.7	9.1	9.3	9.2	9.3	9.3	9.2	9.1	9.0
Argentina	19.5	16.2	18.8	20.2	19.6	18.3	18.0	18.0	18.2	18.4	18.8	19.1
Australia	7.1	5.4	6.3	6.4	6.5	6.6	6.7	6.8	6.9	7.0	7.1	7.2
Brazil	21.5	19.5	21.0	21.5	21.7	21.4	21.8	22.6	23.0	24.2	24.7	25.3
Canada	5.2	3.5	4.2	4.2	4.1	4.0	4.0	3.9	3.9	3.9	4.0	4.0
South Africa	3.0	2.2	1.8	1.6	1.4	1.4	1.5	1.5	1.5	1.5	1.5	1.4
Other Europe	1.8	2.5	2.5	2.5	2.5	2.6	2.6	2.6	2.7	2.7	2.8	2.8
Russia	6.9	7.4	6.0	6.1	6.3	6.6	6.8	6.8	6.9	7.0	7.0	7.0
Ukraine	22.8	20.7	19.6	19.4	20.4	21.4	21.7	21.7	22.0	22.0	22.3	22.6
Other Former Soviet Union ⁴	7.9	8.2	6.8	6.7	6.9	7.3	7.6	7.8	8.0	8.2	1.4	1.5
Other foreign	4.9	2.3	4.1	4.7	4.4	4.0	3.7	3.3	2.9	2.4	9.1	8.8
United States	54.4	50.5	54.4	56.9	58.8	60.7	62.6	64.5	65.8	67.1	68.3	69.6
<i>Percent</i>												
U.S. trade share	33.3	34.2	35.1	35.8	36.4	37.1	37.7	38.2	38.5	38.6	38.8	39.0

¹Covers FSU-12. Includes intra-FSU trade.

²Includes South Africa.

³Includes unaccounted, which can be negative.

⁴Covers FSU-12 except for Russia and Ukraine. Includes intra-FSU trade.

The projections were completed in November 2014.

Table 5. Corn trade long-term projections

	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
<i>Imports, million metric tons</i>												
Importers												
European Union	16.0	6.0	8.6	9.4	9.8	9.6	9.4	9.2	8.9	8.5	8.1	7.5
Former Soviet Union ¹	0.4	0.4	0.5	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8
Egypt	8.5	7.5	8.5	8.7	8.8	8.9	9.0	9.2	9.3	9.4	9.6	9.7
Morocco	2.0	2.3	2.3	2.4	2.4	2.5	2.5	2.6	2.6	2.7	2.7	2.7
Other North Africa	5.3	5.4	5.4	5.5	5.5	5.6	5.7	5.7	5.8	5.8	5.9	5.9
Iran	5.5	5.5	5.0	5.2	5.4	5.5	5.6	5.8	5.9	6.1	6.2	6.4
Saudi Arabia	2.6	2.9	3.1	3.1	3.1	3.2	3.2	3.3	3.3	3.4	3.4	3.5
Turkey	1.3	2.5	2.2	2.3	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
Other Middle East	3.9	4.0	4.0	4.1	4.1	4.1	4.1	4.2	4.2	4.2	4.2	4.2
Japan	15.1	15.4	15.2	15.2	15.1	15.1	15.1	15.1	15.0	15.0	15.0	15.0
South Korea	10.4	9.6	9.8	10.1	10.1	10.2	10.3	10.3	10.4	10.4	10.5	10.6
Taiwan	4.4	4.2	4.3	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
China	3.3	2.5	2.9	3.3	3.6	4.0	4.4	4.9	5.3	5.8	6.5	7.2
Indonesia	3.5	2.6	2.9	3.0	3.2	3.3	3.3	3.4	3.5	3.5	3.6	3.7
Malaysia	3.4	3.4	3.5	3.6	3.7	3.8	3.9	3.9	4.0	4.1	4.2	4.3
Other Asia & Oceania	3.9	3.5	3.6	3.8	4.0	4.3	4.6	4.9	5.2	5.6	5.9	6.2
Canada	0.5	0.7	0.4	0.5	0.7	0.6	0.6	0.7	0.7	0.7	0.7	0.6
Mexico	11.0	10.9	11.4	12.2	12.4	12.6	12.9	13.3	13.8	14.2	14.6	15.0
Central America & Caribbean	5.4	5.7	5.5	5.6	5.7	5.8	5.9	6.0	6.1	6.2	6.2	6.3
Brazil	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Other South America	11.1	11.0	11.4	11.8	12.1	12.3	12.7	13.0	13.3	13.7	14.0	14.3
Sub-Saharan Africa ²	2.4	2.2	2.3	2.5	2.6	2.8	3.0	3.2	3.4	3.6	3.9	4.1
Other foreign ³	8.4	3.5	6.2	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.4	6.4
United States	0.9	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Total trade	129.9	113.1	120.4	125.0	127.5	129.2	131.5	133.9	135.8	138.2	140.3	142.5
<i>Exports, million metric tons</i>												
Exporters												
European Union	2.4	2.5	2.3	2.3	2.4	2.4	2.4	2.5	2.5	2.5	2.6	2.6
Argentina	15.5	13.0	15.5	16.6	15.9	14.6	14.2	14.1	14.2	14.3	14.7	15.0
Brazil	21.5	19.5	20.9	21.5	21.6	21.4	21.8	22.6	23.0	24.2	24.7	25.3
South Africa	3.0	2.2	1.8	1.6	1.3	1.4	1.5	1.4	1.5	1.5	1.4	1.4
Other Europe	1.8	2.5	2.5	2.5	2.5	2.5	2.6	2.6	2.7	2.7	2.8	2.8
Former Soviet Union ¹	24.6	19.8	19.3	19.2	20.6	21.9	22.4	22.3	22.7	22.8	23.1	23.4
Other foreign	12.5	9.1	9.8	10.5	10.4	10.3	10.1	9.9	9.6	9.2	8.9	8.6
United States	48.7	44.5	48.3	50.8	52.7	54.6	56.5	58.4	59.7	61.0	62.2	63.5
<i>Percent</i>												
U.S. trade share	37.5	39.3	40.1	40.6	41.3	42.3	43.0	43.6	43.9	44.1	44.3	44.6

¹Covers FSU-12. Includes intra-FSU trade.²Includes South Africa.³Includes unaccounted, which can be negative.

The projections were completed in November 2014.

Table 6. Sorghum trade long-term projections

	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
<i>Imports, million metric tons</i>												
Importers												
Japan	1.1	1.5	1.5	1.5	1.5	1.4	1.4	1.4	1.4	1.4	1.4	1.4
Mexico	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
North Africa & Middle East	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
South America	0.4	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Sub-Saharan Africa ¹	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
China	4.2	4.6	4.8	4.8	4.9	5.0	5.0	5.1	5.2	5.3	5.4	5.6
Other ²	1.1	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Total trade	7.6	8.3	8.4	8.4	8.5	8.6	8.6	8.7	8.8	8.9	9.0	9.1
<i>Exports, million metric tons</i>												
Exporters												
Argentina	1.2	1.2	1.2	1.3	1.3	1.3	1.4	1.4	1.5	1.5	1.6	1.7
Australia	0.4	0.8	0.8	0.8	0.8	0.8	0.9	0.9	0.9	0.9	0.9	1.0
Other foreign	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6
United States	5.4	5.8	5.8	5.8	5.8	5.8	5.8	5.9	5.8	5.8	5.8	5.8
<i>Percent</i>												
U.S. trade share	71.2	70.1	69.6	69.2	68.7	68.3	67.8	67.4	66.5	65.7	65.0	64.1

¹Includes South Africa.²Includes unaccounted.

The projections were completed in November 2014.

Table 7. Barley trade long-term projections

	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
<i>Imports, million metric tons</i>												
Importers												
Former Soviet Union ¹	0.3	0.3	0.4	0.4	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.7
Japan	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
China	4.9	4.5	4.5	4.5	4.6	4.7	4.8	4.9	5.0	5.0	5.1	5.1
Latin America ²	1.1	1.1	1.1	1.1	1.1	1.2	1.2	1.2	1.2	1.3	1.3	1.3
Saudi Arabia	9.5	7.5	8.0	7.8	7.8	7.8	7.7	7.6	7.5	7.4	7.2	7.1
Iran	0.9	1.0	1.2	1.1	1.0	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Other Middle East	2.5	2.5	2.8	2.7	2.7	2.7	2.7	2.7	2.8	2.8	2.8	2.8
Morocco	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Other North Africa	1.7	1.3	1.2	1.1	1.1	1.2	1.3	1.3	1.4	1.5	1.6	1.7
Other foreign ³	0.0	3.1	1.4	1.3	1.4	1.4	1.4	1.4	1.5	1.5	1.5	1.6
United States	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Total trade	23.1	23.5	22.8	22.3	22.5	22.8	22.9	23.0	23.2	23.3	23.4	23.6
<i>Exports, million metric tons</i>												
Exporters												
European Union	5.7	6.5	6.5	6.0	6.3	6.4	6.2	6.2	6.2	6.1	5.9	5.8
Argentina	2.8	2.0	2.1	2.3	2.4	2.4	2.4	2.4	2.5	2.5	2.5	2.5
Australia	6.5	4.3	5.3	5.4	5.5	5.6	5.7	5.8	5.9	6.0	6.0	6.1
Canada	1.6	1.2	1.6	1.5	1.4	1.4	1.3	1.3	1.3	1.3	1.4	1.4
Russia	2.7	4.3	3.4	3.1	3.0	3.1	3.1	3.2	3.2	3.3	3.2	3.2
Ukraine	2.5	4.0	3.0	3.1	3.0	3.1	3.1	3.0	3.0	3.0	3.0	3.1
Other Former Soviet Union ⁴	0.5	0.4	0.3	0.2	0.2	0.2	0.3	0.5	0.6	0.7	0.8	1.0
Turkey	0.0	0.0	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1
Other foreign	0.5	0.5	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2
United States	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
<i>Percent</i>												
U.S. trade share	1.3	0.9	1.0	1.0	1.0	1.0	0.9	0.9	0.9	0.9	0.9	0.9

¹Covers FSU-12. Includes intra-FSU trade.²Includes Mexico.³Includes unaccounted.⁴Covers FSU-12 except Russia and Ukraine. Includes intra-FSU trade.

The projections were completed in November 2014.

Table 8. Wheat trade long-term projections

	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
<i>Imports, million metric tons</i>												
Importers												
Morocco	3.9	3.0	4.0	3.9	3.8	3.9	3.9	3.9	3.9	3.9	3.9	3.8
Egypt	10.2	9.5	9.3	9.3	9.2	9.2	9.5	9.7	9.9	10.1	10.3	10.5
Other North Africa	11.2	10.8	10.6	10.5	10.6	10.7	10.8	10.9	11.1	11.2	11.4	11.5
Saudi Arabia	3.4	3.3	3.4	3.4	3.5	3.6	3.7	3.7	3.8	3.9	3.9	4.0
Iran	4.8	5.5	5.4	5.2	5.0	4.8	4.6	4.4	4.2	4.0	3.8	3.6
Iraq	3.2	3.0	3.8	4.0	4.1	4.2	4.3	4.4	4.6	4.7	4.8	4.9
Other Middle East	10.9	11.5	10.7	10.9	11.1	11.3	11.5	11.6	11.8	12.0	12.2	12.4
West African Community ¹	7.1	7.5	7.4	7.5	7.6	7.8	7.9	8.2	8.4	8.6	8.8	9.0
Other Sub-Saharan Africa ²	12.0	12.8	13.2	13.6	14.1	14.7	15.2	15.7	16.2	16.8	17.3	17.8
Mexico	4.6	4.6	4.7	4.7	4.8	4.9	4.9	5.0	5.0	5.0	5.1	5.1
Central America & Caribbean	3.8	3.9	3.9	3.9	4.0	4.0	4.0	4.0	4.1	4.1	4.1	4.1
Brazil	7.1	7.0	7.1	7.1	7.2	7.2	7.2	7.3	7.4	7.5	7.6	7.7
Other South America	7.8	6.8	7.3	7.5	7.5	7.7	7.8	8.0	8.1	8.3	8.4	8.6
European Union	4.0	5.0	4.0	4.3	4.3	4.4	4.5	4.6	4.7	4.8	4.9	4.9
Other Europe	1.8	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8
Former Soviet Union ³	7.4	6.9	7.3	7.4	7.5	7.6	7.7	7.8	7.9	8.0	8.1	8.2
Japan	6.1	6.0	5.8	5.7	5.7	5.6	5.6	5.6	5.6	5.6	5.6	5.6
South Korea	4.3	3.8	3.7	3.8	3.8	3.7	3.7	3.7	3.7	3.7	3.7	3.7
Philippines	3.5	3.6	3.7	3.8	3.9	4.0	4.1	4.1	4.2	4.3	4.4	4.5
Indonesia	7.4	7.7	7.9	8.2	8.4	8.7	9.0	9.3	9.6	9.9	10.2	10.5
China	6.8	1.7	1.7	2.1	2.5	2.7	2.9	3.0	3.1	3.2	3.3	3.5
Bangladesh	3.3	3.3	3.3	3.4	3.5	3.6	3.7	3.8	3.9	4.0	4.1	4.2
Malaysia	1.7	1.6	1.6	1.7	1.7	1.8	1.8	1.8	1.8	1.9	1.9	1.9
Thailand	1.7	2.0	2.1	2.2	2.2	2.3	2.4	2.4	2.5	2.6	2.7	2.7
Vietnam	2.2	2.1	2.2	2.3	2.3	2.4	2.5	2.6	2.7	2.7	2.8	2.9
Other Asia & Oceania	7.4	7.9	7.5	7.4	7.5	7.7	7.9	8.1	8.2	8.4	8.6	8.8
Other foreign ⁴	13.7	7.8	7.9	7.9	8.0	8.0	8.1	8.2	8.3	8.3	8.4	8.4
United States	4.6	4.6	4.1	4.2	4.3	4.5	4.6	4.8	4.9	5.0	5.2	5.3
Total trade	165.8	154.9	155.5	157.8	160.0	162.7	165.6	168.4	171.4	174.3	177.2	180.0
<i>Exports, million metric tons</i>												
Exporters												
European Union	31.9	28.0	28.0	28.1	28.7	29.6	30.4	31.5	32.7	33.5	34.6	35.7
Canada	23.2	22.0	19.0	19.0	18.8	18.8	18.9	18.9	19.2	19.4	19.5	19.7
Australia	18.6	17.5	17.4	17.5	17.6	17.7	17.9	18.0	18.2	18.3	18.5	18.6
Argentina	2.2	6.0	7.1	7.6	7.6	7.7	7.7	7.8	7.7	7.7	7.7	7.8
Russia	18.5	22.5	19.2	19.8	20.6	21.6	22.6	23.6	24.6	25.6	26.5	27.5
Ukraine	9.8	10.0	10.3	10.4	10.5	10.7	10.9	11.1	11.3	11.5	11.7	11.8
Other Former Soviet Union ⁵	8.8	5.8	8.2	8.5	8.8	9.0	9.2	9.3	9.4	9.6	9.7	9.9
Other Europe	1.3	0.9	0.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
India	5.9	3.0	2.7	2.7	2.6	2.6	2.6	2.6	2.6	2.5	2.5	2.5
China	0.9	1.0	1.0	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Turkey	4.4	3.5	4.1	4.3	4.4	4.5	4.6	4.7	4.7	4.8	4.8	4.9
Other foreign	8.2	9.5	9.7	10.0	10.1	10.2	10.3	10.3	10.4	10.5	10.6	10.7
United States	32.0	25.2	27.7	27.9	28.0	28.2	28.3	28.4	28.6	28.7	28.9	29.0
<i>Percent</i>												
U.S. trade share	19.3	16.2	17.8	17.7	17.5	17.3	17.1	16.9	16.7	16.5	16.3	16.1

¹Economic Community of West African States.²Includes South Africa.³Covers FSU-12. Includes intra-FSU trade.⁴Includes unaccounted, which can be negative.⁵Covers FSU-12 except for Russia and Ukraine. Includes intra-FSU trade.

The projections were completed in November 2014.

Table 9. Rice trade long-term projections

	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
	<i>Imports, million metric tons</i>											
Importers												
Canada	0.35	0.35	0.35	0.35	0.36	0.36	0.37	0.37	0.37	0.38	0.38	0.38
Mexico	0.70	0.78	0.76	0.76	0.77	0.78	0.79	0.80	0.81	0.82	0.83	0.85
Central America/Caribbean	1.56	1.55	1.55	1.53	1.51	1.54	1.55	1.56	1.58	1.59	1.61	1.64
Brazil	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
Other South America	1.02	1.21	1.22	1.20	1.22	1.23	1.25	1.28	1.31	1.34	1.37	1.41
European Union	1.53	1.50	1.53	1.53	1.53	1.52	1.52	1.52	1.52	1.52	1.52	1.51
Former Soviet Union ¹	0.53	0.44	0.43	0.44	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.45
Other Europe	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.14	0.14	0.14	0.14
Bangladesh	0.68	0.50	0.59	0.67	0.76	0.86	0.96	1.06	1.16	1.26	1.35	1.45
China	3.90	3.90	3.45	3.26	3.22	3.16	3.11	3.08	3.02	2.99	2.95	2.91
Japan	0.64	0.70	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68
South Korea	0.31	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41
Indonesia	1.40	1.00	1.36	1.64	1.72	1.81	1.90	1.92	2.01	2.08	2.14	2.18
Malaysia	1.10	1.10	1.09	1.08	1.07	1.07	1.04	1.04	1.05	1.05	1.05	1.06
Philippines	1.45	1.60	1.61	1.63	1.63	1.65	1.69	1.73	1.80	1.85	1.90	1.95
Other Asia & Oceania	2.57	2.53	2.51	2.50	2.52	2.52	2.53	2.54	2.55	2.56	2.57	2.58
Iraq	1.35	1.45	1.41	1.47	1.51	1.56	1.59	1.63	1.66	1.69	1.73	1.76
Iran	1.65	1.70	1.78	1.78	1.82	1.87	1.92	1.96	2.00	2.04	2.07	2.11
Saudi Arabia	1.33	1.33	1.38	1.41	1.43	1.46	1.48	1.51	1.53	1.56	1.58	1.61
Other N. Africa & M. East	2.78	2.72	2.89	2.93	2.99	3.04	3.09	3.14	3.19	3.24	3.29	3.34
West African Community ²	8.13	8.79	9.07	9.41	9.71	10.01	10.28	10.59	10.86	11.12	11.39	11.65
Other Sub-Saharan Africa ³	3.45	2.94	3.07	3.17	3.31	3.44	3.57	3.72	3.86	4.02	4.17	4.34
South Africa	0.98	1.10	1.13	1.15	1.18	1.19	1.20	1.22	1.23	1.24	1.26	1.27
Other foreign ⁴	2.83	2.46	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45
United States	0.73	0.67	0.67	0.67	0.68	0.68	0.69	0.69	0.69	0.70	0.70	0.70
Total imports	41.78	41.53	42.24	42.95	43.76	44.57	45.38	46.22	47.06	47.89	48.71	49.52
	<i>Exports, million metric tons</i>											
Exporters												
Australia	0.46	0.40	0.26	0.27	0.28	0.29	0.29	0.30	0.30	0.31	0.32	0.32
Argentina	0.60	0.60	0.67	0.68	0.69	0.70	0.72	0.74	0.76	0.78	0.80	0.82
Other South America	2.60	2.87	3.64	3.57	3.66	3.80	3.93	4.03	4.13	4.22	4.30	4.38
European Union	0.25	0.22	0.22	0.22	0.22	0.23	0.23	0.23	0.23	0.23	0.23	0.23
China	0.26	0.35	0.39	0.44	0.47	0.51	0.53	0.57	0.60	0.63	0.67	0.71
India	10.30	8.70	7.99	7.55	7.44	7.56	7.67	7.79	7.91	8.03	8.15	8.27
Pakistan	3.90	3.90	3.94	3.99	4.03	4.05	4.06	4.08	4.10	4.10	4.10	4.10
Thailand	10.30	10.80	10.94	11.42	11.63	11.85	12.09	12.34	12.58	12.84	13.08	13.32
Vietnam	6.50	6.70	6.85	7.15	7.49	7.70	7.87	8.10	8.32	8.54	8.76	8.98
Burma	1.30	1.30	1.37	1.50	1.56	1.56	1.60	1.63	1.67	1.71	1.74	1.77
Cambodia	1.00	1.20	1.29	1.38	1.43	1.47	1.51	1.54	1.56	1.59	1.62	1.64
Egypt	0.60	0.50	0.43	0.49	0.51	0.48	0.44	0.41	0.39	0.37	0.35	0.34
Other foreign	0.74	0.73	0.71	0.72	0.72	0.73	0.74	0.75	0.75	0.76	0.77	0.78
United States	2.95	3.24	3.52	3.59	3.62	3.65	3.68	3.71	3.76	3.79	3.83	3.86
Total exports	41.75	41.50	42.24	42.95	43.76	44.57	45.38	46.22	47.06	47.89	48.71	49.52
	<i>Percent</i>											
U.S. trade share	7.1	7.8	8.3	8.4	8.3	8.2	8.1	8.0	8.0	7.9	7.9	7.8

¹Covers FSU-12. Includes intra-FSU trade.²Economic Community of West African States.³Excludes South Africa.⁴Includes unaccounted.

The projections were completed in November 2014.

Table 10. Soybean trade long-term projections

	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
<i>Imports, million metric tons</i>												
Importers												
European Union	13.0	12.8	11.9	12.0	12.0	11.9	12.0	11.7	11.5	11.4	11.2	11.0
Japan	2.9	2.9	2.8	2.8	2.8	2.7	2.7	2.6	2.6	2.6	2.5	2.5
South Korea	1.3	1.3	1.3	1.3	1.3	1.3	1.2	1.2	1.2	1.2	1.2	1.2
Taiwan	2.4	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.4	2.4	2.4	2.4
Mexico	3.7	4.0	4.1	4.1	4.2	4.3	4.3	4.3	4.4	4.4	4.5	4.5
Former Soviet Union ¹	1.5	0.7	0.8	0.9	1.0	1.0	1.0	0.9	0.9	0.9	0.9	0.9
N. Africa & Middle East	4.1	4.3	4.4	4.4	4.5	4.6	4.6	4.7	4.8	4.9	4.9	5.0
China	70.4	74.0	76.7	80.1	83.4	86.8	90.2	93.5	96.9	100.3	103.9	107.7
Malaysia	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7
Indonesia	2.1	2.2	2.3	2.3	2.4	2.4	2.5	2.5	2.6	2.6	2.7	2.8
Other	11.0	10.5	10.5	10.7	10.8	11.0	11.1	11.3	11.4	11.5	11.7	11.8
Total imports	112.7	115.5	117.7	121.6	125.3	128.9	132.6	135.9	139.4	142.9	146.6	150.4
<i>Exports, million metric tons</i>												
Exporters												
Argentina	7.8	8.2	7.8	8.3	8.9	9.4	10.1	10.6	11.2	11.7	12.1	12.4
Brazil	46.8	46.7	47.3	50.5	53.5	57.2	59.7	61.4	62.9	64.8	66.9	69.0
Other South America	7.9	7.8	7.4	7.8	8.2	8.6	9.0	9.4	9.8	10.3	10.7	11.2
Ukraine	1.3	1.7	1.3	1.4	1.4	1.5	1.7	1.8	1.9	2.0	2.2	2.3
Other foreign	4.0	4.3	4.4	4.5	4.6	4.7	4.7	4.8	4.9	5.0	5.1	5.2
United States	44.8	46.8	49.5	49.3	48.7	47.5	47.5	47.9	48.6	49.1	49.7	50.2
Total exports	112.7	115.5	117.7	121.6	125.3	128.9	132.6	135.9	139.4	142.9	146.6	150.4
<i>Percent</i>												
U.S. trade share	39.8	40.5	42.1	40.5	38.9	36.8	35.8	35.2	34.9	34.4	33.9	33.4

¹Covers FSU-12. Includes intra-FSU trade.

The projections were completed in November 2014.

Table 11. Soybean meal trade long-term projections

	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
<i>Imports, million metric tons</i>												
Importers												
European Union	18.4	19.8	19.9	19.7	20.1	20.2	20.2	20.4	20.4	20.5	20.7	20.8
Former Soviet Union ¹	1.0	1.0	0.9	1.0	1.0	1.1	1.1	1.0	1.0	1.0	1.1	1.1
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
Canada	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Japan	2.0	2.1	2.2	2.2	2.3	2.3	2.3	2.4	2.4	2.4	2.5	2.5
Southeast Asia	13.0	13.8	14.4	14.8	15.4	15.9	16.4	16.9	17.4	18.0	18.5	19.1
Mexico	1.4	1.4	1.4	1.4	1.5	1.5	1.5	1.6	1.6	1.6	1.7	1.7
Other Latin America	6.5	6.8	7.0	7.2	7.4	7.6	7.8	8.1	8.3	8.5	8.7	8.9
North Africa & Middle East	8.6	9.2	9.4	9.6	9.8	10.0	10.3	10.5	10.8	11.0	11.3	11.6
Other	7.4	8.4	8.0	7.9	8.1	8.1	8.2	8.2	8.3	8.3	8.4	8.5
Total imports	59.6	64.0	64.8	65.4	67.1	68.4	69.4	70.5	71.7	73.0	74.4	75.8
<i>Exports, million metric tons</i>												
Exporters												
Argentina	25.0	27.8	28.1	29.0	31.0	32.4	33.1	33.9	34.7	35.8	36.9	38.1
Brazil	13.9	14.1	13.9	14.2	14.7	15.1	15.6	16.1	16.5	17.0	17.5	17.9
Other South America	3.8	3.9	4.0	4.0	4.1	4.1	4.2	4.2	4.2	4.3	4.3	4.4
China	2.0	1.7	1.5	1.5	1.4	1.3	1.3	1.2	1.2	1.1	1.1	1.0
India	2.7	3.0	3.8	3.5	3.2	3.0	2.8	2.6	2.5	2.2	1.9	1.7
European Union	0.3	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Other foreign	1.4	1.4	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
United States	10.5	11.6	11.7	11.6	11.1	10.8	10.8	10.9	10.9	11.0	11.0	11.1
Total exports	59.6	64.0	64.8	65.4	67.1	68.4	69.4	70.5	71.7	73.0	74.4	75.8
<i>Percent</i>												
U.S. trade share	17.6	18.1	18.1	17.7	16.5	15.7	15.6	15.4	15.3	15.0	14.8	14.6

¹Covers FSU-12. Includes intra-FSU trade.

The projections were completed in November 2014.

Table 12. Soybean oil trade long-term projections

	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
<i>Imports, million metric tons</i>												
Importers												
China	1.4	1.1	1.1	1.1	1.0	1.1	1.1	1.0	1.1	1.1	1.1	1.1
India	1.8	1.9	1.7	1.7	1.8	1.9	1.9	2.0	2.0	2.1	2.2	2.2
Other Asia & Oceania	1.2	1.3	1.3	1.3	1.4	1.4	1.4	1.5	1.5	1.6	1.6	1.7
Latin America	1.9	1.9	2.0	2.0	2.1	2.1	2.2	2.2	2.3	2.4	2.4	2.5
North Africa & Middle East	1.9	2.1	2.2	2.2	2.3	2.4	2.4	2.5	2.6	2.6	2.7	2.8
European Union	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Other	0.6	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.1	1.1
Total imports	9.2	9.5	9.5	9.7	9.9	10.2	10.4	10.5	10.8	11.1	11.4	11.7
<i>Exports, million metric tons</i>												
Exporters												
Argentina	4.1	4.4	4.3	4.4	4.6	4.9	4.9	5.0	5.2	5.4	5.6	5.8
Brazil	1.4	1.3	1.2	1.3	1.3	1.4	1.5	1.5	1.6	1.7	1.7	1.8
European Union	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.6	0.6	0.6	0.6
Other foreign	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
United States	0.9	1.0	1.0	1.0	1.1	1.1	1.1	1.2	1.2	1.3	1.3	1.4
Total exports	9.2	9.5	9.5	9.7	9.9	10.2	10.4	10.5	10.8	11.1	11.4	11.7
<i>Percent</i>												
U.S. trade share	9.2	10.0	10.5	10.8	10.8	10.7	10.9	11.2	11.3	11.4	11.5	11.6

The projections were completed in November 2014.

Table 13. All cotton trade long-term projections

	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
<i>Imports, million bales</i>												
Importers												
European Union	0.9	0.9	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.6
Former Soviet Union ¹	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Brazil	0.1	0.1	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Mexico	1.0	1.0	1.0	1.0	1.0	0.9	0.8	0.7	0.6	0.5	0.4	0.3
Japan	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
South Korea	1.3	1.3	1.4	1.4	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
China	14.1	7.0	8.0	9.0	10.0	11.0	12.5	16.0	18.8	20.5	21.5	22.0
Indonesia	3.0	3.1	3.3	3.2	3.3	3.3	3.4	3.5	3.6	3.7	3.8	3.9
Vietnam	3.2	3.6	3.8	3.9	4.0	4.2	4.5	4.7	5.0	5.2	5.5	5.7
Thailand	1.5	1.6	1.6	1.6	1.6	1.6	1.6	1.7	1.7	1.7	1.7	1.8
Pakistan	1.2	1.5	1.7	1.8	1.9	2.0	2.1	2.1	2.2	2.2	2.3	2.4
India	0.8	0.8	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Bangladesh	4.1	4.5	4.7	4.7	4.8	5.1	5.3	5.5	5.8	6.0	6.3	6.5
Taiwan	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.8
Other Asia & Oceania	1.5	1.5	1.5	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
Turkey	4.2	3.8	3.7	3.7	3.7	3.7	3.9	3.9	4.1	4.2	4.2	4.3
Other	2.4	2.1	2.2	2.2	2.2	2.1	2.1	2.1	2.0	2.0	1.9	1.9
Total imports	40.9	34.3	36.1	37.0	38.2	39.7	41.9	45.9	49.3	51.7	53.2	54.4
<i>Exports, million bales</i>												
Exporters												
Former Soviet Union ¹	4.3	3.6	4.0	4.0	4.2	4.3	4.6	5.1	5.5	5.6	5.7	5.7
Australia	4.9	3.0	2.9	3.0	3.2	3.4	3.7	4.2	4.6	4.8	5.0	5.0
Argentina	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.5	0.5	0.6	0.7
Brazil	2.2	3.4	3.6	3.5	3.8	4.2	4.7	5.6	6.4	7.0	7.5	7.9
Other Latin America	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Pakistan	0.5	0.5	0.5	0.4	0.4	0.5	0.6	0.7	0.9	1.0	1.2	1.3
India	9.4	5.0	5.7	6.0	6.3	6.5	7.0	7.9	8.7	9.2	9.4	9.6
Egypt	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3
West African Community ²	3.6	3.5	3.9	3.8	3.9	4.0	4.3	4.9	5.4	5.7	5.9	6.0
Other Sub-Saharan Africa ³	1.9	1.7	1.9	1.8	1.9	2.0	2.1	2.4	2.6	2.7	2.8	2.8
Other foreign	3.1	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.1	3.1	3.1	3.2
United States	10.5	10.0	10.0	10.6	10.8	10.9	11.0	11.1	11.2	11.4	11.5	11.6
Total exports	40.9	34.3	36.1	37.0	38.2	39.7	41.9	45.9	49.3	51.7	53.2	54.4
<i>Percent</i>												
U.S. trade share	25.7	29.1	27.7	28.7	28.3	27.4	26.3	24.2	22.7	22.1	21.6	21.3

¹Covers FSU-12. Includes intra-FSU trade.²Economic Community of West African States.³Includes South Africa.

The projections were completed in November 2014.

Table 14. Beef trade long-term projections

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
<i>Imports, thousand metric tons, carcass weight</i>												
Importers												
Japan	760	745	750	751	754	755	757	759	761	762	763	764
South Korea	375	410	416	432	444	468	493	508	529	549	572	589
Taiwan	130	140	145	149	152	155	158	161	163	166	168	170
Philippines	145	155	160	165	170	178	184	190	196	202	207	212
China	412	460	515	567	628	664	721	774	821	870	924	974
Hong Kong	473	650	750	822	881	936	982	1,021	1,062	1,105	1,146	1,184
Other Asia	482	496	508	656	685	711	740	760	786	817	849	873
European Union	376	360	355	352	349	346	342	339	336	333	330	327
Russia	1,018	825	825	950	970	988	1,006	1,024	1,040	1,057	1,072	1,088
Other Europe	91	98	101	103	105	105	106	107	108	109	109	109
Egypt	195	240	250	250	260	280	293	306	319	333	343	352
Other N. Africa & M. East	805	887	925	966	1,020	1,055	1,092	1,130	1,165	1,205	1,240	1,273
Mexico	232	235	230	267	302	344	364	398	429	453	476	517
Canada	296	280	280	283	287	288	289	290	291	292	293	294
United States	1,021	1,280	1,225	1,179	1,179	1,236	1,259	1,281	1,304	1,327	1,349	1,372
Major importers	6,810	7,262	7,435	7,891	8,184	8,509	8,784	9,049	9,313	9,578	9,840	10,099
<i>Exports, thousand metric tons, carcass weight</i>												
Exporters												
Australia	1,593	1,832	1,640	1,568	1,577	1,593	1,600	1,607	1,618	1,627	1,638	1,651
New Zealand	529	570	577	585	587	593	598	602	606	609	613	617
India	1,765	1,850	2,024	2,189	2,379	2,539	2,689	2,814	2,934	3,047	3,169	3,287
Other Asia	138	149	156	214	215	222	226	229	238	246	252	259
European Union	244	255	245	240	240	240	238	235	233	232	231	231
Argentina	186	190	200	187	178	186	201	211	225	233	247	264
Brazil	1,849	2,030	2,235	2,341	2,378	2,426	2,469	2,522	2,552	2,602	2,647	2,673
Canada	333	365	355	321	307	306	308	310	312	314	315	315
United States	1,175	1,179	1,145	1,153	1,207	1,270	1,331	1,393	1,451	1,497	1,538	1,576
Major exporters	7,812	8,420	8,577	8,797	9,069	9,374	9,660	9,923	10,168	10,406	10,648	10,872

The projections were completed in November 2014.

Table 15. Pork trade long-term projections

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
	<i>Imports, thousand metric tons, carcass weight</i>											
Importers												
Japan	1,223	1,320	1,275	1,268	1,280	1,284	1,287	1,294	1,296	1,298	1,298	1,300
China	770	810	1,000	1,051	1,110	1,161	1,207	1,248	1,286	1,325	1,366	1,406
Hong Kong	399	350	360	371	379	386	394	401	407	413	420	427
South Korea	388	440	485	489	498	501	508	515	524	530	538	547
Russia	868	460	375	425	421	414	407	399	390	380	370	360
Mexico	783	815	840	874	920	959	997	1,028	1,059	1,087	1,120	1,152
Central America/Caribbean	132	137	141	140	145	147	145	145	148	148	149	150
Canada	220	210	210	216	222	228	233	239	244	249	254	259
United States	399	441	408	408	414	420	426	432	438	444	450	455
Major importers	5,182	4,983	5,095	5,242	5,390	5,500	5,605	5,700	5,791	5,874	5,965	6,054
	<i>Exports, thousand metric tons, carcass weight</i>											
Exporters												
Brazil	585	585	700	770	795	799	810	820	825	830	835	840
Canada	1,245	1,180	1,180	1,195	1,217	1,235	1,245	1,253	1,262	1,271	1,280	1,290
Mexico	111	120	125	128	132	136	140	145	150	155	160	165
European Union	2,236	2,150	2,200	2,213	2,257	2,293	2,354	2,400	2,450	2,498	2,547	2,595
China	244	275	300	308	309	313	316	319	322	327	330	333
United States	2,264	2,298	2,381	2,438	2,495	2,540	2,574	2,608	2,642	2,676	2,710	2,744
Major exporters	6,685	6,608	6,886	7,052	7,205	7,316	7,438	7,546	7,651	7,757	7,863	7,967

The projections were completed in November 2014.

Table 16. Poultry trade long-term projections¹

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
<i>Imports, thousand metric tons, ready to cook</i>												
Importers												
Russia	552	395	399	418	425	401	362	315	268	223	180	140
European Union	757	738	759	764	754	759	765	768	771	773	775	776
Canada	149	156	163	164	166	167	169	170	172	173	174	176
Mexico	839	855	914	963	1,027	1,069	1,121	1,160	1,218	1,276	1,328	1,386
Central America/Caribbean	497	482	491	447	454	465	477	488	498	509	522	535
Japan	855	881	871	865	862	861	860	858	856	854	854	854
Hong Kong	287	270	260	260	263	272	284	296	308	321	335	349
China	288	262	270	274	277	281	282	286	290	294	299	303
South Korea	135	148	153	156	159	161	162	164	165	166	168	170
Saudi Arabia	873	807	829	831	853	874	898	922	946	961	981	1,007
Other Middle East	1,428	1,403	1,506	1,546	1,588	1,649	1,711	1,771	1,833	1,894	1,947	2,011
North Africa	31	32	32	97	123	147	170	187	206	224	237	250
West African Community ²	301	305	335	351	375	386	409	429	448	464	483	502
Other Sub-Saharan Africa	1,005	1,028	1,089	1,127	1,180	1,218	1,263	1,311	1,356	1,401	1,445	1,489
Major importers	7,997	7,762	8,071	8,263	8,504	8,710	8,930	9,126	9,334	9,533	9,727	9,946
<i>Exports, thousand metric tons, ready to cook</i>												
Exporters												
European Union	1,225	1,235	1,192	1,187	1,187	1,188	1,187	1,193	1,196	1,199	1,201	1,212
Brazil	3,643	3,720	3,907	4,111	4,244	4,332	4,449	4,532	4,630	4,743	4,845	4,982
China	420	440	460	475	491	531	546	551	568	578	584	601
Thailand	513	540	570	602	636	676	709	741	778	813	848	893
United States	3,676	3,682	3,729	3,835	3,917	3,986	4,054	4,118	4,173	4,224	4,272	4,321
Major exporters	9,477	9,617	9,857	10,210	10,476	10,712	10,946	11,134	11,345	11,555	11,751	12,010

¹Broilers and turkeys only.²Economic Community of West African States.

The projections were completed in November 2014.

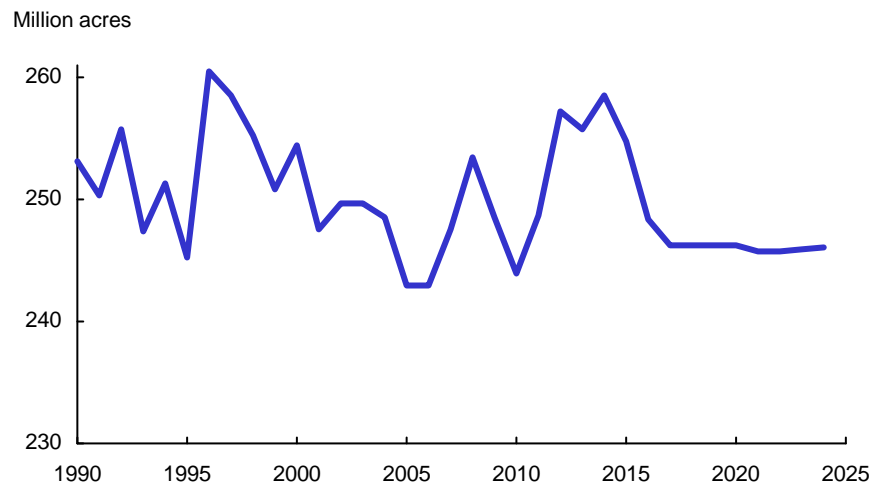
U.S. Crops

Planted area for major field crops in the United States is projected to decline over the next several years as U.S. and global supplies rebound from relatively low levels in recent years and prices decline for most crops. As a consequence of the associated lower producer returns, U.S. planted acreage for eight major crops (corn, sorghum, barley, oats, wheat, rice, upland cotton, and soybeans) is projected to fall from a 2012-14 average of about 257 million acres to about 246 million in 2017.

Over the longer run, steady global economic growth provides a foundation for strong crop demand. Combined with some further expansion of global biofuel production and continued weakness of the dollar, overall projections indicate longer run gains in world consumption and trade of crops. Although crop prices are projected to be below highs of recent years, they remain above pre-2007 levels. Eight-crop plantings in the United States remain steady near 246 million acres during the second half of the projections, with increasing yields providing most of the gains in U.S. production.

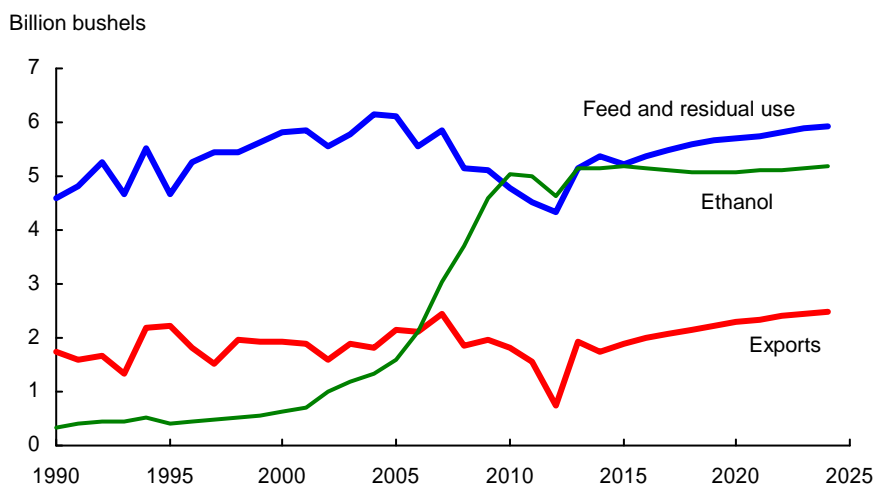
Farm programs of the Agricultural Act of 2014 are assumed to be extended through the projection period. Acreage enrolled in the Conservation Reserve Program (CRP) is assumed at levels slightly below the legislated maximum of 24 million acres.

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



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

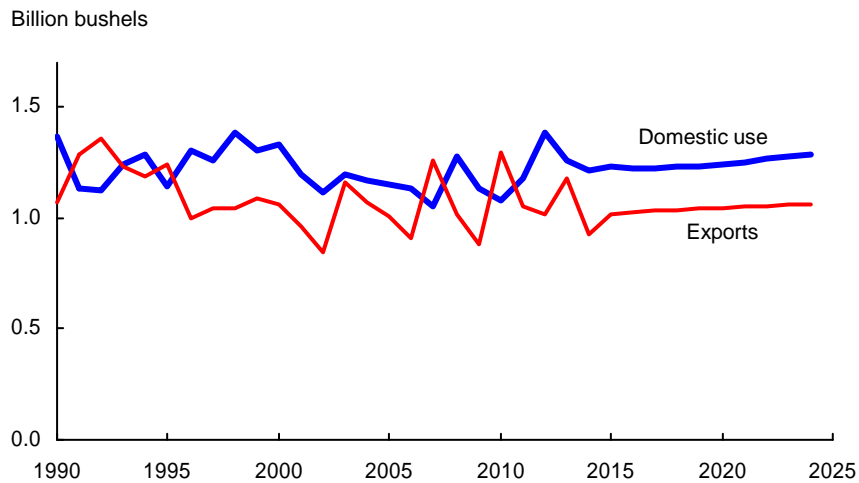
U.S. corn: Feed and residual use, ethanol, and exports



Record U.S. corn yields and production in 2014 continued the rebound in corn supplies from the weather-reduced 2012 level, resulting in higher stocks and lower prices. Moderate growth in demand is projected over the next decade.

- Ethanol production in the United States is based almost entirely on corn as the feedstock. Almost no growth is projected for corn-based ethanol production over the next 10 years. This projection reflects declining overall gasoline consumption in the United States (which is mostly a 10-percent ethanol blend (E10)), infrastructural and other constraints on growth in the E15 (15-percent ethanol blend) market, and the small size of the E85 (85-percent ethanol blend) market. Nonetheless, a strong presence for ethanol in the sector continues, with about 35 percent of total corn use expected to go to ethanol production during the projection period.
- Rising corn production, lower corn prices than in recent years, and increasing meat production underlie projected gains in feed and residual corn use over the next decade. Also supporting gains in feed use of corn is almost no growth in the production of distillers grains, a co-product of dry mill ethanol production used for feeding livestock, as corn-based ethanol production flattens.
- Food and industrial use of corn (other than ethanol production) is projected to rise at a moderate pace over the next decade, averaging less than population growth. Use of corn for high fructose corn syrup (HFCS) grows slowly, reflecting small increases in domestic use and rising HFCS exports to Mexico. Increases in corn used for glucose and dextrose also are small, limited by consumer dietary concerns. Other food uses of corn (including the food portion of starch use) are also projected to rise more slowly than population increases. The nonfood portion of starch use of corn, such as in the production of drywall and paper products, responds to economic growth and industrial demand and is projected to push total starch use up more rapidly than population as the economy grows.
- U.S. corn exports increase during the projection period, in response to strong global demand for feed grains to support growth in meat production. The United States is the world's largest corn exporter, with its market share of global trade growing to almost 45 percent by the end of the projection period. However, trade competition from Argentina, Brazil, and the FSU as well as continued use of corn for ethanol production in the United States combine to hold the U.S. trade share well below its 1970-2000 average of 71 percent.

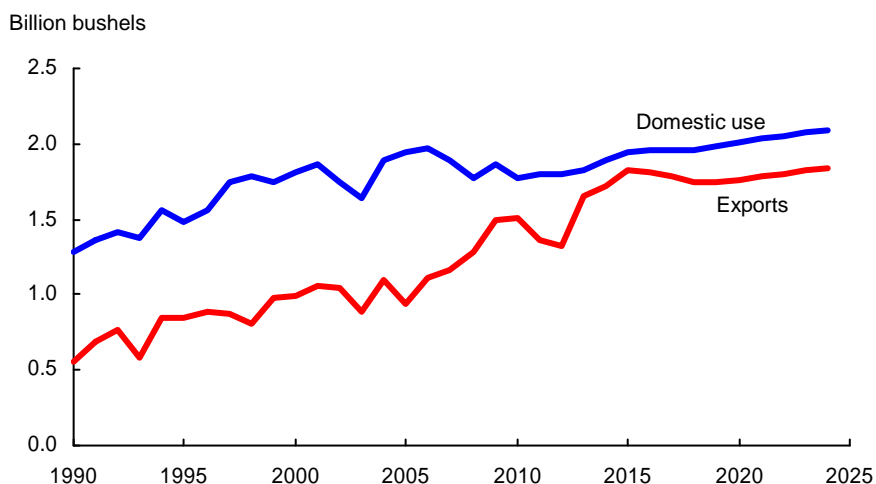
U.S. wheat: Domestic use and exports



U.S. wheat plantings are projected to decline over the next decade, continuing a long-term general downward trend since the early 1980s. Relatively weak overall demand growth for U.S. wheat is projected.

- Domestic demand for wheat reflects a relatively mature market. Food use of wheat is projected to show moderate gains, generally in line with U.S. population increases.
- Feed use of wheat, a lower value market for the crop, remains fairly steady through the projection period as prices relative to corn allow a moderate level of wheat in livestock feed rations.
- U.S. imports of wheat are projected to rise through the projection period due to increases from Canada. The end of the Canadian Wheat Board's monopoly for wheat and barley as well as transportation and other market factors are expected to result in more wheat shipped to the United States.
- U.S. wheat exports grow slowly over the next decade. U.S. wheat trade faces competition from countries of the FSU (particularly Russia), with FSU wheat exports rising from 24 percent to 27 percent of global trade over the next decade. EU wheat exports also grow from a global market share of 18 percent in 2015/16 to 20 percent by 2024/25. For the same time period, the U.S. market share declines from 18 percent to 16 percent.

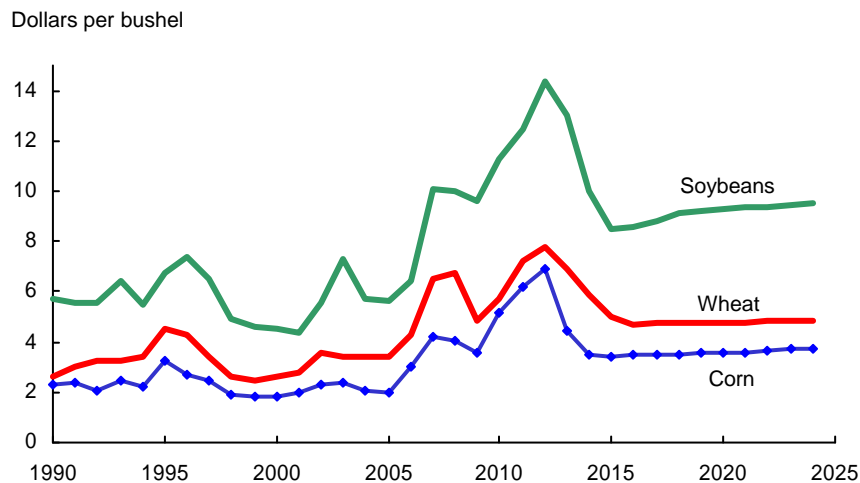
U.S. soybeans: Domestic use and exports



U.S. soybean plantings decline from about 84 million acres in 2014 and 2015 to 78-79 million acres over the rest of the projection period as lower prices and producer returns reduce planting incentives from those in recent years. In the longer term, growth in both domestic use and export demand lead to increases in prices, allowing soybeans to compete with corn and other crops for land use.

- With reduced feed prices, projected increases in meat production and slowing production of distillers grains and canola meal lead to projected gains in domestic demand for soybean meal and thus soybean crush in the coming decade.
- Strong global demand for soybeans, particularly in China, boosts soybean trade over the projection period—China accounts for almost all of the increase in world soybean imports. Even though U.S. soybean exports are projected to rise, competition from South America leads to a reduction in the U.S. share of global soybean trade from 42 percent in 2015/16 to about 33 percent in 2024/25. Beyond 2015/16, Brazil is the largest exporter of soybeans.
- U.S. exports of soybean oil and soybean meal also face strong competition from South America. Argentina, in particular, is a competitive exporter of soybean products because its graduated export taxes favor exports of soybean products over soybeans. Increasing biodiesel production in Argentina, however, limits the country's soybean oil export growth somewhat, allowing the U.S. global export share to increase moderately. However, Argentina is projected to be the leading soybean meal exporter and account for close to half of global soybean meal exports over the next decade. Brazil remains the second largest soybean meal exporter.
- Soybean oil used to produce methyl esters (biodiesel) in the United States is projected to rise from 4.8 billion pounds in 2014/15 to 5.4 billion pounds in 2024/25, supporting the production of more than 700 million gallons of biodiesel annually in the second half of the decade. This use reflects the mandate of 1.28 billion gallons of biomass-based diesel use starting in 2013 and assumed to continue through the projections. Some additional demand for biodiesel and renewable diesel is also assumed, which meets a portion of the Renewable Fuel Standard's advanced biofuel mandate. Soybean oil is assumed to account for about half of total biodiesel production made from methyl esters. Other feedstocks used to produce biodiesel include corn oil extracted from distillers grains, other first-use vegetable oils, animal fats, and recycled vegetable oils.

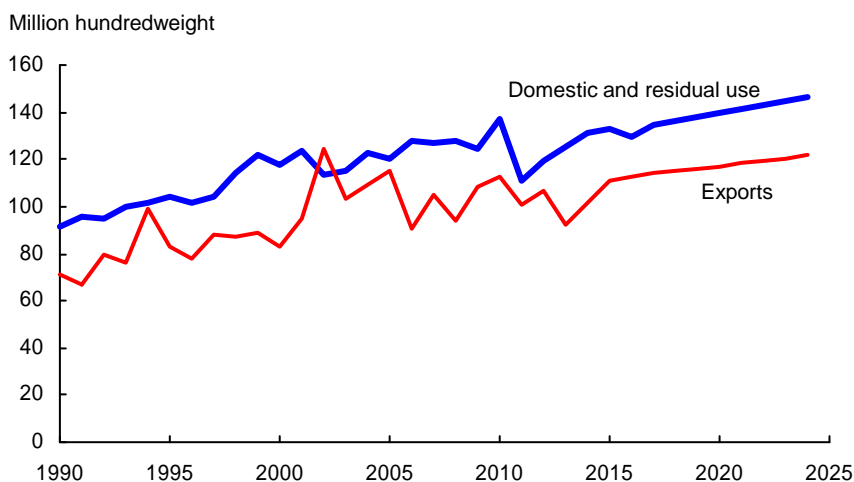
U.S. farm-level prices: Corn, wheat, and soybeans



Larger global production of grains and oilseeds in response to high prices in recent years has raised world supplies and lowered U.S. prices for corn, wheat, and soybeans. Following these near-term price declines, the continuing influence of several long-term factors—including global growth in population and per capita income, a relatively low-valued U.S. dollar, and global biofuel production—underlies moderate gains in these prices and keeps them above pre-2007 levels.

- Corn prices are projected to decline in 2015/16, but then begin increasing moderately in 2016/17 as ending stocks-to-use ratios fall due to growth in feed use, exports, and, in the longer run, demand for corn by ethanol producers.
- Prices for soybean also initially fall in 2015/16 as continued high soybean acreage leads to an increase in stocks. Soybean prices rise moderately through the rest of the projection period, reflecting lower soybean plantings and strengthening demand for soybeans and soybean products.
- Wheat prices decline through 2016/17, reflecting higher wheat stocks and lower corn prices than in recent years. Wheat prices increase moderately through the remainder of the projection period with small increases in exports and food use, generally steady feed use, and lower stocks. Rising imports and increasing global competition limit price increases for wheat.

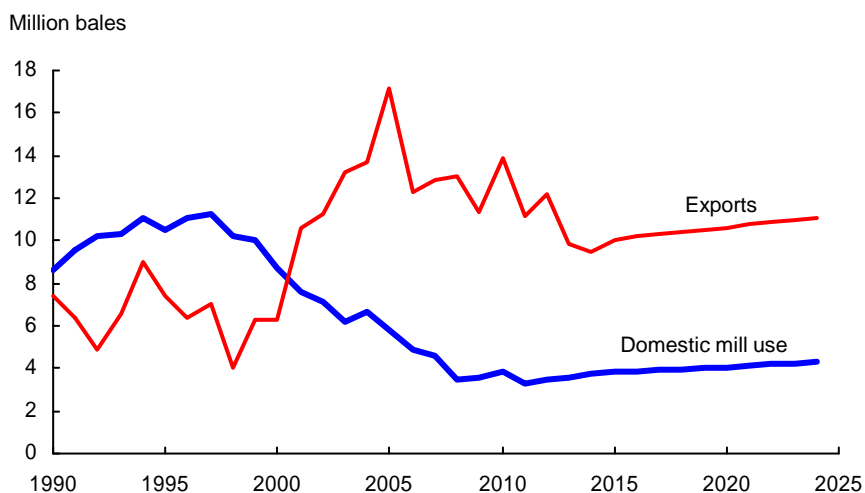
U.S. rice: Domestic and residual use and exports



U.S. acreage planted to long-grain rice declines in the short run, but is then projected to rise after 2016. In contrast, plantings for medium- and short-grain rice rise in 2015 and 2016, before falling moderately afterwards.

- Domestic and residual use of rice is projected to account for a steady share of U.S. production over the next decade, increasing slightly faster than population growth. U.S. rice imports are projected to expand over the next decade, but at a slower rate than in the past. Asian aromatic varieties, classified as long-grain rice and nearly all from Thailand, India, and Pakistan, are expected to continue to account for most of U.S. rice imports.
- U.S. rice exports are projected to increase over the next decade. Continued growth of U.S. rough-rice exports to Latin America (nearly all long-grain rice) is projected to account for most of the overall expansion of U.S. rice exports. The U.S. market share of all rice traded globally remains at about 8 percent over most of the projection period.
- Long-grain rice prices are projected to fall through 2015/16 as the market continues to adjust from tight supplies and high prices in 2013/14 that largely resulted from reduced U.S. acreage and production. Long-grain prices then rise moderately through the projection period as strengthening demand reduces the stocks-to-use ratio. In contrast, prices for medium- and short-grain rice fall for three years from a high in 2015/16 as stocks and stocks-to-use ratios build, before rising moderately over the remainder of the projection period.

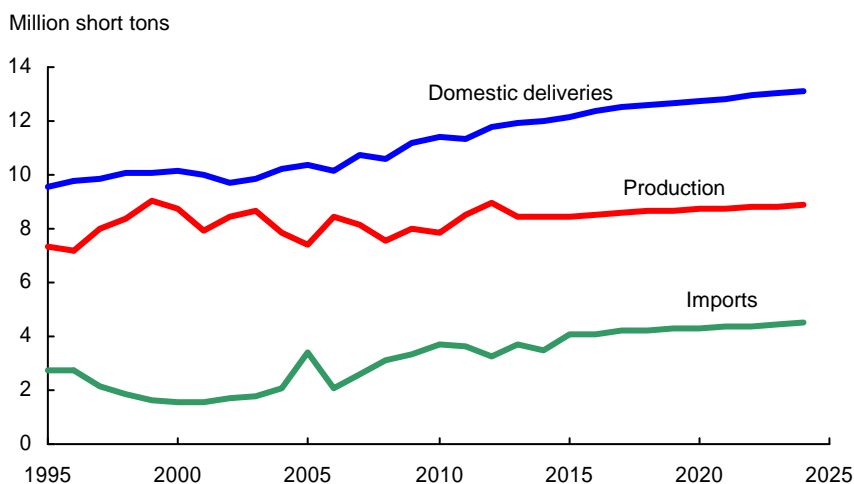
U.S. upland cotton: Domestic mill use and exports



Upland cotton plantings are projected to fall below 10 million acres in 2015 as lower prices reduce producer returns. Acreage then increases slowly over the next decade as rising prices and improved returns provide incentives to expand. Mill use and exports of U.S. upland cotton are projected to rise moderately.

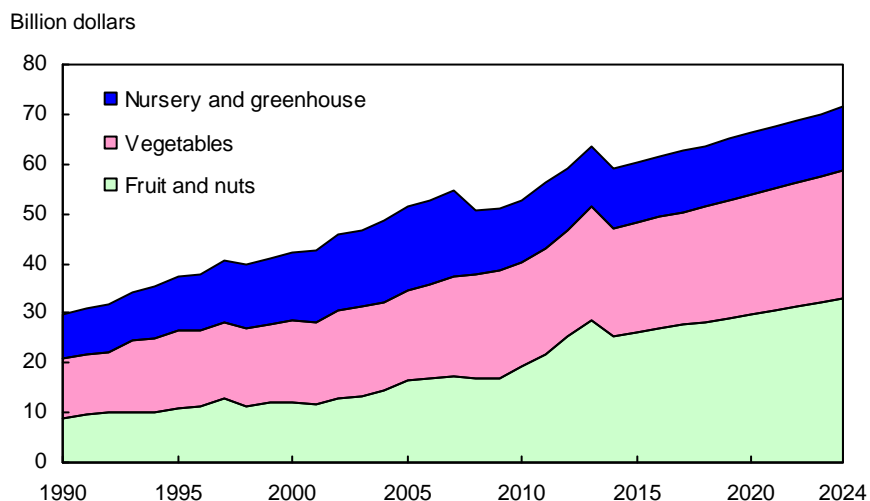
- A decline in U.S. mill use of cotton since the late 1990s reflected a gradual, long-term movement of spinning capacity to developing countries. Continued increases in U.S. imports of apparel from Asia will reduce domestic apparel production and lower the apparel industry's demand for fabric and yarn produced in the United States. However, U.S. mill use is projected to grow somewhat over the next decade in response to rising demand for U.S. textile product exports (such as fabric and yarn), mainly to other countries in the Western Hemisphere. Nonetheless, even with this growth, domestic mill use is projected to represent only about 28 percent of total U.S. disappearance of upland cotton over the projection period, down from more than 60 percent in the late 1990s.
- U.S. upland cotton exports are projected to rise marginally throughout the projection period. The United States remains the world's largest exporter of cotton, although the U.S. share of global cotton trade falls to 21 percent by 2024/25, compared to an average of more than 37 percent in 2000-10. Brazil, India, Australia, and Pakistan gain market share of global cotton exports. China is the world's largest importer of cotton, accounting for more than 40 percent of global imports by 2024/25 and over 76 percent of global import growth from 2015/16 to 2024/25.

U.S. sugar: Domestic production, use, and imports



- U.S. sugar production is projected to increase at a gradual rate over the next decade. Total sugar production in 2024/25 is projected to be just 4.6 percent higher than in 2015/16. Both beet and cane sugar production will increase over this time period, with a slightly larger rate of growth for beet sugar. Production growth for both beet sugar and cane sugar is expected to come from higher yields and sucrose recovery rates, as area harvested is expected to decline slightly over the projection period.
- Sugar deliveries for domestic use increase steadily over the course of the decade, with deliveries in 2024/25 7.9 percent higher than in 2015/16. This increase follows projected population increases.
- Total sugar use is projected to increase at a higher rate than domestic production. As a result, sugar imports are expected to increase over the next 10 years, with imports at the end of the projection period 9.7 percent above the 2015/16 estimate. Particularly in the latter years of the projection period, increased imports are expected to come from tariff-rate-quota (TRQ) imports as imports from Mexico are expected to be constrained by lower Mexican sugar production.
- A moderate decline in Mexican sugar production is projected, with reductions in area eclipsing gains in yield. Projected production reaches a low point in 2021/22 and then rises over the last few years of the projection period. Steadily increasing domestic consumption combined with lower total supplies will result in declining exports although, similar to production, exports will reach a low point midway through the projection period before slight increases are seen in the last few years of the projection period.
- The projections assume that limitations on Mexico's exports to the United States based on calculated U.S. needs are in place as described in policy agreements between the U.S. and Mexican Governments signed in December 2014. Thus, Mexico's sugar exports to the United States are assumed at levels that hold the U.S. stocks-to-use ratio at 13.5 percent.
- U.S. production of high fructose corn syrup (HFCS) is projected to grow slowly. Small increases are projected in domestic HFCS use along with rising exports to Mexico.

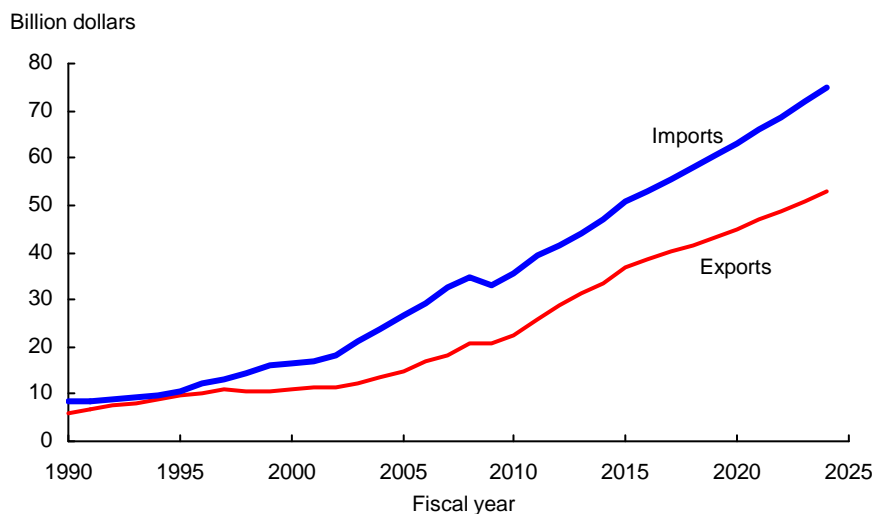
Value of U.S. horticultural production



Farm sales of horticultural crops are projected to grow by 1.9 percent annually over the next decade, reaching \$73 billion in calendar year 2024, up from \$60 billion in 2014.

- The value of farm production of fruit and tree nuts is projected to grow at an annual rate of 2.6 percent over the next decade, largely due to sales growth of tree nuts and noncitrus fruits. Fruit and tree nuts are projected to rank first among horticultural crops in terms of farm sales value with a share of 46 percent. Farm sales value of vegetables and pulses is projected to grow 1.8 percent per year, while farm sales of greenhouse and nursery crops are projected to increase at an annual rate of 0.5 percent.
- The volume of U.S. farm production of horticultural crops is projected to rise by 0.6 percent annually in the next decade. Vegetables lead this growth at an annual rate of 0.6 percent, reaching 139 billion pounds in 2024 as processing production averages 0.8-percent growth. Fruit and nut production expands by 0.5 percent per year to 65 billion pounds in 2024 as noncitrus production growth more than offsets citrus production decline. U.S. citrus fruit production is projected to fall by an average of 0.7 percent per year in the next decade because of continued declines of bearing acreage, which fell by an average of 1.6 percent annually over the past 8 years.
- Farm prices for vegetables increase only 1.2 percent annually from 2014 due to relatively strong processing vegetable production. Producer prices for fruits and nuts rise by 2.1 percent per year due to slower production growth than for vegetables and due to higher citrus prices as citrus production declines.
- U.S. per capita use of fruits and tree nuts increases from 261 pounds in 2014 to 282 pounds by 2024, an annual average growth rate of 0.8 percent. Per capita use of vegetables stays level around 415 pounds with modest growth of fresh-market vegetable and potato use. The total supply of fruits, nuts, and vegetables over the next decade, both domestic and imported, is projected to grow at an average rate of 1.3 percent per year.

Value of U.S. horticultural trade



The U.S. trade deficit in horticultural crops and products is projected to expand from \$13.5 billion in fiscal year (FY) 2014 (October 2013 through September 2014) to \$22.2 billion in FY 2024.

- Imports increasingly supplement domestic production of horticultural crops and products. By FY 2024, imports are projected to supply 53 percent of domestic fruit and nut use and 26 percent of vegetable use, in terms of farm weight. In 2014, these shares were 45 percent and 19 percent, respectively.
- The export market becomes more important for U.S. horticultural producers. In FY 2024, exports are projected to be the destination for 26 percent of U.S. fruit and nut production, up from 23 percent in 2014, while 24 percent of vegetable production will be sold in foreign markets, up from 17 percent in 2014.
- The value of U.S. horticultural imports is projected to increase by 4.8 percent annually over the next decade, compared with 7.8 percent on average during the past 15 years, reaching \$75 billion in FY 2024. Fruit and nut imports account for \$28.3 billion, while vegetable imports account for \$17 billion.
- Exports of U.S. horticultural products are projected to reach \$53 billion in FY 2024, up an average of 4.7 percent annually from 2014. Of this amount, fruit and nuts contribute \$25 billion, and vegetables contribute \$10.8 billion. Exports of other horticultural products total \$16.7 billion by 2024, up from \$10.3 billion in 2014.

Table 17. Acreage for major field crops and Conservation Reserve Program (CRP) assumptions, long-term projections

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
<i>Million acres</i>												
Planted acreage, eight major crops												
Corn	95.4	90.9	88.0	90.0	90.0	90.0	89.5	89.5	89.0	89.0	89.0	89.0
Sorghum	8.1	7.2	7.5	7.5	7.4	7.3	7.3	7.2	7.2	7.1	7.1	7.0
Barley	3.5	3.0	3.5	3.3	3.2	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Oats	3.0	2.7	3.0	2.8	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Wheat	56.2	56.8	56.0	53.0	52.5	52.5	52.5	52.5	52.0	52.0	52.0	52.0
Rice	2.5	2.9	2.9	2.9	2.9	3.0	3.0	3.0	3.0	3.0	3.0	3.1
Upland cotton	10.2	10.8	9.8	9.8	9.8	9.9	9.9	10.0	10.1	10.2	10.3	10.4
Soybeans	76.8	84.2	84.0	79.0	78.0	78.0	78.5	78.5	79.0	79.0	79.0	79.0
Total	255.7	258.5	254.7	248.3	246.3	246.2	246.2	246.2	245.8	245.8	245.9	246.0
CRP acreage assumptions												
Total CRP	26.8	25.5	24.2	23.5	23.9	23.8	23.9	24.0	23.9	23.9	23.9	23.9
Total planted plus CRP	282.5	284.1	278.9	271.8	270.3	270.0	270.1	270.2	269.8	269.8	269.8	269.9
Harvested acreage, eight major crops												
Corn	87.7	83.1	80.4	82.4	82.4	82.4	81.9	81.9	81.4	81.4	81.4	81.4
Sorghum	6.5	6.2	6.3	6.3	6.2	6.1	6.1	6.0	6.0	6.0	6.0	5.9
Barley	3.0	2.4	3.0	2.8	2.8	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Oats	1.0	1.0	1.1	1.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
Wheat	45.3	46.4	47.4	44.9	44.5	44.5	44.5	44.5	44.0	44.0	44.0	44.0
Rice	2.5	2.9	2.9	2.8	2.9	2.9	3.0	3.0	3.0	3.0	3.0	3.0
Upland cotton	7.3	9.7	8.3	8.3	8.3	8.4	8.4	8.5	8.6	8.7	8.8	8.8
Soybeans	76.3	83.4	83.1	78.1	77.1	77.1	77.6	77.6	78.1	78.1	78.1	78.1
Total	229.6	235.1	232.5	226.6	225.1	224.9	225.0	225.0	224.6	224.7	224.8	224.7

Table 18. U.S. corn long-term projections

Item	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Area (million acres):												
Planted acres	95.4	90.9	88.0	90.0	90.0	90.0	89.5	89.5	89.0	89.0	89.0	89.0
Harvested acres	87.7	83.1	80.4	82.4	82.4	82.4	81.9	81.9	81.4	81.4	81.4	81.4
Yield:												
Bushels per harvested acre	158.8	173.4	167.2	169.2	171.2	173.2	175.3	177.3	179.3	181.3	183.3	185.3
Supply and use (million bushels):												
Beginning stocks	821	1,236	2,008	1,733	1,738	1,753	1,773	1,748	1,753	1,703	1,683	1,668
Production	13,925	14,407	13,445	13,940	14,105	14,270	14,355	14,520	14,595	14,760	14,920	15,085
Imports	36	25	25	25	25	25	25	25	25	25	25	25
Supply	14,782	15,668	15,478	15,698	15,868	16,048	16,153	16,293	16,373	16,488	16,628	16,778
Feed & residual	5,132	5,375	5,225	5,375	5,500	5,600	5,650	5,700	5,750	5,800	5,875	5,925
Food, seed, & industrial	6,497	6,535	6,620	6,585	6,540	6,525	6,530	6,540	6,570	6,605	6,635	6,695
Ethanol and by-products	5,134	5,150	5,200	5,150	5,100	5,075	5,075	5,075	5,100	5,125	5,150	5,200
Domestic use	11,629	11,910	11,845	11,960	12,040	12,125	12,180	12,240	12,320	12,405	12,510	12,620
Exports	1,917	1,750	1,900	2,000	2,075	2,150	2,225	2,300	2,350	2,400	2,450	2,500
Total use	13,546	13,660	13,745	13,960	14,115	14,275	14,405	14,540	14,670	14,805	14,960	15,120
Ending stocks	1,236	2,008	1,733	1,738	1,753	1,773	1,748	1,753	1,703	1,683	1,668	1,658
Stocks/use ratio, percent	9.1	14.7	12.6	12.4	12.4	12.4	12.1	12.1	11.6	11.4	11.1	11.0
Price (dollars per bushel):												
Farm price	4.46	3.50	3.40	3.50	3.50	3.50	3.55	3.55	3.60	3.65	3.70	3.75
Variable costs of production (dollars):												
Per acre	359	363	353	351	356	361	365	371	377	383	389	395
Returns over variable costs (dollars per acre):												
Net returns	349	244	216	242	244	245	257	258	269	278	289	300

Note: Marketing year beginning September 1 for corn.

Table 19. U.S. sorghum long-term projections

Item	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Area (million acres):												
Planted acres	8.1	7.2	7.5	7.5	7.4	7.3	7.3	7.2	7.2	7.1	7.1	7.0
Harvested acres	6.5	6.2	6.3	6.3	6.2	6.1	6.1	6.0	6.0	6.0	6.0	5.9
Yield:												
Bushels/harvested acre	59.6	66.1	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
Supply and use (million bushels):												
Beginning stocks	15	34	37	37	37	35	37	39	39	39	39	39
Production	389	408	410	410	403	397	397	390	390	390	390	384
Imports	0	0	0	0	0	0	0	0	0	0	0	0
Supply	404	442	447	447	440	432	434	429	429	429	429	423
Feed & residual	88	95	100	100	95	85	85	80	80	80	80	75
Food, seed, & industrial	70	80	80	80	80	80	80	80	80	80	80	80
Domestic use	158	175	180	180	175	165	165	160	160	160	160	155
Exports	212	230	230	230	230	230	230	230	230	230	230	230
Total use	370	405	410	410	405	395	395	390	390	390	390	385
Ending stocks	34	37	37	37	35	37	39	39	39	39	39	38
Stocks/use ratio, percent	9.2	9.1	9.0	9.0	8.6	9.4	9.9	10.0	10.0	10.0	10.0	9.9
Price (dollars per bushel):												
Farm price	4.28	3.45	3.30	3.40	3.40	3.40	3.45	3.45	3.50	3.55	3.60	3.65
Variable costs of production (dollars):												
Per acre	148	150	146	146	148	150	153	155	158	161	164	167
Returns over variable costs (dollars per acre):												
Net returns	107	79	68	75	73	71	72	69	69	69	70	70

Note: Marketing year beginning September 1 for sorghum.

Table 20. U.S. barley long-term projections

Item	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Area (million acres):												
Planted acres	3.5	3.0	3.5	3.3	3.2	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Harvested acres	3.0	2.4	3.0	2.8	2.8	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Yield:												
Bushels/harvested acre	71.3	72.4	70.7	71.3	72.0	72.6	73.2	73.9	74.5	75.1	75.8	76.4
Supply and use (million bushels):												
Beginning stocks	80	82	70	73	74	83	79	81	81	83	81	82
Production	217	177	212	200	202	189	190	192	194	195	197	199
Imports	19	35	25	25	25	25	25	25	25	25	25	25
Supply	316	294	307	298	301	297	294	298	300	303	303	306
Feed & residual	65	60	70	60	55	55	50	55	55	60	60	60
Food, seed, & industrial	155	154	154	154	153	153	153	152	152	152	151	151
Domestic use	220	214	224	214	208	208	203	207	207	212	211	211
Exports	14	10	10	10	10	10	10	10	10	10	10	10
Total use	234	224	234	224	218	218	213	217	217	222	221	221
Ending stocks	82	70	73	74	83	79	81	81	83	81	82	85
Stocks/use ratio, percent	35.0	31.3	31.2	33.0	38.1	36.2	38.0	37.3	38.2	36.5	37.1	38.5
Price (dollars per bushel):												
Farm price	6.06	5.15	4.80	4.50	4.10	3.90	3.95	3.95	4.00	4.05	4.10	4.15
Variable costs of production (dollars):												
Per acre	199	202	197	196	199	202	205	209	213	217	221	225
Returns over variable costs (dollars per acre):												
Net returns	233	171	143	125	96	81	84	83	85	87	90	92

Note: Marketing year beginning June 1 for barley.

Table 21. U.S. oats long-term projections

Item	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Area (million acres):												
Planted acres	3.0	2.7	3.0	2.8	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Harvested acres	1.0	1.0	1.1	1.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
Yield:												
Bushels/harvested acre	64.1	67.7	65.1	65.4	65.8	66.1	66.4	66.8	67.1	67.4	67.7	68.1
Supply and use (million bushels):												
Beginning stocks	36	25	30	38	38	37	35	34	32	30	29	27
Production	65	70	72	65	59	59	60	60	60	61	61	61
Imports	97	100	100	100	100	100	100	100	100	100	100	100
Supply	198	194	202	203	197	196	195	194	192	191	190	188
Feed & residual	97	85	85	85	80	80	80	80	80	80	80	80
Food, seed, & industrial	75	77	77	78	78	79	79	80	80	80	81	81
Domestic use	172	162	162	163	158	159	159	160	160	160	161	161
Exports	2	2	2	2	2	2	2	2	2	2	2	2
Total use	173	164	164	165	160	161	161	162	162	162	163	163
Ending stocks	25	30	38	38	37	35	34	32	30	29	27	25
Stocks/use ratio, percent	14.5	18.3	23.2	23.0	23.1	21.7	21.1	19.8	18.5	17.9	16.6	15.3
Price (dollars per bushel):												
Farm price	3.75	3.25	2.70	2.40	2.30	2.30	2.30	2.30	2.35	2.35	2.40	2.40
Variable costs of production (dollars):												
Per acre	115	116	112	111	113	115	117	119	121	124	126	128
Returns over variable costs (dollars per acre):												
Net returns	126	104	64	46	38	37	36	35	37	35	37	36

Note: Marketing year beginning June 1 for oats.

Table 22. U.S. wheat long-term projections

Item	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Area (million acres):												
Planted acres	56.2	56.8	56.0	53.0	52.5	52.5	52.5	52.5	52.0	52.0	52.0	52.0
Harvested acres	45.3	46.4	47.4	44.9	44.5	44.5	44.5	44.5	44.0	44.0	44.0	44.0
Yield:												
Bushels/harvested acre	47.1	43.7	45.5	46.2	46.6	47.0	47.3	47.7	48.1	48.5	48.8	49.2
Supply and use (million bushels):												
Beginning stocks	718	590	644	700	680	663	654	653	666	662	661	663
Production	2,135	2,026	2,155	2,075	2,075	2,090	2,105	2,125	2,115	2,135	2,145	2,165
Imports	169	170	150	155	160	165	170	175	180	185	190	195
Supply	3,021	2,785	2,949	2,930	2,915	2,918	2,929	2,953	2,961	2,982	2,996	3,023
Food	951	960	967	974	981	988	995	1,002	1,009	1,016	1,023	1,030
Seed	77	76	72	71	71	71	71	70	70	70	70	70
Feed & residual	228	180	190	180	170	170	170	170	170	180	180	190
Domestic use	1,256	1,216	1,229	1,225	1,222	1,229	1,236	1,242	1,249	1,266	1,273	1,290
Exports	1,176	925	1,020	1,025	1,030	1,035	1,040	1,045	1,050	1,055	1,060	1,065
Total use	2,432	2,141	2,249	2,250	2,252	2,264	2,276	2,287	2,299	2,321	2,333	2,355
Ending stocks	590	644	700	680	663	654	653	666	662	661	663	668
Stocks/use ratio, percent	24.3	30.1	31.1	30.2	29.4	28.9	28.7	29.1	28.8	28.5	28.4	28.4
Price (dollars per bushel):												
Farm price	6.87	5.90	5.00	4.65	4.75	4.80	4.80	4.80	4.80	4.85	4.85	4.85
Variable costs of production (dollars):												
Per acre	130	132	128	128	130	132	134	137	139	142	144	147
Returns over variable costs (dollars per acre):												
Net returns	193	126	99	87	91	93	93	92	92	93	92	92

Note: Marketing year beginning June 1 for wheat.

Table 23. U.S. soybeans and products long-term projections

Item	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Soybeans												
Area (million acres):												
Planted	76.8	84.2	84.0	79.0	78.0	78.0	78.5	78.5	79.0	79.0	79.0	79.0
Harvested	76.3	83.4	83.1	78.1	77.1	77.1	77.6	77.6	78.1	78.1	78.1	78.1
Yield: bushels per harvested acre	44.0	47.5	46.0	46.5	46.9	47.4	47.9	48.3	48.8	49.3	49.7	50.2
Supply (million bushels)												
Beginning stocks, September 1	141	92	450	519	396	282	243	238	232	237	241	244
Production	3,358	3,958	3,820	3,630	3,620	3,655	3,715	3,750	3,810	3,845	3,885	3,920
Imports	72	15	15	15	15	15	15	15	15	15	15	15
Total supply	3,570	4,065	4,285	4,164	4,031	3,952	3,973	4,003	4,057	4,097	4,141	4,179
Use (million bushels)												
Crush	1,734	1,780	1,835	1,850	1,850	1,855	1,880	1,900	1,925	1,940	1,960	1,975
Seed and residual	98	115	111	109	109	109	110	111	111	111	111	111
Exports	1,647	1,720	1,820	1,810	1,790	1,745	1,745	1,760	1,785	1,805	1,825	1,845
Total use	3,479	3,614	3,766	3,769	3,748	3,709	3,735	3,771	3,821	3,856	3,896	3,931
Ending stocks, August 31												
Total ending stocks	92	450	519	396	282	243	238	232	237	241	244	248
Stocks/use ratio, percent	2.6	12.5	13.8	10.5	7.5	6.6	6.4	6.2	6.2	6.3	6.3	6.3
Price (dollars per bushel)												
Soybean price, farm	13.00	10.00	8.50	8.55	8.80	9.10	9.20	9.30	9.35	9.40	9.45	9.55
Variable costs of production (dollars):												
Per acre	183	186	184	184	186	189	191	194	197	200	204	207
Returns over variable costs (dollars per acre):												
Net returns	389	289	207	214	227	243	250	255	259	263	266	273
Soybean oil (million pounds)												
Beginning stocks, October 1	1,705	1,165	1,335	1,845	2,230	2,370	2,320	2,265	2,145	2,145	2,145	2,210
Production	20,130	20,560	21,215	21,405	21,425	21,500	21,810	22,060	22,370	22,560	22,815	23,010
Imports	165	160	170	180	190	200	210	220	230	240	250	260
Total supply	22,000	21,885	22,720	23,430	23,845	24,070	24,340	24,545	24,745	24,945	25,210	25,480
Domestic disappearance	18,958	18,450	18,675	18,900	19,125	19,350	19,575	19,800	19,900	20,000	20,100	20,200
Biodiesel ¹	4,800	4,800	4,900	5,000	5,100	5,200	5,300	5,400	5,400	5,400	5,400	5,400
Food, feed, and other industrial	14,158	13,650	13,775	13,900	14,025	14,150	14,275	14,400	14,500	14,600	14,700	14,800
Exports	1,877	2,100	2,200	2,300	2,350	2,400	2,500	2,600	2,700	2,800	2,900	3,000
Total use	20,835	20,550	20,875	21,200	21,475	21,750	22,075	22,400	22,600	22,800	23,000	23,200
Ending stocks, September 30	1,165	1,335	1,845	2,230	2,370	2,320	2,265	2,145	2,145	2,145	2,210	2,280
Soybean oil price (dollars per lb)	0.382	0.360	0.340	0.340	0.333	0.340	0.350	0.360	0.365	0.370	0.378	0.385
Soybean meal (thousand short tons)												
Beginning stocks, October 1	275	250	300	300	300	300	300	300	300	300	300	300
Production	40,685	42,785	43,620	43,995	43,980	44,110	44,695	45,175	45,660	46,080	46,505	46,900
Imports	336	165	165	165	165	165	165	165	165	165	165	165
Total supply	41,296	43,200	44,085	44,460	44,445	44,575	45,160	45,640	46,125	46,545	46,970	47,365
Domestic disappearance	29,496	30,100	30,885	31,410	31,945	32,425	32,910	33,340	33,775	34,145	34,520	34,865
Exports	11,550	12,800	12,900	12,750	12,200	11,850	11,950	12,000	12,050	12,100	12,150	12,200
Total use	41,046	42,900	43,785	44,160	44,145	44,275	44,860	45,340	45,825	46,245	46,670	47,065
Ending stocks, September 30	250	300	300	300	300	300	300	300	300	300	300	300
Soybean meal price (dollars per ton)	489.94	350.00	295.00	298.00	314.00	325.00	326.00	327.00	328.00	329.00	330.00	331.50
Crushing yields (pounds per bushel)												
Soybean oil	11.61	11.55	11.56	11.57	11.58	11.59	11.60	11.61	11.62	11.63	11.64	11.65
Soybean meal	46.92	48.08	47.50	47.50	47.50	47.50	47.50	47.50	47.50	47.50	47.50	47.50
Crush margin (dollars per bushel)	2.93	2.57	2.44	2.46	2.51	2.56	2.60	2.65	2.68	2.72	2.78	2.81

Note: Marketing year beginning September 1 for soybeans; October 1 for soybean oil and soybean meal.

¹Reflects biodiesel made from methyl ester as reported by the U.S. Department of Energy, Energy Information Administration.

Table 24a. U.S. rice long-term projections, total rice, rough basis

Item	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Area (thousand acres):												
Planted	2,489	2,931	2,935	2,850	2,940	2,965	2,980	2,995	3,010	3,025	3,040	3,055
Harvested	2,468	2,910	2,909	2,825	2,914	2,939	2,954	2,969	2,983	2,998	3,013	3,028
Yield:												
Pounds per harvested acre	7,694	7,597	7,690	7,752	7,793	7,839	7,884	7,935	7,982	8,032	8,088	8,137
Supply and use (million hundredweight):												
Beginning stocks	36.4	31.8	40.9	42.1	39.9	39.7	39.9	40.1	40.4	40.2	40.2	40.5
Production	189.9	221.1	223.7	219.0	227.1	230.4	232.9	235.6	238.1	240.8	243.7	246.4
Imports	23.1	21.0	21.1	21.2	21.3	21.5	21.6	21.7	21.8	21.9	22.1	22.2
Total supply	249.4	273.9	285.7	282.3	288.3	291.6	294.4	297.3	300.3	303.0	306.0	309.1
Domestic use and residual	124.9	131.0	132.6	129.5	134.6	136.7	138.3	140.0	141.6	143.2	145.0	146.7
Exports	92.7	102.0	111.0	113.0	114.0	115.0	116.0	117.0	118.5	119.5	120.5	121.5
Total use	217.6	233.0	243.6	242.5	248.6	251.7	254.3	257.0	260.1	262.7	265.5	268.2
Ending stocks	31.8	40.9	42.1	39.9	39.7	39.9	40.1	40.4	40.2	40.2	40.5	41.0
Stocks/use ratio, percent	14.6	17.6	17.3	16.4	16.0	15.9	15.7	15.7	15.5	15.3	15.3	15.3
Price (dollars per hundredweight):												
Average farm price	16.10	14.70	14.80	14.70	14.90	15.10	15.40	15.60	15.70	15.80	15.90	16.00
Variable costs of production (dollars):												
Per acre	581	591	580	580	586	594	603	613	624	635	647	658
Returns over variable costs (dollars per acre):												
Net returns	657	526	558	560	575	590	611	625	629	634	639	644

Note: Marketing year beginning August 1 for rice.

Table 24b. U.S. rice long-term projections, long-grain rice, rough basis

Item	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Area (thousand acres):												
Planted	1,781	2,201	2,200	2,100	2,200	2,225	2,250	2,265	2,285	2,300	2,315	2,330
Harvested	1,767	2,186	2,180	2,081	2,180	2,205	2,230	2,245	2,264	2,279	2,294	2,309
Yield:												
Pounds per harvested acre	7,464	7,331	7,440	7,492	7,545	7,597	7,651	7,704	7,758	7,812	7,867	7,922
Supply and use (million hundredweight):												
Beginning stocks	21.9	16.2	28.0	29.6	26.9	26.6	26.4	26.5	26.5	26.6	26.7	26.9
Production	131.9	160.3	162.2	155.9	164.5	167.5	170.6	173.0	175.6	178.0	180.5	182.9
Imports	19.6	18.5	18.6	18.7	18.8	18.9	19.0	19.0	19.1	19.2	19.3	19.4
Total supply	173.3	195.0	208.8	204.1	210.2	212.9	215.9	218.5	221.3	223.9	226.6	229.2
Domestic use & residual	95.3	99.0	102.2	98.2	103.6	105.5	107.5	109.0	110.6	112.1	113.7	115.2
Exports	61.8	68.0	77.0	79.0	80.0	81.0	82.0	83.0	84.0	85.0	86.0	87.0
Total use	157.1	167.0	179.2	177.2	183.6	186.5	189.5	192.0	194.6	197.1	199.7	202.2
Ending stocks	16.2	28.0	29.6	26.9	26.6	26.4	26.5	26.5	26.6	26.7	26.9	27.0
Stocks/use ratio, percent	10.3	16.7	16.5	15.2	14.5	14.2	14.0	13.8	13.7	13.6	13.4	13.3
Price (dollars per hundredweight):												
Average farm price	15.40	12.70	12.50	12.70	13.00	13.40	13.80	14.00	14.10	14.20	14.30	14.40

Note: Marketing year beginning August 1 for rice.

Table 24c. U.S. rice long-term projections, medium- and short-grain rice, rough basis

Item	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Area (thousand acres):												
Planted	708	730	735	750	740	740	730	730	725	725	725	725
Harvested	701	724	729	744	734	734	724	724	719	719	719	719
Yield:												
Pounds per harvested acre	8,272	8,399	8,440	8,482	8,525	8,567	8,610	8,653	8,696	8,740	8,784	8,827
Supply and use (million hundredweight):												
Beginning stocks	12.2	13.3	10.6	10.2	10.6	10.8	11.2	11.3	11.5	11.3	11.2	11.4
Production	58.0	60.8	61.5	63.1	62.6	62.9	62.3	62.6	62.5	62.8	63.2	63.5
Imports	3.5	2.5	2.5	2.6	2.6	2.6	2.6	2.7	2.7	2.7	2.7	2.8
Total supply	73.8	76.6	74.7	75.9	75.8	76.3	76.1	76.5	76.7	76.8	77.1	77.6
Domestic use & residual	29.6	32.0	30.4	31.2	31.0	31.1	30.8	31.0	30.9	31.1	31.3	31.4
Exports	30.9	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.5	34.5	34.5	34.5
Total use	60.4	66.0	64.4	65.2	65.0	65.1	64.8	65.0	65.4	65.6	65.8	65.9
Ending stocks	13.3	10.6	10.2	10.6	10.8	11.2	11.3	11.5	11.3	11.2	11.4	11.7
Stocks/use ratio, percent	22.0	16.1	15.9	16.3	16.7	17.2	17.4	17.8	17.3	17.1	17.3	17.7
Price (dollars per hundredweight):												
Average farm price	18.50	19.50	20.00	19.50	19.40	19.00	19.10	19.20	19.30	19.40	19.50	19.60

Note: Marketing year beginning August 1 for rice.

Table 25. U.S. upland cotton long-term projections

Item	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Area (million acres):												
Planted acres	10.2	10.8	9.8	9.8	9.8	9.9	9.9	10.0	10.1	10.2	10.3	10.4
Harvested acres	7.3	9.7	8.3	8.3	8.3	8.4	8.4	8.5	8.6	8.7	8.8	8.8
Yield:												
Pounds per harvested acre	802	783	800	805	810	815	820	825	830	835	840	845
Supply and use (thousand bales):												
Beginning stocks	3,613	2,325	4,967	4,937	4,757	4,527	4,447	4,317	4,237	4,207	4,227	4,397
Production	12,275	15,819	13,800	13,900	14,000	14,300	14,400	14,600	14,900	15,100	15,400	15,500
Imports	6	5	5	5	5	5	5	5	5	5	5	5
Supply	15,894	18,149	18,772	18,842	18,762	18,832	18,852	18,922	19,142	19,312	19,632	19,902
Domestic use	3,527	3,775	3,825	3,875	3,925	3,975	4,025	4,075	4,125	4,175	4,225	4,275
Exports	9,850	9,450	10,000	10,200	10,300	10,400	10,500	10,600	10,800	10,900	11,000	11,100
Total use	13,377	13,225	13,825	14,075	14,225	14,375	14,525	14,675	14,925	15,075	15,225	15,375
Ending stocks	2,325	4,967	4,937	4,757	4,527	4,447	4,317	4,237	4,207	4,227	4,397	4,517
Stocks/use ratio, percent	17.4	37.6	35.7	33.8	31.8	30.9	29.7	28.9	28.2	28.0	28.9	29.4
Price (dollars per pound):												
Farm price	0.779	0.600	0.595	0.605	0.620	0.640	0.655	0.670	0.680	0.690	0.700	0.710
Variable costs of production (dollars):												
Per acre	512	517	512	513	519	527	534	543	552	562	571	581
Returns over variable costs (dollars per acre):												
Net returns	274	74	71	82	95	111	122	132	137	142	147	152

Note: Marketing year beginning August 1 for upland cotton.

Table 26. U.S. sugar long-term projections

Item	Units	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Sugarbeets													
Planted area	1,000 acres	1,166	1,163	1,236	1,240	1,235	1,232	1,228	1,223	1,220	1,216	1,211	1,207
Harvested area	1,000 acres	1,154	1,146	1,190	1,194	1,189	1,186	1,183	1,178	1,175	1,171	1,166	1,162
Yield	Tons/acre	28.4	27.4	27.4	27.5	27.6	27.7	27.8	27.9	28.0	28.1	28.2	28.3
Production	Mil. s. tons	32.8	31.4	32.6	32.8	32.8	32.8	32.9	32.9	32.9	32.9	32.9	32.9
Sugarcane													
Harvested area	1,000 acres	826	829	816	812	812	811	811	811	811	810	808	807
Yield	Tons/acre	35.0	33.4	33.7	34.0	34.1	34.3	34.5	34.7	34.9	35.0	35.2	35.3
Production	Mil. s. tons	28.9	27.7	27.5	27.6	27.7	27.9	28.0	28.2	28.3	28.4	28.4	28.5
Supply:													
Beginning stocks	1,000 s. tons	2,158	1,796	1,485	1,674	1,700	1,723	1,734	1,746	1,757	1,769	1,780	1,792
Production	1,000 s. tons	8,457	8,462	8,481	8,543	8,584	8,634	8,683	8,724	8,772	8,806	8,836	8,869
Beet sugar	1,000 s. tons	4,794	4,870	5,123	5,177	5,199	5,229	5,256	5,277	5,304	5,329	5,350	5,372
Cane sugar	1,000 s. tons	3,663	3,592	3,358	3,366	3,385	3,406	3,426	3,447	3,468	3,477	3,486	3,496
Total imports	1,000 s. tons	3,706	3,471	4,107	4,079	4,199	4,224	4,260	4,303	4,340	4,393	4,451	4,504
TRQ imports	1,000 s. tons	1,302	1,479	1,738	1,890	2,344	2,565	2,745	2,880	2,960	3,014	3,032	3,006
Imports from Mexico	1,000 s. tons	2,130	1,582	1,960	1,779	1,446	1,249	1,105	1,014	970	969	1,009	1,088
Other imports	1,000 s. tons	274	410	410	410	410	410	410	410	410	410	410	410
Total supply	1,000 s. tons	14,321	13,729	14,073	14,296	14,483	14,581	14,677	14,773	14,869	14,968	15,067	15,165
Use:													
Exports	1,000 s. tons	307	250	250	250	250	250	250	250	250	250	250	250
Domestic deliveries	1,000 s. tons	11,897	11,994	12,149	12,346	12,511	12,597	12,681	12,766	12,851	12,938	13,025	13,111
Miscellaneous	1,000 s. tons	5	0	0	0	0	0	0	0	0	0	0	0
Total use	1,000 s. tons	12,209	12,244	12,399	12,596	12,761	12,847	12,931	13,016	13,101	13,188	13,275	13,361
CCC surplus disbursements ¹	1,000 s. tons	316	0	0	0	0	0	0	0	0	0	0	0
Ending stocks	1,000 s. tons	1,796	1,485	1,674	1,700	1,723	1,734	1,746	1,757	1,769	1,780	1,792	1,804
Raw sugar price:													
New York (No. 16) ²	Cents/lb.	25.26	23.02	22.40	22.40	22.40	22.40	22.40	22.40	22.40	22.40	22.40	22.40
Raw sugar loan rate	Cents/lb.	18.75	18.75	18.75	18.75	18.75	18.75	18.75	18.75	18.75	18.75	18.75	18.75
Beet sugar loan rate	Cents/lb.	24.09	24.09	24.09	24.09	24.09	24.09	24.09	24.09	24.09	24.09	24.09	24.09
Grower prices:													
Sugarbeets	Dol./ton	44.30	50.46	45.93	42.83	42.83	42.83	42.83	42.83	42.83	42.83	42.83	42.83
Sugarcane	Dol./ton	31.32	31.02	29.14	29.12	29.14	29.15	29.16	29.18	29.19	29.14	29.10	29.07

Note: Marketing year beginning October 1 for sugar.

¹CCC is the Commodity Credit Corporation, U.S. Department of Agriculture.

²Price for July-September quarter.

Table 27. Horticultural crops long-term production, farm value, and price projections, calendar years

Item	Unit	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Production area¹													
Fruit, nuts, and vegetables	1,000 acres	9,229	9,240	9,249	9,268	9,289	9,311	9,334	9,359	9,386	9,414	9,444	9,475
Fruit and tree nuts	1,000 acres	4,194	4,202	4,213	4,225	4,238	4,252	4,266	4,281	4,296	4,313	4,330	4,347
Vegetables	1,000 acres	5,035	5,038	5,036	5,043	5,051	5,059	5,069	5,079	5,090	5,101	5,114	5,128
Supply													
Production, farm weight													
Fruit and nuts	Mil. lbs.	66,311	61,682	62,527	62,761	63,001	63,249	63,503	63,765	64,035	64,312	64,596	64,888
Citrus	Mil. lbs.	22,228	18,868	19,292	19,099	18,908	18,719	18,532	18,347	18,163	17,981	17,802	17,624
Noncitrus	Mil. lbs.	38,766	37,200	37,498	37,798	38,100	38,405	38,712	39,022	39,334	39,649	39,966	40,285
Tree nuts	Mil. lbs.	5,317	5,614	5,738	5,864	5,993	6,125	6,260	6,397	6,538	6,682	6,829	6,979
Vegetables ²	Mil. lbs.	128,614	131,330	132,068	132,818	133,581	134,356	135,145	135,948	136,765	137,597	138,443	139,305
Fresh market	Mil. lbs.	41,471	42,646	42,688	42,731	42,774	42,816	42,859	42,902	42,945	42,988	43,031	43,074
Processing	Mil. lbs.	35,748	35,710	35,995	36,283	36,574	36,866	37,161	37,458	37,758	38,060	38,365	38,672
Potatoes	Mil. lbs.	43,465	44,277	44,409	44,543	44,676	44,810	44,945	45,080	45,215	45,350	45,487	45,623
Pulses	Mil. lbs.	4,563	4,952	5,130	5,315	5,506	5,705	5,910	6,123	6,343	6,572	6,808	7,053
Total fruit, nuts, vegetables	Mil. lbs.	194,925	193,012	194,595	195,578	196,582	197,605	198,649	199,714	200,800	201,909	203,040	204,194
Farm value³													
Fruit and nuts	\$ Mil.	28,496	25,481	26,151	26,839	27,545	28,270	29,015	29,780	30,565	31,371	32,199	33,050
Citrus	\$ Mil.	3,171	3,393	3,457	3,523	3,590	3,658	3,728	3,799	3,871	3,944	4,019	4,096
Noncitrus	\$ Mil.	16,111	11,436	11,722	12,015	12,315	12,623	12,939	13,262	13,594	13,933	14,282	14,639
Tree nuts	\$ Mil.	9,215	10,652	10,972	11,301	11,640	11,989	12,349	12,719	13,101	13,494	13,898	14,315
Vegetables	\$ Mil.	23,018	21,682	22,063	22,451	22,846	23,248	23,658	24,074	24,498	24,929	25,368	25,815
Fresh market	\$ Mil.	13,880	12,395	12,580	12,766	12,955	13,146	13,339	13,535	13,732	13,932	14,134	14,338
Processing	\$ Mil.	1,932	1,930	1,965	2,000	2,036	2,073	2,110	2,148	2,187	2,226	2,267	2,307
Potatoes	\$ Mil.	4,223	4,108	4,194	4,282	4,372	4,464	4,558	4,653	4,751	4,851	4,953	5,057
Pulses	\$ Mil.	1,327	1,308	1,354	1,401	1,450	1,501	1,554	1,608	1,664	1,723	1,783	1,845
Nursery and greenhouse ⁴	\$ Mil.	11,836	11,954	12,014	12,074	12,135	12,195	12,256	12,317	12,379	12,441	12,503	12,566
Other horticulture crops ⁵	\$ Mil.	945	968	991	1,015	1,039	1,064	1,089	1,116	1,142	1,170	1,198	1,227
Total horticulture crops	\$ Mil.	64,295	60,084	61,219	62,379	63,565	64,778	66,018	67,287	68,584	69,911	71,269	72,657
Prices received by farmers⁶													
Fruits and tree nuts	2011=100	112.0	125.0	126.6	129.4	132.3	135.2	138.3	141.3	144.4	147.6	150.8	154.1
Vegetables	2011=100	103.0	103.0	104.2	105.5	106.7	108.0	109.2	110.5	111.8	113.0	114.3	115.6
Fruit, nuts, and vegetables	2011=100	108.0	114.9	116.5	118.5	120.5	122.6	124.7	126.8	128.9	131.1	133.3	135.5

¹Bearing acreage for fruit and nuts; harvested area for vegetables. Fruits include melons.

²Includes melons, sweet potatoes, and mushrooms. Utilized production is used for potatoes. Pulses include edible dry beans and peas, lentils, and other peas.

³Production values are used for fruits, nuts, and vegetables. Farm cash receipts are used for nursery and other horticulture crops.

⁴Includes floral crops, greenhouse vegetables such as tomatoes, cucumbers, colored peppers, and fruit/vegetable transplants.

⁵Includes hops, honey, maple syrup, mint oils, mustard, and taro.

⁶Projections are based on annual percent changes of unit farm values—i.e., farm value per production weight.

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

Table 28. Horticultural crops long-term export and import projections, fiscal years

Item	Unit	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Exports													
Fruit and nuts													
Fresh fruits	\$ Mil.	5,007	5,028	5,400	5,588	5,783	5,986	6,197	6,416	6,644	6,881	7,127	7,383
Citrus	\$ Mil.	1,004	978	925	931	938	944	950	956	963	969	976	982
Noncitrus	\$ Mil.	4,002	4,050	4,475	4,656	4,845	5,042	5,246	5,459	5,681	5,911	6,151	6,401
Processed fruits	\$ Mil.	2,881	2,982	3,100	3,203	3,309	3,419	3,532	3,649	3,770	3,895	4,024	4,157
Fruit juices	\$ Mil.	1,284	1,253	1,290	1,330	1,372	1,414	1,458	1,504	1,551	1,599	1,649	1,700
Tree nuts	\$ Mil.	7,163	8,133	9,500	9,898	10,313	10,745	11,195	11,664	12,153	12,662	13,193	13,745
Total fruit and nuts	\$ Mil.	15,051	16,143	18,000	18,689	19,405	20,149	20,924	21,729	22,566	23,438	24,344	25,286
Vegetables													
Fresh	\$ Mil.	2,330	2,392	2,470	2,554	2,640	2,729	2,822	2,917	3,016	3,118	3,223	3,332
Processed ¹	\$ Mil.	4,257	4,627	5,000	5,231	5,472	5,725	5,989	6,265	6,554	6,856	7,173	7,504
Total vegetables	\$ Mil.	6,588	7,020	7,470	7,784	8,112	8,454	8,810	9,182	9,570	9,974	10,396	10,836
Other horticulture													
Nursery and greenhouse	\$ Mil.	370	378	424	430	436	441	447	453	459	465	472	478
Essential oils	\$ Mil.	1,688	1,717	1,928	1,983	2,041	2,099	2,160	2,222	2,287	2,353	2,421	2,490
Wine	\$ Mil.	1,520	1,522	1,709	1,775	1,844	1,915	1,988	2,065	2,145	2,227	2,313	2,402
Beer	\$ Mil.	486	486	546	576	607	640	675	712	751	793	836	882
Other ²	\$ Mil.	5,707	6,167	6,923	7,244	7,579	7,930	8,297	8,681	9,082	9,503	9,942	10,403
Total horticulture	\$ Mil.	31,411	33,433	37,000	38,480	40,022	41,629	43,302	45,045	46,861	48,753	50,724	52,777
Fresh produce ³	\$ Mil.	7,337	7,420	7,900	8,141	8,423	8,715	9,018	9,333	9,659	9,998	10,350	10,715
Processed produce ³	\$ Mil.	7,138	7,610	8,100	8,433	8,781	9,143	9,521	9,914	10,324	10,751	11,197	11,661
Imports													
Fruit and nuts													
Fresh fruits	\$ Mil.	8,341	9,457	10,300	10,854	11,439	12,055	12,704	13,387	14,108	14,868	15,668	16,511
Citrus	\$ Mil.	589	784	854	899	947	997	1,050	1,105	1,164	1,226	1,291	1,359
Noncitrus	\$ Mil.	7,752	8,673	9,446	9,956	10,492	11,058	11,654	12,282	12,944	13,642	14,377	15,152
Processed fruits	\$ Mil.	4,718	4,731	5,000	5,268	5,549	5,846	6,159	6,489	6,836	7,202	7,588	7,994
Fruit juices	\$ Mil.	1,895	1,839	2,000	2,099	2,202	2,311	2,425	2,545	2,670	2,802	2,941	3,086
Tree nuts	\$ Mil.	1,815	2,073	2,400	2,527	2,662	2,803	2,952	3,108	3,273	3,447	3,630	3,823
Total fruit and nuts	\$ Mil.	14,873	16,261	17,700	18,649	19,650	20,704	21,815	22,985	24,218	25,517	26,886	28,328
Vegetables													
Fresh	\$ Mil.	6,544	6,651	7,100	7,429	7,773	8,133	8,509	8,903	9,316	9,747	10,198	10,670
Processed ¹	\$ Mil.	4,225	4,341	4,600	4,769	4,944	5,126	5,315	5,510	5,713	5,923	6,140	6,366
Total vegetables	\$ Mil.	10,768	10,992	11,700	12,198	12,717	13,259	13,824	14,413	15,028	15,670	16,339	17,037
Other horticulture													
Nursery and greenhouse	\$ Mil.	1,667	1,711	1,800	1,821	1,842	1,863	1,885	1,907	1,929	1,951	1,974	1,997
Essential oils	\$ Mil.	2,768	2,989	3,300	3,376	3,453	3,533	3,614	3,697	3,781	3,868	3,957	4,048
Wine	\$ Mil.	5,362	5,488	5,800	5,984	6,174	6,370	6,572	6,780	6,995	7,217	7,446	7,682
Beer	\$ Mil.	3,579	4,084	4,500	4,609	4,721	4,836	4,954	5,074	5,198	5,324	5,453	5,586
Other ²	\$ Mil.	5,094	5,450	6,100	6,468	6,859	7,273	7,713	8,178	8,672	9,196	9,751	10,340
Total horticulture	\$ Mil.	44,112	46,975	50,900	53,106	55,417	57,838	60,375	63,034	65,821	68,743	71,806	75,018
Fresh produce ³	\$ Mil.	14,884	16,108	17,400	18,283	19,212	20,187	21,213	22,291	23,424	24,615	25,866	27,182
Processed produce ³	\$ Mil.	8,943	9,071	9,600	10,037	10,494	10,973	11,474	11,999	12,549	13,125	13,728	14,360

¹Includes dry edible beans, peas, lentils, and potato products.²Includes hops, ginseng, sauces, condiments, mixed food, yeast, starches, and other products that contain horticulture ingredients.³Includes fruits and vegetables only.

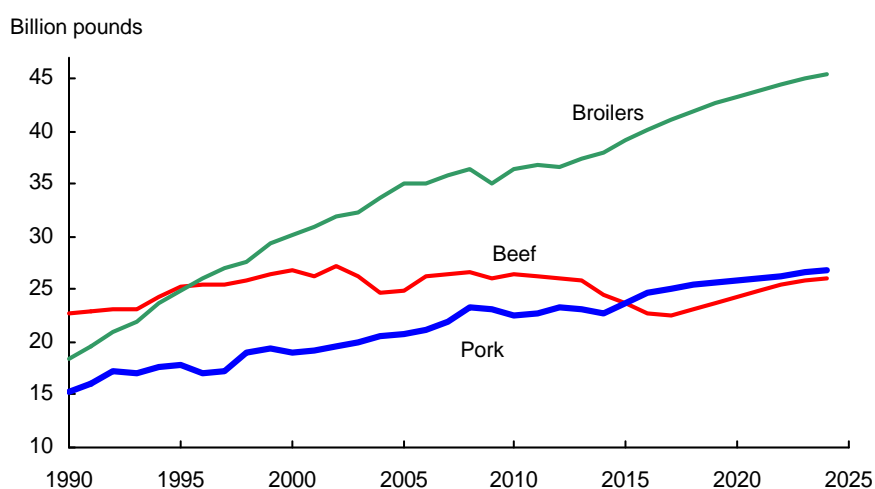
Exports are free alongside ship (FAS) value at U.S. port of exportation. Imports are customs value at U.S. port of entry.

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

U.S. Livestock

The livestock sector is projected to adjust to lower feed costs, with stronger producer returns providing incentives for increasing production. Additionally, the pork sector rebounds from reduced production in 2014 that largely reflected effects of Porcine Epidemic Diarrhea virus (PEDv). Production expansions for pork and broilers are projected for the full projection period. Beef production increases begin in 2018 as near-term declines in output are exacerbated as more heifers are retained to build beef cow inventories rather than fed for slaughter. As a result, total U.S. red meat and poultry production is projected to rise over the projections period. Milk production also increases over the next decade.

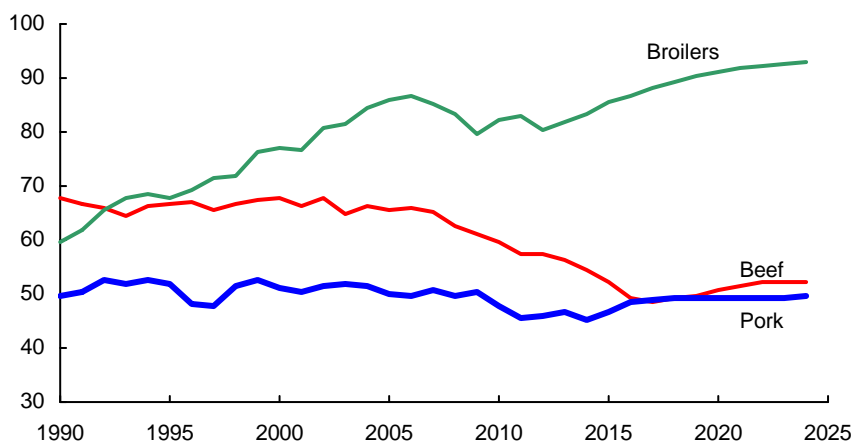
U.S. red meat and poultry production



- Lower feed prices than in the past several years raise producer returns and, coupled with improved pasture, provide incentives for increases in beef production. Retention of heifers for breeding, however, leads to declines in beef production through 2017. Beef production then rises in the remainder of the projection period as returns support continued herd expansion. Beef cow numbers rise from about 29 million head at the start of 2015 to more than 33 million toward the end of the projection period. The total cattle inventory rises from below 88 million head to about 94 million in 2024. Rising slaughter weights also contribute to the longer term increases in beef production.
- With lower feed costs than in recent years and with the pork sector rebounding from PEDv, producers are expected to increase farrowings, and the number of pigs saved per litter also rises. Pork production is projected to rise over the next decade with increases also supported by rising slaughter weights.
- Poultry production rises through the projection period, with both broiler and turkey meats projected to expand. Production growth is expected to come from both higher numbers of birds and higher average weights at slaughter.

U.S. per capita meat consumption

Pounds per capita, retail weight

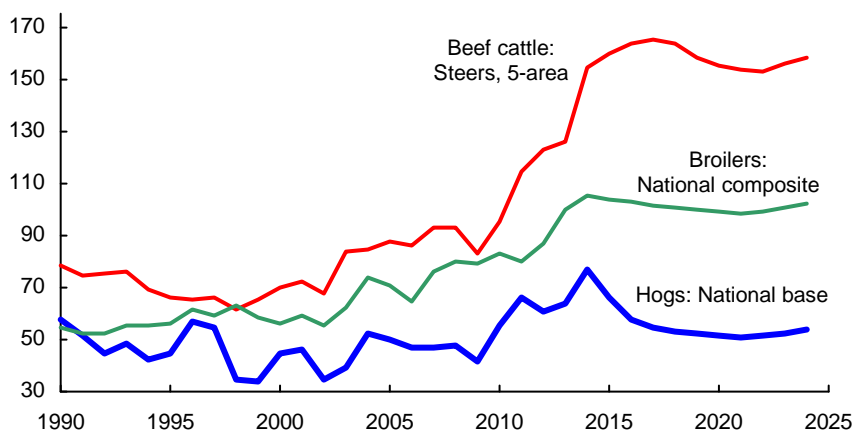


Since 2007, lower overall meat production and increased net exports have resulted in higher consumer prices and lower per capita consumption in the United States. Annual average consumption of red meats and poultry fell from over 221 pounds per capita in 2004-07 to under 202 pounds in 2014. As production increases, per capita consumption of red meats and poultry is projected to rise to about 215 pounds by 2024.

- Per capita beef consumption declines through 2017, before rising moderately over the remainder of the projection period. The near-term decline reflects reductions in beef production over the next several years. As beef production increases in subsequent years, per capita consumption grows.
- Per capita pork consumption is projected to rise sharply in 2015-16 as production gains reflect producer response to lower feed costs and a rebound from 2014 production that was reduced by PEDv. For the remainder of the projections, gains in production are large enough to accommodate both increased domestic use as well as rising U.S. pork exports, although per capita consumption gains moderate as pork production growth slows.
- Poultry production increases throughout the projection period. Per capita consumption rises over the next 10 years and, in contrast to red meats, surpasses levels of the past decade.

Nominal U.S. livestock prices

Dollars per hundredweight

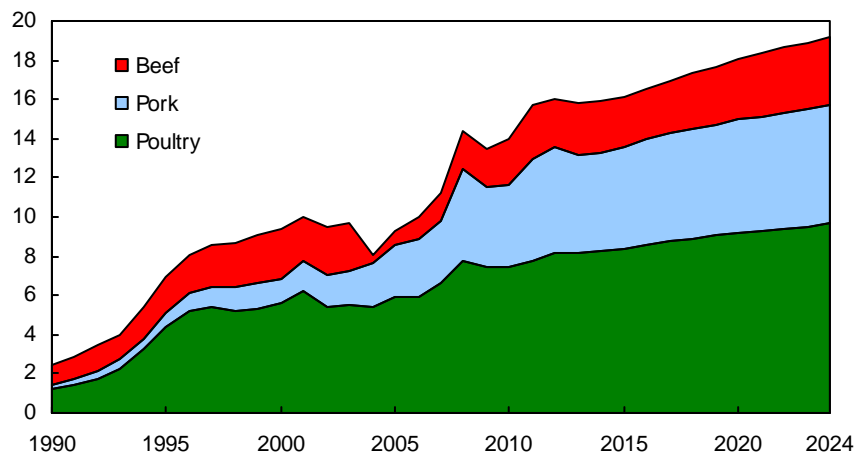


During the initial years of the projection period, prices for hogs and broilers decline as production levels for those meats rise. In contrast, beef cattle prices continue to rise as projected beef production initially falls.

- Beef cattle prices are projected to decrease for several years beginning in 2018 when beef production increases, before turning up again toward the end of the projection period as production gains slow.
- Nominal prices for hogs and broilers continue to decline over much of the projection period reflecting higher overall meat production, but begin to rise toward the end of the projection period as production gains for each slow.

U.S. meat exports

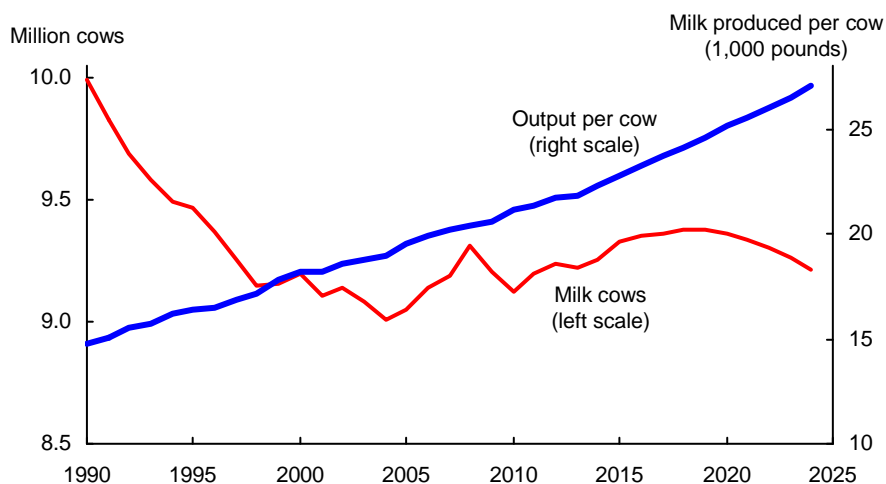
Billion pounds



The projected rise in U.S. red meat and poultry exports over the next decade reflects steady global economic growth, continued weakness of the U.S. dollar, and foreign demand for selected meat cuts and parts from the large U.S. market.

- Most U.S. beef exports are high-quality, grain-fed beef that typically go to Mexico, Canada, and Pacific Rim nations. U.S. beef exports to Japan and South Korea are expected to rise, continuing the recovery in these export markets that were closed to the United States for several years following the first U.S. case of bovine spongiform encephalopathy (BSE) in December 2003. The United States is projected to remain the world's largest importer of beef, primarily of grass-fed, lean beef from Australia, New Zealand, and NAFTA countries for use in ground beef and processed products.
- U.S. pork exports are projected to rise over the next decade. Production efficiency in the U.S. pork sector enhances the sector's international competitiveness. Pacific Rim nations and Mexico are key markets for long-term growth of U.S. pork exports. Exports to Russia are expected to resume as Russia's one-year ban on imports from several countries ends. However, Russia is assumed to continue using investment and trade policies to facilitate expansion of its domestic pork industry and limit reliance on imports, affecting pork exports from the United States and Brazil the most.
- U.S. broiler exports rise through the projection period. Major U.S. export markets include China and Mexico, but U.S. broiler exports also have been increasing to a number of other countries. Longer term gains in these markets reflect their economic growth and increasing consumer demand. International demand for broilers also remains strong because of its lower cost relative to beef and pork. U.S. poultry producers continue to face strong competition from other major exporters, particularly Brazil. Over the projection period, most exports from Thailand and China will continue to be fully cooked products, although Thai export gains also reflect the reopening of trade in uncooked chicken products from that country to the EU and Japan. As noted for pork, Russia is assumed to also support its domestic poultry industry with investment and trade policies.

U.S. dairy herd and milk production per cow



Milk production is projected to continue rising over the projection period. The long-term upward trend in output per cow continues, with favorable returns encouraging expansion of milk cow numbers through 2018.

- Milk cow numbers are projected to rise through 2018 as high milk prices and lower feed costs provide favorable returns to producers. In later years, feed costs begin to rise and milk cow numbers show year-to-year declines in 2020-24.
- U.S. milk output per cow is projected to increase through the projection period, reflecting continued technological and genetic developments.
- Domestic commercial use of dairy products increases faster than the growth in U.S. population over the next decade. The demand for cheese is expected to rise due to greater consumption of prepared foods and increased away-from-home eating. A slow decline in per capita consumption of fluid milk products is expected to continue.
- The United States is expected to be well positioned to expand exports of dairy products. Commercial U.S. dairy exports are projected to increase steadily over the next decade, reaching record levels on both a fat and a skim-solids basis. Production increases in other major dairy exporting countries are expected to lag growth in global import demand.
- Nominal farm-level milk prices are projected to decline through 2018 as lower feed costs encourage increased production. Prices remain flat in 2019 and 2020 and then gradually rise over the rest of the projection period as production gains slow. Declines in real prices largely reflect efficiency gains in production, which result from technological improvements and consolidation in the sector.

Table 29. Per capita meat consumption, retail weight

Item	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
	<i>Pounds</i>											
Beef	56.3	54.6	52.2	49.4	48.5	49.1	49.8	50.6	51.5	52.1	52.4	52.4
Veal	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Pork	46.8	45.3	46.6	48.5	48.8	49.1	49.3	49.4	49.4	49.4	49.4	49.5
Lamb and mutton	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Total red meat	104.4	101.1	99.9	99.0	98.4	99.3	100.1	101.0	101.9	102.4	102.8	102.9
Broilers	81.9	83.4	85.4	86.7	88.1	89.2	90.2	91.1	91.7	92.2	92.7	93.1
Other chicken	1.3	1.3	1.3	1.3	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
Turkeys	16.0	15.7	15.8	16.2	16.5	16.7	16.8	17.0	17.1	17.2	17.3	17.3
Total poultry	99.2	100.3	102.5	104.2	106.0	107.3	108.4	109.5	110.2	110.8	111.3	111.9
Red meat & poultry	203.6	201.4	202.3	203.2	204.4	206.5	208.5	210.5	212.1	213.2	214.1	214.8

Table 30. Beef long-term projections

Item	Units	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Beginning stocks	Mil. lbs.	608	584	495	485	490	500	500	500	500	500	500	500
Commercial production	Mil. lbs.	25,720	24,459	23,665	22,667	22,536	22,986	23,550	24,194	24,847	25,346	25,736	25,947
Change from previous year	Percent	-0.7	-4.9	-3.2	-4.2	-0.6	2.0	2.5	2.7	2.7	2.0	1.5	0.8
Farm production	Mil. lbs.	71	71	71	71	71	71	71	71	71	71	71	71
Total production	Mil. lbs.	25,791	24,530	23,736	22,738	22,607	23,057	23,621	24,265	24,918	25,417	25,807	26,018
Imports	Mil. lbs.	2,250	2,823	2,700	2,600	2,600	2,725	2,775	2,825	2,875	2,925	2,975	3,025
Total supply	Mil. lbs.	28,649	27,937	26,931	25,823	25,697	26,282	26,896	27,590	28,293	28,842	29,282	29,543
Exports	Mil. lbs.	2,590	2,599	2,525	2,543	2,662	2,800	2,935	3,070	3,200	3,300	3,390	3,475
Ending stocks	Mil. lbs.	584	495	485	490	500	500	500	500	500	500	500	500
Total consumption	Mil. lbs.	25,475	24,843	23,921	22,790	22,535	22,982	23,461	24,020	24,593	25,042	25,392	25,568
Per capita, retail weight	Pounds	56.3	54.6	52.2	49.4	48.5	49.1	49.8	50.6	51.5	52.1	52.4	52.4
Change from previous year	Percent	-1.8	-3.2	-4.4	-5.4	-1.8	1.3	1.4	1.7	1.7	1.1	0.7	0.0
Prices:													
Beef cattle, farm	\$/cwt	124.67	152.52	157.54	161.69	163.00	161.85	156.47	153.31	151.49	150.60	153.55	156.17
Calves, farm	\$/cwt	174.25	247.86	278.24	263.78	249.96	247.21	237.11	229.26	226.40	223.15	225.85	231.42
Steers, 5-area	\$/cwt	125.89	154.41	159.50	163.70	165.03	163.86	158.42	155.22	153.38	152.48	155.46	158.11
Yearling steers, Oklahoma City	\$/cwt	147.06	202.51	226.75	214.96	203.70	201.46	193.23	186.83	184.50	181.85	184.05	188.59
Feed price ratio:													
Beef cattle-corn	Ratio	18.1	34.2	45.0	47.6	46.6	46.2	44.7	43.2	42.7	41.8	42.1	42.2
Cattle inventory	1,000 head	90,095	87,730	87,700	87,900	88,281	89,613	90,878	92,525	93,419	93,634	93,984	94,127
Beefcow inventory	1,000 head	29,631	29,042	28,922	28,991	29,741	30,992	31,837	32,630	33,031	33,245	33,543	33,697
Total cow inventory	1,000 head	38,853	38,251	38,200	38,250	39,059	40,320	41,165	41,943	42,319	42,504	42,762	42,866

Note: Cwt = hundredweight.

Table 31. Pork long-term projections

Item	Units	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Beginning stocks	Mil. lbs.	625	618	580	605	600	600	600	600	600	600	600	600
Commercial production	Mil. lbs.	23,187	22,662	23,620	24,664	25,052	25,402	25,681	25,922	26,129	26,327	26,554	26,808
Change from previous year	Percent	-0.3	-2.3	4.2	4.4	1.6	1.4	1.1	0.9	0.8	0.8	0.9	1.0
Farm production	Mil. lbs.	13	13	13	13	13	13	13	13	13	13	13	13
Total production	Mil. lbs.	23,200	22,675	23,633	24,677	25,065	25,415	25,694	25,935	26,142	26,340	26,567	26,821
Imports	Mil. lbs.	880	973	900	900	913	926	939	952	965	978	991	1,004
Total supply	Mil. lbs.	24,705	24,266	25,113	26,182	26,578	26,941	27,233	27,487	27,707	27,918	28,158	28,425
Exports	Mil. lbs.	4,992	5,066	5,250	5,375	5,500	5,600	5,675	5,750	5,825	5,900	5,975	6,050
Ending stocks	Mil. lbs.	618	580	605	600	600	600	600	600	600	600	600	600
Total consumption	Mil. lbs.	19,095	18,620	19,258	20,207	20,478	20,741	20,958	21,137	21,282	21,418	21,583	21,775
Per capita, retail weight	Pounds	46.8	45.3	46.6	48.5	48.8	49.1	49.3	49.4	49.4	49.4	49.4	49.5
Change from previous year	Percent	1.9	-3.2	2.7	4.2	0.6	0.6	0.4	0.2	0.0	0.0	0.1	0.2
Prices:													
Hogs, farm	\$/cwt	67.22	77.98	66.96	59.26	56.44	54.59	53.63	52.85	52.59	53.06	54.05	55.65
National base, live equivalent	\$/cwt	64.05	76.60	65.75	57.54	54.79	53.00	52.07	51.31	51.06	51.52	52.48	54.03
Feed price ratio:													
Hog-corn	Ratio	9.8	17.5	19.1	17.4	16.1	15.6	15.3	14.9	14.8	14.7	14.8	15.0
Hog inventory,													
December 1, previous year	1,000 head	66,224	64,775	65,400	66,916	67,480	67,987	68,393	68,743	69,043	69,331	69,661	70,030

Note: Cwt = hundredweight.

Table 32. Young chicken long-term projections

Item	Units	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Beginning stocks	Mil. lbs.	651	669	610	645	650	650	650	650	650	650	650	650
Federally inspected slaughter	Mil. lbs.	37,830	38,484	39,630	40,586	41,525	42,307	43,081	43,805	44,421	44,967	45,483	45,997
Change from previous year	Percent	2.1	1.7	3.0	2.4	2.3	1.9	1.8	1.7	1.4	1.2	1.1	1.1
Production	Mil. lbs.	37,425	38,072	39,206	40,151	41,081	41,854	42,620	43,336	43,946	44,486	44,997	45,505
Total supply	Mil. lbs.	38,198	38,859	39,932	40,913	41,849	42,623	43,390	44,107	44,718	45,259	45,771	46,280
Change from previous year	Percent	2.3	1.7	2.8	2.5	2.3	1.9	1.8	1.7	1.4	1.2	1.1	1.1
Exports	Mil. lbs.	7,345	7,319	7,400	7,629	7,805	7,952	8,098	8,234	8,350	8,452	8,549	8,646
Ending stocks	Mil. lbs.	669	610	645	650	650	650	650	650	650	650	650	650
Consumption	Mil. lbs.	30,184	30,930	31,887	32,634	33,394	34,021	34,642	35,223	35,718	36,157	36,572	36,984
Per capita, retail weight	Pounds	81.9	83.4	85.4	86.7	88.1	89.2	90.2	91.1	91.7	92.2	92.7	93.1
Change from previous year	Percent	1.9	1.8	2.4	1.6	1.6	1.2	1.1	1.0	0.7	0.5	0.5	0.4
Prices:													
Broilers, farm	Cents/lb.	60.5	64.2	63.5	62.7	61.9	61.3	60.7	60.2	59.9	60.3	61.1	62.2
Broilers, National composite	Cents/lb.	99.7	105.2	104.0	102.9	101.7	100.7	99.7	98.8	98.3	99.1	100.3	102.2
Feed price ratio:													
Broiler-feed ¹	Ratio	3.5	4.7	6.0	6.6	6.4	6.3	6.1	6.0	5.9	5.9	5.9	6.0

¹Broiler feed price based on 58 percent corn price and 42 percent soybean price, as used by USDA, National Agricultural Statistics Service.

Table 33. Turkey long-term projections

Item	Units	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Beginning stocks	Mil. lbs.	296	237	215	275	300	300	300	300	300	300	300	300
Production	Mil. lbs.	5,729	5,739	5,925	6,041	6,162	6,280	6,371	6,464	6,540	6,615	6,692	6,773
Total supply	Mil. lbs.	6,047	6,005	6,168	6,344	6,490	6,608	6,699	6,792	6,868	6,943	7,020	7,101
Change from previous year	Percent	-1.2	-0.7	2.7	2.9	2.3	1.8	1.4	1.4	1.1	1.1	1.1	1.1
Exports	Mil. lbs.	759	799	820	825	830	835	840	845	850	860	870	880
Ending stocks	Mil. lbs.	237	215	275	300	300	300	300	300	300	300	300	300
Consumption	Mil. lbs.	5,051	4,991	5,073	5,219	5,360	5,473	5,559	5,647	5,718	5,783	5,850	5,920
Per capita	Pounds	16.0	15.7	15.8	16.2	16.5	16.7	16.8	17.0	17.1	17.2	17.3	17.3
Change from previous year	Percent	-0.3	-1.9	0.9	2.2	2.0	1.4	0.9	0.9	0.6	0.5	0.5	0.5
Prices:													
Turkey, farm	Cents/lb.	66.5	72.0	71.2	71.6	70.6	69.3	68.3	66.8	66.0	66.4	67.1	68.4
Hen turkeys, National	Cents/lb.	99.8	107.6	106.5	107.0	105.7	103.7	102.1	99.9	98.7	99.3	100.4	102.3
Feed price ratio:													
Turkey-feed ¹	Ratio	4.2	5.7	7.2	8.1	8.0	7.7	7.5	7.3	7.1	7.1	7.1	7.2

¹Turkey feed price based on 51 percent corn price, 28 percent soybean price, and 21 percent wheat price, as used by USDA, National Agricultural Statistics Service.

Table 34. Egg long-term projections

Item	Units	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Beginning stocks	Mil. doz.	21	23	23	23	23	23	23	23	23	23	23	23
Production	Mil. doz.	8,046	8,237	8,430	8,540	8,651	8,780	8,912	9,019	9,127	9,228	9,329	9,432
Change from previous year	Percent	2.1	2.4	2.3	1.3	1.3	1.5	1.5	1.2	1.2	1.1	1.1	1.1
Imports	Mil. doz.	17	33	40	40	40	40	40	40	40	40	40	40
Total supply	Mil. doz.	8,084	8,293	8,493	8,603	8,714	8,843	8,975	9,082	9,190	9,291	9,392	9,495
Change from previous year	Percent	2.0	2.6	2.4	1.3	1.3	1.5	1.5	1.2	1.2	1.1	1.1	1.1
Hatching use	Mil. doz.	960	975	1,000	1,019	1,036	1,051	1,065	1,078	1,090	1,100	1,109	1,118
Exports	Mil. doz.	372	362	355	358	361	364	367	370	373	376	379	382
Ending stocks	Mil. doz.	23	23	23	23	23	23	23	23	23	23	23	23
Consumption	Mil. doz.	6,729	6,933	7,115	7,203	7,294	7,405	7,520	7,611	7,704	7,792	7,881	7,972
Per capita	Number	255.2	261.1	266.0	267.5	269.0	271.2	273.5	274.9	276.4	277.7	278.9	280.2
Change from previous year	Percent	0.3	2.3	1.9	0.5	0.6	0.8	0.9	0.5	0.5	0.5	0.5	0.5
Prices:													
Eggs, farm	Cents/doz.	108.9	119.8	112.0	100.4	98.6	95.2	91.7	89.9	89.0	89.0	89.0	89.0
New York, Grade A large	Cents/doz.	124.7	137.2	128.3	115.0	113.0	109.0	105.0	103.0	102.0	102.0	102.0	102.0
Feed price ratio:													
Egg-feed ¹	Ratio	7.2	10.5	12.6	12.4	12.0	11.4	10.8	10.5	10.3	10.2	10.1	10.0

¹/Egg feed price based on 75 percent corn price and 25 percent soybean price, as used by USDA, National Agricultural Statistics Service.

Table 35. Dairy long-term projections

Item	Units	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Milk production and marketings:													
Number of cows	Thousand	9,221	9,255	9,325	9,350	9,365	9,375	9,375	9,360	9,335	9,305	9,265	9,215
Milk per cow	Pounds	21,822	22,285	22,770	23,275	23,680	24,140	24,580	25,100	25,495	25,980	26,475	27,060
Milk production	Bil. lbs.	201.2	206.2	212.3	217.6	221.8	226.3	230.4	234.9	238.0	241.7	245.3	249.4
Farm use	Bil. lbs.	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.9	0.9
Marketings	Bil. lbs.	200.2	205.2	211.3	216.6	220.8	225.3	229.5	234.0	237.0	240.8	244.4	248.4
Supply and use, milkfat basis:													
Beginning commercial stocks	Bil. lbs.	12.2	11.2	10.5	12.1	12.6	13.0	13.3	13.5	13.6	13.7	13.6	13.5
Marketings	Bil. lbs.	200.2	205.2	211.3	216.6	220.8	225.3	229.5	234.0	237.0	240.8	244.4	248.4
Imports	Bil. lbs.	3.7	4.2	3.8	3.7	3.7	3.7	3.7	3.7	3.8	3.8	3.9	4.1
Commercial supply	Bil. lbs.	216.2	220.6	225.7	232.5	237.1	242.0	246.4	251.1	254.4	258.3	261.9	266.0
Domestic commercial use	Bil. lbs.	192.6	197.8	202.6	207.9	211.2	214.7	218.2	221.7	224.3	227.6	230.8	234.6
Commercial exports	Bil. lbs.	12.4	12.3	11.0	12.0	12.8	14.0	14.8	15.8	16.5	17.1	17.6	17.9
Ending commercial stocks	Bil. lbs.	11.2	10.5	12.1	12.6	13.0	13.3	13.5	13.6	13.7	13.6	13.5	13.5
Total utilization	Bil. lbs.	216.2	220.6	225.7	232.5	237.1	242.0	246.4	251.1	254.4	258.3	261.9	266.0
Supply and use, skim solids basis:													
Beginning commercial stocks	Bil. lbs.	12.4	11.6	12.0	12.8	13.1	13.4	13.6	13.8	13.9	14.0	14.1	14.0
Marketings	Bil. lbs.	200.2	205.2	211.3	216.6	220.8	225.3	229.5	234.0	237.0	240.8	244.4	248.4
Imports	Bil. lbs.	5.3	5.8	5.4	5.2	5.1	5.1	5.1	5.2	5.3	5.3	5.4	5.5
Commercial supply	Bil. lbs.	217.9	222.6	228.8	234.7	239.0	243.8	248.2	252.9	256.2	260.1	263.9	268.0
Domestic commercial use	Bil. lbs.	167.7	172.3	178.6	182.4	184.8	187.3	190.0	193.0	195.0	197.6	200.2	203.0
Commercial exports	Bil. lbs.	38.5	38.3	37.4	39.1	40.8	42.9	44.4	46.0	47.2	48.5	49.7	50.9
Ending commercial stocks	Bil. lbs.	11.6	12.0	12.8	13.1	13.4	13.6	13.8	13.9	14.0	14.1	14.0	14.0
Total utilization	Bil. lbs.	217.9	222.6	228.8	234.7	239.0	243.8	248.2	252.9	256.2	260.1	263.9	268.0
Prices:													
All milk	\$/cwt	20.05	24.20	19.30	18.70	18.30	18.05	18.05	18.05	18.25	18.50	18.90	19.20
Cheese	\$/lb.	1.77	2.18	1.73	1.70	1.66	1.64	1.63	1.63	1.63	1.65	1.68	1.71
Butter	\$/lb.	1.55	2.14	1.72	1.55	1.47	1.43	1.42	1.39	1.41	1.44	1.47	1.50
Nonfat dry milk	\$/lb.	1.71	1.78	1.45	1.43	1.41	1.41	1.43	1.46	1.50	1.52	1.56	1.58
Dry whey	\$/lb.	0.59	0.66	0.57	0.58	0.58	0.58	0.59	0.59	0.60	0.60	0.62	0.62

Note: Cwt = hundredweight.

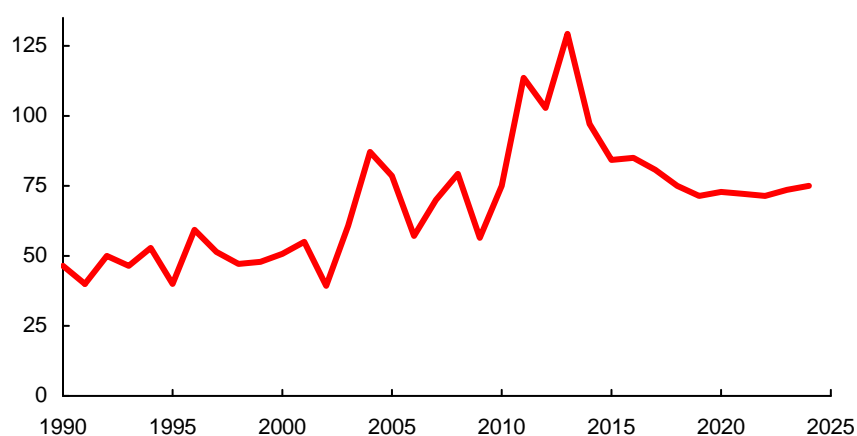
Totals may not add due to rounding.

U.S. Farm Income and Agricultural Trade Value

Projected reductions in prices for most major crops result in declines in export values in 2015 and farm cash receipts in 2015-16. Export values and cash receipts then grow over the rest of the projection period as steady domestic and international economic growth, continued weakness of the U.S. dollar, and production of biofuels support longer term demand for U.S. agricultural products. Farm production expenses also increase after 2016 and direct Government payments fall from 2016 to 2019, so net farm income declines from recent record highs.

U.S. net farm income

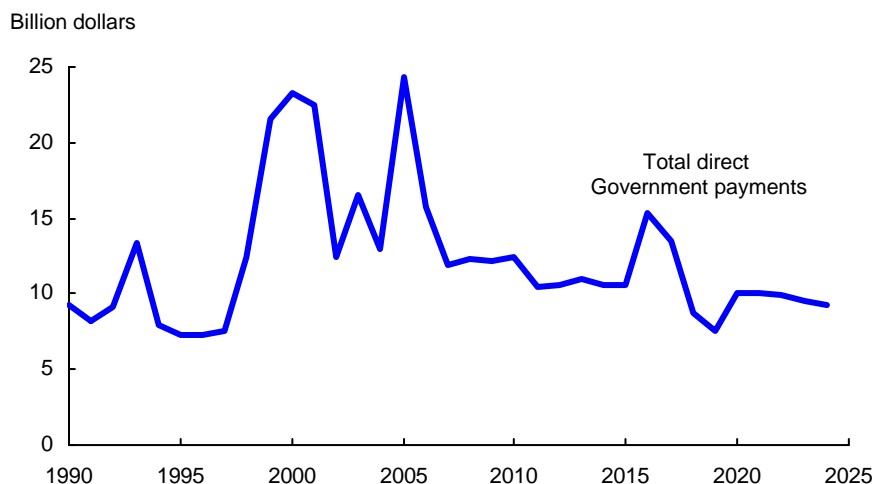
Billion dollars



Net farm income reached a record high in 2013, largely reflecting a runup in prices for many agricultural commodities. While net farm income is projected to fall from that record, it remains above the average of the 2001-10 decade.

- Strengthening global food demand, weakness of the dollar, and world biofuel feedstock demand are major factors underlying projections of rising cash receipts after 2016.
- Total direct Government payments are projected to rise sharply in 2016, largely reflecting lower crop prices that push up payments under the Agriculture Risk Coverage (ARC) and Price Loss Coverage (PLC) programs of the Agricultural Act of 2014. Government payments then fall for several years as commodity prices begin to rise, before averaging close to \$10 billion annually during 2020-24.
- Farm production expenses fall in the first two projection years as lower prices for crops and crude oil along with reduced acreage lead to declines in expenses for farm-origin inputs and manufactured inputs. Expenses increase after 2016 as prices for grains, oilseeds, and crude oil rise.

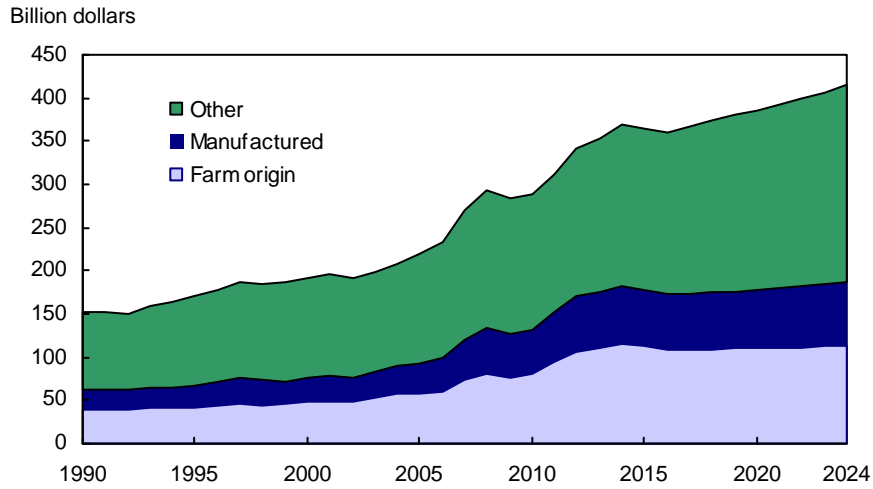
Direct Government payments



Direct Government payments to farmers rise sharply in 2016, mostly due to ARC and PLC payments under the Agricultural Act of 2014. After falling through 2019, direct Government payments average almost \$10 billion per year over 2020-24, compared to an annual average of over \$15 billion in 2001-10. The Conservation Reserve Program (CRP), ARC, and PLC are the largest Government payments to the agricultural sector over the projection period.

- Acreage enrolled in the CRP is assumed to decline to less than its legislative maximum of 24 million acres under the Agricultural Act of 2014. As crop prices begin to rise again, average rental rates for land in the CRP will also increase. As a result, CRP payments are projected to increase from about \$1.8 billion in 2014 to \$2.4 billion in 2024.
- Payments under the ARC and PLC programs rise sharply in 2016, reflecting reductions in crop prices from relatively high levels of recent years. These payments then fall for several years as commodity prices begin to rise, but then jump again in 2020 as some producers are assumed to shift to PLC. (The initial producer election of ARC or PLC under the Agricultural Act of 2014 covers 2014-18 crops. For projections beyond those years, another enrollment election is assumed to be available for 2019-24 crops.)

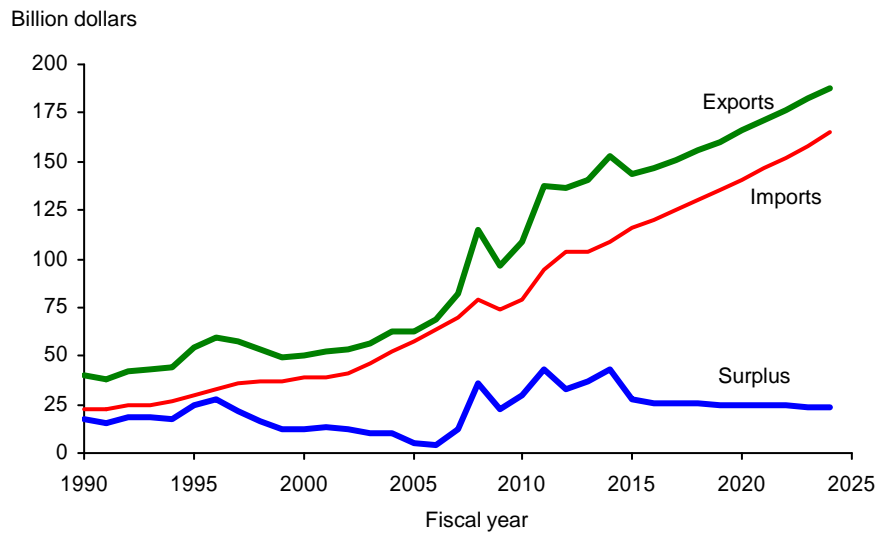
U.S. farm production expenses



Total farm production expenses are projected to fall in 2015 and 2016 as declining agricultural commodity prices lower farm-origin costs, while lower planted acreage and crude oil prices reduce manufactured input expenses. Beyond 2016, production expenses rise less rapidly than the overall rate of inflation through 2024. While interest expenses rise faster than the general inflation rate during these years, expenses for farm-origin inputs and manufactured input costs are up less than the general inflation rate. Aggregate expenses for other nonfarm-origin inputs increase at rates near the overall level of inflation.

- Interest costs rise faster than the general inflation rate over the projection period, reflecting rising farm debt levels as well as increasing interest rates due largely to tightening monetary policy.
- Production expenses for fuel and oil also rise faster than the general inflation rate after 2016, largely reflecting increases in crude oil prices. Reductions in planted acreage in 2015-16 combine with anticipated higher domestic nitrogen fertilizer production capacity and relatively low natural gas prices to lower fertilizer expenses in this period, with these costs rising more slowly than inflation later in the projection period.

U.S. agricultural trade value



The value of U.S. agricultural exports declines in 2015 from the record high of 2014, as prices for major field crops fall from recent highs. Agricultural exports then rise through the remainder of the projections because of sustained global economic growth, strengthening agricultural demand, and a continuing low-valued U.S. dollar. Domestic economic growth boosts demand for U.S. agricultural imports.

- Prices for many crops are projected to initially fall, reducing the value of U.S. agricultural exports in 2015. Agricultural export values are then projected to grow over the rest of the decade and surpass the 2014 record. World economic growth, particularly sustained relatively high growth in developing countries, provides a foundation for increases in global food demand, trade, and U.S. agricultural exports. Continued global demand for biofuel feedstocks also contributes to rising commodity prices and the projected gains in export values. Furthermore, although the U.S. dollar is projected to strengthen somewhat, its continued low value after the depreciation of 2002-11 remains an important factor underlying longer term gains in U.S. export values.
- Exports of high-value products (HVP) are projected to grow to nearly 73 percent of the value of total U.S. agricultural exports by 2024. Much of the growth in HVP exports is for animal products and horticultural products.
- U.S. agricultural import values rise throughout the projection period to almost \$165 billion by 2024, up from \$116 in 2015. These increases are boosted by gains in U.S. consumer incomes and demand for a large variety of foods. Strong growth in horticultural imports is assumed to continue, contributing about half of the overall increase in agricultural imports in the projection period.
- With the value of U.S. exports initially falling, the agricultural trade balance is expected to decline from 2014's record high of \$43.3 billion to \$27.5 billion in 2015. The agricultural trade surplus then falls marginally over the rest of the projection period to \$23.5 billion in 2024.

Table 36. Farm receipts, expenses, and income, long-term projections

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
	<i>Billion dollars</i>											
Cash receipts:												
Crops	218.5	193.5	185.4	179.1	181.3	184.6	188.0	191.2	194.1	197.5	200.9	204.4
Livestock and products	182.8	208.7	202.4	198.1	196.1	196.7	195.8	196.4	198.5	201.0	206.1	211.0
All commodities	401.3	402.2	387.8	377.2	377.4	381.3	383.8	387.5	392.6	398.5	407.0	415.5
Farm-related income	31.5	26.2	27.7	27.7	28.1	28.7	29.2	29.7	30.1	30.6	31.1	31.6
Government payments	11.0	10.6	10.6	15.3	13.5	8.7	7.6	10.1	10.1	9.9	9.5	9.2
Gross cash income	443.9	438.9	426.1	420.2	419.0	418.6	420.6	427.4	432.8	439.0	447.6	456.2
Cash expenses	312.7	330.7	323.4	320.1	323.7	330.3	335.8	341.2	346.6	352.6	359.3	366.2
Net cash income	131.1	108.2	102.7	100.1	95.3	88.3	84.8	86.2	86.2	86.4	88.4	90.1
Value of inventory change	13.7	4.3	-3.3	0.5	1.1	2.8	2.5	3.1	2.0	1.2	1.4	1.1
Non-money income	23.4	24.1	25.0	25.5	26.2	27.1	27.8	28.6	29.5	30.4	31.3	32.2
Gross farm income	481.0	467.3	447.9	446.2	446.4	448.5	450.9	459.1	464.3	470.5	480.3	489.5
Noncash expenses	30.4	30.5	31.4	32.1	33.2	33.9	34.6	35.4	36.2	36.9	37.7	38.5
Operator dwelling expenses	8.8	8.8	8.8	8.9	9.0	9.1	9.2	9.3	9.5	9.6	9.7	9.8
Total production expenses	352.0	370.0	363.7	361.1	365.9	373.3	379.6	385.9	392.2	399.1	406.7	414.5
Net farm income	129.0	97.3	84.2	85.1	80.5	75.2	71.3	73.2	72.1	71.4	73.6	75.0

The projections were completed in December 2014.

Table 37. Summary of U.S. agricultural trade long-term projections, fiscal years

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
<i>Billion dollars</i>												
Agricultural exports (value):												
Livestock, poultry, and dairy	31.5	33.8	33.7	33.8	35.1	36.5	37.8	39.3	40.7	42.2	43.9	45.7
Livestock products	18.9	20.0	20.6	20.9	21.7	22.6	23.4	24.2	25.2	26.1	27.2	28.3
Dairy products	6.1	7.4	6.7	6.3	6.5	6.9	7.3	7.6	8.0	8.3	8.7	9.0
Poultry products	6.5	6.4	6.4	6.6	6.8	7.0	7.2	7.4	7.6	7.8	8.1	8.3
Grains and feeds	31.4	36.5	29.9	30.7	31.7	32.6	33.7	34.6	35.6	36.7	37.8	38.9
Coarse grains	6.2	12.5	9.5	10.2	10.6	10.9	11.4	11.8	12.2	12.6	13.0	13.4
Feeds and fodder	8.3	9.0	7.1	7.4	7.6	7.9	8.2	8.5	8.8	9.2	9.5	9.8
Oilseeds and products	31.9	35.1	29.7	29.7	30.2	30.5	30.9	31.5	32.1	32.6	33.2	33.8
Soybeans and products	27.4	30.8	25.3	25.3	25.7	26.0	26.3	26.8	27.3	27.8	28.2	28.8
Horticultural products ¹	31.4	33.4	37.0	38.5	40.0	41.6	43.3	45.0	46.9	48.8	50.7	52.8
Fruits and vegetables, fresh	7.3	7.4	7.9	8.1	8.4	8.7	9.0	9.3	9.7	10.0	10.4	10.7
Fruits and vegetables, processed	7.1	7.6	8.1	8.4	8.8	9.1	9.5	9.9	10.3	10.8	11.2	11.7
Tree nuts, whole and processed	7.2	8.1	9.5	9.9	10.3	10.7	11.2	11.7	12.2	12.7	13.2	13.7
Cotton	5.6	4.6	3.7	3.8	4.0	4.1	4.3	4.4	4.6	4.7	4.8	4.9
Sugar and tropical products	6.3	6.3	6.7	6.9	7.1	7.3	7.5	7.8	8.0	8.3	8.5	8.8
Other exports ²	2.8	2.9	2.8	2.9	2.9	2.9	3.0	3.0	3.1	3.2	3.2	3.3
Total agricultural exports	141.0	152.5	143.5	146.3	150.9	155.6	160.5	165.7	171.0	176.4	182.1	188.1
Major bulk products ³	46.1	52.8	42.9	43.3	44.3	45.1	46.0	47.0	48.1	49.1	50.0	51.1
High-value product exports ⁴	94.9	99.7	100.6	103.1	106.7	110.5	114.5	118.6	122.9	127.3	132.1	137.0
High-value product share	67.3%	65.4%	70.1%	70.4%	70.7%	71.0%	71.3%	71.6%	71.9%	72.2%	72.5%	72.8%
<i>Million metric tons</i>												
Agricultural exports (volume):												
Bulk commodity exports	93.2	134.9	129.1	131.5	132.9	133.7	135.7	138.0	140.1	141.9	143.8	145.7
<i>Billion dollars</i>												
Agricultural imports (value):												
Livestock and dairy products	13.7	16.0	16.8	17.0	17.4	18.1	18.5	19.0	19.5	20.1	20.7	21.4
Livestock and meats	10.1	12.1	12.9	12.9	13.1	13.7	14.0	14.4	14.8	15.2	15.8	16.3
Dairy products	3.0	3.3	3.2	3.4	3.5	3.6	3.7	3.8	3.9	4.0	4.1	4.2
Grains and feeds	11.3	10.8	11.0	11.3	11.7	12.1	12.6	13.0	13.5	14.0	14.6	15.1
Grain products	6.2	6.5	6.8	7.1	7.4	7.7	8.0	8.3	8.6	9.0	9.3	9.7
Oilseeds and products	8.8	9.9	9.3	9.8	10.4	11.1	11.6	12.2	12.8	13.4	14.0	14.7
Vegetable oils	5.2	5.4	5.6	5.9	6.2	6.4	6.7	7.0	7.4	7.7	8.1	8.4
Horticultural products	44.1	47.0	50.9	53.1	55.4	57.8	60.4	63.0	65.8	68.7	71.8	75.0
Fruits and vegetables, fresh	14.9	16.1	17.4	18.3	19.2	20.2	21.2	22.3	23.4	24.6	25.9	27.2
Fruits and vegetables, processed	8.9	9.1	9.6	10.0	10.5	11.0	11.5	12.0	12.5	13.1	13.7	14.4
Wine and beer	8.9	9.6	10.3	10.6	10.9	11.2	11.5	11.9	12.2	12.5	12.9	13.3
Sugar and tropical products	23.5	23.2	25.3	26.6	27.6	28.5	29.5	30.5	31.6	32.7	33.9	35.1
Sugar and related products	4.6	4.7	4.5	5.0	5.1	5.2	5.3	5.3	5.4	5.5	5.6	5.7
Cocoa, coffee, and products	10.1	10.7	11.6	12.0	12.5	13.0	13.5	14.0	14.5	15.1	15.7	16.3
Other imports ⁵	2.4	2.2	2.5	2.6	2.7	2.8	2.8	2.9	3.0	3.1	3.2	3.3
Total agricultural imports	103.9	109.2	116.0	120.4	125.2	130.4	135.4	140.7	146.3	152.1	158.2	164.7
Net agricultural trade balance	37.1	43.3	27.5	26.0	25.7	25.2	25.1	24.9	24.7	24.3	23.9	23.5

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

U.S. trade value projections were completed in December 2014. For updates of the nearby year forecasts, see USDA's *Outlook for U.S. Agricultural Trade* report, published in February, May, August, and December.¹Includes wine, beer, essential oils, nursery crops, hops, and mint.²Includes planting seeds, unmanufactured tobacco, and cotton linters.³Includes bulk grains, soybeans, cotton, and tobacco.⁴The category "high-value product exports" is calculated as total exports less bulk commodities. The category includes semiprocessed and processed grains and oilseeds, animals and animal products, horticultural products, and sugar and tropical products.⁵Includes planting seeds, unmanufactured tobacco, and cotton.

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