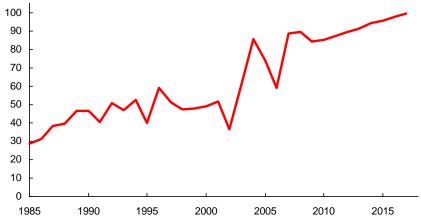
# U.S. Agricultural Sector Aggregate Indicators Farm Income, Food Prices and Expenditures, and U.S. Trade Value

Steady domestic and international economic growth supports gains in consumption, trade, and prices. In addition, large increases in corn-based ethanol production affect production, use, and prices of farm commodities throughout the sector. These factors combine to result in higher market prices and increasing cash receipts. Rising production expenses and lower government payments offset some of the gains in cash receipts and other sources of farm income, although net farm income remains strong and reaches record levels in the second half of the projections. Similarly, U.S. agricultural export values are robust through the projections and set new records beyond 2012. On average, consumer food prices are projected to rise more slowly than the general rate of inflation over the next decade, although continuing adjustments due to higher energy-related costs and agricultural commodity prices push food prices up faster in some years.



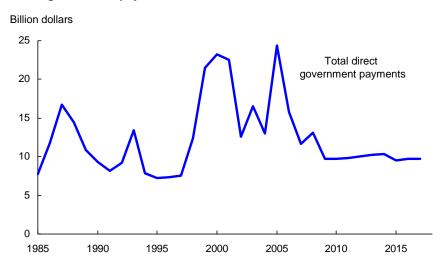
U.S. net farm income



Strong domestic use and export demand push U.S. net farm income from a projected record of about \$90 billion in 2008 to almost \$100 billion by 2017.

• Expansion of corn-based ethanol production is a major factor underlying large increases in cash receipts in 2006-08. Continuing demand strength in domestic and international markets result in further gains in cash receipts through the projections. Lower government payments, due to higher commodity prices, and rising farm production expenses offset some of the gains in cash receipts, although net farm income remains historically high.

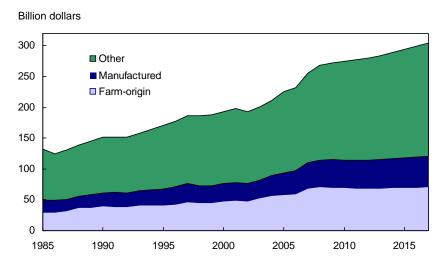
# **Direct government payments**



Direct government payments to farmers are projected to fall from \$13 billion in 2008 to an average of less than \$10 billion annually in 2009 to 2017, largely due to higher commodity prices and correspondingly lower price-dependent program benefits.

- Strong domestic and international demand for crops, including corn for ethanol production, causes projected market prices for crops to be at levels that result in very low government payments for price-sensitive income-support programs. For example, even with stochastic considerations included here to capture potential variation in farm program benefits due to shocks to production yields, payments for marketing loan benefits and counter-cyclical payments for feed grains are minimal, totaling less than \$500 million over calendar years 2008-17 for the projections scenario in this report.
- In contrast, with higher crop prices, use of land for production is more valuable, so rental rates for land in the Conservation Reserve Program (CRP) rise and push overall annual CRP payments to close to \$3 billion toward the end of the projections. As a result, fixed direct payments under the 2002 Farm Act and conservation payments account for a larger share of total direct government payments in the farm income accounts, over 80 percent in 2015-17.
- With lower government payments, the agriculture sector relies on the market for more of its income, and the share of income provided by government payments falls. Government payments, which represented more than 8 percent of gross cash income in 2005, account for less than 3 percent during most of the projection period. Conversely, cash receipts plus farm-related income rises to over 97 percent of gross cash income.

# U.S. farm production expenses



Total production expenses increase at less than the general inflation rate from 2009-17, following the adjustments to higher energy costs that started in 2004. These expenses are divided into three categories in the chart above: farm-origin (seed, feed, and feeder livestock), manufactured (fuel, fertilizer, pesticides, and electricity), and other (labor, interest, net rent to nonoperator landlords, and other expenses).

- The largest percentage increase is for "other" expenses, reflecting increases in labor expenses, interest costs, and net rent to nonoperator landlords. Labor expenses rise as sector output increases and wage rates rise. Projected increases in interest costs reflect higher interest rates, as well as increased debt facilitated by higher income. Increases for net rent reflect higher cash receipts and profitability as well as larger sector output.
- Projected manufactured-input expenses reflect high oil prices and larger crop production. After increases in 2004-08 that were mostly due to rising oil prices, these expenses increase moderately through 2013 during a period of relatively stable oil prices. Then as oil prices rise faster than the general inflation rate over the remainder of the projection period, production expenses for manufactured inputs rise more rapidly.
- Farm-origin expenses rise less than the general inflation rate. Feed expenses, which have risen sharply in recent years with higher corn prices, are relatively flat in the projections period as corn prices stabilize. Seed expenses increase only moderately as acreage declines from 2008 highs and then stabilizes. Expenses for purchased livestock also increase moderately as the livestock sector continues to adjust to higher feed costs.
- Cash operating margins remain relatively stable over the projections period at about
   73 percent as cash receipts and gross cash incomes rise at close to the same pace as cash expenses.

#### U.S. food inflation

Percent change

Consumer Price Index (CPI), all items

Food CPI

1985 1990 1995 2000 2005 2010 2015

Adjustments in retail prices due to higher energy and agricultural commodity prices are projected to continue for the next 2 years and lead to food price increases somewhat larger than general inflation in 2008 and 2009. For the rest of the projections period, however, retail food prices increase less than the general inflation rate.

- Relatively large price increases are expected in 2008 for fats and oils and for cereals and bakery products, reflecting higher prices for vegetable oils and wheat. Consumer prices for red meats, poultry, and eggs exceed the general inflation rate in 2009 as the livestock sector adjusts to higher feed costs due to the expansion in corn-based ethanol production. Smaller increases in meat prices are then projected as production growth resumes.
- Prices for food away from home reflect the overall inflation rate as well as some effect of
  price movements for retail meat and poultry. Income growth supports continuing gains in
  prices for food consumption away from home, although competition in the fast-food and
  foodservice industries tend to moderate these price increases.

## U.S. food expenditures

Billion dollars

800 
600 
Food at home

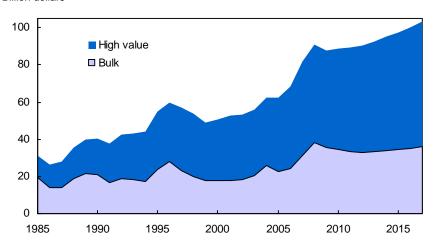
400 
Food away from home

200 
1990 1995 2000 2005 2010 2015

• Expenditures for meals prepared away from home account for a growing share of food spending, reaching about 52 percent of total food expenditures by 2017.

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

Billion dollars



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

The value of U.S. agricultural exports rises in the projections due to increases in both export volumes and prices. Strong domestic economic growth and consumer demand boost agricultural imports.

- The value of U.S. agricultural exports is projected to grow from \$82 billion in fiscal year 2007 to more than \$103 billion in 2017. The lower value U.S. dollar is an important factor underlying recent export gains and the projected growth. In addition, steady world economic growth, particularly in developing countries, provides a foundation for gains in trade and U.S. agricultural exports. Higher commodity prices due to expansion of global biofuel demand also contribute to the gains in export values.
- Recent increases in bulk commodity prices have strengthened bulk export values, pushing
  the share of exports accounted for by high-value products (HVP) down through fiscal year
  2008. In the longer run, however, HVP export values grow in importance again,
  representing about 65 percent of the value of U.S. exports by the end of the projection
  period. Much of the growth in HVP exports is for animal products and horticultural
  products.
- U.S. agricultural import values rise to almost \$105 billion in 2017, boosted by gains in consumer income and demand for a large variety of foods. Strong growth in horticultural imports is assumed to continue, contributing over half of the overall agricultural import increase.
- Overall, the U.S. agricultural trade surplus is projected at \$15.5 billion in fiscal year 2008, largely due to recent gains in bulk commodity prices and bulk export values. The agricultural trade balance declines from this level over the projections period, as bulk exports remain relatively flat while imports continue steady gains.

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

<u> </u>	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
	Billion dollars											
Cash receipts:												
Crops	120.0	143.2	161.5	162.1	163.2	164.1	166.0	169.3	172.9	176.4	180.1	184.2
Livestock and products	119.3	141.0	138.3	137.6	139.1	142.0	143.8	145.6	148.4	150.8	152.9	154.9
All commodities	239.3	284.2	299.8	299.8	302.3	306.1	309.9	314.9	321.3	327.2	333.0	339.1
Farm-related income	17.5	18.8	19.3	19.8	20.3	20.7	21.2	21.7	22.2	22.7	23.2	23.7
Government payments	15.8	11.7	13.1	9.7	9.7	9.8	10.0	10.2	10.3	9.6	9.7	9.7
Gross cash income	272.5	314.6	332.2	329.3	332.2	336.6	341.1	346.7	353.8	359.5	366.0	372.5
Cash expenses	204.7	227.2	238.1	241.4	243.8	245.2	247.5	251.8	256.4	261.2	265.7	270.9
Net cash income	67.9	87.4	94.1	87.9	88.4	91.5	93.5	95.0	97.4	98.3	100.3	101.7
Value of inventory change	-1.6	5.8	0.4	1.5	1.6	0.6	0.5	0.8	0.9	1.2	1.1	1.4
Noncash income	20.5	23.8	24.7	25.8	26.3	26.8	27.4	27.9	28.4	29.0	29.5	30.1
Gross farm income	291.5	344.2	357.3	356.5	360.1	364.1	369.0	375.4	383.2	389.7	396.6	404.0
Noncash expenses	18.2	18.3	18.7	19.5	19.8	20.1	20.3	20.5	20.7	20.9	21.1	21.3
Operator dwelling expenses	9.6	10.1	11.2	11.4	11.5	11.6	11.8	11.9	12.1	12.2	12.3	12.5
Total production expenses	232.5	255.5	268.1	272.3	275.1	276.9	279.6	284.2	289.2	294.3	299.1	304.7
Net farm income	59.0	88.6	89.2	84.2	85.0	87.2	89.4	91.2	94.0	95.3	97.5	99.4

Table 28. Consumer food price indexes and food expenditures, long-term projections

CPI category	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Consumer price indexes:						1982-8	4–100					
•	4050	000.0	000.4	045.5	200.0			005.0	044.5	0.40.0	050.0	057.7
All food	195.2	202.9	209.4	215.5	220.8	225.7	230.6	235.8	241.5	246.8	252.2	257.7
Food away from home	199.4	206.7	212.9	219.7	225.4	231.0	236.5	242.4	248.7	254.7	260.8	267.1
Food at home	193.1	201.2	207.9	213.7	218.7	223.3	227.9	232.7	238.0	242.9	247.9	253.0
Meats	188.8	195.0	198.9	210.3	215.6	218.6	221.4	224.3	228.8	231.9	233.9	236.1
Beef and veal	202.1	211.1	216.0	230.5	236.1	237.7	239.8	243.1	249.8	253.9	255.8	258.3
Pork	177.3	180.9	185.0	195.4	201.1	206.3	209.8	212.1	214.0	215.5	216.9	218.1
Other meats	180.7	184.8	186.0	191.0	194.8	198.5	201.7	204.7	207.6	210.5	213.3	216.1
Poultry	182.0	191.4	194.5	203.0	206.3	210.8	214.3	217.6	219.9	221.2	221.8	224.2
Fish and seafood	209.5	219.1	226.8	233.6	240.6	247.8	255.2	262.9	270.8	278.9	287.3	295.9
Eggs	151.2	195.3	189.0	198.0	205.8	210.7	213.7	216.7	219.7	222.7	225.7	228.7
Dairy products	181.4	194.8	200.0	199.5	203.5	208.0	212.5	217.0	221.5	226.0	231.0	236.0
Fats and oils	168.0	172.9	182.4	186.6	191.0	195.6	200.3	205.1	210.0	214.9	220.1	225.4
Fruits and vegetables	252.9	262.6	271.5	276.6	282.5	289.2	296.0	303.0	310.4	318.0	325.8	333.8
Sugar and sweets	171.5	176.8	181.2	185.3	188.6	192.5	196.3	200.2	204.3	208.3	212.5	216.7
Cereals and bakery products	212.8	222.1	235.4	239.7	243.9	248.6	254.0	259.9	266.1	272.3	278.8	285.5
Nonalcoholic beverages	147.4	153.4	159.5	165.1	170.1	174.4	178.8	183.3	187.9	192.6	197.4	202.3
Other foods	185.0	188.2	193.9	199.2	204.0	208.7	213.5	218.4	223.5	228.6	233.9	239.3
Food expenditures:						Billion	dollars					
All food	1,082.5	1,137.7	1,190.2	1,241.9	1,290.7	1,339.2	1,388.6	1,440.9	1,497.0	1,553.0	1,610.5	1,671.1
Food at home	553.4	583.6	608.3	629.8	650.4	670.2	690.3	711.2	733.8	756.1	778.6	802.4
Food away from home	529.1	554.1	581.9	612.1	640.3	669.0	698.3	729.7	763.2	796.9	831.9	868.7

Table 29. Changes in consumer food prices, long-term projections

CPI category	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	
	Percent												
All food	2.4	4.0	3.2	2.9	2.5	2.2	2.2	2.3	2.4	2.2	2.2	2.2	
Food away from home	3.1	3.6	3.0	3.2	2.6	2.5	2.4	2.5	2.6	2.4	2.4	2.4	
Food at home	1.7	4.2	3.3	2.8	2.3	2.1	2.1	2.1	2.3	2.1	2.1	2.1	
Meats	0.7	3.3	2.0	5.7	2.5	1.4	1.3	1.3	2.0	1.4	0.9	0.9	
Beef and veal	0.8	4.4	2.3	6.7	2.4	0.7	0.9	1.4	2.8	1.6	0.7	1.0	
Pork	-0.2	2.0	2.3	5.6	2.9	2.6	1.7	1.1	0.9	0.7	0.6	0.6	
Other meats	1.8	2.3	0.6	2.7	2.0	1.9	1.6	1.5	1.4	1.4	1.3	1.3	
Poultry	-1.8	5.1	1.6	4.4	1.6	2.2	1.7	1.5	1.1	0.6	0.3	1.1	
Fish and seafood	4.7	4.6	3.5	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Eggs	4.9	29.2	-3.2	4.8	3.9	2.4	1.4	1.4	1.4	1.4	1.3	1.3	
Dairy products	-0.5	7.4	2.7	-0.2	2.0	2.2	2.2	2.1	2.1	2.0	2.2	2.2	
Fats and oils	0.2	2.9	5.5	2.3	2.4	2.4	2.4	2.4	2.4	2.3	2.4	2.4	
Fruits and vegetables	4.8	3.8	3.4	1.9	2.1	2.4	2.4	2.4	2.4	2.4	2.5	2.5	
Sugar and sweets	3.8	3.1	2.5	2.3	1.8	2.1	2.0	2.0	2.0	2.0	2.0	2.0	
Cereals and bakery products	1.8	4.4	6.0	1.8	1.8	1.9	2.2	2.3	2.4	2.3	2.4	2.4	
Nonal coholic beverages	2.1	4.1	4.0	3.5	3.0	2.5	2.5	2.5	2.5	2.5	2.5	2.5	
Other foods	1.4	1.8	3.0	2.7	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	

Table 30. Summary of U.S. agricultural trade long-term projections, fiscal years

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
						Billion do	ollars					
Agricultural exports (value):												
Livestock, dairy, and poultry	13.4	16.3	17.1	16.9	17.6	18.4	19.1	19.8	20.7	21.5	22.3	23.2
Livestock, poultry, and products	11.6	13.9	14.5	14.7	15.4	16.1	16.8	17.5	18.3	19.1	19.8	20.7
Dairy products	1.8	2.5	2.6	2.2	2.2	2.3	2.3	2.3	2.4	2.4	2.5	2.5
Grain and feeds	18.3	24.2	27.5	24.9	24.9	24.0	23.8	24.2	24.9	25.4	26.2	27.1
Coarse grains	6.8	9.6	11.7	11.0	11.2	10.5	10.2	10.3	10.7	11.0	11.3	11.9
Oilseeds and products	10.6	13.7	16.3	14.8	14.9	14.5	14.6	14.6	14.8	14.9	15.1	15.3
Soybeans and products	8.2	11.0	13.3	11.8	11.9	11.4	11.5	11.5	11.5	11.5	11.6	11.7
Horticultural products	16.7	17.9	18.6	19.1	19.6	20.2	20.7	21.3	21.9	22.5	23.2	23.8
Fruits and vegetables, fresh	4.5	4.8	4.9	5.0	5.1	5.3	5.4	5.5	5.7	5.8	6.0	6.1
Fruits and vegetables, processed	3.9	4.4	4.5	4.6	4.7	4.8	4.9	5.0	5.1	5.2	5.3	5.4
Cotton and linters	4.7	4.3	5.8	6.6	6.4	6.5	6.6	6.9	6.9	7.2	7.3	7.6
Other exports	5.0	5.6	5.8	5.4	5.5	5.7	5.8	6.0	6.1	6.2	6.3	6.5
Total agricultural exports	68.6	81.9	91.0	87.8	88.9	89.2	90.7	92.8	95.3	97.7	100.3	103.4
Bulk commodity exports	24.5	31.4	38.0	35.7	34.6	33.4	32.9	33.2	33.9	34.4	35.2	36.3
High-value product exports	44.1	50.6	53.0	52.1	54.3	55.8	57.8	59.6	61.4	63.3	65.1	67.1
High-value product share	64.4%	61.7%	58.2%	59.3%	61.1%	62.6%	63.7%	64.2%	64.5%	64.8%	64.9%	64.9%
					٨	1illion met	ric tons					
Agricultural exports (volume):												
Bulk commodity exports	120.7	124.7	130.8	116.9	115.2	114.4	114.2	115.2	117.0	118.4	121.4	124.3
Agricultural imports (value):						Billion do	ollars					
Livestock, dairy, and poultry	11.5	12.0	12.3	13.2	13.6	14.0	14.3	14.7	15.2	15.7	16.0	16.5
Livestock and meats	8.5	8.9	9.2	9.9	10.2	10.5	10.8	11.0	11.4	11.7	12.0	12.3
Dairy products	2.6	2.7	2.7	2.8	2.9	3.0	3.0	3.1	3.2	3.3	3.4	3.5
Grain and feeds	4.9	6.0	6.6	6.9	7.1	7.3	7.6	7.9	8.2	8.6	9.0	9.4
Grain products	3.4	3.9	4.2	4.5	4.7	4.9	5.2	5.5	5.7	6.0	6.3	6.6
Oilseeds and products	3.5	4.0	4.8	5.1	5.3	5.5	5.7	5.9	6.1	6.3	6.5	6.8
Vegetable oils	2.4	2.8	3.5	3.7	3.9	4.0	4.1	4.3	4.4	4.6	4.8	4.9
Horticultural products	29.1	32.4	35.2	37.1	38.7	40.1	41.6	43.2	44.8	46.4	48.2	50.0
Fruits and vegetables, fresh	8.7	9.6	10.4	11.0	11.4	11.9	12.3	12.8	13.2	13.7	14.2	14.8
Fruits and vegetables, processed	5.4	6.6	7.4	7.7	7.8	7.9	8.0	8.1	8.2	8.4	8.5	8.6
Wine and beer	7.4	8.2	8.8	9.3	9.7	10.1	10.5	11.0	11.4	11.9	12.4	12.9
Sugar and tropical products	13.6	14.1	15.0	15.6	16.2	16.7	17.2	17.8	18.4	19.0	19.6	20.3
Sugar and related products	3.3	2.8	3.1	3.2	3.4	3.5	3.6	3.7	3.8	3.9	4.0	4.1
Cocoa, coffee, and products	5.8	6.2	6.5	6.8	7.0	7.2	7.5	7.7	8.0	8.2	8.5	8.8
Other imports	1.4	1.5	1.6	1.5	1.5	1.6	1.7	1.6	1.7	1.7	1.7	1.6
Total agricultural imports	64.0	70.0	75.5	79.4	82.4	85.2	88.1	91.1	94.4	97.7	101.0	104.6
Net agricultural trade balance	4.6	11.9	15.5	8.3	6.5	4.0	2.6	1.7	0.9	0.0	-0.7	-1.2

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

Notes: The projections were completed in November 2007 based on policy decisions and other information known at that time. For updates of the nearby year forecasts, see USDA's Outlook for U.S. Agricultural Trade report, published in February, May, August, and November. Other exports includes tobacco, seeds, sugar and tropical products, and beverages and preparations. Bulk commodity exports covers wheat, rice, feed grains, soybeans, cotton, and tobacco. High-value product (HVP) exports is calculated as total exports less the bulk commodities. HVP's include semiprocessed and processed grains and oilseeds, animals and animal products, horticultural products, and sugar and tropical products. Other imports include cotton, tobacco, and planting