



## CRS Report for Congress

# The U.S. Farm Economy

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### Summary

According to USDA's Economic Research Service (ERS), national net farm income — a key indicator of U.S. farm well-being — is expected to rise 10% in 2007 on the strength of higher commodity prices, which, in turn, are being driven largely by the rapidly growing demand for corn as a feedstock in ethanol production.<sup>1</sup> Net farm income is forecast at \$66.6 billion, up from \$60.6 billion in 2006, as projected record agricultural cash receipts of \$258.7 billion (up \$16 billion) more than offset higher production expenses and a decline of nearly \$4 billion in government payments.

Crop and livestock receipts are both projected to reach record levels in 2007 of \$133.5 billion and \$125.2 billion, respectively. While higher prices are behind the surge in crop receipts, mostly steady prices and larger output account for the livestock sector's increased value. The projected rise in crop prices is expected to reduce price-triggered marketing loan benefits and counter-cyclical payments, leading to lower total government payments. In addition, the rise in cash receipts is expected to be partially offset by record high production expenses of \$251.3 billion (up nearly 6%).

Total farm asset value of \$1,994 billion and total farm debt of \$235 billion are both projected at record levels in 2007. However, the debt-to-asset ratio of 11.8% equals last year's value and represents the lowest level since 1960, suggesting a strong financial position for the agricultural sector as a whole. This report will be updated as events warrant.

### Introduction

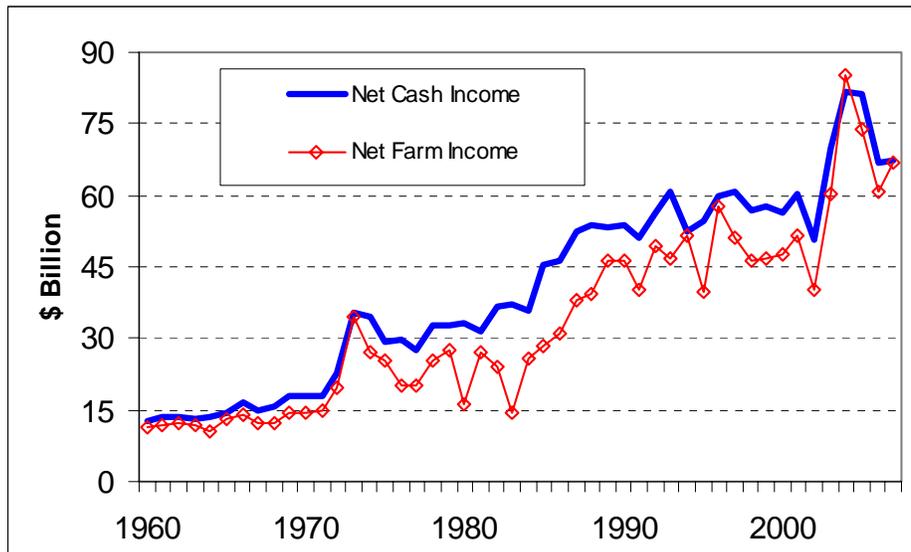
Two indicators that measure the economic well-being of the farm economy are net cash income and net farm income. *Net cash income* compares cash receipts to cash expenses. As such, it is a cash flow measure representing the funds that are available to farm operators to meet family living expenses and make debt payments. In contrast, *net*

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<sup>1</sup> ERS's 2006 farm sector income forecast, last updated on Feb. 14, 2007, is available at the *Farm Income and Costs Briefing Room*, at [[http://www.ers.usda.gov/Briefing/FarmIncome/national\\_estimates.htm](http://www.ers.usda.gov/Briefing/FarmIncome/national_estimates.htm)].

*farm income* is a value of production measure, indicating the farm operator's share of the net value added to the national economy within a calendar year, independent of whether it is received in cash or a noncash form. Net farm income differs from net cash income by including the value of home consumption, changes in inventories, capital replacement, and implicit rent and expenses related to the farm operator's dwelling that are not reflected in cash transactions during the current year. Net cash income is generally less variable than net farm income. Farmers can manage the timing of crop and livestock sales and of the purchase of inputs to stabilize the variability in their net cash income. For example, farmers can hold crops from large harvests to sell in the forthcoming year when output may be lower and prices higher.

**Figure 1. U.S. Farm Income Outlook, 1960 to 2007F**



**Source:** USDA, Economic Research Service, "2007 Farm Income Forecast," at [<http://www.ers.usda.gov/Briefing/FarmIncome/>].

**Note:** 2007 is projected.

## Outlook for Calendar Year 2007

USDA's net farm income estimate for 2007 of \$66.6 billion is up 10% from last year's \$60.6 billion, but well below 2004's record of \$85.4 billion (**Table 1**). When measured in cash terms, net cash income in 2007 is projected up less than 1% to \$67.2 billion, well below 2004's record \$81.5 billion (**Figure 1**).

**Cash Receipts.** The combined value of cash receipts from marketings of both crop and livestock commodities is projected at \$258.7 billion in 2007, the highest amount on record and up \$16 billion from the previous year's record \$242.7 billion.

**Crops.** The U.S. ethanol industry has shown rapid growth in recent months and, since corn is the principal feedstock used to produce ethanol in the United States, this has pushed corn and other crop prices higher. USDA estimates that 20% of the 2006 corn crop will be used to produce ethanol during the 2006/07 (September-August) corn marketing year, and that this share will grow to 27% in 2007/08 due to the rapid

expansion of U.S. ethanol production capacity.<sup>2</sup> The ethanol-driven surge in corn demand has fueled a sharp rise in corn prices. For example, the futures contract for March 2007 corn on the Chicago Board of Trade rose from \$2.50 per bushel in September 2006 to a contract high of over \$4.16 per bushel in January 2007 (a rise of 66%). As corn prices rise, so too does the incentive to expand corn production. This has had the effect of raising prices for other field crops, primarily soybeans, that compete with corn for planted area (**Table 2**). Higher crop prices are expected to generate record crop cash receipts of \$133.5 billion. Corn cash receipts are projected at a record \$30.5 billion. Cash receipts for other field crops as well as fruits and nuts, and greenhouse and nursery crops, are also expected to rise on strong sales volume.

**Livestock.** The value of livestock production is forecast at a record \$125.2 billion in 2007, just ahead of 2005's previous record of \$125.0 billion. Output is projected larger for all major livestock categories — beef, pork, poultry, dairy, and eggs — however, different price projections are expected to alter cash receipts by livestock category. Cash receipts in the poultry, eggs, and dairy sectors are projected to rise in 2007 due to year-to-year production gains and slightly higher prices. Cash receipts for beef producers are projected record large at \$51.4 billion in 2007 as cattle prices are expected to remain in the mid-\$80s per cwt. Hog cash receipts are projected \$1.3 billion lower at \$13.1 billion due to declining hog prices.

**Government Payments.** Government direct payments are forecast at \$12.4 billion in 2007, down from \$16.3 billion in 2006 and the record of \$24.3 billion in 2005. Higher projected market prices are expected to limit payments under the two major price-triggered programs — counter-cyclical payments, which are projected to decline by \$2.4 billion, and marketing loan benefits (loan deficiency payments, marketing loan gains, and certificate exchange gains), which are projected down by \$1.3 billion in 2007. These two programs account for most of the decline in government payments in 2007.<sup>3</sup>

Fixed direct payments, whose payment rates are fixed in legislation and are not affected by the level of program crop prices, are estimated up slightly at \$5.3 billion. Conservation payments are projected unchanged at \$2.9 billion. Farm disaster assistance and emergency assistance payments — which have figured heavily in sectoral income in 16 of the previous 18 years (1989-2006) — are expected to remain relatively small at \$0.7 billion in 2007.<sup>4</sup>

**Production Expenses.** Total production expenses are forecast at a record \$251.3 billion in 2007, up \$13.5 billion (5.7%) from last year's record level. Higher commodity prices are expected to push feed costs up substantially (nearly 13%), while all other expense categories show more modest growth (4.6%). Farm origin inputs, including feed, account for over 25% of average farm expenses, and are expected to rise by nearly 7% in

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<sup>2</sup> USDA, Office of the Chief Economist, *USDA Agricultural Projections to 2016*, Feb. 14, 2007; available at [<http://www.ers.usda.gov/Briefing/Baseline/>].

<sup>3</sup> For more information on commodity programs, see CRS Report RL33271, *Farm Commodity Programs: Direct Payments, Counter-Cyclical Payments, and Marketing Loans*, by Jim Monke.

<sup>4</sup> For more information, see CRS Report RL31095, *Emergency Funding for Agriculture: A Brief History of Supplemental Appropriations, FY1989-FY2006*; and CRS Report RS21212, *Agricultural Disaster Assistance*, both by Ralph M. Chite.

aggregate due to projected higher crop prices. Higher costs for manufactured inputs, interest charges, and general operating expenses all contributed to the surge in costs. Manufactured inputs — such as fuel, fertilizer, electricity, and pesticides — that account for about 16% of national average farm operating expenses are projected up 3%, while interest charges (7% of operating expenses) are projected up 5%. Finally, other operating expenses (e.g., repair and maintenance, hired labor, hired custom work, etc.) account for one-third of operating expenses and are also projected to rise by over 7%.

**Farm Asset Values and Debt.** Despite the relatively small increase in net cash income and the decline in government payments, farm asset values are projected up 4% (or \$74.9 billion) in 2007 to a record \$1,994 billion, on the strength of higher real estate values. Farm debt is projected to rise by a similar 4% (or \$9.1 billion) to a record \$235 billion in 2007. As a result, farm equity (defined as asset value minus debt) is projected at a record \$1,759 billion, while the farm debt-to-asset ratio in 2006 is expected to hold steady at a 45-year low of 11.8%. The U.S. farm debt-to-asset ratio peaked in 1985 at 23%.

**Farm Household Income.** Average farm-operator household income is projected at \$81,588 in 2007, up about 2% from 2006 but slightly below 2004's record of \$81,596. Off-farm income sources are expected to account for nearly 86% of the national average farm household income in 2007, compared with about 14% from farming activities. However, the share of income from farming increases with farm size (as measured by gross sales).

Commercial farm households (farms with annual sales in excess of \$250,000), on average, obtain 76% of their total household income from farming activities. This grouping includes "large" family farms (farms with annual sales between \$250,000 and \$499,999) and "very large" family farms (farms with annual sales in excess of \$500,000). Large family farms obtained 63% of their total household income from farming activities in 2005; while "very large" family farms obtained 79%. These two classes of farms represented slightly less than 8% of family farms, but accounted for 74% of total production value in 2005.<sup>5</sup>

Intermediate family farms (farms with annual sales in excess of \$100,000 but less than \$250,000) represented about 23% of family farms and obtained about 16% of household income from on-farm sources. The remaining 69% of family farms are classified as rural residence farms and either receive little or no income from farm sources or their total income level qualifies them as limited-resource farms.

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<sup>5</sup> For more information on farm typology see the ERS Briefing Room, *Farm Household Economics and Well-Being: Farm Operator Household Income Forecasts*, at [<http://www.ers.usda.gov/Briefing/WellBeing/farmhouseincome.htm>].

**Table 1. Overview of the U.S. Farm Economy**

Commodity	2002	2003	2004	2005	2006F <sup>a</sup>	2007F <sup>a</sup>
(\$ billions)						
1. Cash receipts	195.0	215.5	237.9	238.9	242.7	258.7
<i>Crops<sup>b</sup></i>	101.0	109.9	114.3	114.0	121.6	133.5
<i>Livestock</i>	94.0	105.6	123.6	125.0	121.2	125.2
2. Government payments <sup>c</sup>	12.4	16.5	13.0	24.3	16.3	12.4
<i>Fixed direct payments<sup>d</sup></i>	3.9	6.4	5.2	5.2	5.2	5.3
<i>CCP<sup>e</sup></i>	0.2	2.3	1.1	4.1	4.1	1.6
<i>Marketing Loan Benefits<sup>f</sup></i>	2.8	1.3	3.5	7.0	2.0	0.8
<i>Conservation</i>	2.0	2.2	2.3	2.8	2.9	2.9
<i>Ad hoc and emergency</i>	1.7	3.1	0.6	3.2	0.4	0.7
<i>All other<sup>g</sup></i>	1.9	1.2	0.2	2.1	1.7	1.1
3. Farm-related income <sup>h</sup>	14.8	15.7	16.9	17.6	18.0	18.7
<b>4. Gross cash income (1+2+3)</b>	<b>222.2</b>	<b>247.8</b>	<b>267.8</b>	<b>280.9</b>	<b>277.1</b>	<b>289.8</b>
5. Cash expenses	171.6	177.8	186.3	199.7	210.4	222.6
<b>6. NET CASH INCOME (4-5)</b>	<b>50.7</b>	<b>70.0</b>	<b>81.5</b>	<b>81.2</b>	<b>66.7</b>	<b>67.2</b>
7. Total gross revenues <sup>i</sup>	233.6	260.9	296.2	299.8	298.4	318.0
8. Total production expenses <sup>j</sup>	193.4	200.4	210.8	226.0	237.8	251.3
<b>9. NET FARM INCOME (7-8)</b>	<b>40.2</b>	<b>60.4</b>	<b>85.4</b>	<b>73.8</b>	<b>60.6</b>	<b>66.6</b>
Farm Assets	1,304.0	1,378.8	1,584.8	1,805.3	1,919.4	1,994.3
Farm Debt	193.3	196.1	204.7	215.6	226.2	235.5
Farm Equity	1,110.7	1,182.7	1,380.1	1,589.6	1,693.2	1,759.0
Debt-to-asset ratio (expressed as %)	14.8%	14.2%	12.9%	11.9%	11.8%	11.8%
	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006F<sup>a</sup></b>	<b>2007F<sup>a</sup></b>
Average farm household income	\$65,761	\$68,597	\$81,596	\$81,420	\$79,851	\$81,588
Average U.S. household income	\$57,852	\$59,067	\$60,528	\$63,344	na	na

**Source:** USDA, Economic Research Service, briefing rooms: *Farm Income and Costs: Farm Sector Income*, and *Costs: Farm Sector Income*, available at [<http://www.ers.usda.gov/Briefing/FarmIncome/>]; U.S. farm income data updated as of Feb. 14, 2007.

na = not available.

a. F = forecast.

b. Includes CCC loans.

c. For more information on U.S. farm commodity programs, see CRS Report RS21999, *Farm Commodity Policy: Programs and Issues for Congress*, by Jim Monke; for more information on conservation programs see CRS Report RL33556, *Soil and Water Conservation: An Overview*, by Jeffrey Zinn.

d. Direct payments include production flexibility payments of the 1996 Farm Act through 2001, and fixed direct payments under the 2002 Farm Act since 2002.

e. CCP = counter-cyclical payments.

f. Includes LDP = loan deficiency payments; MLG = marketing loan gains; and commodity certificate exchange gains.

g. Peanut quota buyout, milk income loss payments, and other miscellaneous program payments.

h. Income from custom work, machine hire, recreational activities, forest product sales, and other farm sources.

i. Gross cash income plus inventory adjustments, the value of home consumption, and the imputed rental value of operator dwellings.

j. Cash expenses plus depreciation and perquisites to hired labor.

**Table 2. U.S. Prices and Loan Rates for Selected Farm Commodities, 1998/1999-2006/2007F**

Commodity	Unit	Year	1999/2000	2000/2001	2001/2002	2002/2003	2003/2004	2004/2005	2005/2006	2006/2007F	2007/2008F	Loan rate
Wheat <sup>a</sup>	\$/bu	Jun-May	2.48	2.62	2.78	3.56	3.40	3.40	3.42	4.20-4.30	—	2.75
Corn <sup>a</sup>	\$/bu	Sep-Aug	1.82	1.85	1.97	2.32	2.42	2.06	2.00	3.00-3.40	—	1.95
Sorghum <sup>a</sup>	\$/bu	Sep-Aug	1.57	1.89	1.94	2.32	2.39	1.79	1.86	3.10-3.50	—	1.95
Barley <sup>a</sup>	\$/bu	Jun-May	2.13	2.11	2.22	2.72	2.83	2.48	2.53	2.75-2.95	—	1.85
Oats <sup>a</sup>	\$/bu	Jun-May	1.12	1.10	1.59	1.81	1.48	1.48	1.63	1.75-1.95	—	1.33
Rice <sup>a</sup>	\$/cwt	Aug-Jul	5.93	5.61	4.25	4.49	8.08	7.33	7.65	9.65-9.85	—	6.50
Soybeans <sup>a</sup>	\$/bu	Sep-Aug	4.63	4.54	4.38	5.53	7.34	5.74	5.66	5.90-6.50	—	5.00
Soybean oil <sup>b</sup>	¢/lb	Oct-Sep	15.6	14.1	16.5	22.0	30.0	23.0	23.4	27.5-29.5	—	—
Soybean meal <sup>b</sup>	\$/st	Oct-Sep	154.1	173.6	167.7	181.6	256.1	182.9	174.2	180-195	—	—
Cotton, Upland <sup>c</sup>	¢/lb	Aug-Jul	45.0	49.8	29.8	44.5	61.8	41.6	47.7	47.3 <sup>e</sup>	—	52.0
Choice Steers <sup>d</sup>	\$/cwt	Jan-Dec	65.6	70.0	72.6	67.0	84.7	84.8	87.3	85.4	83-88	—
Barrows/Gilts <sup>d</sup>	\$/cwt	Jan-Dec	34.0	45.3	45.8	34.9	39.5	52.5	50.1	47.3	44-46	—
Broilers <sup>d</sup>	¢/lb	Jan-Dec	58.1	56.2	59.1	55.6	62.0	74.1	70.8	64.4	69-73	—
Eggs <sup>d</sup>	¢/doz	Jan-Dec	65.6	68.9	67.1	67.1	87.9	82.2	65.5	71.8	84-90	—
Milk <sup>d</sup>	\$/cwt	Jan-Dec	14.35	12.32	14.98	12.11	12.52	16.05	15.14	12.90	14.35-15.05	—

a. Season average farm price from USDA, National Agricultural Statistical Service, *Agricultural Prices*. Calendar year data is for the first year, e.g., 2000/2001 = 2000; F = forecast from *World Agricultural Supply and Demand Estimates (WASDE)* Feb. 9, 2007; — = no loan rate; and USDA's out-year 2007/2008 crop price forecasts will first appear in the May 2007 WASDE report scheduled for release on May 11, 2007.

b. USDA, Agr. Marketing Service (AMS), Decatur, IL, cash price, simple average crude for soybean oil, and simple average 48% protein for soybean meal.

c. Average farm price received for August-December 2006. USDA is prohibited by law from publishing cotton price projections [12 U.S.C. 1141(j)(d)].

d. USDA, AMS: choice steers — Nebraska, direct 1100-1300 lbs.; barrows/gilts — national base, live equivalent 51%-52% lean; broilers — wholesale, 12-city average; eggs — Grade A, New York, volume buyers; and milk — simple average of prices received by farmers for all milk.