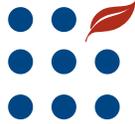




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Agricultural Income and Finance Outlook

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U.S. net farm income is forecast to be \$58.9 billion in 2006, down from \$73.8 billion in 2005, but slightly above its 10-year average of \$57.2 billion. The primary reasons for the anticipated decline are a drop in the value of livestock production and direct government payments combined with an increase in the cost of purchased inputs. Net cash income is forecast to be \$66.6 billion in 2006, a decline from the high levels achieved in 2004 and 2005.

Farms are expected to contribute \$107.6 billion in net value-added to the U.S. economy in 2006, substantially down from the 2004 peak year of \$128.9 billion. Net value added is the sum of net farm income and payments made to agriculture's stakeholders (lenders, hired labor, and nonoperator landlords). Farms specializing in crops and farms specializing in livestock contributed equally to U.S. agriculture's net value added in 2005.

The value of production in the U.S. farm sector is forecast to be \$279.5 billion in 2006, up \$4.1 billion over 2005. The 10-year average is \$237 billion. The value of crop production is projected to be up \$7.1 over 2005, benefiting primarily from higher projected corn prices and stronger sales of vegetables, fruits and nuts, and greenhouse/nursery products. The value of livestock production is expected to be down \$4.7 billion from 2005, but still \$18.9 billion above its 10-year average. Farmgate prices for most major livestock products are expected to fall from 2005, with milk prices declining the most.

Total direct government payments are expected to total \$16.5 billion in 2006, down from the \$24.3 billion for 2005. This payment total is nearly 6.7 percent below the 5-year average. Direct payments under the Direct

and Countercyclical Program (DCP) in 2006 are estimated at \$5.2 billion, less than a 1-percent increase from 2005.

Total production expenses in 2006 are forecast to rise \$11 billion (5 percent) to a record \$237.3 billion. The percentage change is less than in 2005, but continues the increase in total production expenses that has occurred in each of the last 4 years. Since a decrease in 2002, total expenses in current dollars will have risen \$43.8 billion (22.7 percent). Through October 2006, prices paid overall for crop sector inputs had risen faster than for livestock sector inputs.

Farm sector equity is expected to rise by about 7 percent in 2006, as the value of farm assets continues to rise more rapidly than farm debt, driven mostly by increases in farmland values. Debt-to-asset and debt-to-equity ratios continue to improve in 2006, compared with the first half of this decade and average performance over the past four decades.

Average farm household income is expected to decline 0.9 percent in 2006 to \$80,703, as the decrease in farm income more than offsets the increase in off-farm income. For every year since 1996, average income for farm households has exceeded average U.S. household income; during 1996-2005, the average difference was 15.2 percent. However, family farms are diverse, and the financial outlook for farm operator households varies across the population.

2006 Earnings of U.S. Farmers Forecast To Be \$58.9 Billion

Net farm income is forecast to be \$58.9 billion in 2006, down from \$73.8 billion in 2005 but above its 10-year average of \$57.2 billion. Net cash income is forecast to be \$66.6 billion in 2006, following highs of \$81.5 billion in 2004 and \$81.2 billion in 2005. Net cash income is forecast to remain slightly above its 10-year average in 2006

Net farm income is forecast to be \$58.9 billion in 2006, down from \$73.8 billion in 2005 but above its 10-year average of \$57.2 billion. The projected decline in farm income from the record levels of 2004 and 2005 (when both crop and livestock commodities experienced exceptionally favorable market and/or production conditions) results from several components on both the income and expense sides of the ledger.

The value of the sector's production in 2006 is forecast to be up \$4.1 billion from 2005, with production forecast to be up \$7.1 billion for crops, down \$4.7 billion for livestock, and up \$1.7 billion for the value of services and forestry. Government payments, the other component of gross farm income, are forecast to decline \$7.8 billion.

Purchases of manufactured inputs are forecast to rise by \$2.4 billion from 2005 due to higher fuel and fertilizer prices, with the latter resulting from high prices for natural gas. Payments to stakeholders (lenders, hired labor, and nonoperator landlords) are forecast to be up \$2 billion, led by rising interest payments on debt and higher expenditures for labor. Expenditures for all purchased inputs are forecast to be up 8.6 percent in 2006.

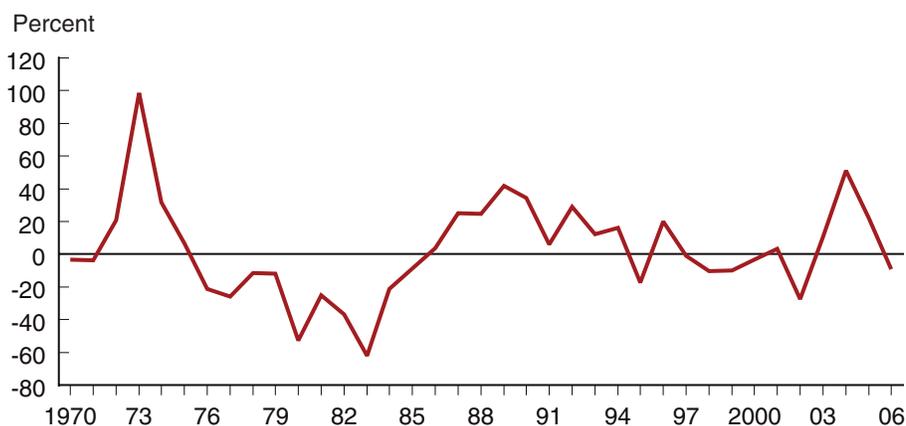
Expressed in constant dollars, the net farm income forecast for 2006 is \$52.8 billion—below its 10-year average of \$55.9 billion by \$7.3 billion (fig. 1). Still, it is higher than the \$48.4 billion averaged over 1998-2002 prior to the farm income spike in 2003-05. Inflation-adjusted gross farm income in 2006 of \$254.8 billion exceeds its 10-year average of \$247.9 billion by \$6.9 billion, but real production expenses more than offset that as the \$204.1 billion incurred in 2006 exceeds its 10-year average of \$192 billion by \$12.1 billion.

Value of production

The value of total production in the U.S. farm sector is forecast to be \$279.5 billion in 2006, following the record \$283 billion in 2004 and \$275 billion in 2005. All are considerably above the 10-year average of \$237 billion. For 2006, the value of crop production is projected to be up \$7.1 billion over 2005 and \$14 billion above its average over the previous 10 years. Crop production will benefit primarily from higher projected corn prices plus stronger sales of vegetables, fruits and nuts, and greenhouse/nursery products. The value of livestock production, at \$122.2 billion in 2006, is expected to be down \$4.7 billion from 2005 but still \$18.9 billion above its

Figure 1

Net farm income—current year vs. 10-year moving average, 1970-2006



Note: The moving average is for the prior 10 years with farm income expressed in constant (2000=100) dollars. 2006 forecast.

Source: Economic Research Service, USDA.

10-year average. Farmgate prices for most major livestock products are expected to fall from 2005, with milk prices declining the most.

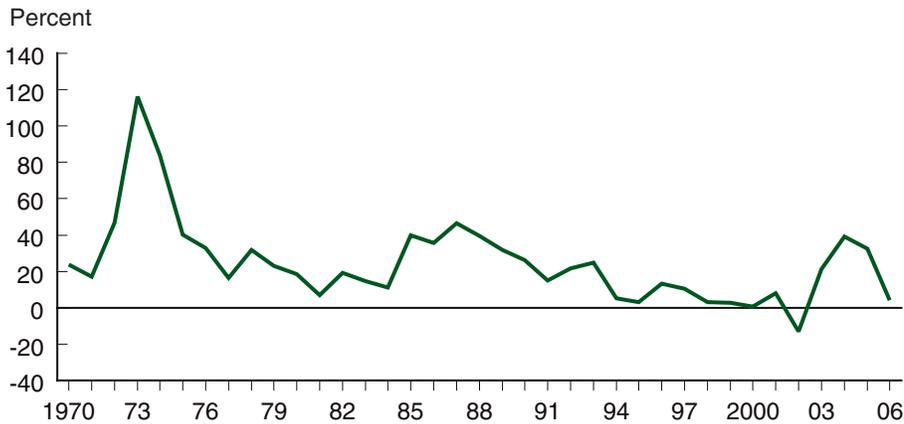
Net cash income is forecast to be \$66.6 billion in 2006, following highs of \$81.5 billion in 2004 and \$81.2 billion in 2005. Total cash receipts are forecast to be \$242 billion in 2006, following records of \$238 billion in 2004 and \$239 billion in 2005. Net cash income is down primarily due to a drop in government payments (\$7.8 billion) and a rise in cash expenses (\$10.8 billion)

After being considerably above its 10-year moving average for the past 3 years (2003-05), net cash income is forecast to remain slightly above its 10-year average (\$64 billion) in 2006 (fig. 2). Net cash income is a measure of the cash income after payment of business expenses that is available to pay debt obligations and family living expenses. Since about 1990, net cash income has not been as volatile as in earlier decades. A continual upward trend in crop yields has boosted production. Increasing populations and rising standards of living throughout many developing countries have kept demand strong for U.S. agricultural commodities. The combination of rising productivity by U.S. farmers and rising demand for U.S. agricultural products has resulted in consistently higher net cash income over the last two decades. In 2003-05, the earnings of farmers spiked above the trend line and are now returning to more historical levels.

Cash receipts for crops are forecast to be a record \$121.2 billion in 2006, up \$7.3 billion from 2005 as farmers are expected to sell off additional quantities from inventories. Total crop revenues from cash receipts and government payments are forecast to be \$137.8 billion, following successive records of \$127 billion in 2004 and \$138 billion in 2005. Large crop supplies in 2004 and 2005 reduced market prices to a level that triggered loan deficiency and countercyclical payments. Most government payments are from programs related to crops, with the balance being from conservation programs. Government payments in calendar year 2006 are expected to see a decline of more than 30 percent from 2005's record \$24.3 billion. Most of the payments received by

Figure 2

Net cash income—current year vs. 10-year moving average, 1970-2006



Note: The moving average is for the prior 10 years with farm income expressed in current dollars. 2006 forecast.

Source: Economic Research Service, USDA.

producers in 2005 from “ad hoc and emergency programs” are not authorized for 2006. Higher market prices for corn in 2006 are resulting in lower loan deficiency payments. Tobacco transition payments are lower because some recipients chose to accept a lump-sum payment in the first year (2005) rather than receive payments over 10 years.

The value of the change in inventories accounts for most of the difference in value of production and cash receipts. A positive change represents production available for sale but not sold at the end of the year, and a negative change represents production from a prior year that was reflected in the prior year’s net farm income. Crop inventories are expected to decline by \$1.5 billion in 2006, following a decline of \$1.3 billion in 2005. Continued dry weather in some areas is resulting in lower production levels, and higher prices reduce the incentive to postpone sales until 2007. Livestock inventories are expected to rise by \$1.2 billion as ranchers seek to rebuild cattle herds from recent lows.

Banner Year for Most Crops, Especially Corn. With the fall harvest completed, the value of crop production (table 1) is forecast to be up by more than \$7 billion in 2006. A notable change in U.S. agriculture is the rising importance of ethanol, a renewable energy source. In the mid-1990s, 500,000 bushels of corn were used annually to produce ethanol; by 2006, 2 billion bushels of corn are expected to be used. Corn producers are projected to receive record high cash receipts in 2006.

Most wheat is grown in drier regions of the world, so moisture conditions are a concern for its producers. Droughts across the globe, particularly in Australia, have tightened world supplies and caused ending stocks to fall by almost a fifth. U.S. prices have risen, enabling cash receipts for wheat in 2006 to approach record levels. Soybean growers, who have high stocks, could experience modestly falling prices and cash receipts in 2006 after harvesting the largest crop on record.

Defining the Key Terms

Net value added is a measure of the U.S. farm sector's contribution to the national economy (similar to GDP). It is the sector's net value of production (value added through production activities). It is derived as the total value of agricultural sector production within the calendar year less the related annual costs of production plus net government transactions.

Net farm income is the residual portion of net value added after paying the owners of factors of production (land, labor, capital) for which payment is determined in advance of production and marketing activities. The residual is the income accruing to those entrepreneurs providing factors of production for which the earnings are determined by assuming and managing the risks of production.

Net cash income is a liquidity indicator of the income generated by the same production activities, which is available to pay debts and household living expenses. It is computed in the same manner as net farm income, but excludes the noncash components, of which the two largest are imputed rental value of operators' dwellings and capital consumption.

Farm Types, 2005

Small Family Farms (gross sales less than \$250,000) ¹	Other Family Farms
<p>Rural residence family farms</p> <p>Limited-resource farms. Small farms with gross sales less than \$105,000 in 2004 and less than \$110,000 in 2005.² Operators of limited resource farms must also receive low household income in both 2004 and 2005. Household income is considered low in a given year if it is less than the poverty level for a family of four, or it is less than half the county median household income. Operators may report any major occupation except hired manager.</p> <p>Retirement farms. Small farms whose operators report they are retired.³</p> <p>Residential/lifestyle farms. Small farms whose operators report a major occupation other than farming.³</p>	<p>Commercial family farms</p> <p>Large family farms. Gross sales between \$250,000 and \$499,999.</p> <p>Very large family farms. Gross sales of \$500,000 or more.</p>
<p>Intermediate family farms</p> <p>Farming-occupation farms. Small family farms whose operators report farming as their major occupation.³</p> <ul style="list-style-type: none"> • Low-sales farms. Gross sales less than \$100,000. • High-sales farms. Gross sales between \$100,000 and \$249,999. 	<p>Nonfamily Farms</p> <p>Commercial farms</p> <p>Nonfamily farms. Farms organized as nonfamily corporations or cooperatives, as well as farms operated by hired managers. Also includes farms held in estates or trusts.</p> <p>Note: This farm classification focuses on the "family farm," or any farm organized as a sole proprietorship, partnership, or family corporation. Family farms exclude farms organized as nonfamily corporations or cooperatives, as well as farms with hired managers..</p> <p>¹ The National Commission on Small Farms selected \$250,000 in gross sales as the cutoff between small and large-scale farms.</p> <p>² The original gross sales cut-off was established at \$100,000 for 2003. The cut-off for subsequent years is adjusted by the index of prices paid by farmers.</p> <p>³ Excludes limited-resource farms whose operators report this occupation.</p>

Adjusting for Inflation Using Constant Dollars

Do upward trends in time series denominated in dollars, such as net farm income and net value added, mean that recipients of the dollars—farmers, contractors, and other stakeholders—are better off? For example, if net value added increases by 3 percent this year, are recipients of agriculture’s net value added better off? Not necessarily.

People are better off in an economic sense only if the purchasing power of the dollars received increases over time. For example, the percentage rate of increase in net value added must be greater than the inflation rate experienced by farmers, contractors, and other stakeholders. Inflation is the increase in the average price of goods and services as time passes. If price levels increase at a faster rate than value added, the extra dollars of value added do not result in greater purchasing power.

A time series of net value added or net farm income representing dollars actually received each year is expressed in “current dollars.” One method used to compare current dollar values over time is to convert current dollars to “constant dollars,” which measure real purchasing power after inflation. An increase in a constant-dollar time series over time means the recipient’s purchasing power has increased. In contrast, an increase in current dollars does not necessarily indicate an increase in purchasing power. AIS uses the term “constant dollars” in AIS as well as other terms with the same meaning: “real,” “deflated,” or “inflation adjusted.”

Current dollars are converted to constant dollars using the GDP chain-type price index developed by the Bureau of Economic Analysis, an agency of the U.S. Department of Commerce. We use 2000 as our base year of our constant dollar time series. By using the year 2000 as our base year, we treat each year as if the average price level for purchases by agriculture’s equity-holders and stakeholders is the same as in 2000. When constant-dollar (or real, deflated, or inflation-adjusted) net value added or net farm income increases or decreases, the purchasing power of agriculture’s equity-holders and stakeholders changes in the same direction.

Consumers, with rising incomes, are buying more ornamentals and other floral crops, while developers of residential and commercial properties are buying more sod. With these market conditions in 2006, greenhouse/nursery sales are forecast to reach an all-time high of \$16.6 billion. Vegetable growers should continue to benefit from rising domestic consumption of fresh vegetables, while fruit/nut growers should continue to be helped by rising prices. These market forces have enabled cash receipts for specialty crops to increase more rapidly in recent years than major government-supported program crops (wheat, rice, corn, sorghum, soybeans, and cotton).

Beef Rebounds, but Dairy, Pork, and Poultry Slip. Value of livestock production (table 1) is forecast to be \$122.2 billion in 2006, down nearly \$5 billion from 2005 but still the third highest on record. Cash receipts for beef producers are forecast to top \$50 billion for the first time with greater domestic consumption and an expected doubling of export demand. Export

Table 1

Value-added to the U.S. economy by the agricultural sector via the production of goods and services, 2002-2006

Item	2002	2003	2004	2005	2006	Change 2004 to 2005	Change 2005 to 2006
	<i>Billion dollars</i>						
Value of crop production	98.4	108.4	125.3	112.7	119.8	-12.6	7.1
Value of livestock production	93.5	105.0	124.4	126.9	122.2	2.5	-4.7
Revenues from services and forestry	29.3	30.9	33.5	35.8	37.5	2.3	1.7
Value of agricultural sector production	221.2	244.3	283.2	275.4	279.5	-7.7	4.1
less: Purchased inputs	123.1	130.0	136.6	146.7	155.3	10.0	8.6
Farm origin	48.3	53.7	57.5	57.9	60.8	0.4	3.0
Feed purchased	25.0	27.5	29.7	28.2	30.7	-1.5	2.4
Livestock and poultry purchased	14.4	16.8	18.1	19.2	18.8	1.1	-0.4
Seed purchased	8.9	9.4	9.6	10.4	11.3	0.8	0.9
Manufactured inputs	28.5	28.5	31.7	35.5	38.0	3.9	2.4
Fertilizers and lime	9.6	10.0	11.4	12.9	13.8	1.5	0.9
Pesticides	8.3	8.4	8.6	8.9	9.4	0.3	0.5
Petroleum fuel and oils	6.6	6.8	8.2	10.3	11.0	2.1	0.7
Electricity	3.9	3.3	3.4	3.4	3.8	0.0	0.4
Other intermediate expenses	46.4	47.8	47.5	53.3	56.5	5.8	3.2
plus: Net government transactions	5.2	9.2	5.4	15.8	7.9	10.4	-7.9
+ Direct Government payments	12.4	16.5	13.0	24.3	16.5	11.4	-7.8
- Motor vehicle registration and licensing fees	0.4	0.5	0.5	0.6	0.6	0.0	0.0
- Property taxes	6.8	6.8	7.0	8.0	8.1	1.0	0.1
Gross value added	103.2	123.5	152.0	144.6	132.1	-7.4	-12.5
less: Capital consumption	21.0	21.5	23.1	24.1	24.5	1.0	0.4
Net value added	82.2	102.0	128.9	120.4	107.6	-8.4	-12.9
less: Payments to stakeholders	42.0	41.6	43.5	46.6	48.6	3.1	2.0
Employee compensation (total hired labor)	19.1	18.8	20.5	21.0	21.8	0.5	0.8
Net rent received by nonoperator landlords	9.8	10.1	9.9	10.5	10.5	0.6	0.0
Real estate and nonreal estate interest	13.1	12.7	13.1	15.1	16.4	2.1	1.3
Net farm income	40.2	60.4	85.4	73.8	58.9	-11.6	-14.9
Gross cash income	222.2	247.8	267.8	280.9	277.1	13.2	-3.9
Cash receipts	195.0	215.5	237.9	238.9	242.0	1.1	3.0
Crops	101.0	109.9	114.3	114.0	121.2	-0.3	7.3
Livestock	94.0	105.6	123.6	125.0	120.7	1.4	-4.2
Direct government payments	12.4	16.5	13.0	24.3	16.5	11.4	-7.8
Farm-related income	14.8	15.7	16.9	17.6	18.6	0.7	0.9
less: Cash production expenses	171.6	177.8	186.3	199.7	210.5	13.4	10.8
Net cash income	50.7	70.0	81.5	81.2	66.6	-0.2	-14.7

Note: The current forecast and historic information can always be found at <http://www.ers.usda.gov/data/farmincome/finfidmu.htm> 2006 forecast.

Source: Economic Research Service, USDA.

demand for beef has been hampered by a ban imposed by most beef importing countries due to mad cow disease or BSE (Bovine Spongiform Encephalopathy restrictions initiated in May 2003). Milk production in 2006 is expected to climb and reach a record high, causing milk prices to decline and cash receipts to fall around \$3.1 billion. Foreign demand has become increasingly important for pork producers, with 14 percent of U.S. pork production consumed abroad, up from 6 percent in the late 1990s. Even with pork exports forecast up 11 percent in 2006, average hog prices are expected to fall, pushing cash receipts down by nearly a \$700 million in 2006. Cash receipts to broiler producers in 2006 are expected to be the third highest on record at \$18.9 billion, still \$2 billion lower than 2005.

Government Payments Forecast at \$16.5 Billion in 2006

Total direct government payments are expected to total \$16.5 billion in 2006, down from the \$24.3 billion for 2005, yet up from \$13.0 billion for 2004 (table 2, fig. 3). This is nearly 7 percent below the 5-year average. Direct payments under the Direct and Countercyclical Program (DCP) in 2006 are estimated at \$5.2 billion, less than a 1-percent increase from 2005. Direct payment rates are fixed in legislation and are not affected by the level of program crop prices. The increase in 2006 is the outcome of a change in the number of farmers taking advantage of the advanced payment in December (optional), rolling more of the payment into the following calendar year. There is little change in direct payments by crop year.

Countercyclical payments are forecast to increase from \$4.1 billion in 2005 to \$4.2 billion in 2006. This follows a 263-percent increase in 2005. For the 2005 crops, increases in payments to corn and peanut producers are expected to offset declines in payments to rice producers. More than half the payments in 2004 and 2005 are to corn producers. About a quarter of the payments are to cotton producers. For the 2006 crops, only sorghum, cotton, and peanut producers are expected to receive payments. Producers may elect to receive countercyclical payments in three installments. The first partial payments are available in October of the calendar year of harvest. The second partial payments are made the following February with the final payments after the end of the marketing year for the program crop. Countercyclical payments in calendar year 2006 include the second partial and final payments for 2005 crops and the first partial payment for 2006 crops. For calendar year 2006, we assume that 60 percent of the producers receive 35 percent of their payment as first partial payments. The second partial and final countercyclical payments (as determined at the end of the respective marketing year) are paid the following calendar year. Partial payments are based on the projected payment rate at the time of the payment, creating the possibility of an overpayment.

Marketing loan benefits—including loan deficiency payments, marketing loan gains, and certificate exchange gains—are projected down to \$2.0 billion in 2006 from \$7.0 billion in 2005. Marketing loan benefits would thus represent 12.3 percent of total government payments. Expected declines in marketing loan benefits to producers of wheat, rice, corn, sorghum, barley, and upland cotton more than offset the increase in

Table 2

Direct government payments, 2002-2006

Item	2002	2003	2004	2005	2006	Change 2006 to 2005	2006/ 2001-05 Avg. ¹
	— \$ million —					Percent change	
Total direct payments ²	12,414.9	16,522.8	12,965.3	24,349.5	16,549.7	-32.0	-6.7
Production flexibility contract payments ³	3,499.8	-280.0	-3.9	-0.9	0.0	-100.0	-100.0
Direct payments ⁴	367.1	6,703.6	5,242.4	5,198.6	5,210.0	0.2	-8.8
Counter-cyclical payments ⁵	203.4	2,300.7	1,122.0	4,074.0	4,150.0	1.9	66.1
Loan deficiency payments	1,196.7	576.3	2,859.9	5,041.0	885.0	-82.4	-70.8
Marketing loan gains ⁶	459.7	198.1	130.4	365.6	280.0	-23.4	-24.8
Certificate exchange gains	1,178.6	556.4	475.7	1,614.0	870.0	-46.1	-21.3
Peanut quota buyout payments	983.0	237.6	24.7	22.3	20.0	-10.3	-93.7
Milk income loss program payments	859.6	913.0	206.0	9.7	450.0	4,539.2	-9.5
Tobacco Transition Payment Program ⁷	0.0	0.0	0.0	2,079.4	1,026.7	-50.6	na
Conservation program payments ⁸	1,965.8	2,167.0	2,319.5	2,767.5	2,900.0	4.8	30.4
Ad hoc and emergency program payments ⁹	1,655.0	3,142.4	583.1	3,168.7	750.0	-76.3	-78.1
Miscellaneous program payments ¹⁰	46.1	7.6	5.4	9.6	8.0	-16.7	-71.8

Note: 2006 forecast. na = not applicable. Numbers may not add due to rounding.

¹ A three year (2003-05) average is used for direct and counter-cyclical programs, while a four year (2002-05) average is used for peanut quota buyout and milk income loss programs.

² Includes only those funds paid directly to farmers within the calendar year.

³ Enactment of the 2002 Farm Act terminated the authority for production flexibility contract payments.

⁴ For 2006, this is the estimated direct payments to be received for 2006 crops less what the CCC reported as advanced payments for 2006 crops received in 2005. Also the 2006 estimate assumes that 7 percent of program participants will receive 50 percent of the estimated 2007 crop direct payment as advance payments.

⁵ The 2005 payment includes the 1st partial payment for 2005 crops. The rest of the 2005 crop counter-cyclical payments are to be received in 2006. The 2006 estimate also assumes that 60 percent of program participants receive 35 percent of the estimated 2006 crop counter-cyclical as first partial payments.

⁶ In publications prior to May of 2001, marketing loan gains were included in cash receipts rather than in government payments in the farm sector income accounts.

⁷ The Tobacco Transition Payment Program will provide payments over a ten-year period to quota holders and producers of quota tobacco. Payments are made to eligible quota holders and producers. The Credit Commodity Corporation will not make lump-sum payments, but a third party may. The private party enters into an agreement with the quota holder or producer to receive a lump-sum payment from them in return for the individual's rights to TTPP payments. The estimates here include TTPP payments and lump-sum payments to quota holders and producers. The TTPP payments to private parties are not included.

⁸ This category includes all conservation programs except for those considered as emergency assistance such as the Emergency Conservation Program. This is a change from the last release where Emergency Conservation Program was included. In publications prior to July 2003, this category only included payments to Conservation Reserve Program, Agricultural Conservation Program, Emergency Conservation Program, and Great Plains Program.

⁹ This category includes all programs providing disaster and emergency assistance payments to growers. This is a change from the last release where conservation programs which provided emergency assistance were included in the conservation program payment category. In publications prior to July 2003, the category Emergency Assistance included only emergency assistance payments attributed to supplemental legislation.

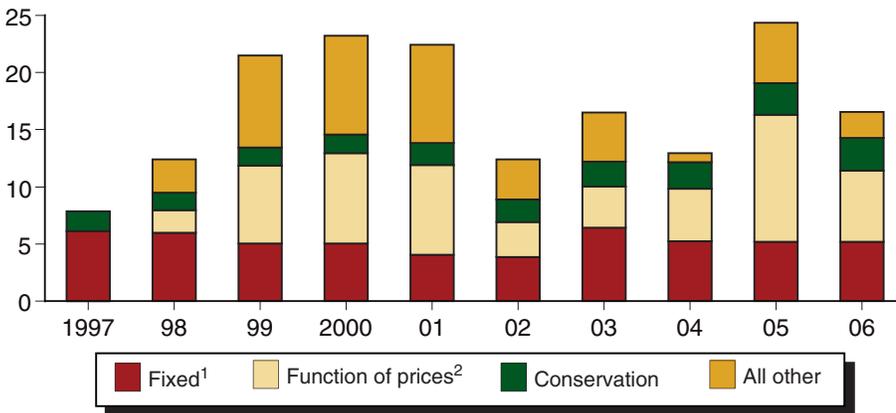
¹⁰ Miscellaneous programs and provisions vary from year to year. In publications prior to July 2003, this category included some program payments which are now considered either as either Conservation or Ad Hoc and Emergency. Also included here are CCP—Fruit and Vegetable Violation, CCP—Late Fees, and CCP—Payment Limitation Over payments which could not be directly linked to either Direct or Counter-cyclical Program payments.

Sources: Direct payments to producers for programs that are administered by either Farm Service Agency (FSA), USDA, or Natural Resource Conservation Service (NRCS), USDA, and paid by Commodity Credit Corporation (CCC) are obtained from CCC. Direct payments to producers for programs that are administered NRCS and paid by NRCS are obtained from NRCS. Certificate exchange data is obtained from Budget Division, FSA. TTPP payments are obtained from CCC which receives the data from parties contracted to administer the program.

Figure 3

Government payments, 1997-2006

\$ billion



Note: 2006 forecast.

¹Production flexibility contract payments and direct payments, where payment rates are fixed by legislation.

²Counter-cyclical payments, loan deficiency payments, marketing loan gains, and certificate exchange gains; where payment rates vary with market prices.

Source: Economic Research Service, USDA.

payments to producers of soybeans, other oilseeds, peanuts, and pulse crops. In 2005, corn producers realized 75 percent of the total marketing loan benefits. Corn marketing loan benefits are expected to decline 71 percent, resulting in corn producers realizing 48 percent of the total marketing loan benefits in 2006. Since cotton marketing benefits are expected to decline only 11 percent, cotton producers may realize 38 percent of the total benefits in 2006. The final marketing assistance loan availability date for 2006 crop wheat, barley, and oats is March 31, 2007, the calendar year after the harvest of the crop. Since this activity can occur any day during the period of availability, any benefit realized as marketing loan gains, certificate exchange gains, or loan deficiency payment for a particular harvested crop may be realized either in the calendar year of harvest or the following calendar year. Although crop years may differ among program crops, marketing loan benefits may be realized over a 2-year period.

CCC payments for the Tobacco Transition Payment Program (TTPP) are paid in January. The Commodity Credit Corporation is not authorized to make lump-sum payments, but a third party may. The private party enters into an agreement where the quota holder or producer is to receive a lump-sum payment from them in return for the individual's rights to TTPP payments. Payments reported here include the portion of the CCC payment that went to quota holders and producers plus the lump sum payments received by quota holders and producers that entered into agreement with third parties. However, the portion of the CCC payment that went to third parties is not included. About 16 percent of the tobacco quota contracts were sold in 2005 to third parties, with the respective quota owners and producers receiving lump-sum payments. TTPP payments are expected to be 50 percent lower in 2006. The benefits from this program are realized primarily by producers in the States that specialized in tobacco production.

Conservation programs include all conservation programs sponsored by the Farm Service Agency (FSA) and the National Resources Conservation Service (NRCS) that provide direct payments to producers. Estimated conservation payments of \$2.9 billion in 2006 reflect programs being brought up toward funding levels authorized by current legislation.

In calendar 2006, ad hoc and emergency program payments, which include all programs providing disaster and emergency assistance to farmers, are projected to fall 76.3 percent. Most of the benefits realized by producers in 2005 are not authorized for 2006. Most of the payments in 2005 are attributed to the Crop Disaster Program. Payments are also included for the Crop Disaster Assistance Program, Dairy Indemnity Program, Dairy Market Loss Assistance Program, Emergency Conservation Program, Florida Crop Hurricane Disaster Program, Livestock Assistance Program, Noninsured Assistance Program, Trade Adjustment Assistance Program, and the Tree Assistance Program. Payments for hurricanes with major crop damage in 2004 were primarily realized in 2005. Payments for hurricanes with damage in 2005 are being realized in 2006. Most of the programs in effect in 2005 continue in 2006. Additional programs in 2006 include the Crop Hurricane Damage Program, Hurricane Indemnity Program, Feed Indemnity Program, and Tree Indemnity Program.

Other Sources of Income: Tourism and Recreation

Many farms use their farm assets to generate income from agritourism activities, such as hunting, fishing, horseback riding, onfarm rodeos, and petting zoos. According to ARMS data for 2005, about 45,500 farms, representing 2.2 percent of farms nationwide (excluding Alaska and Hawaii), are involved in farm-based recreation, generating \$664 million in income. Two regions – the Northeast and Southern Plains – account for more than half of all recreation income reported nationwide.

Although 23 percent of all farms are classified as intermediate (includes farming occupation/lower-sales and farming occupation/higher-sales farms), they account for 38 percent of all farms engaged in recreation activity. Fewer than one in seven farms earning income from onfarm recreation activity are commercial farms (includes larger, very large, and nonfamily farms). However, among farms with recreation income, commercial farms have the highest per-farm receipts, at \$29,600, more than four times the average receipts of rural residential farms (includes limited-resource, retirement, and residential lifestyle farms). ARMS indicates that 54 percent of recreation farms specialize in either raising cattle and calves or horses (compared with 49 percent for all farms nationwide), possibly reflecting the popularity of horseback riding and dude ranches. Horse farms involved in recreation have the highest average recreation receipts at \$57,700 per farm.

Production Expenses in 2006

Total production expenses¹ in 2006 are forecast to rise \$11 billion (5 percent) to a record \$237.2 billion. The percentage change is less than in

¹In the value-added table (table 1), total production expenses are the sum of purchased inputs, motor vehicle registration and licensing fees, property taxes, capital consumption, and the elements of payments to stakeholders.

2005, but continues the increase in total production expenses that has occurred in each of the last 4 years. Since a decrease in 2002, total expenses in current dollars will have risen \$43.8 billion (22.7 percent). In real dollars, though, total expenses have risen 8.3 percent (fig. 4). During the same period, the Production, Interest, Taxes and Wage rates (PITW) prices-paid index calculated by the National Agricultural Statistics Service (NASS)—the prices-paid index that encompasses all agricultural production inputs—rose 20.1 percent. This index is expected to climb 4.6 percent in 2006. The rise in prices during 2006 accounts for most of the rise in total expenses. Total output in 2006, as measured by the Tornqvist output index² on the forecast model, is expected to be almost exactly the same as in 2005, with crop output falling 2.0 percent and livestock output rising 2.9 percent. Through October 2006, prices paid overall for crop sector inputs had risen faster than for livestock sector inputs.

Increases of \$900 million or more are forecast for seven expenses (table 1). The largest increase in an individual expense will be a \$2.4-billion (8.6-percent) jump in feed expenses. Interest and miscellaneous expenses are also forecast to rise more than \$1 billion each. Repair and maintenance and labor expenses will be up around \$1 billion. Seeds and fertilizer should each increase around \$900 million. Two expenses—livestock and poultry purchases and net rent to nonoperators—are expected to decrease, but each will fall less than 2 percent.

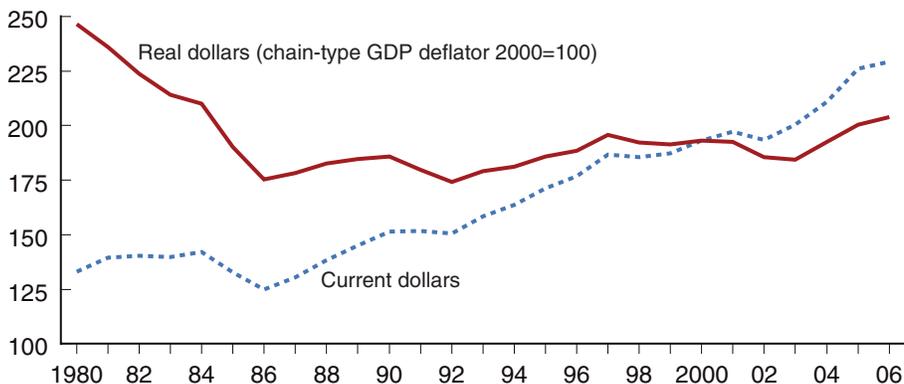
The 8.6-percent increase in feed expenses is the product of a forecast 5.5-percent rise in feed prices, due primarily to higher grain prices, and a 3-percent rise in livestock output. The number of grain-consuming animal units is predicted to be 1.5 percent higher in 2006. A big factor in the amount of feed used is the number of cattle on feed, which is 9 percent higher in the fourth quarter of 2006 over a year ago. With continued poor pasture and hay/forage conditions in some of the main cattle-producing areas, more cattle are being moved into feedlots. Also, many cows are being culled rather than kept for breeding, in part because of low milk prices.

²The Tornqvist output index on the forecast model is the result of a mixture of price and quantity factors. The same index is used in ERS' productivity analysis.

Figure 4

Total production expenses, 1980-2006

\$ billion



Note: 2006 forecast.

Source: Economic Research Service, USDA.

Livestock and poultry purchases are declining. The price for Oklahoma City feeder cattle is down 3.3 percent. With more hogs available for slaughter, their farm price is 6.7 percent lower than a year earlier. The farm price for broilers has dropped 10 percent, likely because of an increase in broiler production.

The principal crop-related expenses—seed, fertilizers, and pesticides—are forecast to be \$34.5 billion, up \$2.2 billion (7 percent) from 2005. One factor affecting this expense, planted acreage, is up marginally in 2006.

The prices paid for seed in 2006 are up 8.6 percent through October. Seed prices have been climbing steadily. Including 2006, they will have increased 6.3 percent or more in 5 of the last 6 years and 50 percent since 1999. The rise in seed prices is tied to the greater use of scientifically improved seeds, which are more expensive to produce and in high demand.

Following 3 years of double-digit percentage increases (52 percent overall), the annual average price for fertilizer through October 2006 is 7.5 percent above last year. However, prices for fertilizer dropped 12 percent between January and August of 2006. Through this period, nitrogen prices fell 22.5 percent. The principal reason for this drop is the fall in natural gas prices during 2006. The predicted annual average price for natural gas is 5 percent lower than in 2005 and through the third quarter of 2006 has dropped 43 percent since the fourth quarter of 2005. The lower prices for fertilizer through August may have influenced some operators to prepurchase fertilizer for use in 2007. According to the 2005 Agricultural Resources Management Survey (ARMS), 32 percent of fertilizer expenses were prepurchased in 2005. Applying the previous year's application rates to forecast planted acreage of individual crops, the use of fertilizer in 2006 should be down 0.8 percent, with use on corn down 2.9 percent.

The forecast increase of 5.5 percent in pesticide expenses in 2006 is the largest annual increase since expenditures peaked in 1997. Pesticide expenses have remained below that year's estimate of \$9.0 billion until 2006's forecast of \$9.4 billion. Pesticide prices have been rising since May 2005. Between then and October 2006, they have increased 10.7 percent. Between 1997 and 2005, pesticide prices rose very slowly or decreased. The current increase in prices is likely due to increases in oil prices, since petrochemicals are used in many pesticides. Use of pesticides is expected to be slightly lower in 2006 than in 2005. Applying the previous year's application rates to forecast planted acreage of individual crops, use on field crops will be nearly the same as decreased use for corn will be offset by increases for soybeans and cotton. Pesticide use on fruit will probably be down slightly, but use on vegetables is expected to rise.

Payments to Providers of Hired Labor, Rented Land, and Debt Capital (Stakeholders)

While net farm income is forecast to fall 20 percent in 2006, payments to nonoperator stakeholders are expected to increase more than 4 percent to a record \$48.6 billion.

Employee compensation (hired labor) is forecast to rise a little less than 4 percent. Wage rates will be up 3.9 percent and the production of vegetables, fruit and nut, and greenhouse and nursery products—the three farm types that are the heaviest users of hired labor—will be up around 1 percent.

The decrease in net rent to nonoperators of less than 0.5 percent is the result of nearly offsetting factors. Cash rent is forecast up 5 percent based on a projected increase in cash rental rates, and the 6-percent rise in the value of crop production should push share rent up by around the same percentage. However, these increases are nearly offset by a 37-percent fall in direct government payments to landlords. Corn, general cash grain, and beef cattle farms are the three largest farm types paying rent. Together, they account for more than half of rental payments. The inclusion of grazing fees in the gross rent collected on ARMS is likely the reason that beef cattle farms are among the top three. Adding government payments to landlords would lift program crop farms to a greater share of gross rent received by landlords.

The increase of nearly \$1.3 billion in interest expenses will come from a \$550-million rise in real estate interest and a \$720-million rise in nonreal estate interest expenses. Even though end-of-year nonreal estate debt will be lower, average outstanding debt during the year, on which interest expenses are calculated, will still be higher. Nonreal estate interest rates also contribute to the increase. They are forecast to rise from 7.2 percent to 8 percent, while real estate interest rates climb from 6 percent to 6.2 percent. Beef cattle, general crop, and dairy farms incurred the greatest share of operator interest expenses in 2005. Small farms are more concentrated in beef cattle farms (73 percent) and general crop farms (82 percent) compared with their percentage of total farms (68 percent).

Hired labor expenses are concentrated more heavily than interest and gross rent expenses on commercial farms. In 2005, 84 percent of hired labor expenses were incurred on commercial farms, in contrast to around 70 percent of gross rent and 53 percent of interest expenses. As a portion of payments, hired labor has tended to rise since 1990, while the share claimed by rent and interest has tended to decline. Because hired labor expenses are most heavily concentrated on commercial farms, a greater share of payments to stakeholders is going to commercial farms in 2005 than in 1990.

Energy and Production Costs in Agriculture

Over the past 4 years, the price of fuels has increased sharply and, by historical standards, remains relatively high (fig. 5). Through September 2006, the inflation-adjusted annual average of prices paid for diesel, gasoline/gasohol, and LP (liquefied petroleum) gas had risen 94 percent since 2002. The forecast fuels and oils expense for 2006, \$11.5 billion, is the highest nominal expenditure for this input ever.¹

While the cost of imported oil in the fourth quarter of 2006 is forecast to be lower than in the third quarter of 2006, prices are expected to rise in the first quarter of 2007.² But any effects will probably be mitigated by the fact that fuels and oils comprised a small share, less than 5 percent, of total production expenses in 2005, about the same amount accounted for by fertilizers (at 6 percent).

In contrast, the price of natural gas (for industrial uses) has fallen sharply over the last year, decreasing by nearly 40 percent between December 2005 and July 2006. The declining price of natural gas is particularly significant since it is an ingredient in the production of fertilizer, which has fallen nearly 15 percent in price from January to September 2006. The price of industrial propane has remained relatively stable over the same period.

In 2005, diesel accounted for nearly 60 percent of all fuel purchases among U.S. farms, followed by gasoline/gasohol at about 20 percent. The dominance of diesel in fuel purchases prevails across all types of farms, although gasoline/gasohol purchases tend to be

more important for rural residence farms, accounting for 30 percent of total fuel purchases. This might be an indication of operators' (of these farms) heavier reliance on pickup trucks and automobiles for personal transportation and their use of gasoline-powered tractors and farm equipment.

Inputs into agricultural production based directly or indirectly on energy are used on almost all farm types, although not to the same degree. For example, energy accounts for a higher share of production costs for crop farms than livestock farms (fig. 6). Heavy users of irrigation, which consumes large amounts of energy, are likely to be most directly affected by rising energy prices. Manufactured inputs that rely heavily on energy as an input, such as nitrogen fertilizer (in which natural gas is the primary input), or production activities that use machinery run by diesel fuel tend to be more sensitive to changes in the price of energy.

Regional variations are likely to result from changes in energy prices. Regions that rely heavily on irrigation are more affected by changes in energy prices. In particular, corn, soybean, wheat, cotton, grain sorghum, and peanut farms in the Prairie Gateway are heavy users of irrigation relative to total expenses. In the Southeast, corn and cotton producers are heavy users of fertilizers relative to total production expenses and may also be disproportionately affected by changes in energy prices. Livestock (hog, dairy, and cattle) operations in the Corn Belt and elsewhere are heavy users of feed, the cost of which is indirectly affected by rising energy prices.

Figure 5

Prices paid index for fuels, 1970-2006

2000=100



Note: Index reflects annual average of real prices paid for diesel, gasoline/gasohol, and LP gas. Real prices calculated using implicit GDP price deflator with 2000 as base year. 2006 forecast.

Source: Economic Research Service, USDA.

Continue on page 17

Continued from page 16

Sustained changes in energy prices may encourage farm operators to employ more energy-efficient farming practices. For example, conservation tillage, whereby tractors plow fields fewer times, can reduce fuel consumption as well as fertilizer use. In 2001, about 70 percent of corn (a widely planted crop heavily reliant on inputs) acres were farmed using this practice. Low-water-pressure systems are another energy-saving strategy. In 2001, about a third of irrigated corn acres were farmed using low-water irrigation. Nitrogen management can reduce fertilizer use through soil testing and application methods that encourage conservation. According to ERS, less than a third of corn acreage in 2001 was planted using a nitrogen soil test.

Another way to reduce fuel costs is through bulk purchase discounts, favored by commercial farms. Fuel expenditures may also be offset through the use of hedging and forward contracting.

Sustained fuel price increases may encourage investment in alternative domestic energy sources, most notably ethanol. With dozens of plants opened in recent years, the annual production capacity of the U.S. ethanol industry is forecast to be 5.8 billion gallons in 2006/2007, from corn alone. By some estimates, capacity may grow by 60 percent over the next 4 years. Production of ethanol could be expanded by including cellulosic biomass (wood fibers and crop residue) as a raw material. However, the biomass market is presently limited due to technological limitations in the production process.

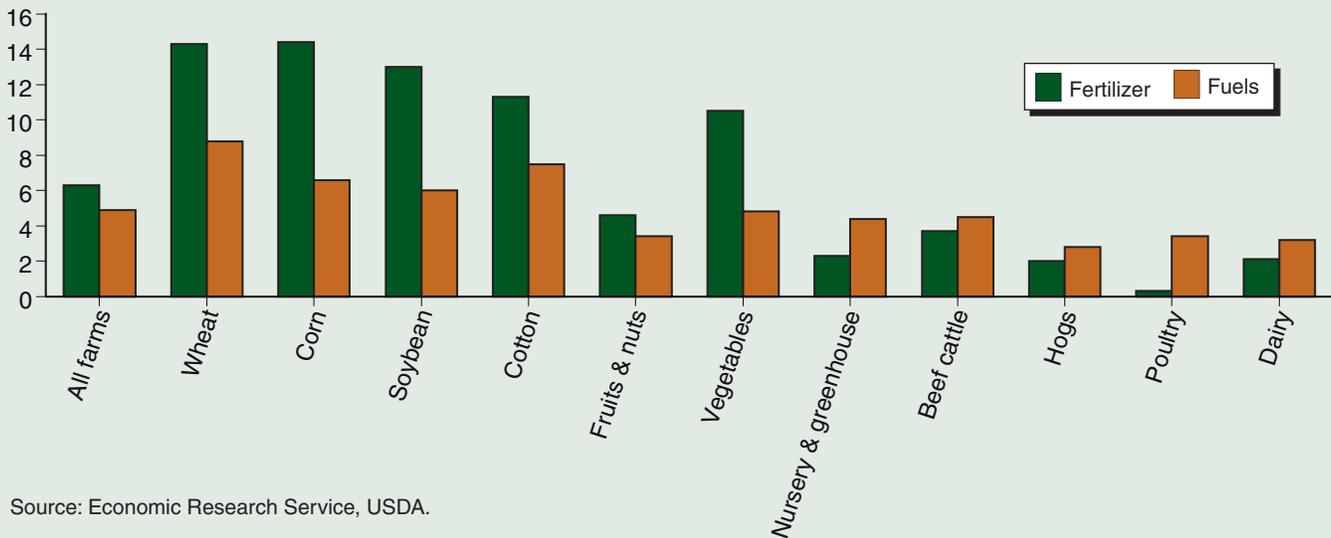
¹Unless otherwise noted, prices reported are in nominal terms.

²As reported by the Energy Information Administration, U.S. Dept. of Energy.

Figure 6

Fertilizers and fuels: share of total expenses by farm type, 2005

Percent of total expenses



Source: Economic Research Service, USDA.

Distribution of Agriculture Sector Earnings

Farms are expected to contribute \$107.6 billion in net value added to the U.S. economy in 2006, down from the 2004 peak of \$128.9 billion.

Agriculture's value added (fig. 7), is distributed to its equity holders (farm operators and contractors) and stakeholders (lenders, nonoperator landlords, and hired labor). Contractors are processors, elevators, retailers, and others who use both production and marketing contracts with farm operations to obtain agricultural products with specific, desired attributes. Equity holders' share comes in the form of net farm income. Stakeholders' share is in the form of interest payments to lenders, rent to nonoperator landlords, and both wages and noncash compensation to hired labor.

Since 1980, agriculture's value added in current dollars has trended upward, peaking at \$128.9 billion in 2004. It is expected to decline to \$107.6 billion in 2006 (fig. 8). While an upward trend in the current-dollar line suggests the farm sector equity and stakeholders are "better off" since 1980, removing inflation eliminates this upward trend. The line showing net value added in constant, inflation-adjusted dollars shows that the buying power of those dollars going to agriculture's equity- and stakeholders has fluctuated around \$94.4 billion.

While total net value added has been relatively constant in real terms since 1980, the same has not been true for the shares going to the different groups who contribute to it. Examining inflation-adjusted dollars shows that real net farm income, though more volatile than real payments to stakeholders, has trended upward since 1980 (fig. 9). The volatility in net farm income reflects equity holders' risk of residual returns. Payments to stakeholders declined in the mid-1990s, and has been relatively level since. The decline in stakeholders' share of net value added is due to large declines in interest rates on farm loans and reductions in farm debt use following the financial crisis in the early 1980s.

As residual claimants, the share of net value added (net farm income) going to farm equity-holders increases during years of large increases in net value added and declines in declining years (table 3). Stakeholders' share (wages, rent, and interest) is relatively fixed with respect to changes in the value of agricultural production. Thus, stakeholder share of net value added tends to move inversely with changes in net value added. Hired labor receives their compensation in both cash and non-cash form. Noncash compensation is measured as the cash value of all commodities, feed, fuel, housing, meals and other food, utilities, vehicles for personal use, and any other noncash payments for farm work. Increases in interest rates on farm loans, which have not been offset by reduced farm debt have led to an increasing share of net value added going to farm lenders in 2005. This trend is expected to continue into 2006 as well.

Figure 7
Components of value added among sources and earners

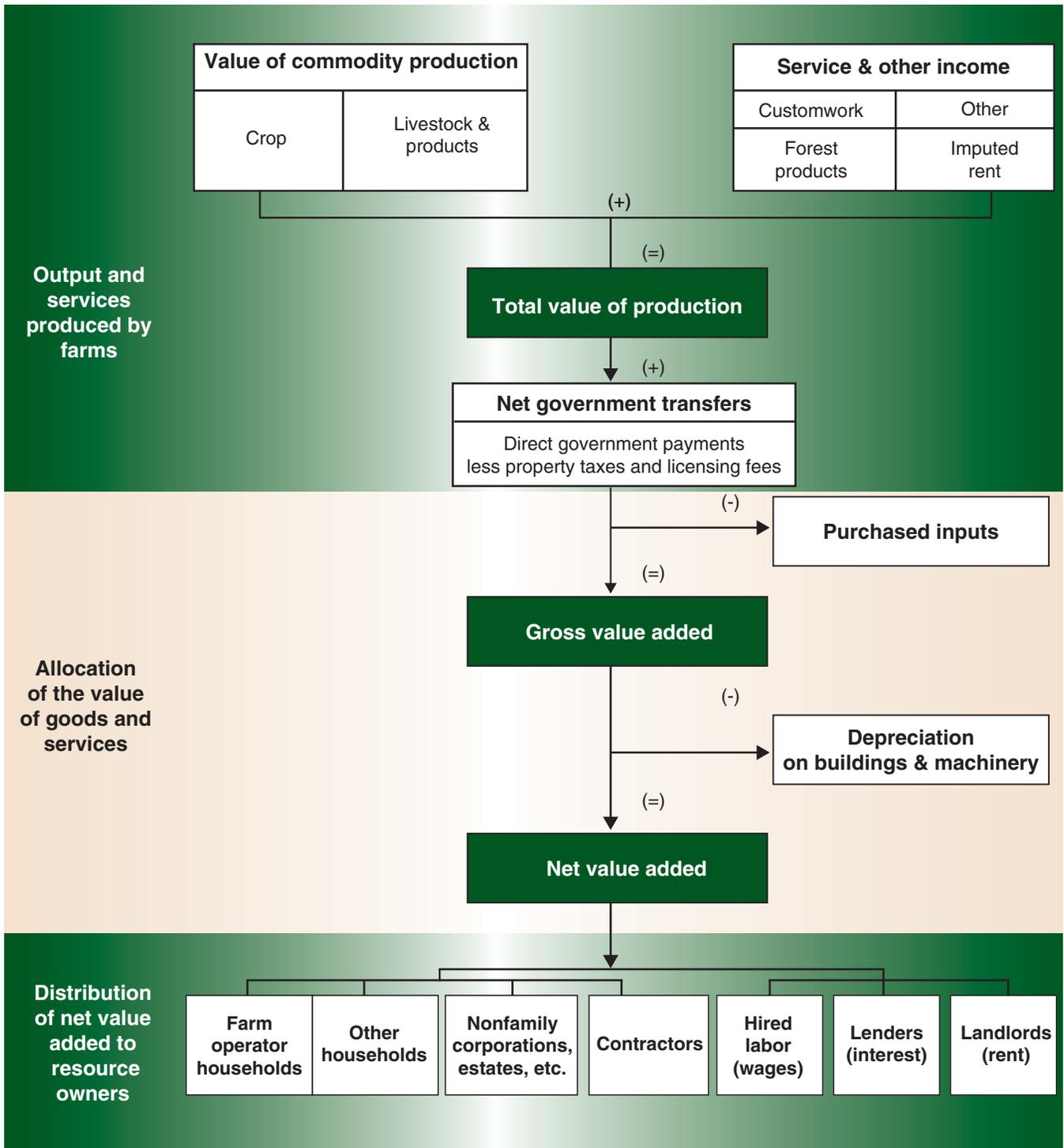
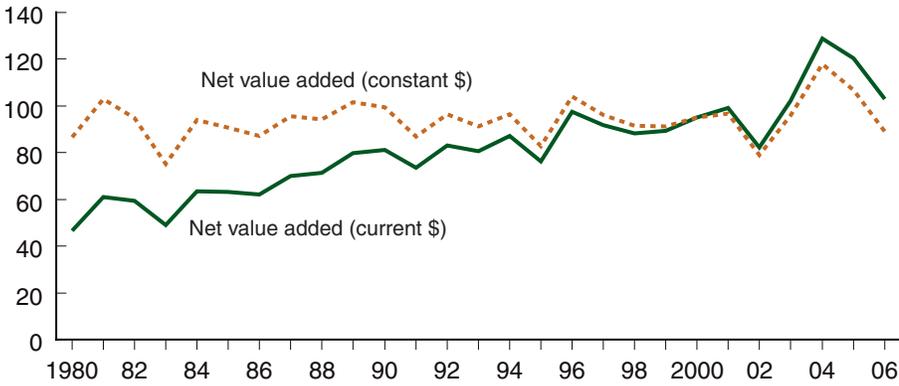


Figure 8

U.S. agriculture sector net value added, 1980-2006

\$ billion



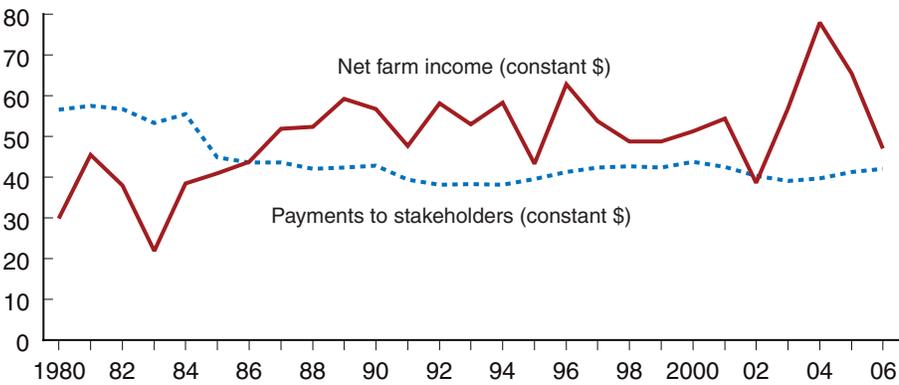
Note: 2006 forecast.

Source: Economic Research Service, USDA.

Figure 9

Net farm income and payments to stakeholders, 1980-2006

\$ billion



Note: 2006 forecast.

Source: Economic Research Service, USDA.

Table 3

Distribution of Net Value Added by Claimant Group, 2002-2006

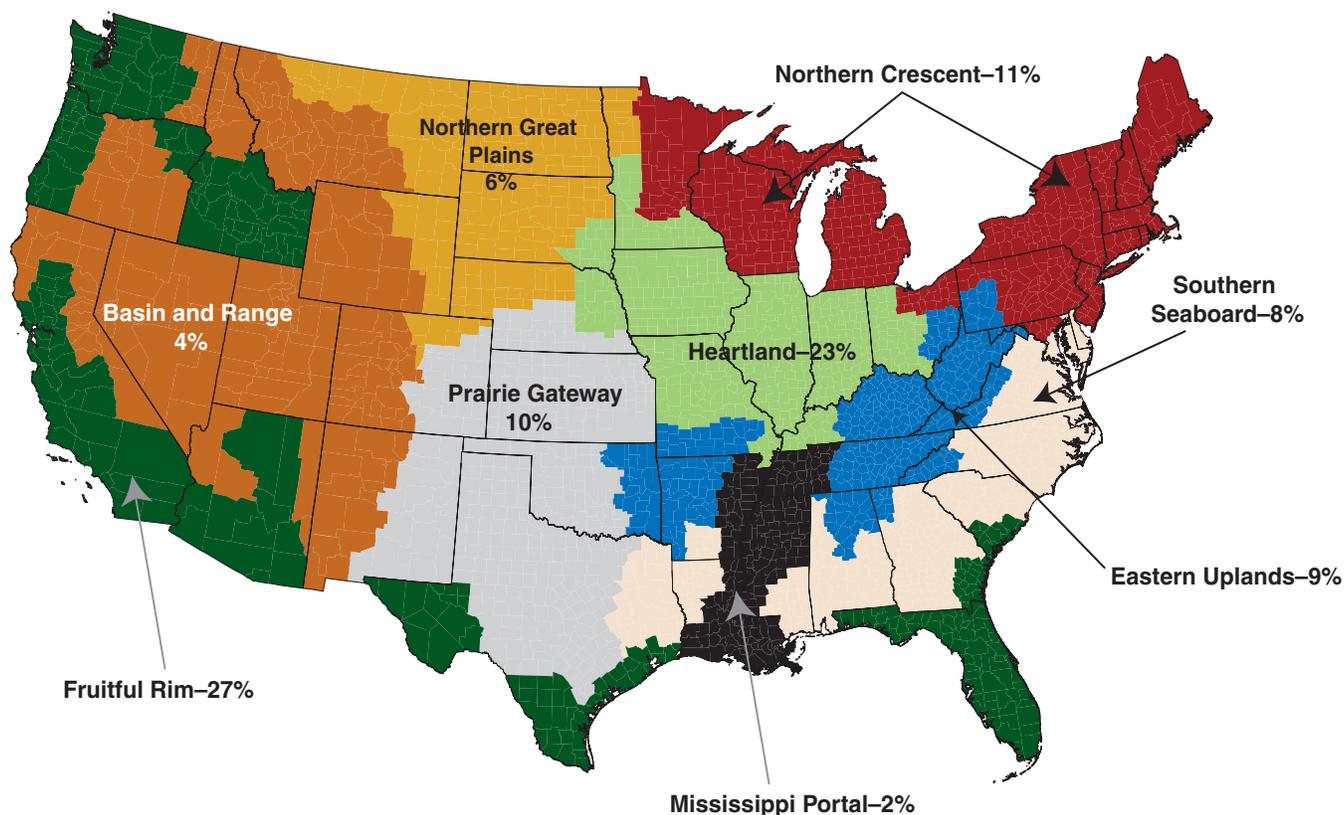
	2002	2003	2004	2005	2006
	<i>Percent</i>				
Equity Holders:					
Family Farm Operators	30.6	46.4	45.3	43.8	41.6
Nonfamily Farm Operators	3.6	4.7	7.3	8.0	6.3
Contractors	11.4	7.8	13.2	13.6	12.2
Subtotal	45.6	58.9	65.7	65.5	60.1
Stakeholders:					
Hired Labor	26.9	19.8	16.5	17.5	20.2
Lenders	15.0	10.9	7.9	8.4	10.1
Nonoperator Landlords	12.5	10.4	9.9	8.6	9.6
Subtotal	54.4	41.1	34.3	34.5	39.9
Total	100.0	100.0	100.0	100.0	100.0

Note: 2006 forecast.

Source: Agricultural Resource Management Survey, USDA.

The two largest resource regions in terms of number of farms and value of production—the Fruitful Rim and the Heartland—accounted for half of U.S. agriculture’s net value added (fig. 10). A farm is classified as specializing in one of eight different crop or livestock commodities if that commodity’s value of production accounts for more than 50 percent of the farm’s total value of crop and livestock production. Farm operations specializing in crops and those specializing in livestock contributed equally to U.S. agriculture’s net value added in 2005 (fig. 11). While rural residence farms make up two-thirds of U.S. farm operations, they accounted for only 11 percent of net value added in 2005 (fig. 12). Commercial farm operations make up less than one in ten U.S. farms, yet accounted for almost 74 percent of 2005’s net value added by agriculture.

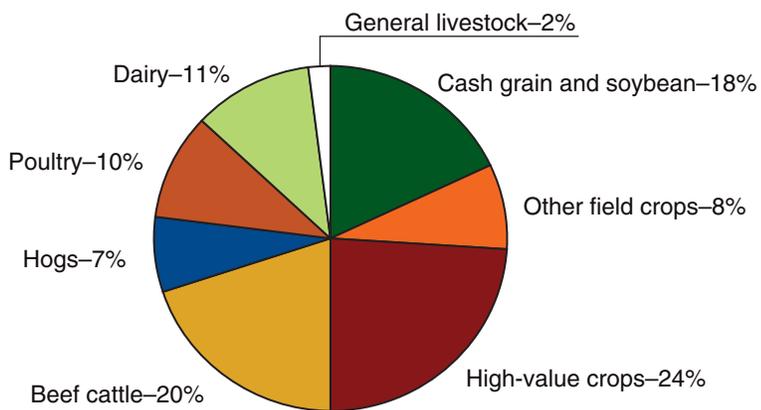
Figure 10
Net value added by farm resource region, 2005



Source: Economic Research Service, USDA.

Figure 11

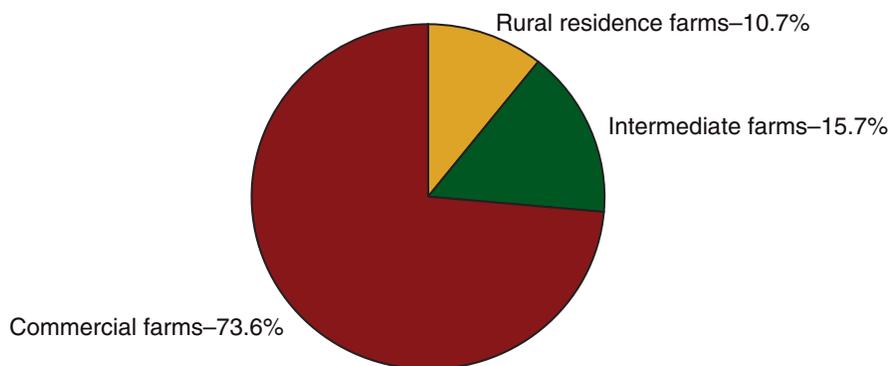
Net value added by farm type, 2005



Source: Agricultural Resource Management Survey, USDA.

Figure 12

Net value added by farm typology, 2005



Source: Agricultural Resource Management Survey, USDA.

Income, Debt Use, and Financial Performance of Farm Businesses

Rising crop prices help solidify 2006 as one of the top three net income years of the past 10 years. Debt use continues to expand. The combination of income and rising asset values relative to debt use leaves fewer farms in a high-debt, low-income financial position.

Farm Business Income Prospects

After 2 consecutive years of exceptionally high income, 2006 net cash income for farm businesses is projected to be \$68,669, on average. This is 20 percent higher than the previous 5-year average but a 13 percent drop from 2005. Income for farm businesses (see box) will remain at the third highest level of the past 10 years. The projected change in income prospects for farm businesses will not affect all farm operations in the same manner or to the same degree. There is considerable variation in business structure, including the extent to which assets are owned, the mix of crops and livestock, the contribution of government payments to gross income, and the relative importance of energy inputs and borrowed capital to production costs.

Income Prospects Differ by Production Specialty. Almost all types of farms, as classified by the major commodity or commodity groups produced, are forecast to experience reduced income in 2006. The magnitude varies across commodity specialties. Specialty crop producers—which include vegetable and fruit growers and greenhouse/nursery operators—are expected to generate a higher level of income for the fourth consecutive year. Growth in receipts for specialty crop producers more than outpaces an increase in expenses. The incomes of dairy, hog, and other livestock farms are expected to decline more than for other farm types because of forecast lower prices, reduced marketings, lower government payments, and higher input costs. Dairy farm income could be lower in 2006 being than for any year this decade. Increasing prices for energy-based inputs, higher feed expense, and larger interest charges on debt capital contribute most to the overall increase in farm operating costs. These inputs are prominent in the cost structure of livestock farms and, combined, account for more than 40 percent of costs for these businesses. For other types of livestock operations, the smallest net cash income declines are forecast for poultry and beef farms, where higher receipts offset some of the increases in expenses. Average net cash income for farms that specialize in the production of program crops such as corn, soybeans, wheat, cotton, and rice are forecast to be 8-18 percent below 2005 levels (fig. 13). Even though incomes are lower in 2006, farm business income could remain well above the previous 5-year average for specialty crop and corn producers, and higher than the 5-year average for the remaining crop types. Average net cash income in 2006 is forecast to fall below the previous 5-year average for hog, dairy, and other livestock producers (fig. 14).

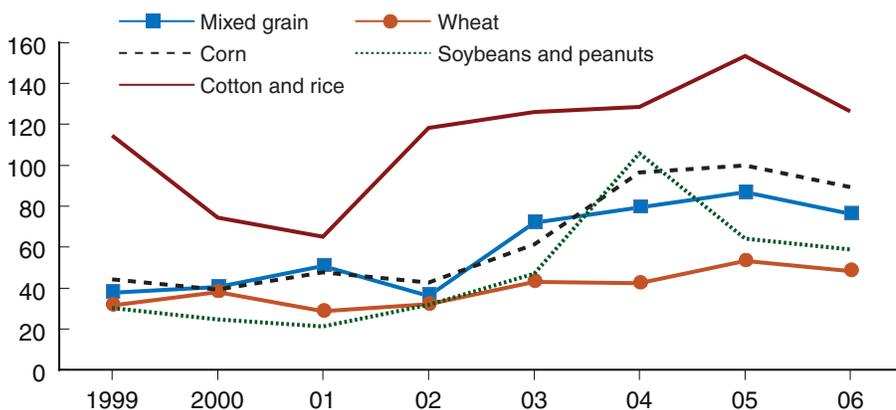
Defining Farm Business

The official USDA farm definition (an operation with \$1,000 of gross agricultural sales or the potential to generate such sales) encompasses a widely diverse 2.1 million operations. Farms vary in their level of business activity, resource allocation, goals, and a host of other attributes. ERS developed a typology of farms to classify farms into more similar groups based on gross sales, major occupation, and total household earnings (for more information see box item ERS Typology of Farms). In order to concentrate analysis of business performance on those farms with significant labor allocation to farming and household dependence on business income several of the farm typology classifications are excluded (limited resource farms, retirement farms, and residential/lifestyle farms). A majority of these farms have negative business income and their operators' households receive most of the income from off-farm sources. Farm businesses, for purposes of performance analysis, include the nearly 800,000 remaining family and non-family farms who indicated that farming was the primary activity of the operator.

Figure 13

Average net cash income forecast lower for program crop farms in 2006

\$ 1,000



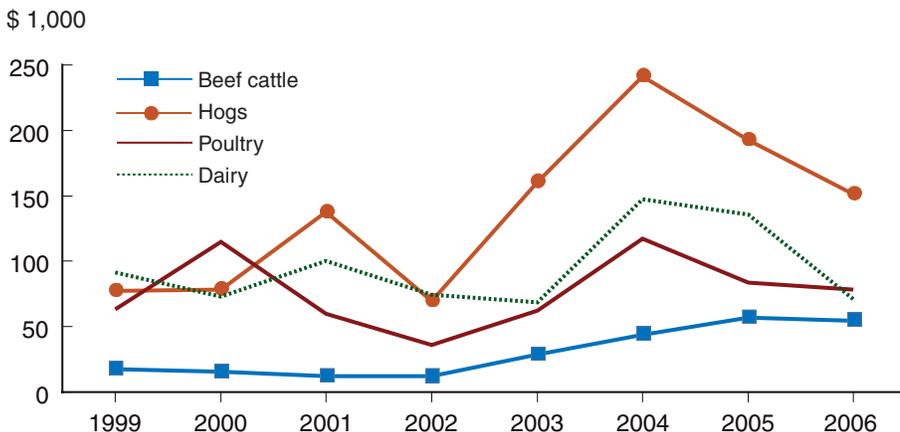
Note: 2006 forecast.

Source: Agricultural Resource Management Survey, USDA.

Income Prospects Differ by Farm Business Location. Geographic concentration of commodity production explains much of the regional variation in the income outlook for farm businesses. In 2006, not all regions of the country are forecast to experience a similar decline in net cash income. The largest year-to-year declines in average net cash income are expected in the Northern Crescent and Mississippi Portal regions. The forecast decline for the Northern Crescent reflects the concentration of dairy production. The Mississippi Portal, one of the regions most dependent on government payments (12 percent of gross cash income), has lower gross income even though receipts rise as a result of larger crop sales. The rise in crop receipts does not offset a reduction in payments combined with a slight reduction in livestock sales. The smallest declines in net income (8-10 percent) are fore-

Figure 14

Average net cash income forecast lower for livestock producers in 2006



Note: 2006 forecast.

Source: Agricultural Resource Management Survey, USDA.

cast for the Prairie Gateway, Eastern Uplands, and Fruitful Rim. Compared with the previous 5-year average, 2006 net cash income is expected to be lower in two regions: the Mississippi Portal and Southern Seaboard. In contrast, net cash incomes remain at least 25 percent higher than the previous 5-year average in the Prairie Gateway, Eastern Uplands, Heartland, and Fruitful Rim.

Income Prospects Vary by Economic Size of Farm Business. There is considerable variation in projected net cash income by size of farming operation in 2006. Commercial operations, which represent about 9 percent of farms and 75 percent of production, are expected to experience an 11-percent decline in average net cash income for 2006. The 2006 forecast for these farms is still 14 percent higher than the previous 5-year average and the third highest income in this decade. The rate of decline forecast for intermediate farms (primary occupation of farming and gross sales below \$250,000) is almost twice that of commercial farms (21 percent,) resulting in net cash income near the previous 5-year average. Two-thirds of U.S. farms are classified as rural residences—operators of which typically earn most of their household income from off-farm sources. Unlike operators of intermediate and commercial farms, the vast majority of rural residence farmers were employed off-farm prior to becoming a farmer, with a much larger share of both operators and their spouses having off-farm jobs. The farm operations of these households have for many years averaged a negative net cash income, with 2006 no exception.

Farm Business Debt Use

Farm business owners incorporate debt into their businesses along with equity capital, earnings retained from business activity, and a variety of leases to acquire inputs ranging from cropland to machinery and equipment. How these assets are combined in business startup and adjustment decisions differs among farm owners. Not all owners of farm businesses owe term debt, or notes, to

creditors at year-end. In contrast, all farm businesses typically have some liability when the liabilities include items such as accrued interest, accounts payable, notes payable within a year, or the current portion of term debt. Considering total liabilities, two-thirds of farm businesses have liabilities less than 10 percent of total assets. If only term debt owed to lending institutions, individuals or other creditors at year-end is considered, nearly half of farm businesses reported owing no debt at year-end 2005 (fig. 15).

Total liabilities of farm businesses have increased, on average, during the last 10 years, rising from less than \$100,000 per farm to over \$140,000 in 2006 (fig. 16). Most of the increase in total liabilities has resulted from noncurrent liabilities where farm owners have used debt capital to acquire real estate or other long-term assets. Noncurrent liabilities, on average, have increased by about 50 percent while current liabilities have increased 22 percent.

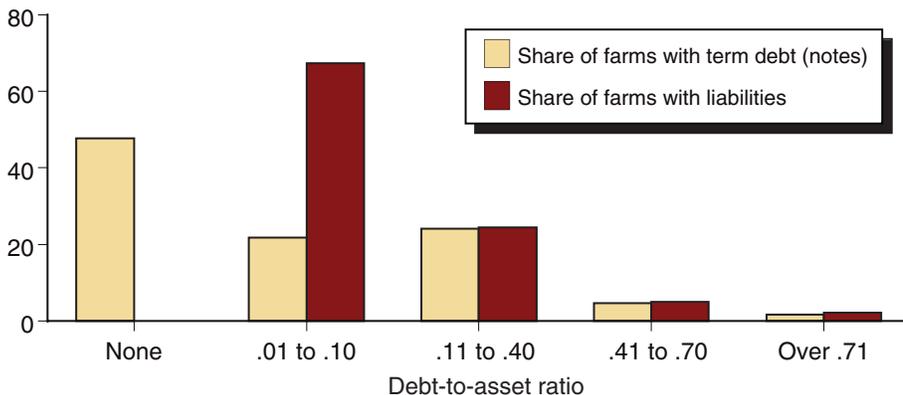
Farmers that reported the highest liabilities relative to asset values (farms with debt over 71 percent of asset values) operated larger farms in terms of acreage and generated much larger value of production than operations that reported smaller amounts of debt (fig. 17). Only about 2 percent of farm businesses reported liabilities and assets that resulted in them having a debt to asset ratio over 0.71. These more highly leveraged farms tended to be operated by managers that were younger, with fewer years operating a farm business. These operators were likely still in a build-up or expansion phase of their business development. The 2.2 percent of farms with debt over 71 percent of asset values held nearly 16 percent of liabilities. These farms also held a similar share of term debt.

Fifty-three percent of liabilities reported by operators at year-end 2005 were owed by the 25 percent of operations with a debt-asset ratio of 0.11 to 0.40. The two-thirds of farms with liabilities less than 10 percent of asset values owed 12 percent of total liabilities in 2005. These low-leverage businesses controlled three-fourths of land owned and 63 percent of all land operated by farm businesses. They generated about half of total production value. Managers of these farms were older, on average, and had more years of farm experience.

Figure 15

Share of farm businesses with term debt (notes) and liabilities, 2005

Percent of farm business

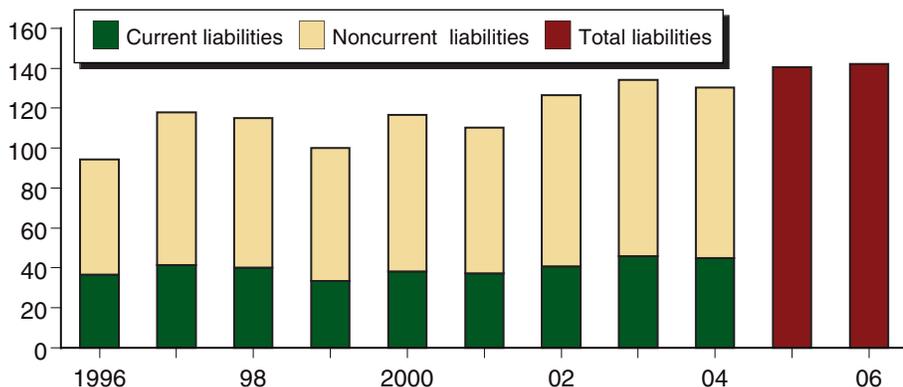


Source: Agricultural Resource Management Survey, USDA.

Figure 16

Total liabilities of farm businesses have increased, 1996-2006

Average \$ 1,000 per farm business

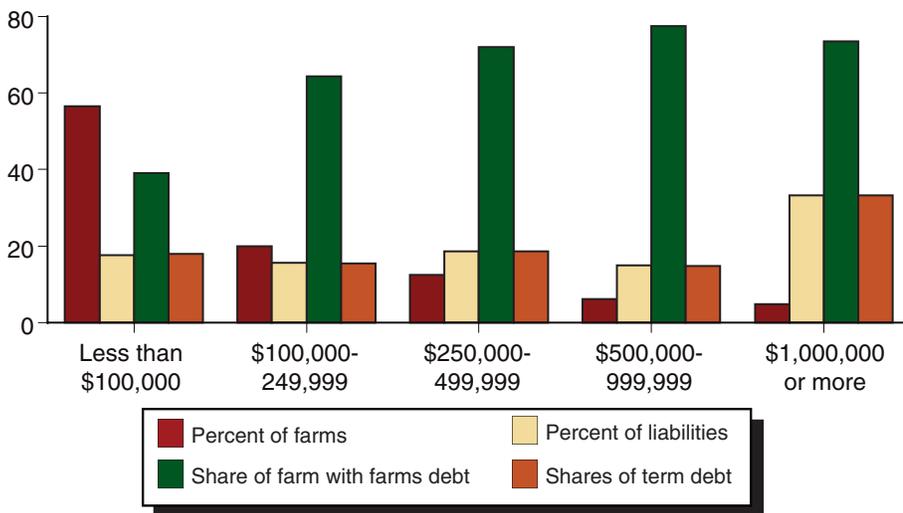


Source: Agricultural Resource Management Survey, USDA.

Figure 17

Distribution of debt owed by size of farm business operation, 2005

Percent



Source: Agricultural Resource Management Survey, USDA.

Farm Business Financial Ratios

Financial ratios provide a means to examine recent trends in financial performance, as well as differences in financial structure among various classifications of farms. Ratio analyses, by expressing relationships between the income and balance sheet statements in percentage terms, provide a relative basis for monitoring and comparing the financial strength of farm businesses. Ratios have been developed to reflect key aspects of financial performance, including liquidity, solvency, debt repayment capacity, profitability, and financial efficiency (table 4).

Farm business liquidity as measured through the current ratio indicates the relationship between current assets and current debt. Values of the current ratio across all farm businesses ranged from a high of 3.31 in 2000 to a low

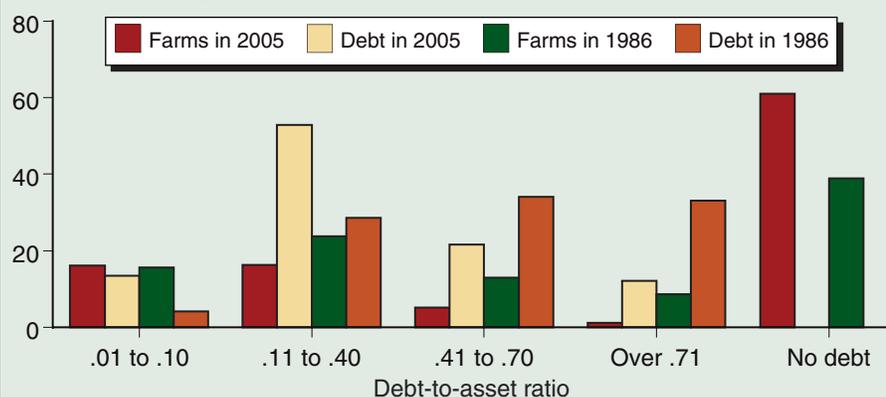
Trends in Debt Use and Business Performance

There are varying degrees of financial success among farm businesses from one year to the next that may not be reflected in sector measures of performance. Annual results from the ARMS survey have been reported and analyzed by ERS to monitor and evaluate changing economic circumstances of farm businesses. Both liabilities and term debt reported by farmers tend to be concentrated among farms that are more highly leveraged. Based on data reported by farmers in the ARMS and earlier surveys, both the share of farms and the share of debt held by highly leveraged farms is less in 2005 than in the mid-1980's (figure 18). Asset values have risen relative to debt, leaving farms, on average, in a less leveraged position.

Figure 18

Distribution of all farms and term-debt by debt-to-asset ratio, 2005 and 1986*

Percent of all farms



* For purposes of this chart, all farms were used in order to generate data for 2005 comparable to data for 1986, prior to development of the ERS typology of farms.

Source: Agricultural Resource Management Survey and the Farm Costs and Returns Survey, USDA.

of 1.58 in 2002. The year 2002 was the only time during the 10-year period that the ratio fell below 2.6, indicating that farm businesses have held a consistently strong liquidity position.

Liquidity varies a great deal across different farm types. For example, in 2005, general livestock farms (equine, aquaculture, and other mixed livestock specialties) had the highest average current ratio at 6.06. Poultry farms had the lowest average current ratio at 1.82.

The **debt-to-asset ratio** is one measure of solvency. The debt-to-asset ratio is defined as total liabilities divided by total assets. This ratio indicates the amount of risk embedded in the operation's financial structure. Associated with debt is an obligation to pay principal and interest. While debt increases a farm's financial risk, if debt service commitments are met by earnings, then benefits may accrue to owners using the debt. The average debt/asset ratio of farm businesses ranged from a high of 15.54 percent in 1997 to a low of 10.0 percent in 2005. The 1996-2005 period was one of gradual continued improvement in the solvency position of farm businesses. There

Table 4

Definition and historical values for selected farm business financial ratios

Ratio	Computation method				Significance			
Liquidity ratios:								
Current	<u>Current farm business assets</u> Current farm business liabilities				A "stock" measure of ability to meet financial obligations without disrupting ordinary business operations.			
Ratio low	Ratio high	2005 low	2005 high	2005 low	2005 high	2005 low	2005 high	
	(Year)	(Resource Region)	(Production Specialty)	(Economic Class)				
1.58 (2002)	3.31 (2000)	2.72 (Prairie Gateway)	5.75 (Eastern Uplands)	1.82 (Poultry)	6.05 (General Livestock)	2.58 (Less than \$1,000,000 or more)	5.47 (Less than \$100,000)	
Solvency ratios:								
Debt/asset	<u>Farm business assets</u> Farm business liabilities				Indicates the degree of security for the lender(s) and the relative use of the owner's capital.			
Ratio low	Ratio high	2005 low	2005 high	2005 low	2005 high	2005 low	2005 high	
	(Year)	(Resource Region)	(Production Specialty)	(Economic Class)				
10.00 (2005)	15.54 (1997)	6.69 (Basin and Range)	13.03 (Heartland)	4.62 (General Livestock)	18.46 (Poultry)	4.37 (Less than \$100,000)	15.92 (Less than \$1,000,000 or more)	
Profitability ratios:								
Return on assets	<u>Returns to debt and equity capital</u> Total farm business assets				Measures how efficiently the farm business uses its assets.			
Ratio low	Ratio high	2005 low	2005 high	2005 low	2005 high	2005 low	2005 high	
	(Year)	(Resource Region)	(Production Specialty)	(Economic Class)				
0.17 (2002)	3.45 (2005)	1.98 (Northern Great Plains & Mississippi Portal)	4.54 (Fruitful Rim)	-1.11 (General Livestock)	14.03 (Hogs)	-0.96 (Less than \$100,000)	10.94 (Less than \$1,000,000 or more)	
Repayment capacity ratios:								
Term debt coverage ratio	Net farm income + Depreciation + <u>Interest on term debt</u> Interest and principal on term debt				The ratio provides a measure of the ability of the borrower to cover all term debt payments. The higher the ratio, the greater the margin to cover the payments.			
Ratio low	Ratio high	2005 low	2005 high	2005 low	2005 high	2005 low	2005 high	
	(Year)	(Resource Region)	(Production Specialty)	(Economic Class)				
3.47 (2002)	5.35 (2005)	4.34 (Northern Crescent)	6.95 (Eastern Uplands)	3.19 (General Livestock)	9.55 (Cotton and rice)	3.41 (Less than \$100,000)	7.17 (Less than \$1,000,000 or more)	
Financial efficiency ratios:								
Operating expense ratio	<u>Cash operating expenses</u> Gross cash farm income				Measures the proportion of gross cash income absorbed by cash operating expenses.			
Ratio low	Ratio high	2005 low	2005 high	2005 low	2005 high	2005 low	2005 high	
	(Year)	(Resource Region)	(Production Specialty)	(Economic Class)				
72.06 (2004 & 2005)	80.38 (2002)	67.46 (Heartland)	78.95 (Mississippi Portal)	62.89 (Poultry)	90.51 (General Livestock)	70.29 (Less than \$1,000,000 or more)	86.77 (Less than \$100,000)	

Source: Agricultural Resource Management Survey, USDA.

The ARMS web-based data tool

The ARMS data tool (<http://www.ers.usda.gov/data/arms/app/Farm.aspx>) provides tables and graphs to demonstrate the variation in farm financial ratios and performance measures across farm by economic size, type, location, age of operator, and other characteristics of the farm business and operator.

tends to be considerable regional variation in farm business debt/asset ratios. In 2005, the Heartland had the highest average ratio at 13.03 percent compared with the low of 6.69 percent in the Basin and Range region.

Rate of return on assets (defined as net farm income plus interest expenses minus estimated charges for operator labor and management, divided by the current market value of total assets) reveals the returns received by the farm operator for both debt and equity capital invested. Farm business profitability as indicated by the ROA ranged from a low of 0.17 in 2002 to a high of 3.45 in 2005. Profitability tends to be directly related to farm size. On average, farm business rates of return were negative for farms with gross sales below \$100,000. Farms with gross sales of \$1,000,000 or more had an average rate of return on assets of 10.94 percent in 2005.

A farm's **debt service coverage ratio** indicates its ability to generate sufficient cash to meet financial commitments without disrupting business operations. The ratio of farm business debt service coverage is defined as net cash farm income plus interest payments, divided by term debt service costs (interest expense plus principal repayment). Higher ratio values indicate greater ability of the farm business to manage existing debt commitments. The average term debt coverage ratio for farm businesses ranged from a low of 3.47 in 2002 to a high of 5.35 in 2005. In 2005, farms that specialized in the production of cotton and rice had the highest average term debt coverage ratio at 9.55.

The **operating expense ratio** equals cash operating expenses divided by gross cash income of the farm business. This ratio measures the extent to which the cash income generated by the business is absorbed by the annual costs of production. The lower the ratio, the more effective the farm operation is in generating returns. As has been the general pattern across the various measures of financial performance, the strongest years for financial efficiency (the lowest average operating expense ratios) were 2004 and 2005, while the worst year during the period was 2002 with an average ratio value of 80.38 percent. In 2005, the operating expense ratio ranged from 67.46 percent in the Heartland to 78.95 percent in the Mississippi Portal region.

Overall Financial Performance of Farm Businesses

The overall financial performance of farm operations can be evaluated by considering their combined net income and solvency positions as measured by debts and assets (see box, "Classification of Overall Financial Performance"). Both the debt/asset ratio (a measure of business solvency) and net

farm income (a measure of business profitability) have limitations when considered independently. A high debt/asset ratio may be acceptable if a farm generates enough income to service debt and meet other financial obligations. Periods of low or negative income, similarly, may not pose major financial difficulties if the operation is carrying a low debt load and can either borrow against assets or use other sources of income outside the farm business. To reflect this range of financial situations, we use a framework based on the farm business's combined income and debt/asset ratio position.

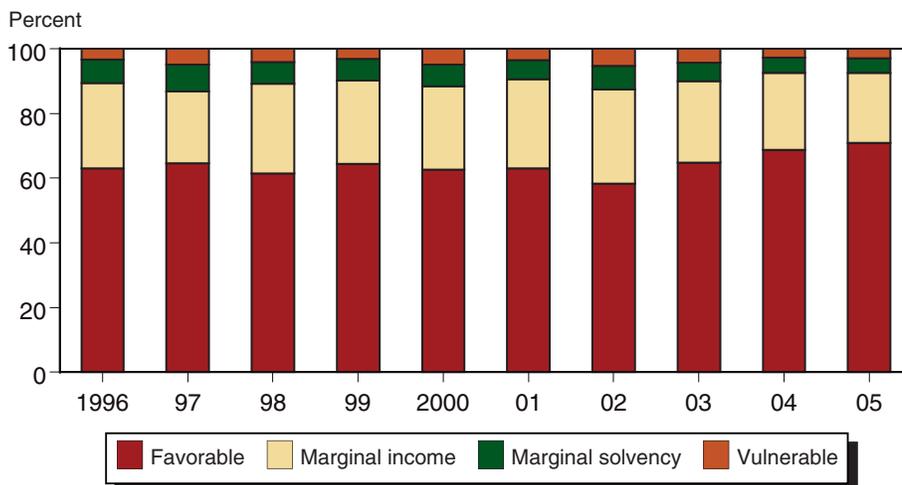
The distribution of farm businesses by overall financial performance mirrors the trends in overall sector performance during 1996-2005. The highest share of farms categorized as financially vulnerable (5.4 percent) and lowest proportion considered financially favorable (58.3 percent) occurred in 2002. That was the only year during this period when the share of favorable farm businesses fell below 60 percent (fig. 19). The highest percentage of favorable farms (71 percent) occurred in 2005, while the lowest share of vulnerable farms was in 2004 (2.8 percent) confirming the favorable financial conditions in agriculture during these two years.

Not all regions followed this pattern of performance during 1996-2005. The highest proportion of vulnerable farm businesses occurred in 1997 for the Northern Crescent, Northern Great Plains, and Basin and Range regions; 1999 for the Mississippi Portal, 2000 for the Fruitful Rim, and 2003 for the Eastern Upland region. The Prairie Gateway had the highest share of vulnerable farm businesses in 2005 (5.3 percent) and the Eastern Uplands the lowest (1 percent). During the 1996-2005 period, the Northern Great Plain and Prairie Gateway generally had higher percentages of vulnerable farms than other regions (fig. 20).

There was also considerable variation across different crop production specialties as to which year during 1996-2005 the highest proportion of vulnerable farms occurred. For example, vulnerable farm percentages were

Figure 19

Distribution of farm businesses by overall financial performance, 1996-2005



Source: Agricultural Resource Management Survey, USDA.

Classification of Overall Financial Performance

The following classification framework has been used by ERS analysts since the mid-1980s to evaluate the overall financial performance and health of farm businesses. This framework combines both income and solvency measures.

Favorable = Positive net income and a debt/asset ratio less than 0.40.

Marginal income = Negative net income and a debt/asset ratio of 0.40 or less.

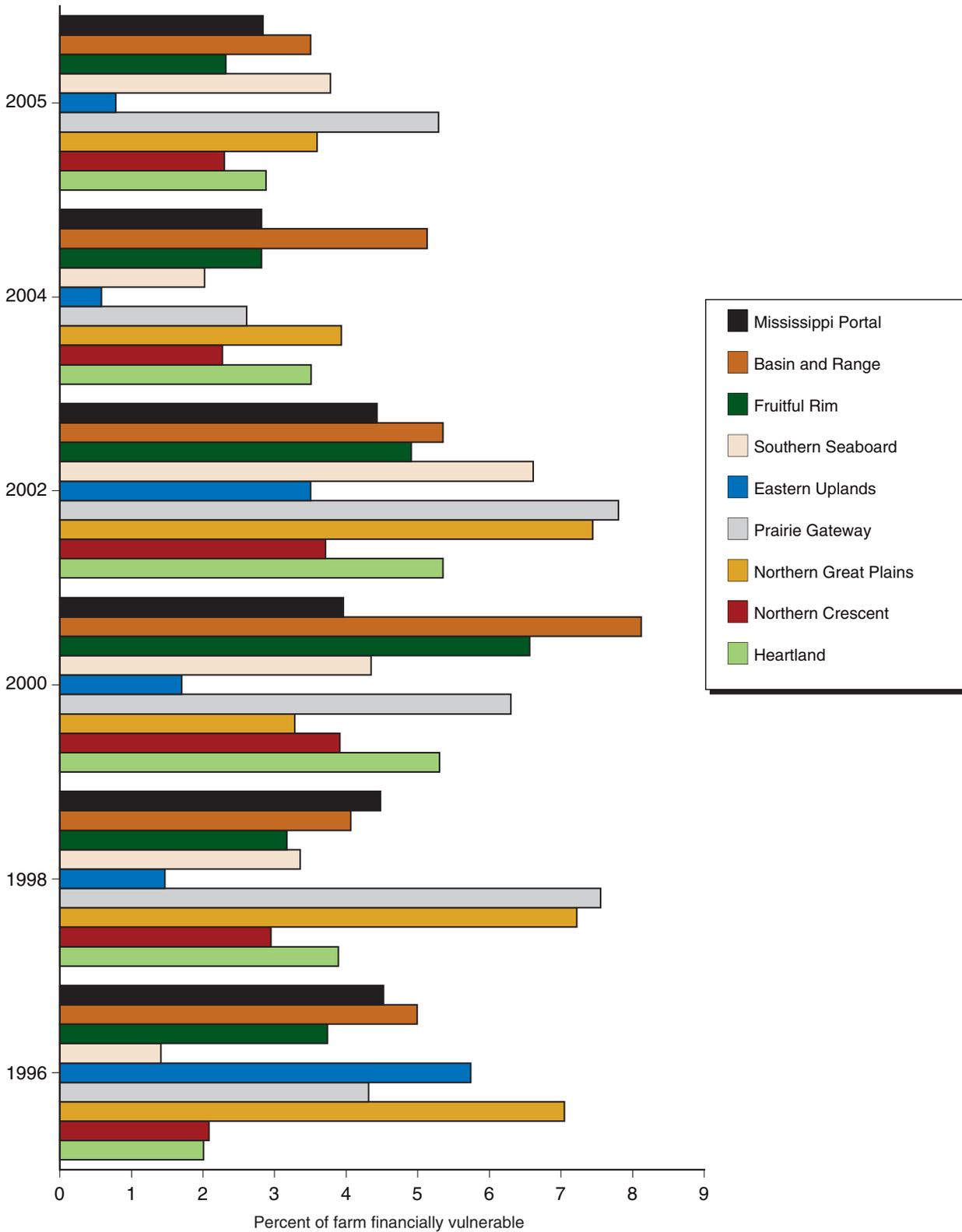
Marginal solvency = Positive net income and debt/asset ratios above 0.40.

Vulnerable = Negative net income and debt/asset ratios above 0.40.

highest in 1996 for wheat farms; 1997 for mixed cash grain and cotton and rice producers; 2000 for corn farms; and 2001 for producers of soybeans and peanuts. With the exception of soybean and peanut farms in 2001 (11.2 percent) the share of vulnerable farms was below 8 percent during the period for crop producers. In 2005, the highest share of vulnerable farm businesses was for wheat farms at nearly 6 percent. Farms that specialized in livestock production had similar variation in the year with the highest share of farms classified as financially vulnerable. The highest share of vulnerable farms for dairy producers was 1996 and 1998 for farms that specialized in hog production. For poultry and beef cattle farms, the highest percentage of vulnerable farms occurred in 2002. In 2005, dairy farms had the lowest percentage classified as vulnerable at 1 percent, while almost 9 percent of poultry farms were considered financially vulnerable (figs. 21 and 22).

Figure 20

Share of farm businesses classified as financially vulnerable by farm resource region, 1996-2005

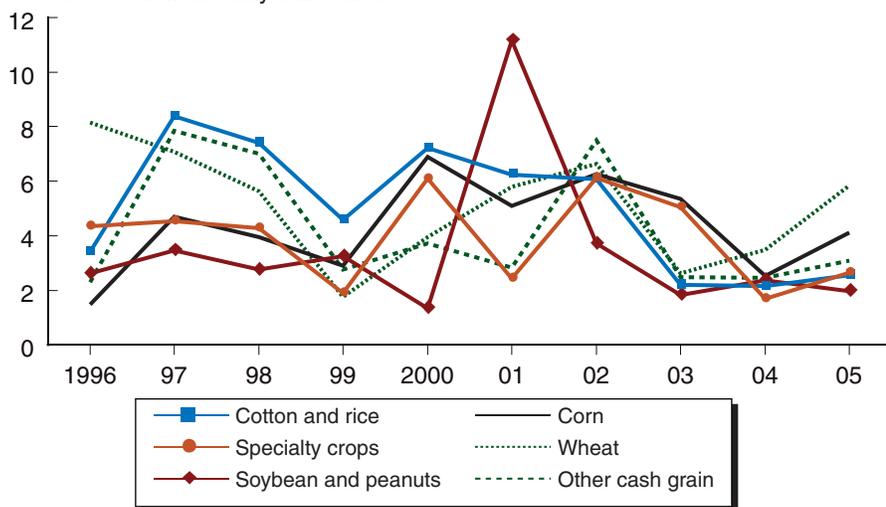


Source: Agricultural Resource Management Survey, USDA.

Figure 21

Share of farm businesses that specialize in crop production classified as financially vulnerable, 1996-2005

Percent farms financially vulnerable

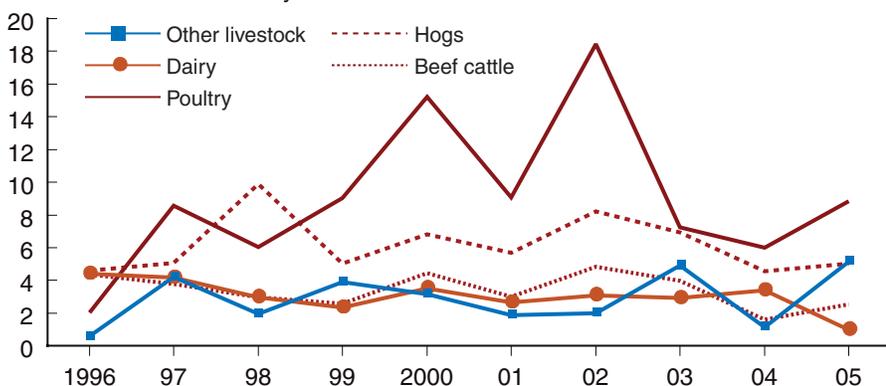


Source: Agricultural Resource Management Survey, USDA.

Figure 22

Share of farm businesses that specialize in livestock production classified as financially vulnerable, 1996-2005

Percent of farms financially vulnerable



Source: Agricultural Resource Management Survey, USDA.

Financial Position of the Farm Sector

Farm equity is expected to rise by about 7 percent in 2006, exceeding the rate of inflation, as the value of farm assets continues to rise more rapidly than farm debt. Financial performance of the sector, as measured by debt-to-asset and debt-to-equity ratios, continues to improve in 2006 relative to the first half of this decade and relative to average performance over the past four decades.

Farm Assets, Debt, and Equity Continue Upward

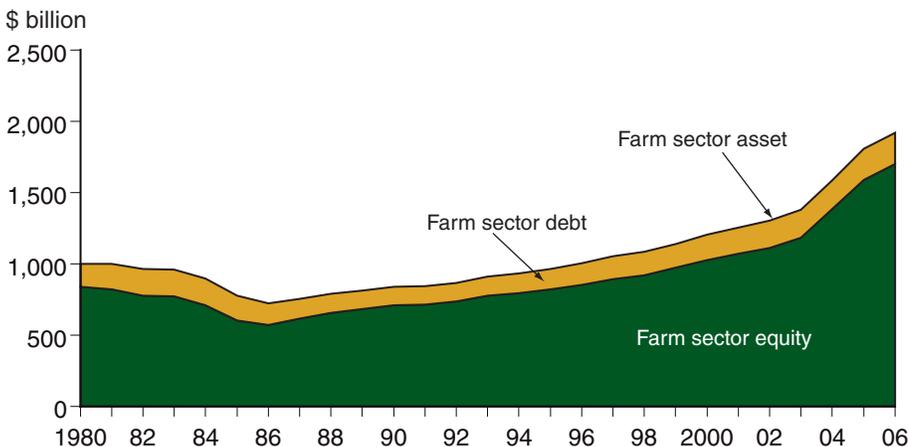
Across the sector, farm equity (assets minus debt) is expected to rise by about 7 percent in current-year dollars from \$1.6 trillion in 2005 to \$1.7 trillion at the end of 2006 (fig. 23). Equity is increasing, as farm asset values are expected to continue to rise more rapidly than debt (fig. 24). For 2006, farm asset value is forecast to increase by 6 percent, and farm debt by about 1.2 percent. The resulting 7-percent forecast gain in farm sector equity is expected to exceed the rate of inflation.

The 2006 forecast represents a slower rate of increase in equity than in 2004 and 2005, when the largest increases in the last 20 years occurred (17 percent and 15 percent, respectively). Equity grew in 2005 by \$206 billion. From a longer term perspective, equity in farm assets has risen in real terms for 15 consecutive years. However, farm sector wealth in 2006 is still \$77 billion below the inflation-adjusted value of farm wealth in 1980 (\$1,550 billion).

Farm Sector Assets: The value of U.S. agricultural assets (excluding operator and other dwellings) is forecast to rise by 6.3 percent in 2006. About four-fifths of the forecast increase in asset values is due to rising values of

Figure 23

Farm sector asset, debt, and equity values, 1980-2006



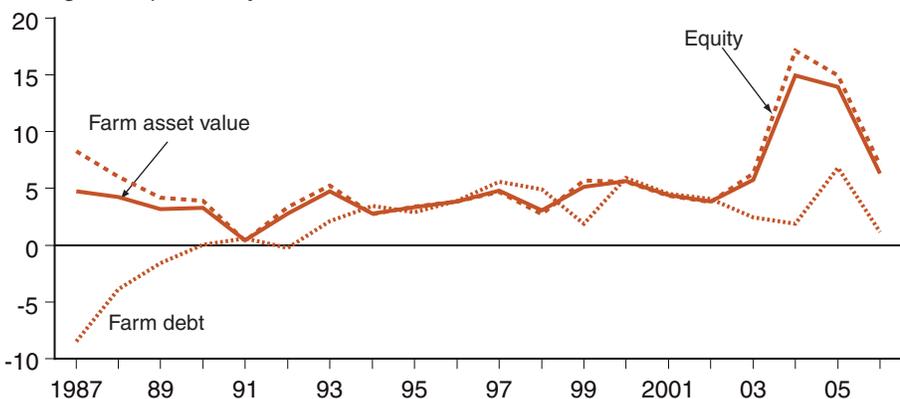
Note: 2006 forecast.

Source: Economic Research Service, USDA.

Figure 24

Rates of change in components of farm sector equity 1987-2006

Change from previous year



Note: 2006 forecast.

Source: Economic Research Service, USDA.

real estate, which represented 84 percent of farm assets in 2005. Farmland values, in turn, have been rising due to a combination of mostly nonagricultural factors, including favorable interest rates and a strong demand for nonagricultural uses of land.

The total value of nonreal estate assets is forecast to rise 0.1 percent in 2006. Livestock and poultry values are expected to fall in 2006, after a modest gain in 2005. The farm balance sheet asset value of crops stored is expected to fall in 2006. The value of purchased inputs is likewise expected to rise and the value of farm machinery and equipment is forecast to decline, reflecting weakening demand for tractors and tightening credit conditions. The value of farm financial assets is forecast to rise in 2006.

Total return to assets includes both current income and capital gains accruing to the assets. Figure 25 illustrates that capital gains have contributed the major share of total returns in the last few years.

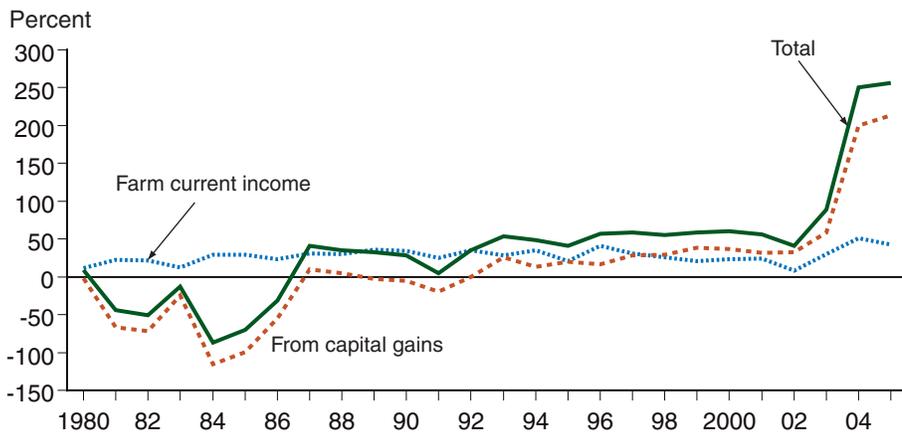
Farm Sector Debt: Total farm business debt was \$215 billion at the end of 2005, having increased 6.8 percent, compared with a 1.9-percent increase in 2004. Farm debt is forecast to approach \$218 billion by the end of 2006, for a 1.2-percent increase over 2005. Farm sector debt has been rising, since bottoming out at \$131.1 billion in 1989. The 2005 growth rate of 6.8 percent was higher than for any year since 1989.

Of the total (real estate and nonreal estate) debt supplied to the farm sector, commercial banks provided 42 percent, the Farm Credit System supplied 32 percent, and individuals and others (including USDA’s Farm Service Agency and life insurance companies) supplied the remaining 26 percent.

Farm sector debt is traditionally divided into two categories, based on whether the liabilities are secured by farm real estate or not. Real estate debt is estimated to have risen over 7 percent in 2005 and is forecast to rise an additional 3 percent in 2006, after almost no change in 2004. Nonreal estate loan balances are estimated to have increased almost 6 percent in 2005, following an almost 5 percent gain in 2004 (fig. 26). Nonreal estate loan

Figure 25

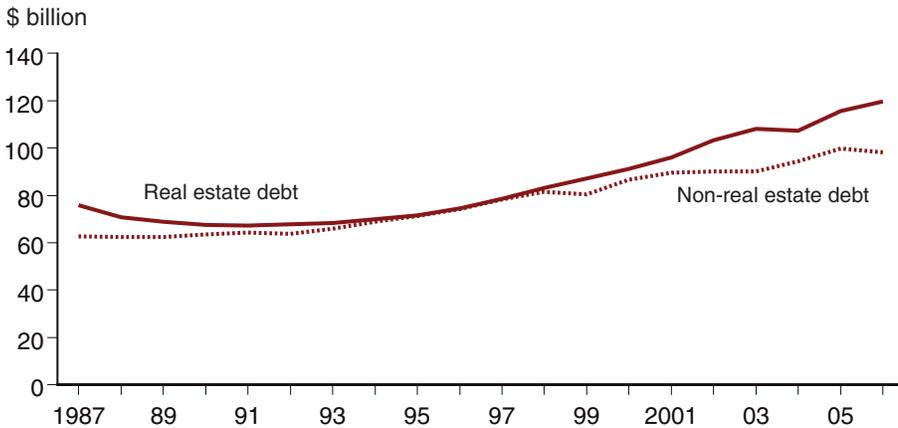
Total returns to farm assets from current income and capital gains, 1980-2005



Source: Economic Research Service, USDA.

Figure 26

Farm sector real estate and non-real estate debt, 1987-2006



Note: 2006 forecast.

Source: Economic Research Service, USDA.

balances are forecast to decrease slightly in 2006 reflecting weakening demand for tractors and tightening credit conditions. From 2001 to 2006, farm real estate debt has grown at an average of 5.0 percent while farm nonreal estate debt has grown at an average of 2.9 percent. Farm real estate debt is expected to exceed nonreal estate debt by \$20 billion in 2006.

Financial Position of U.S. Farm Sector

The financial position of the U.S. farm sector, as measured by total farm liabilities relative to either total farm assets or total farm equity, has continued to improve from 2002 through 2006 (table 5, fig. 27). The debt-to-asset ratio measures the relationship between claims of creditors on a business (debt capital) and assets of the business. In 2006, the debt/asset ratio is estimated to be 11.4 percent, the lowest value of the ratio since annual measurements began in 1960. Each of the past 2 years has seen

Table 5

Balance sheet of the U.S. farming sector, 2002- 2006

	2002	2003	2004	2005	2006
	<i>Million dollars</i>				
Total farm assets	1,304,049	1,378,757	1,584,842	1,805,272	1,919,432
Real estate	1,045,655	1,111,777	1,307,597	1,520,922	1,634,727
Livestock and poultry	75,621	78,540	79,420	81,097	80,747
Machinery and motor vehicles ¹	93,582	95,944	102,190	105,006	103,500
Crops stored ²	23,114	24,429	24,435	24,291	22,699
Purchased inputs	5,632	5,627	5,700	6,491	6,815
Financial assets	60,445	62,440	65,500	67,465	70,944
Total farm debt ³	193,312	197,999	201,697	215,479	217,978
Real estate	103,357	107,982	107,402	115,740	119,688
Nonreal estate	89,955	90,017	94,296	99,739	98,289
Total farm equity	1,110,737	1,180,758	1,383,145	1,589,793	1,701,454
Percent change in equity	3.79	6.30	17.14	14.94	7.02
Selected ratios:					
Debt-to-equity	17.4	16.8	14.6	13.6	12.8
Debt-to-asset	14.8	14.4	12.7	11.9	11.4

Note: 2006 forecast. Numbers may not add due to rounding.

¹ Includes only farm share of value for trucks and automobiles.

² Non-CCC crops held on farms plus value above loan rates for crops held under CCC.

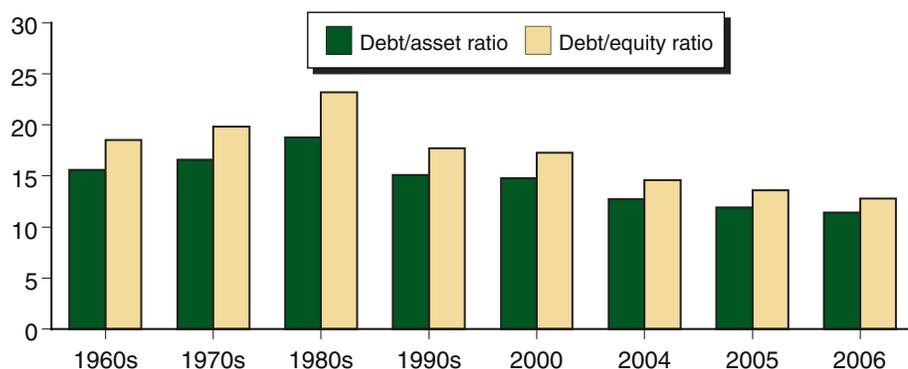
³ Includes CCC storage and drying facilities loans but excludes debt on operator dwellings and for nonfarm purposes. The current forecast and historic information can always be found at <http://www.ers.usda.gov/data/farmincome/finfidmu.htm>

Source: Agricultural Resource Management Study, USDA.

Figure 27

Farm sector debt owed has declined relative to sector assets and equity, 1960-2006

Percent



Note: 2006 forecast.

Source: Economic Research Service, USDA.

record low debt-asset ratios, at 11.9 percent in 2005 and 12.7 percent in 2004. The previous low for the farm sector was 12.9 in 1960, the year that USDA began measuring the farm debt/asset ratio. Total farm sector debt use has expanded each year since reaching a low of \$131.1 billion in 1989, increasing by 66 percent to \$218 billion in 2006. The driving factor in the reduction in farm sector leverage has been the increase in farm asset values by 149 percent over the same time period.

Farm Household Income and Wealth

In 2006 average farm household income is projected to be \$80,703, down 0.9 percent from 2005, but 11.7 percent above the 2001-2005 average. The projected 3.3-percent increase in off-farm income, expected to be 85 percent of household income, is more than offset by a 19.9-percent decrease in farm income. For every year since 1996, average income for farm households has exceeded average U.S. household income; during the period 1996-2005, the average difference was 15.2 percent. However, family farms are diverse, and the financial outlook for farm operator households varies across the population.

Farm Household Income Forecast Down in 2006

In 2006, average family farm operator household income is projected to be \$80,703 down 0.9 percent from 2005, but 11.7 percent above the 5-year average of 2001-05 (table 6). The projected 3.3-percent increase in off-farm income, expected to be 85 percent of household income, is more than offset by a 19.9-percent decrease in farm income.

On family farms, increases in crop cash receipts and other farm income are projected to be more than offset by declines in livestock cash receipts and government payments. Given higher farm expenses, average net cash farm income is projected to be \$17,224, down 17.3 percent from 2005. Following adjustments for depreciation, farm income due to other households sharing in farm income, and other farm-related earnings, operator household earnings from the farm are projected to be \$11,728. Although farm income is forecast down 19.9 percent from 2005, it remains at about the 5-year average. For off-farm income, the 2006 forecast for a 3.3-percent-increase follows a decline of less than 1 percent realized in 2005. The off-farm income forecast of \$68,975 is 9.2 percent above the 5-year average.

Family farms are diverse, and the outlook for farm operator households varies across the population. Income is more likely to decline in 2006 for farm households the higher the usual farm income share of total household income. Commercial farm households (7.7 percent of family farms) on average receive a much larger share of household income from farming (75.6 percent) than other farm households (fig. 28). Commercial farm operators are projected to have household income of \$174,214. Though this represents a 12.9-percent reduction in household income relative to 2005, it is 9.8 percent above the 5-year average (app. table B.1). Operators of intermediate family farms (23.3 percent of family farms) receive a much smaller share of their household income from farm sources (20.6 percent); total household income for them is forecast at \$66,414, down 2 percent from 2005, and 19.1 percent above the 5-year average. The forecast 22.4-percent reduction in farm income is partially offset by the forecast of increased off-farm income. Most family farms are classified as rural-residence farms, a category that

Table 6

Average income to farm operator households, 2001-2006¹

Item	2002 ²	2003	2004	2005	2006	Change 2005 to 2006	2006/ 2001-05 Avg.
	<i>Dollars per family farm</i>					<i>Percent change</i>	
Net cash farm business income ³	11,336	14,979	20,624	20,839	17,224	-17.3	5.1
Less depreciation ⁴	8,189	7,334	7,909	7,586	na	na	na
Less wages paid to operator ⁵	758	695	747	726	na	na	na
Less farmland rental income ⁶	621	864	806	953	na	na	na
Less adjusted farm business income due to other household(s) ⁷	1,248	1,344	2,955	2,009	na	na	na
	<i>Dollars farm operator household</i>						
Equals adjusted farm business income	520	4,742	8,206	9,565	na	na	na
Plus wages paid to operator	758	695	747	726	na	na	na
Equals farm self-employment income	1,278	5,437	8,953	10,291	na	na	na
Plus other farm-related earnings ⁸	2,199	2,447	5,363	4,346	na	na	na
Equals earnings of the operator household from farming activities	3,477	7,884	14,317	14,637	11,728	-19.9	28.6
Plus earnings of the operator household from off-farm sources ⁹	62,284	60,713	67,279	66,782	68,975	3.3	9.2
Equals average money income of farm operator households, comparable to CPS measure for all U.S. households	65,761	68,597	81,596	81,420	80,703	-0.9	11.7
	<i>Dollars per U.S. household</i>						
U.S. average household income ¹⁰	57,852	59,067	60,528	63,344	na	na	na
	<i>Percent</i>						
Average farm operator household income as percent of U.S. average household income	113.7	116.1	134.8	128.5	na	na	na
Average operator household earnings from farming activities as percent of average operator household income	5.3	11.5	17.5	18.0	14.5	-19.2	19.9

Note: 2006 forecast. na = not available.

¹ This table derives farm operator household income estimates from the Agricultural Resource Management Study (ARMS) that are consistent with household income in the Current Population Survey (CPS). The CPS, conducted by the Census Bureau, is the source of official U.S. household income statistics. The CPS defines income to include any income received as cash. The CPS definition departs from a strictly cash concept by including depreciation as an expense that farm operators and other self-employed people subtract from gross receipts when reporting net cash income.

² Prior to 2000, net cash income from operating another farm and net cash income from farmland rental were included in earnings from farming activities. Starting in 2000, net cash income from another farm and net cash income from farmland rental are not separable from total off-farm income in ARMS. Although there is no effect on estimates of farm operator household income, earnings of the farm from farming activities, and earnings of the farm from off-farm income are not strictly comparable to those from previous years. Starting in 2002, net cash income from operating another farm is once again included as earnings from farming activities. Starting in 2003, net cash income from farmland rental is once again included as earnings from farming activities.

³ A component of farm sector income which includes the income of farms organized as proprietorships, partnerships, and family corporations. It excludes income of contractors and landlords as well as the income of farms organized as nonfamily corporations or cooperatives and farms run by a hired manager.

⁴ The ARMS collects farm business depreciation used for tax purposes.

⁵ Wages paid to the operator are subtracted here because they are not shared among other households that have claims on farm business income. These wages are added to the operator household's adjusted farm business income to obtain farm self-employment income.

⁶ Gross rental income is subtracted here because net rental income from the farm operation is added below to income received by the household.

⁷ More than one household may have a claim on the income of a farm business. On average, 1.1 households share the income of a farm business.

⁸ Wages paid to other operator household members by the farm business and net income from a farm business other than the one being surveyed. This also includes the value of commodities provided to household members for farm work. Starting in 2003, this category includes net income from farmland rental (see footnote 2).

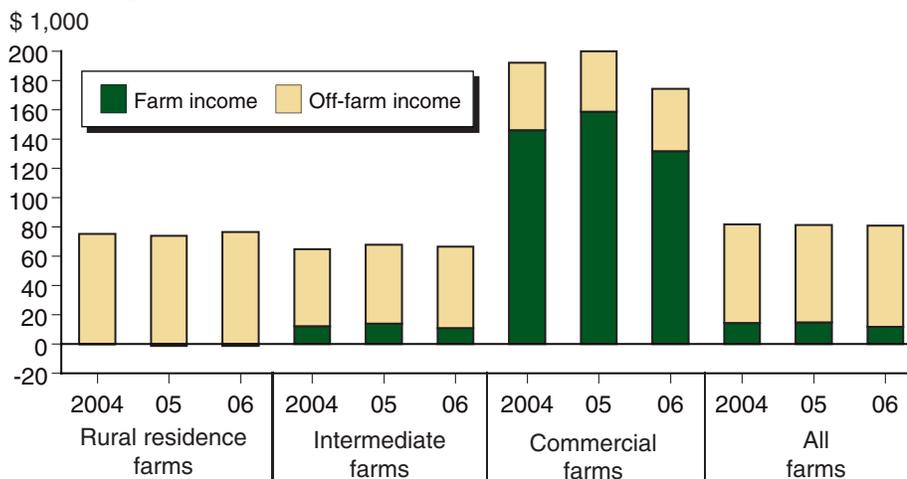
⁹ Wages, salaries, net income from nonfarm businesses, interest, dividends, transfer payments, etc. In 2002, also includes net cash income from farm land rental (see footnote 2).

¹⁰ From the CPS.

Sources: Agricultural Resource Management Study, USDA, for farm operator household income and Current Population Survey, USDC, for U.S. average household income.

Figure 28

Average farm household income from farm and off-farm sources by typology, 2004-06



Note: 2006 forecast.

Source: Agricultural Resource Management Survey, USDA.

includes limited-resource, retirement, and farming-occupation small-family farms (for definitions see the box on farm types). The total household income of rural-residence farm operators is forecast to reach \$75,145, an increase of 3.1 percent from 2005, and 8.1 percent above the 5-year average.

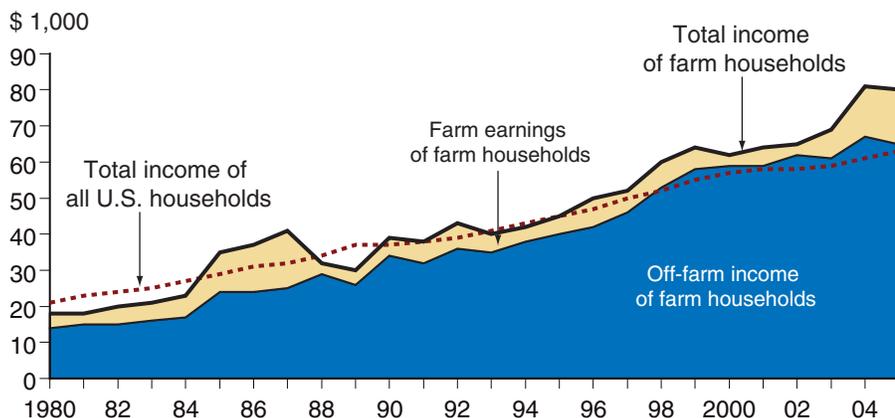
Since the late 1980s, ERS has reported money income for farm operator households, comparable to the measure the U.S. Census Bureau reports for all U.S. households. Money income has been more variable through the years for farm operator households than for all U.S. households (fig. 29), primarily due to the variability of farm income over time. Nonetheless, for every year since 1996, average income for farm households has exceeded average U.S. household income; during 1996-2005, the average difference was 15.2 percent.

Household Income Prospects Vary Across the Sector

Household Income Prospects Vary by Farm Typology. Because of the wide diversity among family farms, it is insightful to look at a finer classification of farms. Based on expanded farm typology, rural-residence farm households operating limited-resource, retirement, and residential/lifestyle small farms rely on off-farm income sources for virtually all their income; on average, limited resource and residential lifestyle farm operators reported losing money from farming activities, while retirement farm operators reported little income from farming activities (fig. 30). These farms typically generate relatively small amounts of gross income from the sales of farm products, government payments, or other sources. Limited resource and retirement farm households obtain most of their off-farm income from unearned income (net income from interest, dividends, retirement and assistance programs, and other sources).

Figure 29

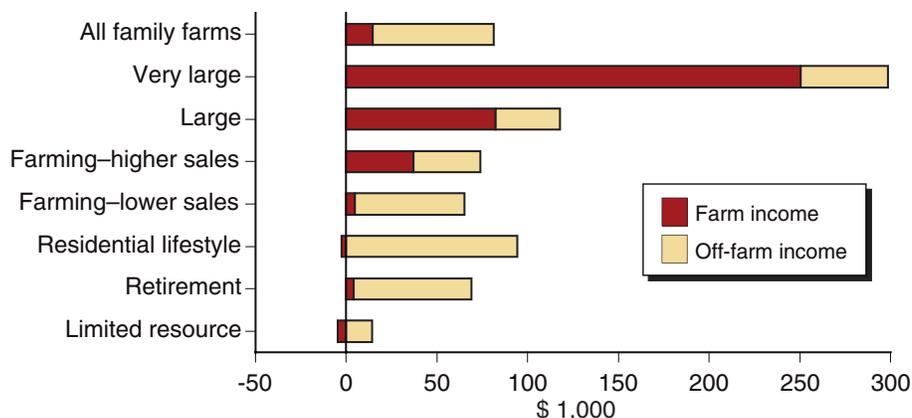
Average household income for farm households and all U.S. households, 1980-2005



Source: Agricultural Resource Management Survey, USDA and Current Population Survey, U.S. Department of Commerce.

Figure 30

Average farm household income varies by detailed farm typology, 2005



Source: Agricultural Resource Management Survey, USDA.

Operators of retirement farms are expected to realize an increase in farm income in 2006, whereas operators of limited-resource and residential/lifestyle farms are forecast to have greater losses than in 2005 (app. table B.2). Nonetheless, with the 3.3-percent growth forecast in off-farm incomes on average across all farm types, operators of all three groups of rural-residence farms are expected to realize an increase in household income. About 41 percent of family farms are classified as residential/lifestyle farms. Average household income of these farms is forecast at \$72,131, up 4.4 percent from the previous year, and 31 percent above the 5-year average.

In 2006, households operating the remaining farm types are expected to realize positive earnings from farming on average. The share of income from farming increases with farm size (as measured by gross sales). While farming occupation/lower sales farms averaged 6 percent of their total household income from farming activities, very large farms averaged 81 percent of their total household income from farming activities. Nonethe-

less, off-farm income earned by households in these groups, primarily from off-farm wages and salaries and off-farm business income, is substantial.

Among the operators who report farming/ranching as their primary income, only those of farming occupation/lower sales farms are expected to realize an increase in household income. Operator household income on farming occupation/lower sales farms is forecast at \$66,584, representing an increase of 1.8 percent. The forecast 3.3-percent gain in off-farm income more than offsets the expected 15.5-percent reduction in farm income. Since operators of farming occupation/higher sales realized 42.2 percent of their income from farming, their expected 24.7-percent reduction in farm income has a much larger impact. Operator household income on farming occupation/higher sale farms is forecast at \$65,977, down 10.7 percent from 2005. This would be the first time that household income on lower sales farms exceeded household income on higher sales farms.

On average in 2005, operators of large family farms realized 70 percent of their household income from farming activities and operators of very large family farms realized 84 percent of their household income from farming activities. Both large and very large family farms are expected to realize large reductions in farm income in 2006. The \$102,896 in average household income forecast for large family farms is down 12.6 percent from 2005, but still 4.9 percent above the 5-year average). The \$259,639 in average household income forecast for very large family farms is down 13 percent from 2005, yet still 10.4 percent above the 5-year average.

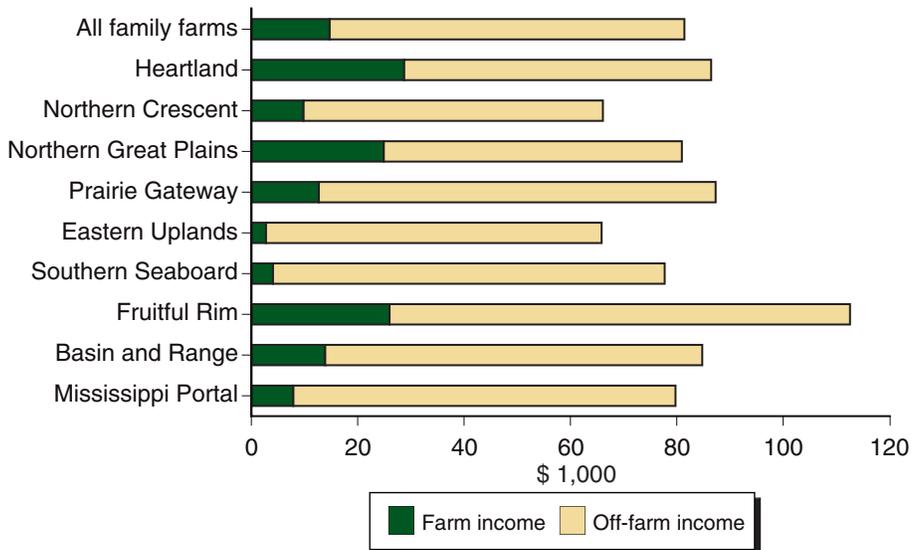
Household Income Prospects Vary by Farm Resource Region. In 2006, average operator household incomes are expected to be highest in the Fruitful Rim and lowest in the Northern Crescent and Eastern Uplands, consistent with the pattern in 2005 (app. table B.3). Households in the Northern Crescent are expected to see the largest regional decline in average household incomes for the second year in a row, at 5 percent in 2006, following a 10-percent decline in 2005. Two regions—Fruitful Rim and Northern Crescent—saw average household income increase by more than 20 percent in 2005; both are forecast to post small declines in 2006.

In 2005, more farm operator households were located in the Heartland (20 percent of all farm households) than in any other resource region (fig. 31). Average farm household income in this region was \$86,445, 6.2 percent above the national average of farm operator households. Heartland farm households also had the highest farm income (\$28,748). Nearly 38 percent of the farms in the Heartland specialized in cash grains and soybeans, 21.4 percent in other field crops, and 22 percent in beef cattle. Operators of cotton farms in the Heartland region realized the highest average household income at \$311,528. However, they represent less than 1 percent of the family farms in the region. Resulting from the significant increase in farm income, about 33 percent of regional average household income was attributed to farm sources. This is a jump from 2004, when only 18 percent of household income came from farm sources.

Household Income Prospects Vary by Farm Commodity Types. Average household incomes are projected to decline 3.3 percent for corn farm operators in 2006, 2.4 percent for wheat operators, and 0.5 percent for soybean

Figure 31

Average farm household income varies by resource region, 2005



Source: Agricultural Resource Management Survey, USDA.

farm operators (app. table B.4).³ These declines are the result of large decreases in government payments that more than offset the gains in cash receipts. The average income of households that operated corn farms (4.6 percent of all family farms) was \$108,659 in 2005, with 46 percent of this income attributed to farming activities (fig. 32). The lowest average household income of all farm types was for wheat farms (1.7 percent of all family farms). About 71.4 percent of corn and 58.8 percent of soybean farms are located in the Heartland, and 51 percent of wheat farms are located in the Prairie Gateway.

The expected 9.5-percent decline in the household income of cotton farm operators in 2006 is associated with a 16-percent decrease in farm income, where the forecast decrease in government payments exceeds the forecast gain in crop cash receipts. In 2006, households that operate cotton farms are still expected to have the highest income (\$143,804) of all types of crop farms. In 2005, cotton farm households (less than 1 percent of all farm households) had an average income of \$110,109, with 69 percent of this income attributed to farming. They received the largest average government payments. About 43 percent of cotton farms are in the Prairie Gateway.

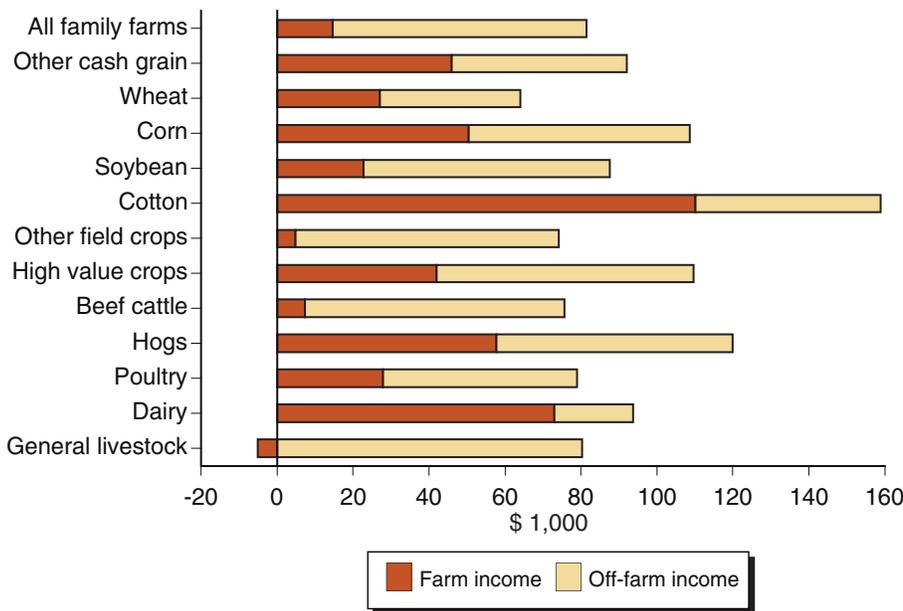
More farms are classified as beef cattle operations (33.8 percent) than any other type of farm. Operators of beef farms consistently earn less than average household income. They are expected to realize a 1.8-percent increase in household income in 2006. With little income from their farming enterprises, beef farm households rely primarily on income from off-farm sources. About 28 percent of surveyed beef farms were located in the Eastern Uplands, and 20 percent in the Prairie Gateway.

The average household incomes of hog farm operators and dairy farm operators are expected to fall from the 2005 levels. Dairy farm households receive a relatively high share of their income from the farm business, and they are expected to see a 53.6-percent decline in operator household

³A farm's type is determined by the one commodity or group of commodities that makes up at least 50 percent of the farm's total value of agricultural production. Using this definition, about half of all U.S. farm operator households can be classified as a particular type. The other farms have a mix of commodities, none of which accounts for at least 50 percent of total production value. Because this definition depends on yearly prices and quantities, an individual operation may be classified as one type one year and another type another year.

Figure 32

Average farm household income varies by farm type by specialization, 2005



Source: Agricultural Resource Management Survey, USDA.

income in 2006. Dairy farm operators reported an average household income of \$93,684 in 2005, with 77.9 percent of this income attributed to farming activities. About 65 percent of dairy farms are located in the Northern Crescent. Hog farm operators are expected to undergo a 14.1-percent decline in household income. In 2005, hog farm operators reported an average household income of \$119,922, with 48.1 percent attributed to farming. About 53 percent of the U.S. hog farms are located in the Heartland, with another 16 percent in the Northern Crescent.

Contributions of Different Income Sources to Household Income

According to the 2005 ARMS, earnings from farming contribute 16 percent of average farm household income (fig. 33). About 70 percent of off-farm income is considered earned income, with 80 percent coming from off-farm wages and salaries earned by the household.

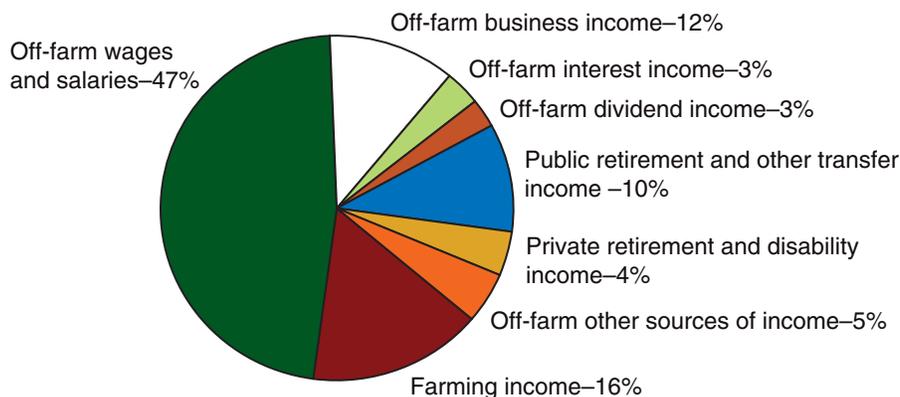
To characterize the 30 percent of household income from unearned income sources, the ARMS survey collected as separate line items—in 2005 for the first time—retirement, disability, and other transfer income from public sources and from private sources. Retirement, disability, and other transfer income from public sources contributed about 40 percent of unearned income; retirement and disability income from private sources contributed about 17 percent.⁴ Interest contributed about 13 percent and dividends 11 percent toward unearned income.

The picture differs across farm typology groups. Retirement farm households realized 47 percent of their household income from retirement and other

⁴Public sources of retirement, disability and other transfer income include Social Security, military and other public retirement, Veterans, public disability, unemployment and other public programs. Private sources of transfer income include retirement (company pensions, 401(k)s, IRAs) and disability benefits.

Figure 33

Average farm household shares of income by source, 2005



Source: Agricultural Resource Management Survey, USDA.

transfer income from public and private sources in 2005; wages and salaries earned off the farm by the household contributed another 16 percent of the total income. On the other hand, residential/lifestyle farm operators realized 75 percent of household income from wages and salaries earned off the farm; only 5 percent of the total was attributed to retirement and assistance income. On farming occupation/lower sales farms, operator households realized 42 percent of their income from off-farm wages and salaries, and 26 percent from Social Security, other retirement, and public transfer programs.

Farm Household Wealth

Wealth or net worth is the difference between assets and debts, measured in ARMS on the last day of the calendar year. Across all U.S. households, the major share of operator household wealth is in houses and other real estate. In contrast, farm households have the major share of their wealth in farm business wealth; consequently, as the average net worth of farms has increased through time, so has the wealth of primary operator households.

In 2005, the average wealth of farm households was \$838,875, with farm net worth comprising 76 percent of the total. This represents a 17-percent increase in farm wealth and a 2-percent increase in nonfarm, for a net change in total wealth of 13 percent. In 2005, nonfarm debt increased 17 percent, faster than the 5-percent increase in nonfarm assets, with the largest increase in the form of loans to off-farm businesses. Nonetheless, operator household debt-to-asset ratio was 0.1, lower than earlier in the decade.

Farm households have broadened their portfolios to include more nonfarm investments. Data on the composition of nonfarm assets are available from the ARMS survey beginning in 2003. Although operator household portfolios are diverse, they are mostly invested in real estate and IRA, Keogh, 401(k) and other retirement accounts. More than 50 percent of the nonfarm debt is mortgage expenses, including both mortgages on operators’ dwellings not owned by the operation and mortgages on other real estate. Looking at variations in assets, debt, and net worth across the typology groups highlights the diversity

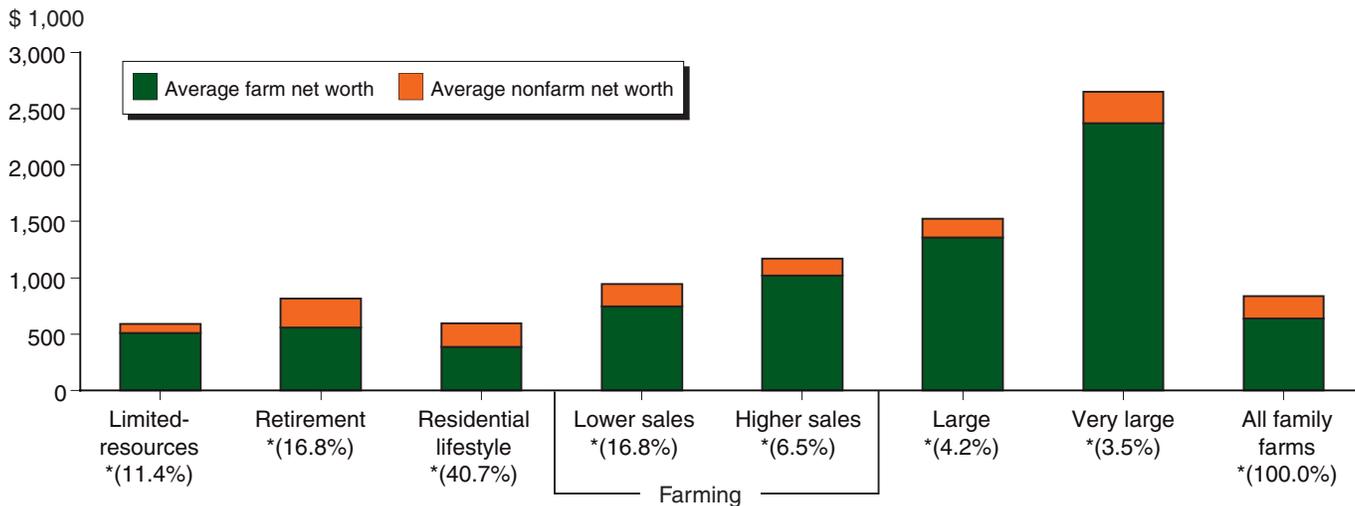
in the distribution and composition of wealth across family farm households (see app. table B.5). Since 76 percent of family farm operator household wealth is attributed to farming, it is no surprise that wealth increases with the size of the operation. Very large family farms (greater than \$500,000 in sales) representing 3 percent of farms held 11 percent of total family farm household net worth (fig. 34). Residential/lifestyle households, 41 percent of family farm households, hold 29 percent of total family farm household net worth. They also hold 72 percent of the total nonfarm assets attributed to an off-farm business. Retirement households, 17 percent of family farm households, hold 16 percent of total family household net worth; they also hold 35 percent of the total nonfarm assets attributed to real estate—other farms, residential rental, and other.

The average net worth (or wealth) of farm households in 2005 (\$838,875) was approximately double the average wealth of all U.S. households. At the medians, however, the difference is starker. (The median household wealth level refers to the level at which 50 percent of households are above, and 50 percent of households are below.) In 2005, the median wealth of farm households (\$510,018) was more than 5 times the median wealth of all U.S. households (\$97,755) (table 7). And for every group in the farm typology, median wealth is higher than the median wealth of all U.S. households. Only 6 percent of all farm households have wealth less than U.S. median household wealth.

Not surprisingly, the wealth distribution of farm households is much closer to the pattern of wealth distribution of all self-employed households in the United States. Farm households have a 50-percent higher median level of wealth than all self-employed households, whose median wealth is \$352,380. In 2005, about 35 percent of all farm households—in contrast to 50 percent of all self-employed households—had wealth less than self-employed median household wealth. On the other hand, a smaller share of farm households have very high incomes; as a result, average farm house-

Figure 34

Average net worth of farm households by detailed farm typology, 2005



*= Share of total family farms.

Source: Agricultural Resource Management Survey, USDA.

Table 7

Financial balance sheet for operator households of family farms, 2001-2005

	2001	2002	2003	2004	2005	2005/2004
	<i>Percent change</i>					
Number of farms	2,094,322	2,114,826	2,084,715	2,060,822	2,053,196	-0.4
Assets:						
Total household assets—mean	627,476	630,634	779,392	828,183	933,311	12.7
Household farm assets—mean	500,798	482,665	557,542	600,789	695,458	15.8
Share of total assets (percent)	79.8	76.5	71.5	72.5	74.5	2.7
Household non-farm assets—mean	126,678	147,969	221,850	227,394	237,853	4.6
Share of total assets (percent)	20.2	23.5	28.5	27.5	25.5	-7.2
Composition of non-farm assets (percent):						
Financial assets held in non-retirement accounts IRA, Keogh, 401k, and other retirement accounts	na	na	31.3	14.3	15.3	7.2
Operator dwelling, not owned by operation, and other personal homes	na	na	17.2	25.0	24.3	-2.7
Real estate—other farms, residential rental, and other	na	na	17.1	13.5	14.0	3.7
Business not part of this farm	na	na	18.9	25.0	23.1	-7.5
Other assets not reported elsewhere	na	na	8.4	13.0	13.9	6.8
Other assets not reported elsewhere	na	na	7.1	9.2	9.4	1.6
Debt:						
Total household debt—mean	87,775	88,341	95,597	88,229	94,436	7.0
Household farm debt—mean	51,814	54,116	53,332	54,000	54,306	0.6
Share of total debt (percent)	59.0	61.3	55.8	61.2	57.5	-6.0
Household non-farm debt—mean	35,961	34,226	42,264	34,229	40,131	17.2
Share of total debt (percent)	41.0	38.7	44.2	38.8	42.5	9.5
Composition of non-farm debt (percent):						
Mortgages on operators dwelling—if not owned by operation	na	na	45.5	29.2	28.8	-1.3
Mortgages on other real estate	na	na	27.9	33.6	30.0	-10.6
Loans on businesses not a part of this operation	na	na	14.8	19.0	23.9	25.7
Personal loans--credit cards, auto loans, any other debts not reported elsewhere	na	na	11.9	18.2	17.3	-5.1
Net worth:						
Household net worth—mean	539,701	542,293	683,795	739,953	838,875	13.4
Household net worth—median	339,221	338,241	416,250	456,914	510,018	11.6
U.S. household net worth—median	86,100	87,822	89,578	93,100	97,755	5.0
Household farm net worth—mean	448,984	428,550	504,210	546,788	641,153	17.3
Share of total net worth (percent)	83.2	79.0	73.7	73.9	76.4	3.4
Household non-farm net worth—mean	90,717	113,743	179,585	193,165	197,722	2.4
Share of total net worth (percent)	16.8	21.0	26.3	26.1	23.6	-9.7
Household debt to asset ratio	0.14	0.14	0.12	0.11	0.10	-5.0

Source: Agricultural Resource Management Survey, USDA.

hold wealth in 2005 was half the average wealth of all self-employed households (\$1,452,000).

Economic Well-Being of Farm Households: Joint Income and Wealth Outcomes

In a variable-income/high-wealth sector such as farming, economic well-being measures based on both income and wealth can provide a better signal of household capacity to support a sustainable standard of living than a measure of income taken in a single year. During periods of low income, farm households may be able to maintain living standards by borrowing against, or liquidating, assets.

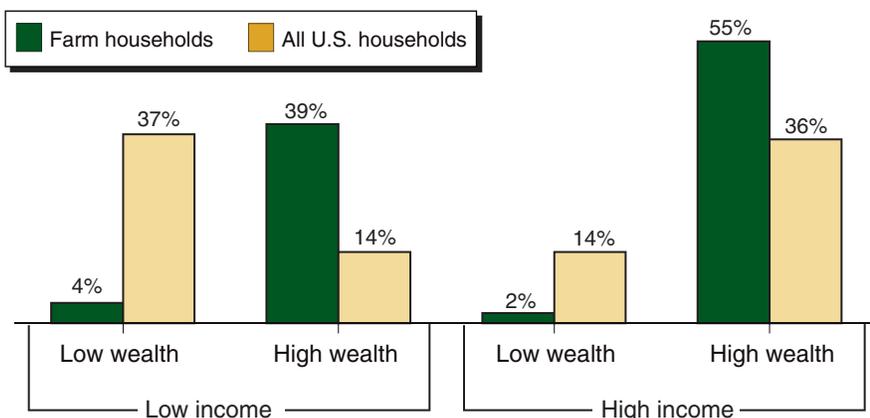
Since average comparisons can be misleading in assessing economic well-being, we divide farm households into four groups, separating them into low and high levels of income, and low and high levels of wealth, with the median levels of U.S. household income or wealth as the dividing lines between low and high (fig. 35). As noted above, the big difference between farm and other U.S. households is in the pattern of wealth, not in income.

Among all farm households, 55 percent have high income and high wealth, and 39 percent have low income and high wealth; the comparable shares across all US households are 36 percent high- income/high-wealth, and 14 percent low-income/high-wealth. The major difference appears to be that, on average, the low-income/high wealth group tends to have incurred farm losses in the year.

Among all farm households, 2 percent have high-income/low-wealth and 4 percent have lower income-lower-wealth, compared to 14 percent and 37 percent respectively for all US households. The distribution of farm households in each income/wealth group has been relatively consistent over time.

Figure 35

Distribution of farm households and all U.S. households relative to median income and wealth of all U.S. households, 2005



Note: U.S. household median income is \$46,326; U.S. household median wealth is \$97,755.

Source: Agricultural Resource Management Survey, USDA.

High-income/high-wealth. In 2005, 55 percent of farm households had both higher incomes and greater wealth than the median U.S. households levels in 2005 (app. table B.6). Almost all (95 percent) of these farms reported farm household income greater than consumption expenditures in 2005: on average, income exceeded consumption expenditures by \$87,465. This group of farms reported average net worth of about \$1 million in 2005 (higher than the \$883,983 reported in 2004), of which a third was household assets not owned by the farming operation. This group of households includes disproportionate shares of large and very large farm operations, as well as of farm operators who reported a primary occupation other than farming. On average, this group accounted for 71 percent of farm output and drew nearly 71 percent of government payments. The operators had the highest educational attainment (about a fifth of farm operators had a college degree) and were on average older (about half of the farm operators were 55 or older) than farm operators in the other three categories.

Low-income/high-wealth. The 36 percent of farm households with low-income/high-wealth averaged household income of \$15,589 and household wealth of \$732,694 in wealth. This group is very similar to the high-income/high-wealth group, except that these farm households lost substantial income from farming. For many households in this category, income from farming is often negative (an average loss of nearly \$11,681 in 2005). On average, farm household expenditures (\$26,147) exceeded current total household income (\$15,473) in 2005, and approximately 50 percent of farm households in this category were not able to meet their consumption expenditures with their current income stream in 2005. Given the high levels of wealth, these farm households can borrow against, or draw down, their accumulated assets to meet their living expenses. These households hold 83 percent of their net worth in business assets, including land, machinery, and crop and livestock inventories. This group contains an equal share of limited-resource and residential/lifestyle farms (about 25 percent each) and intermediate farms (farming as main occupation/lower sales, about 20 percent). Nearly 34 percent of farms in this category specialized in beef cattle operation. About 27 percent reported receiving government payments, averaging \$5,233 in 2005 (about 27 percent of total government payments), compared with \$3,643 in 2004, an increase of 43 percent. About two-thirds of these farm operators are 55 years or older, and many have only either attended or completed high school.

High-income/low-wealth. About 2 percent of farm households have higher income and lower wealth than the median household levels of each. Most of these farm households are almost entirely focused on off-farm employment, with 67 percent reporting a primary occupation other than farming. These operators are younger than average (30 percent are below 44 years), with about 25 percent having attended or completed college. Total household income on average (\$98,220) exceeded average consumption expenditures (\$36,278) by a wide margin. A significant feature of this group is that they averaged negative total wealth or net worth, primarily driven by losses in their average non-farm net worth (-\$37,018), which could be a reflection of unrealized capital losses either in financial or real estate investments. This group of farm households accounted for 2 percent of total U.S. farm output. More than half specialized in beef cattle and other field crops, and more than half of their agricultural output came from livestock production.

Low-income/low-wealth. Following a consistent pattern since 2000, in 2005 about 4 percent of farm households had both lower incomes and lower wealth than the median levels for all U.S. households. Low levels of both household income and household wealth could be interpreted as an indicator of disadvantage in the sector. This group contains a higher proportion of limited-resource farms (46 percent) and a third of residential/lifestyle farms. Surprisingly, only 28 percent of farm operators reported farming as their primary occupation in 2005, down by about half since 2004. In 2005, average household expenditures (\$22,719) were higher than the average household income (\$15,589); nearly 54 percent of these farm households reported income less than consumption expenditures in 2005, compared with about 43 percent in 2004. Farm households in this group had substantially lower levels of wealth (net worth) compared to average farm household. In fact, like farm households in the high-income/low-wealth group these farms households showed a loss in non-farm net worth (on average, -\$7,259), which could again be a reflection of unrealized capital losses either in financial or real estate investments. Moreover, their small asset base may be insufficient to cover unexpected shortfalls in farm household earnings.

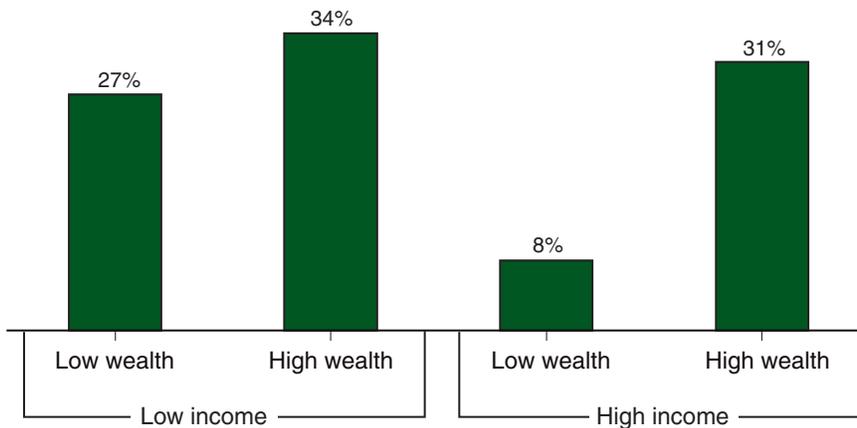
Farm households in this category produce 1 percent of total agricultural output. Many of these farm households specialize in beef cattle (36 percent) and general livestock (29 percent) operations; however, nearly 60 percent of their agricultural output is from crop production. These farm households received an average of \$2,025 in government payments, about 1 percent of total government payments in 2005; but nearly 79 percent of farm households in the group did not receive any farm program payments. About 43 percent of these farm households are located in the South. Generally, operators of these farm households have less education than those in the other groups; for example, more than 90 percent of farm operators in this category have the lowest level of education—a high school degree or less.

Comparisons with Other Self-Employed Households. Since farm households are by definition self-employed, it is also informative to compare farm households against the self-employed reference group, those who operate a business and fall under the same tax rules related to depreciation, capital investment, and self-employment income. For this comparison, we create a second four-quadrant designation, dividing households into four income/wealth groups on the basis of the median income (\$68,701) and median wealth (\$352,380) in 2005 for all self-employed households in the U.S. (fig. 36).

The distribution changes substantially. Farm households have lower median household income, but higher median household wealth relative to all self-employed households. About 65 percent of all farm households have wealth greater than self-employed median household wealth, and 39 percent have income greater than the self-employed median household income. The 65 percent of farm households with higher wealth are split into two groups, with 31 percent having higher income and 34 percent having lower income than the self-employed median (compared with 55 percent and 39 percent relative to the all U.S. household medians). About 27 percent of farm households have both income and wealth lower than the medians for all self-employed households.

Figure 36

Distribution of farm households, relative to median income and wealth of all U.S. self-employed households, 2005



Note: U.S. self-employed household median income is \$68,701; U.S. household median wealth is \$352,380.

Sources: Agricultural Resource Management Survey, USDA and Survey of Consumer Finances, Federal Reserve Board.

Farm Household Entrepreneurship

In 2005, 3 out of 10 farm households used their entrepreneurial skills to operate nonagricultural enterprises on the farm or to operate another business off the farm. Nonagricultural products produced on a diversified farm include custom work, hiring out farm machinery, on-farm recreation, and forestry products. Off-farm business enterprises include both other farms and nonfarm businesses.

Both household groups—those with on-farm nonagricultural diversification and those with multiple businesses—had higher net farm income and higher household income in 2005, relative to the reference group who engaged in neither of these entrepreneurial activities. Reflecting more intensive use of farm-level resources, farmers with on-farm diversification earned 2.5 times the average net farm income and worked 70 percent more hours relative to the reference group (table 8). In contrast, farmers operating multiple businesses earned on average 60 percent more net farm income, while working 12 percent fewer hours on the farm relative to the reference group. Household income was 26 percent higher for farmers with on-farm diversification, and 70 percent higher for farmers operating multiple businesses. Two-thirds of the nonfarm business income comes from service sector enterprises, one-fourth from manufacturing and construction ventures, and the rest from wholesale trade and transportation and agriculturally-related industries. This pattern of business activity across farm households mirrors the rural economy’s transition to a service economy.

Which types of farm households are most actively engaged in other nonfarm business enterprises? Residential-lifestyle farm households were engaged most often (21 percent), followed by intermediate (17 percent), commercial (13 percent), and retirement (7 percent) farm households. Among households operating nonfarm businesses, nonfarm business income was, on average, \$58,000 for commercial, \$67,000 for residential-lifestyle, and

\$74,000 for retirement farm households (fig. 37). However, due to the different numbers in each farm group and the different rates of non-farm business ownership, aggregate nonfarm business enterprise income by household type displays a different pattern. The residential-lifestyle farm households, which represent 43 percent of farms and account for only 6 percent of the value of farm production, earn 66 percent of nonfarm other business income. They represent the largest group of farm households owning multiple businesses, adding to their local economies' stock of wealth and nonfarm employment opportunities.

Table 8
Comparison across farm households, by whether they earn income from on-farm non-agricultural enterprises or multiple business ownership, 2005

	On-farm non-agricultural enterprises	Multiple business owners ¹	Not engaged in other business enterprises ²	All family farms
Number of operator households	205,274	391,654	1,447,976	2,044,904
Average net farm income	46,110	28,802	18,475	23,227
Average total farm operator household income	83,098	116,203	65,973	77,312
Average total operator hours worked annually on farm	3,321	1,703	1,911	2,012

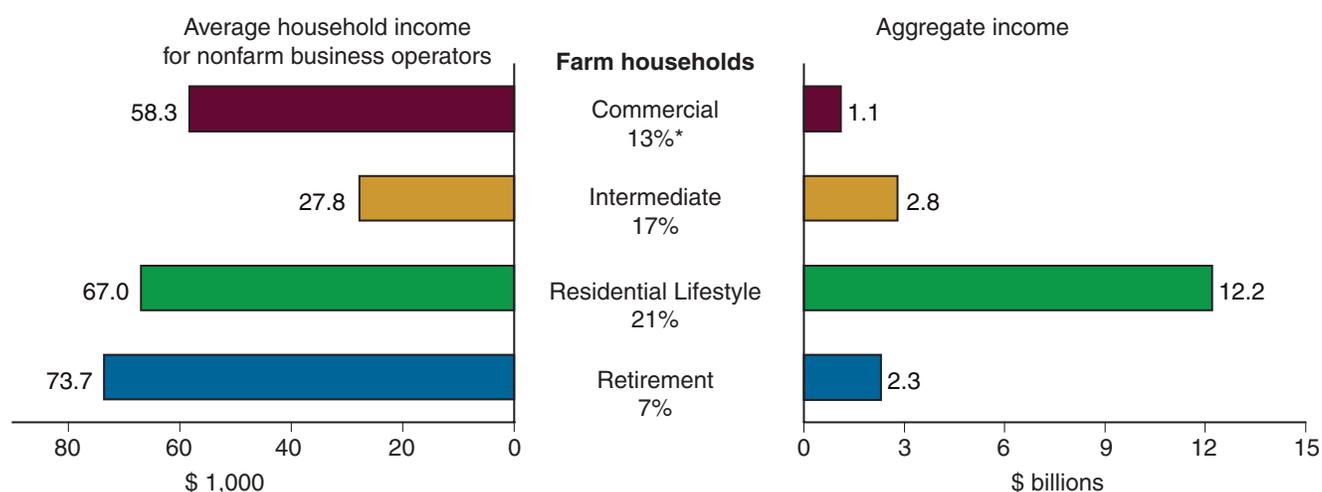
¹ Households may also have on-farm non-agricultural enterprises as well.

² Excludes households with on-farm non-agricultural enterprises and/or multiple business ownership.

Source: Agricultural Resource Management Survey, USDA.

Figure 37

Nonfarm business enterprise income: Average per household vs. aggregate total, 2005



* Percentages refer to share of farm typology group operating a nonfarm business enterprise.

Source: Agricultural Resource Management Survey, USDA.

Appendix A: Forecast Methods and Accuracy

Components of income and expenses are used to project cash flow, assets, and debt. Indices are applied to parameters from the USDA's Short-term Forecast Model that reflects the combined effect of forecast quantity and price changes. The model operates on individual farm data from the most recent (2005) Agricultural Resource Management Survey (ARMS). Forecast quantity and prices of commodities are provided by ERS commodity market situation and outlook specialists in conjunction with their participation with the USDA's World Agricultural Outlook Board in the monthly release of World Agricultural Supply and Demand Estimates (WASDE). ERS macro economy analysts provide information concerning the situation and outlook of the U.S. macro-economy. Results can be summarized across various groupings of farms such as region, commodity specialization, or size categories. Since it is a partial budgeting approach, any potential structural or production response on the part of farms is not treated.

Appendix table A.1 reports forecast errors for selected components of the farm business financial statements. The forecast error is based on a comparison (in percentage terms) of the February 2006 forecast and the actual 2005 ARMS results (as the base). The estimates for farm business income are for intermediate and commercial farms. Across the selected components for all farm businesses forecast errors ranged from 2.5 percent for cash operating expenses to 13.8 percent for net cash income. Forecast errors were generally larger for net cash income than for other components, since it is dependent on forecasts for both sources of income and expense items. Forecast errors derive from two sources. First, they can result from different outcomes than the index reflecting quantity and price changes predicts for the sector as a whole. Errors of this type ranged from 1-10 percent for receipts, with egg and fruit receipts having the highest error. They can also result from the static nature of the partial budgeting model where farms adapt and/or structural changes occur from one survey year to the next. Some of the largest forecast errors were for relatively minor income components for particular farm production specialties. For example, livestock receipts on farms that specialized in the production of soybeans and peanuts accounted for less than 2 percent of gross cash income.

Appendix table A.2 reports forecast errors for selected components of the operator household income statement. The accuracy of the forecast of net cash farm income is discussed in the previous paragraph. The only difference here is the estimates/forecasts are for all family farms. In the forecast of operator household farm income, the partial budget adjustment is applied to net cash income and depreciation while the share of farm income retained by the primary operator household and other farm income earned by the operator household are assumed to be as reported in the base year ARMS. With more sources of error, it is reasonable that error in the forecast of household farm income be greater than the error in the forecast of farm net cash income. The model is specified to provide forecasts of earned income and unearned income separately that recognized that year-to-year change in off-farm wages and salaries and other business income may be different from year-to-year changes in other sources of off-farm income. Unfortunately, since only total off-farm income is available in 2005 there is no way to verify the accuracy of the component forecasts. However, with much less volatility in off-farm income, the forecast of off-farm income is usually more accurate.

Forecast error for farm-level partial-budgeting model, comparing forecast for 2005 (from February 2006) to actual ARMS 2005 survey results (November 2006)

	Net cash income	Livestock receipts	Crop receipts	Government payments	Cash operating expenses	Farm assets	Farm debt
<i>Percent difference</i>							
All farms	6.5	-10.6	3.6	-9.2	-4.6	4.5	-3.2
Commercial farms	6.5	-9.3	7.4	-8.1	-0.9	3.6	5.1
Intermediate farms	26.3	3.9	10.1	-3.6	-0.1	11.4	-6.8
All farm businesses	13.3	-2.7	11.4	-3.7	2.7	8.9	4.6
Rural residence farms	10.5	-15.6	-15.6	-1.1	-7.9	4.4	-8.6
Resource region:							
Heartland	0.8	-26.1	8.5	-6.0	-4.3	10.0	5.7
Northern Crescent	12.6	-8.9	-0.3	-4.5	-10.7	3.7	-4.3
Northern Great Plains	12.8	14.2	16.6	16.1	11.5	25.5	4.2
Prairie Gateway	21.0	-13.3	8.9	-4.5	-11.6	24.3	-10.2
Eastern Uplands	23.0	11.9	22.8	17.9	13.3	5.1	-17.2
Southern Seaboard	-48.0	11.1	-23.7	0.1	3.5	3.8	7.0
Fruitful Rim	30.1	18.4	23.6	-5.7	19.2	6.6	25.2
Basin and Range	64.9	31.7	36.0	1.7	18.8	0.0	4.9
Mississippi Portal	-19.2	42.6	-18.4	-57.5	-6.4	-29.6	2.8
Production specialty:							
Other cash grain	12.4	-26.6	12.7	-2.1	2.9	1.4	-3.0
Wheat	42.0	41.7	-3.6	-10.6	-17.5	4.1	-4.7
Corn	12.9	-46.9	-2.6	-8.5	-7.1	-2.9	-13.6
Soybean and peanuts	-55.6	-1288.3	-1.1	-22.4	-17.8	4.9	-10.3
Cotton and rice	9.8	55.2	22.3	-16.8	20.3	-6.3	35.8
Other field crops	22.5	-14.0	-1.8	23.4	-0.5	31.9	24.7
Specialty crops	29.3	44.1	19.4	34.0	17.8	14.6	7.8
Beef cattle	19.6	-5.9	12.9	-10.4	-11.5	1.8	4.0
Hogs	-21.3	7.3	-9.6	-2.7	12.2	10.7	-7.0
Poultry	-30.2	-148.2	49.2	-25.2	-60.6	4.9	-7.5
Dairy	-6.1	-0.8	14.5	-82.5	-0.7	3.8	0.4
Other livestock	70.9	38.9	25.6	13.5	22.8	13.3	3.2

Note: Calculations are for percentage differences calculated as (forecast - actual)/actual.

Source: Agricultural Resource Management Survey, USDA.

Forecast error for farm-operator-household-level partial-budgeting model, comparing forecast for 2005 (from February 2006) to actual ARMS 2005 survey results (November 2006)

	Net cash farm income	Operator household farm income	Operator household off-farm income	Operator household income
	<i>Percent change</i>			
All family farms	-8.0	-11.7	5.6	2.5
Farm typology:				
Rural residence farms	10.4	93.6	6.9	8.5
Intermediate farms	-26.3	-22.5	1.9	-3.1
Commercial farms	-5.5	-16.1	17.0	-9.3
Expanded farm typology:				
Limited-resources	-83.0	-32.4	-3.6	-21.2
Retirement	-31.4	25.1	-7.7	-5.8
Residential/lifestyle	43.0	69.4	8.3	10.3
Farming occupation/lower-sales	-46.5	-15.2	0.4	-0.8
Farming occupation/higher-sales	-12.4	-17.9	2.4	-7.8
Large	-3.6	-11.4	33.3	2.0
Very large	-6.1	-17.9	2.7	-14.6
Farm type:				
Other cash grains	-14.0	-32.8	16.2	-8.2
Wheat	-61.3	-54.5	47.9	4.6
Corn	-22.5	-27.6	14.0	-5.3
Soybeans	24.5	5.9	3.4	4.1
Cotton	-8.7	-3.1	-9.5	-5.1
Other field crops	-2.1	57.4	5.3	8.7
Specialty crops	-20.8	-35.4	0.4	-13.3
Beef cattle	-30.5	-30.2	6.3	2.8
Hogs	3.5	21.9	-13.7	3.4
Poultry	-8.7	-10.8	7.2	0.8
Dairy	6.9	-4.8	40.7	5.3
Other livestock	-7.5	-9.6	4.5	5.4
Resource region:				
Heartland	3.5	1.5	14.7	10.3
Northern Crescent	-17.5	-24.6	18.8	12.3
Northern Great Plains	-28.0	-19.6	-15.3	-16.6
Prairie Gateway	-35.0	-46.5	6.7	-1.0
Eastern Uplands	-21.3	-20.6	9.4	8.1
Southern Seaboard	83.3	141.3	3.9	11.0
Fruitful Rim	-19.9	-31.5	-16.8	-20.2
Basin and Range	-57.5	-74.1	22.7	7.0
Mississippi Portal	46.5	62.2	-7.5	-0.3

Note: Calculations are for percentage differences calculated as (forecast - actual)/actual.

Source: Agricultural Resource Management Survey, USDA.

Appendix B: Additional Supporting Tables

Appendix table B.1

Number of family farms and average farm operator household income by component and farm typology, 2002-2006

Item	2002	2003	2004	2005	2006	2006/ 2005	2006/ 2001-05 Avg.	Share of family farms
<i>Number of family farms</i>						<i>Percent change</i>		<i>Percent</i>
Number of family farms								
All	2,114,826	2,084,715	2,060,822	2,053,196	2,053,196	0.0	-1.4	100.0
Rural residence farms	1,352,876	1,429,953	1,373,946	1,417,008	1,417,008	0.0	3.3	69.0
Intermediate farms	611,324	502,771	529,081	478,806	478,806	0.0	-13.9	23.3
Commercial farms	150,626	151,991	157,795	157,382	157,382	0.0	3.0	7.7
<i>Dollars/farm average</i>								
Household farm income—mean								
All	3,477	7,884	14,317	14,637	11,728	-19.9	28.6	100.0
Rural residence farms	-4,601	-3,888	-54	-1,149	-1,295	-12.7	54.6	69.0
Intermediate farms	2,953	9,618	12,340	13,959	10,827	-22.4	25.6	23.3
Commercial farms	78,161	112,900	146,072	158,831	131,719	-17.1	11.1	7.7
Household off-farm income—mean								
All	62,284	60,713	67,279	66,782	68,975	3.3	9.2	100.0
Rural residence farms	69,707	69,013	75,391	74,010	76,440	3.3	5.6	69.0
Intermediate farms	51,719	42,957	52,548	53,820	55,587	3.3	17.9	23.3
Commercial farms	38,492	41,364	46,035	41,144	42,495	3.3	6.1	7.7
Household income—mean								
All	65,761	68,597	81,596	81,420	80,703	-0.9	11.7	100.0
Rural residence farms	65,106	65,125	75,337	72,861	75,145	3.1	8.1	69.0
Intermediate farms	54,672	52,575	64,888	67,780	66,414	-2.0	19.1	23.3
Commercial farms	116,652	154,264	192,108	199,975	174,214	-12.9	9.8	7.7
Household income—median								
All	46,491	47,692	53,651	53,779	na	na	na	100.0
Rural residence farms	47,163	47,055	54,230	52,290	na	na	na	69.0
Intermediate farms	39,546	43,917	42,850	49,292	na	na	na	23.3
Commercial farms	80,441	97,382	112,624	119,391	na	na	na	7.7

Note: 2006 forecast. na = not available.

Source: Agricultural Resource Management Survey, USDA.

Number of family farms and average farm operator household income by component and expanded farm typology, 2002-2006

Item	2002	2003	2004	2005	2006	2006/ 2005	2006/ 2001-05 Avg.	Share of family farms
<i>Number of family farms</i>						<i>Percent change</i>		<i>Percent</i>
Number of family farms								
All	2,114,826	2,084,715	2,060,822	2,053,196	2,053,196	0.0	-1.4	100.0
Limited-resources	106,047	234,302	197,734	234,688	234,688	0.0	35.0	11.4
Retirement	395,636	305,687	338,671	345,915	345,915	0.0	5.9	16.8
Residential/lifestyle	851,194	889,964	837,542	836,406	836,406	0.0	-4.1	40.7
Farming occupation/lower-sales	450,895	366,457	395,781	344,733	344,733	0.0	-16.0	16.8
Farming occupation/higher-sales	160,429	136,314	133,299	134,072	134,072	0.0	-8.2	6.5
Large	86,303	85,257	86,087	85,773	85,773	0.0	0.2	4.2
Very large	64,323	66,734	71,708	71,609	71,609	0.0	6.5	3.5
<i>Dollars/farm average</i>								
Household farm income—mean								
All	3,477	7,884	14,317	14,637	11,728	-19.9	28.6	100.0
Limited-resources	-5,062	-7,238	-5,902	-4,740	-4,918	-3.8	6.7	11.4
Retirement	-1,892	394	4,128	4,118	5,009	21.6	331.6	16.8
Residential/lifestyle	-5,803	-4,476	-365	-2,319	-2,885	-24.4	22.5	40.7
Farming occupation/lower-sales	-2,033	2,317	4,925	4,982	4,191	-15.9	169.9	16.8
Farming occupation/higher-sales	16,966	29,248	34,354	37,042	27,889	-24.7	-1.6	6.5
Large	39,829	62,775	80,250	82,381	66,410	-19.4	9.9	4.2
Very large	129,590	176,938	225,094	250,403	209,946	-16.2	9.3	3.5
Household off-farm income—mean								
All	62,284	60,713	67,279	66,782	68,975	3.3	9.2	100.0
Limited-resources	13,683	14,248	13,582	14,457	14,931	3.3	11.3	11.4
Retirement	48,311	49,565	58,339	64,989	67,122	3.3	24.5	16.8
Residential/lifestyle	86,631	90,111	96,879	94,451	97,552	3.3	7.2	40.7
Farming occupation/lower-sales	55,486	47,636	58,118	60,410	62,393	3.3	20.3	16.8
Farming occupation/higher-sales	41,132	30,375	36,011	36,876	38,087	3.3	11.6	6.5
Large	35,612	39,275	44,870	35,326	36,485	3.3	-3.2	4.2
Very large	42,355	44,033	47,434	48,114	49,693	3.3	15.7	3.5
Household income—mean								
All	65,761	68,597	81,596	81,420	80,703	-0.9	11.7	100.0
Limited-resources	8,621	7,011	7,680	9,716	10,013	3.1	23.1	11.4
Retirement	46,419	49,959	62,468	69,107	72,131	4.4	31.0	16.8
Residential/lifestyle	80,828	85,635	96,515	92,131	94,667	2.8	8.5	40.7
Farming occupation/lower-sales	53,453	49,953	63,043	65,392	66,584	1.8	24.7	16.8
Farming occupation/higher-sales	58,098	59,623	70,365	73,918	65,977	-10.7	5.6	6.5
Large	75,441	102,050	125,120	117,707	102,896	-12.6	4.9	4.2
Very large	171,945	220,971	272,527	298,516	259,639	-13.0	10.4	3.5
Household income—median								
All	46,491	47,692	53,651	53,779	na	na	na	100.0
Limited-resources	11,013	10,896	10,300	13,005	na	na	na	11.4
Retirement	34,828	36,010	46,423	47,958	na	na	na	16.8
Residential/lifestyle	59,654	61,457	69,247	70,356	na	na	na	40.7
Farming occupation/lower-sales	36,905	40,056	38,657	44,515	na	na	na	16.8
Farming occupation/higher-sales	47,834	53,743	61,293	62,765	na	na	na	6.5
Large	71,043	80,962	98,863	103,256	na	na	na	4.2
Very large	99,983	126,932	155,111	174,000	na	na	na	3.5

Note: 2006 forecast. na = not available.

Source: Agricultural Resource Management Survey, USDA.

**Number of family farms and average farm operator household income by income component,
by farm resource region, 2002-2006**

Item	2002	2003	2004	2005	2006	2006/ 2005	2006/ 2001-05 Avg.	Share of family farms
	————— <i>Number of family farms</i> —————					<i>Percent change</i>		<i>Percent</i>
Number of family farms								
All	2,114,826	2,084,715	2,060,822	2,053,196	2,053,196	0.0	-1.4	100.0
Heartland	434,661	419,330	422,203	410,599	410,599	0.0	-0.6	20.0
Northern Crescent	302,586	323,682	291,243	291,103	291,103	0.0	-4.0	14.2
Northern Great Plains	90,763	90,367	95,304	85,340	85,340	0.0	-8.6	4.2
Prairie Gateway	297,752	294,501	301,550	309,286	309,286	0.0	3.2	15.1
Eastern Uplands	326,097	314,478	324,144	348,546	348,546	0.0	5.2	17.0
Southern Seaboard	236,697	248,639	232,719	208,103	208,103	0.0	-10.2	10.1
Fruitful Rim	250,262	235,888	219,160	216,597	216,597	0.0	-6.7	10.5
Basin and Range	87,245	80,377	89,687	90,237	90,237	0.0	7.2	4.4
Mississippi Portal	88,762	77,453	84,812	93,384	93,384	0.0	0.5	4.5
	————— <i>Dollars/farm average</i> —————							
Household farm income—mean								
All	3,477	7,884	14,317	14,637	11,728	-19.9	28.6	100.0
Heartland	5,884	12,101	29,653	28,748	25,765	-10.4	48.5	20.0
Northern Crescent	1,100	3,996	9,224	9,785	4,651	-52.5	-10.3	14.2
Northern Great Plains	11,589	14,666	21,596	24,880	22,433	-9.8	25.6	4.2
Prairie Gateway	1,370	8,919	8,017	12,701	10,402	-18.1	75.5	15.1
Eastern Uplands	-2,254	39	2,910	2,646	1,276	-51.8	98.7	17.0
Southern Seaboard	483	2,344	10,986	3,983	1,817	-54.4	-51.4	10.1
Fruitful Rim	11,371	16,599	20,994	25,924	21,407	-17.4	14.0	10.5
Basin and Range	2,172	4,624	5,246	13,789	11,833	-14.2	100.3	4.4
Mississippi Portal	6,624	15,936	14,741	7,914	5,218	-34.1	-45.3	4.5
Household off-farm income—mean								
All	62,284	60,713	67,279	66,782	68,975	3.3	9.2	100.0
Heartland	53,543	56,522	62,987	57,697	59,592	3.3	7.0	20.0
Northern Crescent	55,548	63,475	63,731	56,229	58,075	3.3	-0.9	14.2
Northern Great Plains	45,912	42,944	45,162	56,050	57,890	3.3	13.3	4.2
Prairie Gateway	71,864	58,290	75,866	74,548	76,995	3.3	15.1	15.1
Eastern Uplands	57,213	55,262	66,059	63,186	65,261	3.3	8.6	17.0
Southern Seaboard	64,361	68,761	73,036	73,642	76,060	3.3	10.5	10.1
Fruitful Rim	82,731	75,584	68,838	86,609	89,453	3.3	14.9	10.5
Basin and Range	74,548	63,143	82,823	70,986	73,317	3.3	-0.6	4.4
Mississippi Portal	56,044	50,293	63,550	71,800	74,157	3.3	24.7	4.5
Household income—mean								
All	65,761	68,597	81,596	81,420	80,703	-0.9	11.7	100.0
Heartland	59,427	68,623	92,640	86,445	85,357	-1.3	16.9	20.0
Northern Crescent	56,648	67,472	72,955	66,014	62,726	-5.0	-1.6	14.2
Northern Great Plains	57,501	57,610	66,758	80,930	80,323	-0.7	16.5	4.2
Prairie Gateway	73,234	67,209	83,884	87,248	87,397	0.2	20.0	15.1
Eastern Uplands	54,959	55,301	68,969	65,833	66,537	1.1	9.6	17.0
Southern Seaboard	64,844	71,105	84,022	77,625	77,877	0.3	7.3	10.1
Fruitful Rim	94,102	92,183	89,832	112,533	110,860	-1.5	14.7	10.5
Basin and Range	76,719	67,767	88,069	84,776	85,150	0.4	6.9	4.4
Mississippi Portal	62,668	66,229	78,291	79,714	79,375	-0.4	15.1	4.5

Note: 2006 forecast.

Source: Agricultural Resource Management Survey, USDA.

Number of family farms and average farm operator household income by income component, by commodity specialization, 2002-2006

Item	2002	2003	2004	2005	2006	2006/ 2005	2006/ 2001-05 Avg.	Share of family farms
	————— <i>Number of family farms</i> —————					<i>Percent change</i>		<i>Percent</i>
Number of family farms								
All	2,114,826	2,084,715	2,060,822	2,053,196	2,053,196	0.0	-1.4	100.0
General cash grain	84,687	84,095	81,489	76,639	76,639	0.0	-7.4	3.7
Wheat	34,686	41,146	42,311	34,140	34,140	0.0	-9.0	1.7
Corn	119,658	113,815	115,702	93,478	93,478	0.0	-14.9	4.6
Soybean	67,719	58,230	66,830	80,046	80,046	0.0	16.4	3.9
Cotton	12,620	16,881	15,859	14,910	14,910	0.0	2.0	0.7
Other field crops	463,540	390,236	432,782	441,612	441,612	0.0	-8.1	21.5
High value crops	127,712	125,691	127,003	130,005	130,005	0.0	-0.4	6.3
Beef cattle	698,740	724,515	702,439	693,155	693,155	0.0	-1.7	33.8
Hogs	34,029	20,004	32,761	21,184	21,184	0.0	-20.7	1.0
Poultry	43,088	38,165	33,567	35,784	35,784	0.0	-6.5	1.7
Dairy	76,423	76,115	59,281	60,885	60,885	0.0	-13.9	3.0
General livestock	351,923	395,821	350,797	371,357	371,357	0.0	2.7	18.1
	————— <i>Dollars/farm average</i> —————							
Household farm income—mean								
All	3,477	7,884	14,317	14,637	11,728	-19.9	28.6	100.0
General cash grain	12,850	31,238	31,832	45,937	37,937	-17.4	33.7	3.7
Wheat	10,353	13,154	16,358	27,101	24,363	-10.1	73.7	1.7
Corn	13,690	23,172	43,766	50,447	44,977	-10.8	55.6	4.6
Soybean	4,279	14,229	29,430	22,736	20,159	-11.3	38.2	3.9
Cotton	66,461	77,670	97,020	110,109	93,462	-15.1	23.4	0.7
Other field crops	354	4,337	6,628	4,886	5,339	9.3	42.4	21.5
High value crops	30,203	40,676	35,203	42,017	42,616	1.4	21.2	6.3
Beef cattle	-2,970	754	5,335	7,256	6,341	-12.6	318.0	33.8
Hogs	18,798	47,842	75,984	57,718	38,738	-32.9	-25.0	1.0
Poultry	5,334	23,233	31,032	27,842	25,288	-9.2	29.6	1.7
Dairy	31,069	30,579	74,690	72,942	22,056	-69.8	-57.9	3.0
General livestock	-5,828	-7,657	-3,983	-5,061	-6,015	-18.9	-4.4	18.1
Household off-farm income—mean								
All	62,284	60,713	67,279	66,782	68,975	3.3	9.2	100.0
General cash grain	41,475	41,156	51,248	46,107	47,621	3.3	10.6	3.7
Wheat	48,150	42,001	52,050	36,992	38,206	3.3	-12.8	1.7
Corn	48,771	53,887	63,899	58,212	60,123	3.3	11.0	4.6
Soybean	56,394	46,005	63,110	64,787	66,914	3.3	24.5	3.9
Cotton	36,638	44,411	42,936	48,742	50,343	3.3	24.5	0.7
Other field crops	65,784	69,317	70,191	69,200	71,472	3.3	6.1	21.5
High value crops	71,085	61,988	63,893	67,555	69,773	3.3	6.2	6.3
Beef cattle	62,453	61,206	69,666	68,359	70,603	3.3	10.2	33.8
Hogs	44,120	39,833	51,125	62,204	64,247	3.3	40.2	1.0
Poultry	49,513	50,540	51,950	51,115	52,793	3.3	7.5	1.7
Dairy	28,367	22,223	27,778	20,742	21,423	3.3	-8.8	3.0
General livestock	77,878	71,284	78,354	80,330	82,967	3.3	6.1	18.1

See notes at end of table.

Continued—

**Number of family farms and average farm operator household income by income component,
by commodity specialization, 2002-2006—Continued**

Item	2002	2003	2004	2005	2006	2006/ 2005	2006/ 2001-05 Avg.	Share of family farms
	————— Dollars/farm average —————					Percent change		Percent
Household income—mean								
All	65,761	68,597	81,596	81,420	80,703	-0.9	11.7	100.0
General cash grain	54,325	72,394	83,080	92,044	85,558	-7.0	19.8	3.7
Wheat	58,503	55,155	68,409	64,093	62,569	-2.4	8.2	1.7
Corn	62,461	77,059	107,665	108,659	105,100	-3.3	26.5	4.6
Soybean	60,673	60,234	92,540	87,523	87,073	-0.5	27.5	3.9
Cotton	103,099	122,080	139,956	158,851	143,804	-9.5	23.8	0.7
Other field crops	66,138	73,654	76,819	74,086	76,811	3.7	8.0	21.5
High value crops	101,288	102,664	99,096	109,572	112,390	2.6	11.4	6.3
Beef cattle	59,483	61,959	75,001	75,615	76,945	1.8	17.3	33.8
Hogs	62,918	87,676	127,109	119,922	102,985	-14.1	5.6	1.0
Poultry	54,847	73,772	82,982	78,956	78,081	-1.1	13.8	1.7
Dairy	59,435	52,802	102,467	93,684	43,479	-53.6	-42.7	3.0
General livestock	72,050	63,627	74,371	75,269	76,953	2.2	6.2	18.1

Note: 2006 forecast.

Source: Agricultural Resource Management Survey, USDA.

Financial balance sheet for farm operator households by farm typology, 2005

	Farming occupation							
	Limited- resources	Retire- ment	Residential / lifestyle	Lower- sales	Higher- sales	Large	Very large	All
Number of farms	234,688	345,915	836,406	344,733	134,072	85,773	71,609	2,053,196
Percent of farms	11.4	16.8	40.7	16.8	6.5	4.2	3.5	100.0
Assets:								
Total household assets (mean)	606,632	861,871	682,118	1,014,918	1,306,769	1,746,160	3,217,337	933,311
Distribution by typology (percent)	7.4	15.6	29.8	18.3	9.1	7.8	12.0	100.0
Household farm assets (mean)	522,792	568,845	419,701	777,940	1,128,566	1,547,679	2,865,101	695,458
Distribution by typology (percent)	8.6	13.8	24.6	18.8	10.6	9.3	14.4	100.0
Share of total assets (percent)	86.2	66.0	61.5	76.7	86.4	88.6	89.1	74.5
Household non-farm assets (mean)	83,839	293,026	262,417	236,979	178,203	198,480	352,236	237,853
Distribution by typology (percent)	4.0	20.8	44.9	16.7	4.9	3.5	5.2	100.0
Share of total assets (percent)	13.8	34.0	38.5	23.3	13.6	11.4	10.9	25.5
Composition of non-farm assets (percent):								
Financial assets held in non-retirement accounts	18.8	14.1	13.1	22.9	13.7	18.2	14.1	15.3
IRA, Keogh, 401k, and other retirement accounts	37.0	20.7	25.4	28.6	22.0	19.0	10.4	24.3
Operator dwelling, not owned by operation, and other personal homes	19.0	10.1	14.9	10.8	19.0	18.1	21.9	14.0
Real estate—other farms, residential rental, and other	12.4	40.2	14.6	21.7	33.0	26.7	35.6	23.1
Business not part of this farm	2.1	8.3	21.2	6.9	4.6	9.6	9.4	13.9
Other assets not reported elsewhere	10.7	6.5	10.8	9.2	7.6	8.4	8.6	9.4
Debt:								
Total household debt (mean)	19,297	47,271	85,258	67,657	138,009	224,691	567,060	94,436
Distribution by typology (percent)	2.3	8.4	36.8	12.0	9.5	9.9	20.9	100.0
Household farm debt (mean)	12,155	11,078	33,098	32,146	107,888	189,848	492,979	54,306
Distribution by typology (percent)	2.6	3.4	24.8	9.9	13.0	14.6	31.7	100.0
Share of total debt (percent)	63.0	23.4	38.8	47.5	78.2	84.5	86.9	57.5
Household non-farm debt (mean)	7,142	36,193	52,160	35,512	30,121	34,843	74,080	40,131
Distribution by typology (percent)	2.0	15.2	52.9	14.9	4.9	3.6	6.4	100.0
Share of total debt (percent)	37.0	76.6	61.2	52.5	21.8	15.5	13.1	42.5
Composition of non-farm debt (percent):								
Mortgages on operators dwelling—if not owned by operation	5.9	11.1	31.1	39.0	37.6	23.4	30.5	28.8
Mortgages on other real estate	48.7	10.5	30.3	31.6	31.1	38.6	49.2	30.0
Loans on businesses not a part of this operation	6.7	69.2	17.5	10.5	16.7	23.5	14.6	23.9
Personal loans--credit cards, auto loans, any other debts not reported elsewhere	38.7	9.2	21.2	18.9	14.6	14.5	5.7	17.3

Continued—

Financial balance sheet for farm operator households by farm typology, 2005—Continued

	Limited- resources	Retire- ment	Residential / lifestyle	Farming occupation		Large	Very large	All
				Lower- sales	Higher- sales			
Net worth:								
Household net worth (mean)	587,335	814,599	596,860	947,261	1,168,760	1,521,469	2,650,277	838,875
Distribution by typology (percent)	8.0	16.4	29.0	19.0	9.1	7.6	11.0	100.0
Household net worth (median)	295,850	569,538	400,121	600,014	846,859	1,049,687	1,620,975	510,018
Household farm net worth (mean)	510,637	557,766	386,603	745,794	1,020,678	1,357,832	2,372,122	641,153
Distribution by typology (percent)	9.1	14.7	24.6	19.5	10.4	8.8	12.9	100.0
Share of total net worth (percent)	86.9	68.5	64.8	78.7	87.3	89.2	89.5	76.4
Household non-farm net worth (mean)	76,698	256,833	210,257	201,467	148,083	163,638	278,156	197,722
Distribution by typology (percent)	4.4	21.9	43.3	17.1	4.9	3.5	4.9	100.0
Share of total net worth (percent)	13.1	31.5	35.2	21.3	12.7	10.8	10.5	23.6
Household debt to asset ratio	0.03	0.05	0.12	0.07	0.11	0.13	0.18	0.10

Source: Agricultural Resource Management Survey, USDA.

Characteristics of farm operator households by financial well-being class, based on U.S. median income and U.S. median wealth, 2005¹

	Lower income and lower wealth	Lower income and higher wealth	Higher income and lower wealth	Higher income and higher wealth	All
Number of family farms	83,022	799,097	37,341	1,133,734	2,053,195
	<i>Percent</i>				
Percent of family farms	4.0	38.9	1.8	55.2	100.0
Percent of total value of production	1.1	25.8	1.7	71.4	100.0
Distribution of value of production:					
Percent crop value of production	59.3	45.3	43.6	45.5	45.5
Percent livestock value of production	40.7	54.7	56.4	54.5	54.5
Distribution by farm typology:					
Limited-resources	46.2	24.6	0.0	0.0	11.4
Retirement	2.8	19.0	16.4	16.4	16.8
Residential/lifestyle	29.8	25.5	63.1	51.5	40.7
Farming occupation/lower-sales	17.6	20.3	10.3	14.5	16.8
Farming occupation/higher-sales	2.0	6.0	5.0	7.3	6.5
Large	0.7	2.7	3.3	5.5	4.2
Very large	0.8	1.9	1.9	4.8	3.5
	<i>Acres/farms average</i>				
Farm size (operated acres)	138	349	189	446	391
Percent of acres	1.4	34.7	0.9	63.0	100.0
	<i>Dollars/farms average</i>				
Average government payment	2,025	5,233	4,259	9,565	7,478
Percent of payments	1.1	27.2	1.0	70.6	100.0
	<i>Percent</i>				
Farm location:					
Northeast	2.1	8.7	1.3	5.1	6.3
Midwest	35.1	36.6	36.6	38.3	37.5
South	42.8	43.5	53.2	42.2	42.9
West	20.1	11.1	8.8	14.5	13.3
	<i>Dollars/farms</i>				
Household farm income—mean	-7,611	-11,681	23,614	34,521	14,637
Household off-farm income—mean	23,200	27,154	74,607	97,648	66,782
Household total income—mean	15,589	15,473	98,220	132,168	81,420
Household total income—median	15,055	24,483	74,901	90,024	53,779
Household expenditures—mean	22,719	26,147	36,278	44,703	36,439
Household expenditures—median	20,395	22,500	32,500	37,500	29,954
Household net worth—mean	35,052	732,694	24,753	999,393	838,875
Household net worth—median	46,433	439,248	62,182	641,174	510,018
Household farm net worth—mean	42,311	609,730	61,771	726,236	641,153
Household farm net worth—median	38,480	319,711	51,285	403,620	329,072
Household off-farm net worth—mean	-7,259	122,964	-37,018	273,157	197,722
Household off-farm net worth—median	3,500	60,000	0	150,000	92,500

¹ The income and wealth of farm households were compared with the median income (\$46,326) and estimated median wealth (\$97,775) of all U.S. households for 2005. Based on this information, four groups of farm households (lower income-lower wealth; lower income-higher wealth; higher income-lower wealth; and higher income-higher wealth) were created.

Sources: Agricultural Resource Management Survey, USDA; Survey of Consumer Finances, Federal Reserve Board.

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