U.S. Farm Income and Financial Outlook for 2016

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Presented by
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Summary

• **Net cash farm income** forecast **down 11.5 percent** relative to 2015.

• **Yield and production** are expected to grow to record or near record levels for many commodities, including corn and soybeans in 2016, driven by higher planted acres and favorable weather conditions.

• **Crop cash receipts** are expected to **decrease by 3.7 percent** ($7.1 billion) in 2016.

• **Livestock cash receipts** are expected to **fall by 9.8 percent** ($18.7 billion) in 2016.

• **Government payments** are projected to **rise 24.8 percent** to $13.5 billion in 2016: Price Loss Coverage (up 171.5 percent) and Agricultural Risk Coverage (up 50.8 percent).

• **Federal insurance indemnities** net of farmer’ share of premiums forecast **down 20.7 percent** to $3.7 billion.

• **Total production expenses** are forecast to **fall 2.8 percent**, and for the second year in a row, led by declines in livestock/poultry expenses and in manufactured inputs such as fertilizers and fuel.

• Declining farm sector assets (down 2.2 percent) and stable debt (down 0.8 percent) are forecast to **erode equity by 2.4 percent**.
Net cash farm income forecast to fall below 10-year moving averages

The GDP chain-type price index is used to convert the current-dollar statistics to real (inflation adjusted) amounts (2009=100).

Net cash farm income and net farm income forecast to fall below their 10-year moving averages

F=forecast
The GDP chain-type price index is used to convert the current-dollar statistics to real (inflation adjusted) amounts (2009=100)
Net farm income driven lower by commodity receipts, partially offset by higher government payments and lower expenses, relative to 2015

Net farm income forecast to fall $9.3 billion

F = Forecast.
Data as of August 30, 2016
Crop receipts forecast down for nearly all major crops in 2016

Crop cash receipts forecast down 3.7%.

Corn cash receipts down 37.7% relative to 2012 high.

Higher levels of production and stocks drive lower prices, leading cash receipts lower in 2016.

$ billion

Crop
Soybeans
Cotton
Fruits & nuts
Vegetables & melons
Wheat

$45b
$35b
$6b
$25b
$18b
$9b

2012
2013
2014
2015
2016F

F= Forecast.
Source: USDA, Economic Research Service, Farm Income and Wealth Statistics
Data as of August 30, 2016
Cattle/calves and chicken eggs forecast lead declines in cash receipts in 2016


All major categories expected to decline, led by cattle/calves down 11% and dairy down 3.6%.

Egg prices expected down, leading to a 51.7% drop in cash receipts.

F= Forecast.
Source: USDA, Economic Research Service, Farm Income and Wealth Statistics
Data as of August 30, 2016
Government payments forecast to increase 24.8 percent to $13.5 billion in **2016**

This would be the highest **Federal Government payments** to farmers in **10 years**.

Federal Government payments transition from fixed to price based

Price loss coverage (PLC) payments forecast for peanuts, wheat, long-grain rice, corn, and grain sorghum base acres.

Agricultural risk coverage (ARC) payments primarily expected for corn, soybeans, and wheat.

Federal commodity insurance indemnities down sharply since 2013

2016 Federal commodity insurance indemnities are forecast down 14% ($1.1 billion) from 2015. Since 2013, indemnities have fallen 51%.

The farmers’ share of Federal commodity insurance premiums forecast to decline 5% ($0.2 billion).

F= Forecast.
Source: USDA, Economic Research Service, Farm Income and Wealth Statistics
Data as of August 30, 2016
Federal Government payments and net Federal insurance indemnities contribute relatively small percentage of net cash farm income.

Net cash farm income (NCFI) measures resources available to pay down debt and support household spending.

F= Forecast.
Source: USDA, Economic Research Service, Farm Income and Wealth Statistics
Data as of August 30, 2016
But during low net cash farm income years, Federal Government payments and net Federal insurance indemnities have greater impact.

Government payments and net Federal insurance indemnities comprise 18% of NCFI in 2016.

F = Forecast.
Source: USDA, Economic Research Service, Farm Income and Wealth Statistics
Data as of August 30, 2016.
Second year of decline in **cash expenses**;

**Cash expenses** grew by 7.1% on average from 2010 to 2014 and has shrunk by 4.9% on average from 2014 to 2016.

F= Forecast.
Source: USDA, Economic Research Service, Farm Income and Wealth Statistics
Data as of August 30, 2016
Reduced spending on livestock purchases and fertilizer projected to lead cash expenses lower

Drop in expenses for inputs that traditionally come from the farm sector, including feed, feeder cattle, and barrows/gilts.

Lower interest paid on debt secured by real estate partly offset by a modest increase in interest paid on nonreal estate debt leads to 2.4% decline in total interest expenses.

$ billion

Feed Livestock purchases Fuels & Oils Fertilizer Pesticides Seeds Net rent Interest Labor

2015 2016F

F= Forecast.
Source: USDA, Economic Research Service, Farm Income and Wealth Statistics
Data as of August 30, 2016
So far, fertilizer prices in 2016 below 2015 levels

Index (2011=100)

Lower fertilizer expense forecast driven by lower fertilizer prices.

Source: USDA, NASS
Data as of August 30, 2016
Farm real estate* represents the majority of the sector’s assets

Inflation-adjusted value of farm assets forecast down 3.3% relative to 2015, including real estate (down 2.7%)

F= Forecast. Values are adjusted using the chain-type GDP deflator, 2009=100.
*Real estate includes the value of land and buildings
Farm **real estate debt** expected to grow slowly in 2016

Non-real estate debt peaked in 2014, declined in 2015 and is expected to continue to decline in 2016.

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F= Forecast. Values are adjusted using the chain-type GDP deflator, 2009=100.  
Farm **real estate debt** approaching early 80’s peak

However, interest rates farmers face are much different than in the 1980’s.

<table>
<thead>
<tr>
<th>Year</th>
<th>Real estate</th>
<th>Nonreal estate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1981</td>
<td>9.4%</td>
<td>13.3%</td>
</tr>
<tr>
<td>2016</td>
<td>4.2%</td>
<td>4.6%</td>
</tr>
</tbody>
</table>

\[
\text{Interest rate}_t = \frac{\text{Interest expense}_t}{(\text{Debt}_t + \text{Debt}_{t-1})/2}
\]

F= Forecast. Values are adjusted using the chain-type GDP deflator, 2009=100.

Farm sector **debt-to-asset** and **debt-to-equity** ratios expected to rise slightly in 2016

Debt-to-asset (D/A) and debt-to-equity (D/E) are solvency ratios. Higher ratios indicate higher likelihood of default and decreased ability to overcome adverse financial events.

For the fourth straight year, both farm sector D/A and D/E ratios are forecast to rise, but remain low by historical standards (since 1970).

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Data as of August 30, 2016

Source: USDA, Economic Research Service, Farm Income and Wealth Statistics

F= Forecast.
Farm businesses account for 41% of farms, but over 90% of value of production.

<table>
<thead>
<tr>
<th>Farms</th>
<th>Value of Production</th>
<th>Assets</th>
<th>Debt</th>
</tr>
</thead>
<tbody>
<tr>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>25%</td>
<td>75%</td>
<td>25%</td>
<td>75%</td>
</tr>
<tr>
<td>50%</td>
<td>50%</td>
<td>50%</td>
<td>50%</td>
</tr>
<tr>
<td>75%</td>
<td>25%</td>
<td>75%</td>
<td>25%</td>
</tr>
</tbody>
</table>

**Farm Businesses**

<table>
<thead>
<tr>
<th>Residence</th>
<th>Intermediate</th>
<th>Commercial</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operators report they are retired or have a major occupation other than farming.</td>
<td>Gross cash farm income less than $350,000 and operators report farming as their major occupation.</td>
<td>Gross cash farm income greater than $350,000 or farms organized as nonfamily corporations or cooperatives.</td>
</tr>
</tbody>
</table>

Source: 2014 Agricultural Resource Management Survey (ARMS)
Average net cash farm income flat or down for most crop farm businesses except cotton, rice, and wheat in 2016.

<table>
<thead>
<tr>
<th>Crop Type</th>
<th>Average Net Cash Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cotton and rice</td>
<td>$226</td>
</tr>
<tr>
<td>Specialty crops</td>
<td>$247</td>
</tr>
<tr>
<td>Corn</td>
<td>$150</td>
</tr>
<tr>
<td>Mixed grain</td>
<td>$168</td>
</tr>
<tr>
<td>Soybeans and peanuts</td>
<td>$107</td>
</tr>
<tr>
<td>Wheat</td>
<td>$49</td>
</tr>
</tbody>
</table>

$ thousand per farm

F = forecast.

1/ Farm business forecasts apply a partial budget model on the 2015 Agricultural Resource Management Survey (ARMS) using parameters from the sector forecasts. Data as of August 30, 2016.
Average net cash income expected to fall for most farm businesses specializing in animals and products in 2016 1/

F = forecast.

1/ Farm business forecasts apply a partial budget model on the 2015 Agricultural Resource Management Survey (ARMS) using parameters from the sector forecasts. Data as of August 30, 2016.
2016 net cash farm income regional impacts are mixed for farm businesses

Distribution of regional NCFI impacts follows forecast impact of production patterns.

Strength in rice and cotton receipts drive cash income impacts in Mississippi Portal

Dairy’s forecast drives Northern Crescent and Fruitful Rim cash incomes lower.

The partial budget forecast model is based on the 2015 Agricultural Resource Management Survey (ARMS) using parameters from the sector forecasts. The model is static and does not account for changes in crop rotation, weather, and other location production impacts that occurred after the base year. Data as of August 30, 2016. Source: USDA, Economic Research Service, Farm Income and Wealth Statistics.
More than 90 percent of crop farm businesses have a D/A ratio below the 0.4 threshold in 2016

Highly leveraged crop farm businesses forecast at 5.9% of total businesses, trending up since 2011.

Extremely leveraged crop farm businesses (debt-to-asset ratio above 0.71) expected to remain stable at 4.3%.

The partial budget forecast model is based on the 2015 Agricultural Resource Management Survey (ARMS) using parameters from the sector forecasts. The model is static and does not account for changes in crop rotation, weather, and other location production impacts that occurred after the base year. Data as of August 30, 2016. Source: USDA, Economic Research Service, Farm Income and Wealth Statistics.
Share of highly leveraged and extremely leveraged livestock farm businesses set to rise slightly

Highly leveraged livestock farm businesses forecast at 5.2% of total businesses for 2016.

Extremely leveraged livestock farm businesses (debt-to-asset ratio above 0.71) expected to remain stable at 3.4%.

The partial budget forecast model is based on the 2015 Agricultural Resource Management Survey (ARMS) using parameters from the sector forecasts. The model is static and does not account for changes in crop rotation, weather, and other location production impacts that occurred after the base year. Data as of August 30, 2016.

Questions?

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Visit the Farm Sector Income and Wealth Statistics website:

Our new visualizations let you dive into the financials of the farm sector: