Farm Sector Income & Finances
2015 Outlook

Farmer Mac Refresh
By Ryan Kuhns and Kevin Patrick
September, 30 2015

The views expressed are those of the authors and should not be attributed to the Economic Research Service or USDA
Net cash and net farm income forecast below 10-year moving average

United States Department of Agriculture

$\text{billion (2009 dollars)}$

Annual net cash income  
Annual net farm income  
10-year moving average net cash income  
10 year moving average net farm income

F=forecast

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

Lower commodity receipts drive the expected decline in net cash income from 2014 to 2015.

<table>
<thead>
<tr>
<th>Category</th>
<th>2014</th>
<th>2015</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net cash income</td>
<td>126.7</td>
<td>100.3</td>
<td>-26.4</td>
</tr>
<tr>
<td>Crop receipts</td>
<td></td>
<td>-12.9</td>
<td></td>
</tr>
<tr>
<td>Animals and products receipts</td>
<td></td>
<td>-19.4</td>
<td></td>
</tr>
<tr>
<td>Cash farm-related income</td>
<td>0.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Production Expenses</td>
<td>3.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Government Payments</td>
<td>1.6</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

All figures are in $ Billion
Source: USDA, Economic Research Service, Farm Income and Wealth Statistics
Crop receipts are expected to fall for most major categories in 2015

Source: USDA, Economic Research Service, Farm Income and Wealth Statistics
Data as of August 25, 2015
Animal receipts are also expected to fall for most categories in 2015.

F= Forecast.
Source: USDA, Economic Research Service, Farm Income and Wealth Statistics
Data as of August 25, 2015
Crop price based payments are expected to make up a larger of government payments in 2015.

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<table>
<thead>
<tr>
<th>Year</th>
<th>Fixed payments</th>
<th>Crop price based payments</th>
<th>All other payments</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>$2 billion</td>
<td>$6 billion</td>
<td>$4 billion</td>
</tr>
<tr>
<td>2010</td>
<td>$2 billion</td>
<td>$6 billion</td>
<td>$4 billion</td>
</tr>
<tr>
<td>2011</td>
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<td>$6 billion</td>
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<td>$2 billion</td>
<td>$6 billion</td>
<td>$4 billion</td>
</tr>
<tr>
<td>2014</td>
<td>$2 billion</td>
<td>$6 billion</td>
<td>$4 billion</td>
</tr>
<tr>
<td>2015F</td>
<td>$2 billion</td>
<td>$6 billion</td>
<td>$4 billion</td>
</tr>
</tbody>
</table>

F=forecast.

- **Fixed payments**: Includes fixed direct payments and cotton transition payments.
- **Crop price based payments**: Includes PLC, and ARC, ACRE, counter-cyclical payments, and other programs where payment rates vary with market prices.
- **All other payments**: Include disaster relief payments, tobacco transition payments, dairy program payments, and conservation payments.

Economic Research Service

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Cash expenses are expected to decline for the first time since 2009.

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$ billion (2009 dollars)

F= Forecast. Values are adjusted using the chain-type GDP deflator, 2009=100
Source: USDA, Economic Research Service, Farm Income and Wealth Statistics
Data as of August 25, 2015
Cash expenses are expected to decline for the first time since 2009.

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4.6% growth rate per year (1970-1979)

F= Forecast. Values are adjusted using the chain-type GDP deflator, 2009=100
Source: USDA, Economic Research Service, Farm Income and Wealth Statistics
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$ billion (2009 dollars)


F= Forecast. Values are adjusted using the chain-type GDP deflator, 2009=100
Source: USDA, Economic Research Service, Farm Income and Wealth Statistics
Data as of August 25, 2015
Cash expenses expected to decline for the first time since 2009


F=forecast
The 2015 net cash income forecast improved by $10.9 billion from February to August.

All figures are in $ Billion

Source: USDA, Economic Research Service, Farm Income and Wealth Statistics
Fruit and nut receipts are expected to increase the most relative to February.
Cash receipts for most major animals and products categories are forecast lower relative to February 2015.

Source: USDA, Economic Research Service, Farm Income and Wealth Statistics
Data as of August 25, 2015

F = Forecast

Source: USDA, Economic Research Service, Farm Income and Wealth Statistics
Data as of August 25, 2015
Livestock purchases and net rent payments drive the increase in forecast cash expenses.

All figures are in $ Billion
Source: USDA, Economic Research Service, Farm Income and Wealth Statistics
2015 marks first expected decline in real\(^1\) asset and equity values since 2009

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

Inflation adjusted debt is expected to grow in 2015 and real estate debt approaches its 1980s peak.

2015 data are forecasts
Note: Adjusted for inflation using the BEA chain-type implicit GDP deflator.
Inflation adjusted debt is expected to grow in 2015 and real estate debt approaches its 1980s peak. Real estate debt forecast to grow by 5.25% in 2015. Nonreal estate debt forecast to grow by 6.5% in 2015.

2015 data are forecasts
Note: Adjusted for inflation using the BEA chain-type implicit GDP deflator.
An expected small decline in farm real estate values is primary driver of forecast drop in farm asset values.

An expected small decline in farm real estate values drives forecast drop in farm asset values.

2.1 percent decline in farm real estate assets

Sector leverage remains historically low, despite debt being forecast to grow faster than assets in 2015.

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F= Forecast.
The rate of return on farm assets expected to fall in 2015

**Decomposing the rate of return on farm assets (ROA)**

\[
ROA = \text{Asset Turnover Ratio} \times \text{Profit Margin Ratio}
\]

Value of production that assets generate

Profit margin on value of production

F = forecast


Sector financial ratio documentation:

The rate of return on farm assets expected to fall in 2015.
The rate of return on farm assets expected to fall in 2015.

2015’s expected drop in the operating profit margin ratio is consistent with outcomes in other years where income and ROA have fallen.
Farm Business Outlook
Farm businesses account for over 90% of farm production and 45% of farms.

<table>
<thead>
<tr>
<th>Farm Businesses</th>
<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 and farms organized as nonfamily corporations or cooperatives.</td>
<td></td>
</tr>
</tbody>
</table>
Declines in average net cash income expected for most farm businesses specializing in crops

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Average net cash income for crop farm businesses¹/

<table>
<thead>
<tr>
<th>Year</th>
<th>Cotton and rice</th>
<th>Specialty crops</th>
<th>Corn</th>
<th>Mixed grain</th>
<th>Soybeans and peanuts</th>
<th>Wheat</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>169.0</td>
<td>237.2</td>
<td>113.9</td>
<td>200.0</td>
<td>97.6</td>
<td>111.7</td>
</tr>
</tbody>
</table>

¹/ The farm level forecasts are derived from partial budget modeling on the 2014 Agricultural Resource Management Survey (ARMS) using parameters from the sector forecasts. The model is static and therefore does not account for changes in crop rotation, weather, and other local production impacts that occurred after the base year.
Average net cash income also forecast to fall for farm businesses specializing in livestock, dairy and poultry.

Average net cash income for livestock farm businesses 1/

1/ The farm level forecasts are derived from partial budget modeling on the 2014 Agricultural Resource Management Survey (ARMS) using parameters from the sector forecasts. The model is static and therefore does not account for changes in crop rotation, weather, and other local production impacts that occurred after the base year.

F = forecast
Farm business average net cash income by resource region, 2015F compared with 2014

Note: F = forecast. The partial budget forecast model is based on the 2014 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 25, 2015. Source: USDA, Economic Research Service, Farm Income and Wealth Statistics.
Share of highly leveraged farm businesses forecast to increase in 2015F

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D/A (0.41-0.70)  D/A (0.71 +)

Crops

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Share of highly leveraged farm businesses forecast to increase in 2015F

United States Department of Agriculture

Livestock

Share of farm businesses

D/A (0.41-0.70)  D/A (0.71 +)


5.23%

3.74%
Farm Real Estate Outlook
National Land Values
Comparing Farm Real Estate Values to Capitalized Annual and Moving Average Returns

2015 data are forecasts
Note: Returns per acre are calculated as net cash income plus rental and real estate interest expenses.

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Comparing Farm Real Estate Values to Capitalized Annual and Moving Average Returns

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National Land Values
Comparing Farm Real Estate Values to Capitalized Annual and Moving Average Returns

2015 data are forecasts
Note: Returns per acre are calculated as net cash income plus rental and real estate interest expenses.
Real Estate Values Have Grown Unevenly Across Regions Since 2009

Note: Farm real estate includes land and buildings.
Source: USDA, National Agricultural Statistics Service, June Area Survey.
Cash Returns to Farm Real Estate Have Also Grown Unevenly Across Regions Since 2009

Note: Cash returns per acre are calculated as net cash income plus rental and real estate interest expenses. Source: USDA, Economic Research Service, Farm Income and Wealth Statistics.
Comparing Farm Real Estate Values to Capitalized Returns per Acre (5 year moving average) (Regions with Highest Real Appreciation Since 2009)

2015 data are forecasts
Note: Returns per acre are calculated as net cash income plus rental and real estate interest expenses.
Farm Sector Income & Finances
Analysis coinciding with each of the ERS farm income group data release.

Farm Sector Income and Wealth Statistics
Data product updated 3 times per year. Next update: November 24th, 2015.
Includes historical state and national estimates, and national forecasts.
Amber Waves:

Presents summaries of current ERS economic and policy research on agriculture, food, rural America, and the environment for policymakers, academics and the public.

- Via web connection or mobile app

http://www.ers.usda.gov/AmberWaves/
Daily chart and short analysis on current ERS economic and policy research on agriculture, food, rural America, and the environment for policymakers, academics and the public.


Farm income Chart of Note from August 25, 2015.
QUESTIONS?

Ryan Kuhns
RNKuhns@ers.usda.gov

Kevin Patrick
KTPatrick@ers.usda.gov

Farm Income Team
farmincometeam@ers.usda.gov