United States Department of Agriculture

U.S. Farm Income and Financial Outlook for 2016

Farmer Mac Refresh
December 14, 2016

Presented by

Kevin Patrick

Summary

- **Net cash farm income** forecast **down 14.6 percent** relative to 2015.

- **Animals/products cash receipts** are expected to **fall by 12.3 percent** ($23.4 billion) in 2016.

- **Crop cash receipts** are expected **unchanged** in 2016.

- **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.

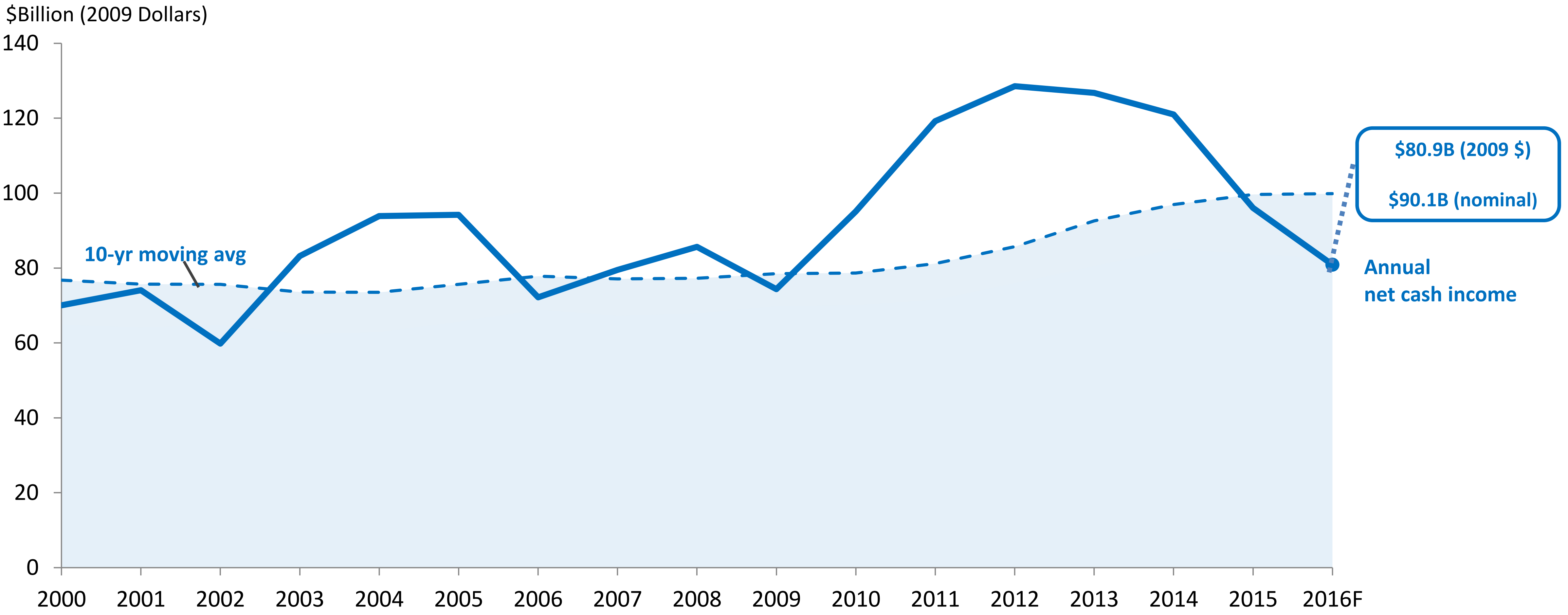
- **Government payments** are projected to **rise 19.1 percent** to $12.9 billion in 2016:
  Price Loss Coverage (up 160 percent) and Agricultural Risk Coverage (up 36 percent).

- **Federal insurance indemnities** forecast **down 36 percent** to $5.3 billion.

- **Total production expenses** are forecast to **fall 2.6 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 2.1 percent) and rising debt (up 5.2 percent) are forecast to **erode equity by 3.1 percent**.

Net cash farm income forecast to fall below their 10-year moving average

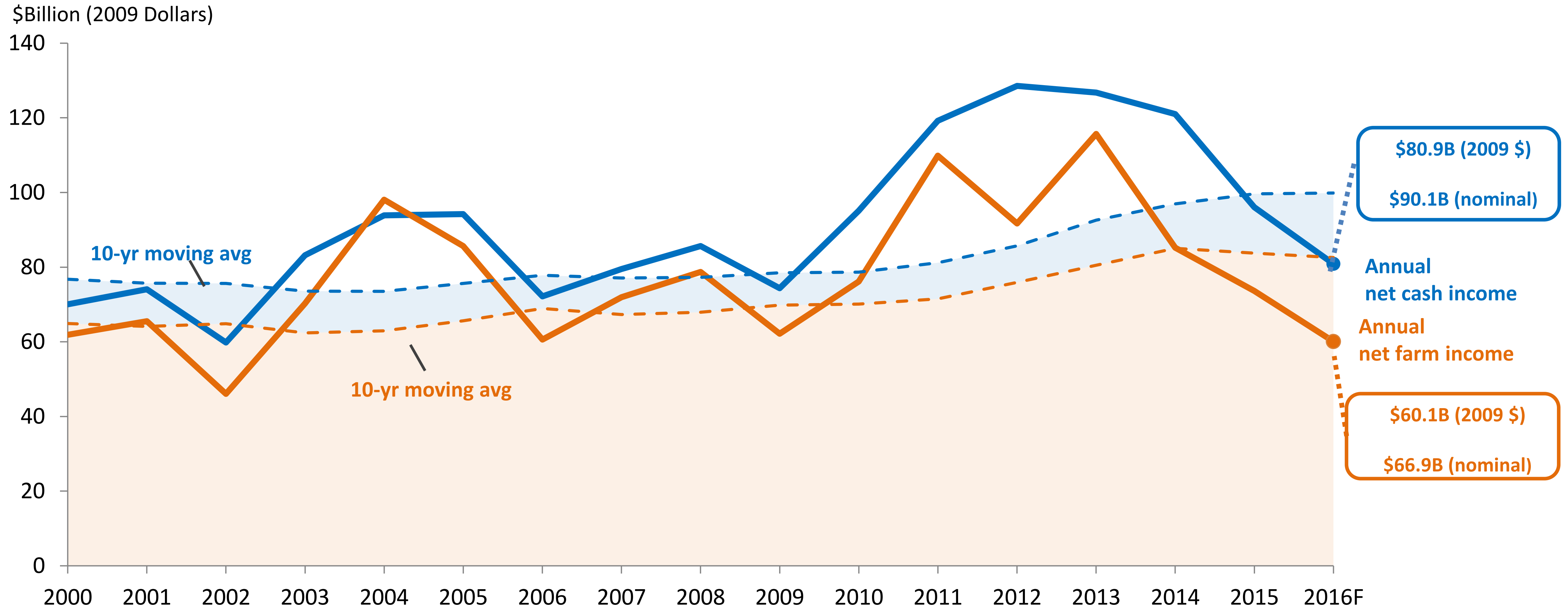


F=forecast

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

Source: USDA, Economic Research Service, Farm Income and Wealth Statistics. Data as of November 30, 2016.

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



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

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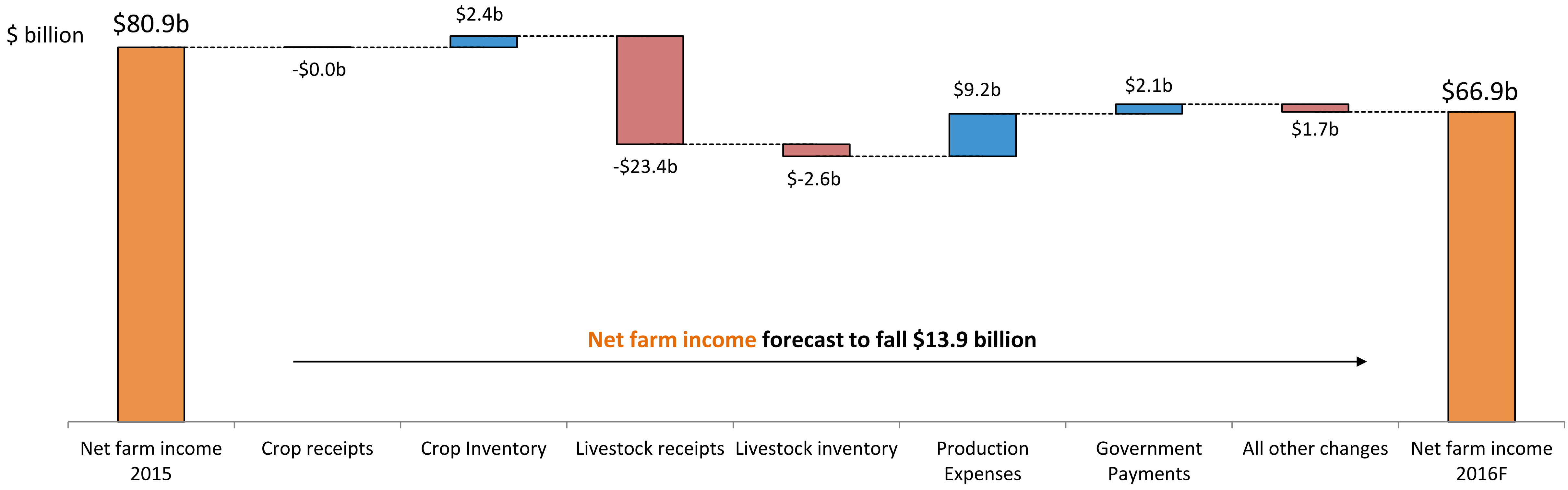
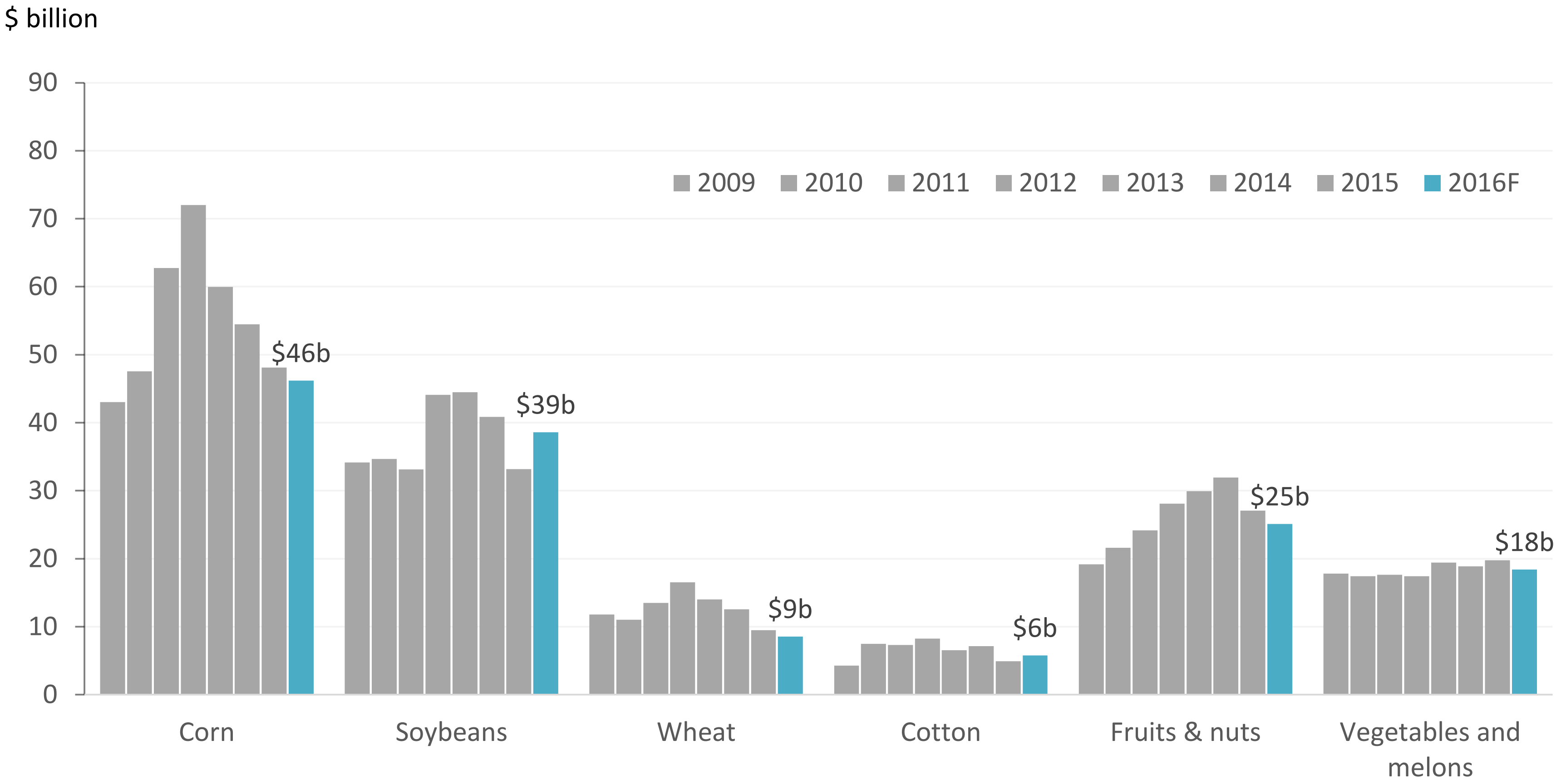
Net farm income driven lower by animal receipts, partially offset by higher government payments and lower expenses, relative to 2015



F= Forecast.
Source: USDA, Economic Research Service, Farm Income & Wealth Statistics.
Data as of November 30, 2016

Crop receipts forecast down for nearly all major crops in 2016



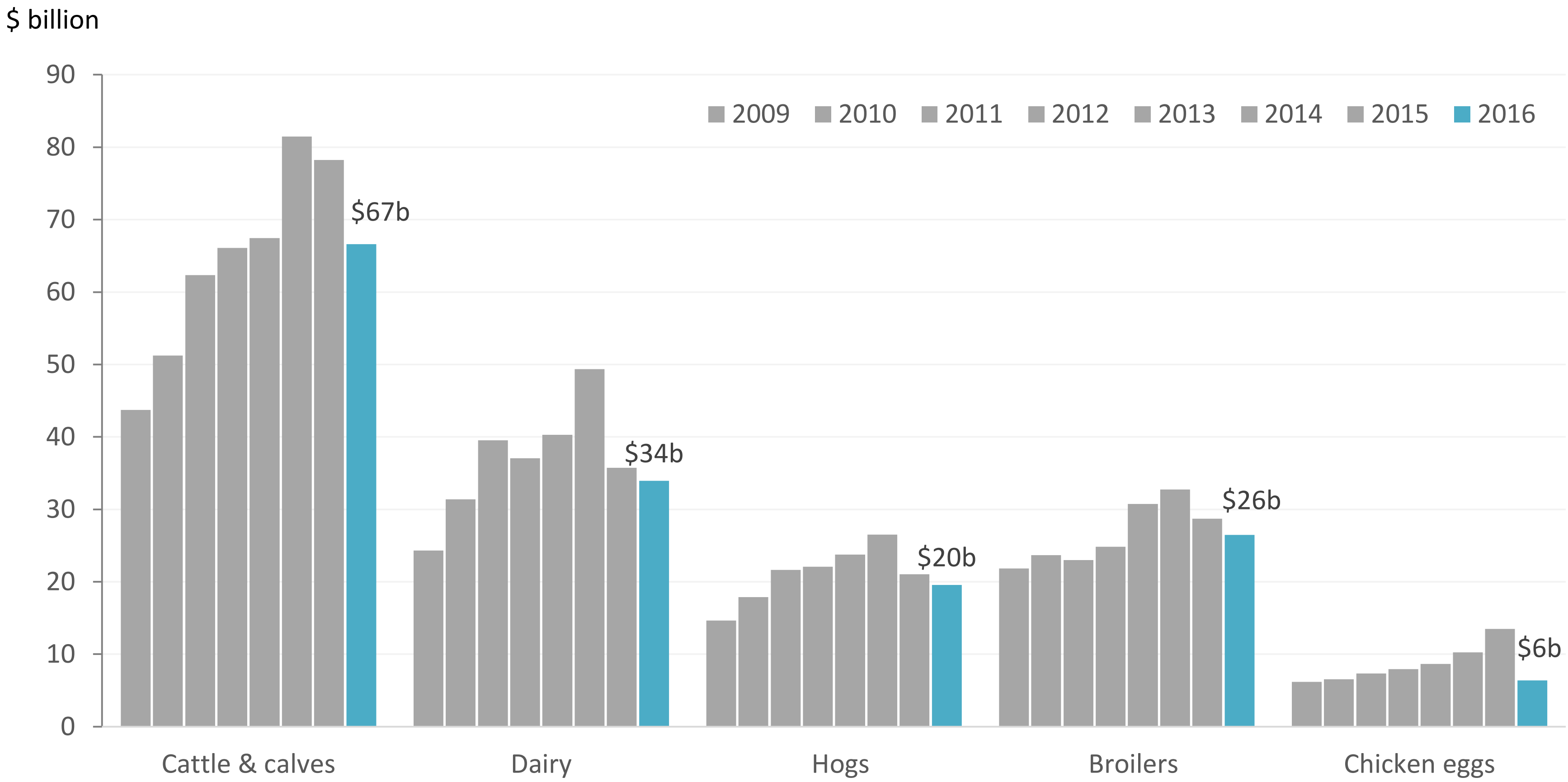
F= Forecast.
Source: USDA, Economic Research Service, Farm Income and Wealth Statistics
Data as of November 30, 2016

Crop cash receipts forecast **flat.**

Corn cash receipts **down 36%** relative to 2012 high.

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

Cattle/calves and chicken eggs forecast lead declines in cash receipts in 2016



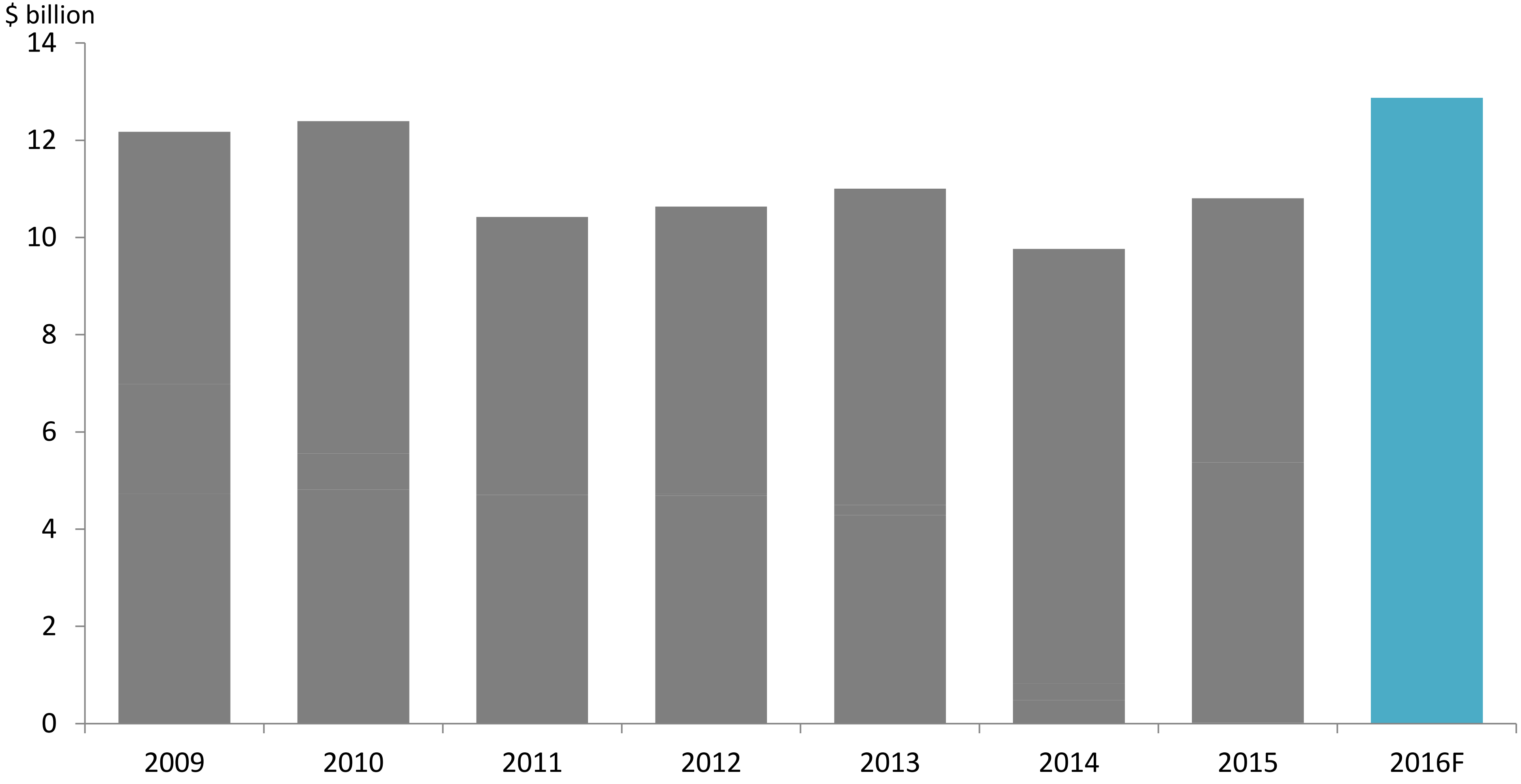
F= Forecast.
Source: USDA, Economic Research Service, Farm Income and Wealth Statistics
Data as of November 30, 2016

Animal/product cash receipts **down** **12.3%** in 2016.

All major categories expected to decline, led by **cattle/calves down** **15%.**

Egg prices expected down, leading to a **53%** **drop** in cash receipts.

Government payments forecast to increase 19.1 percent to $12.9 billion in 2016

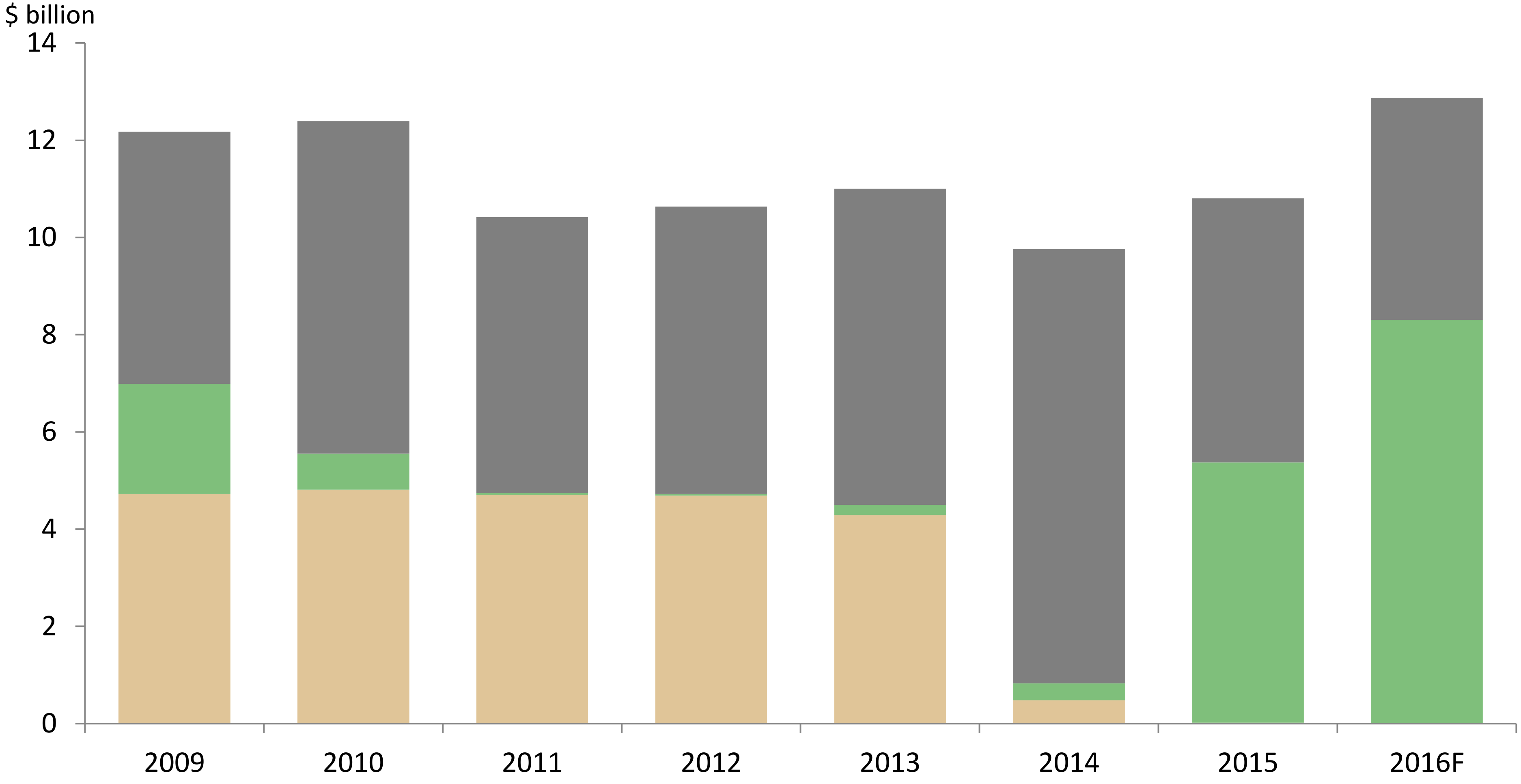


This would be the highest **Federal Government payments** to farmers in **10 years**.

F= Forecast.

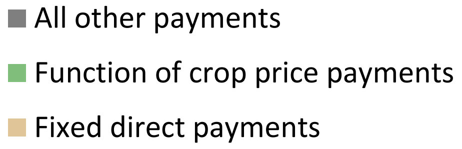
Source: USDA, Economic Research Service, Farm Income and Wealth Statistics using FSA, NRCS, and CCC data. Data as of November 30, 2016.

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.

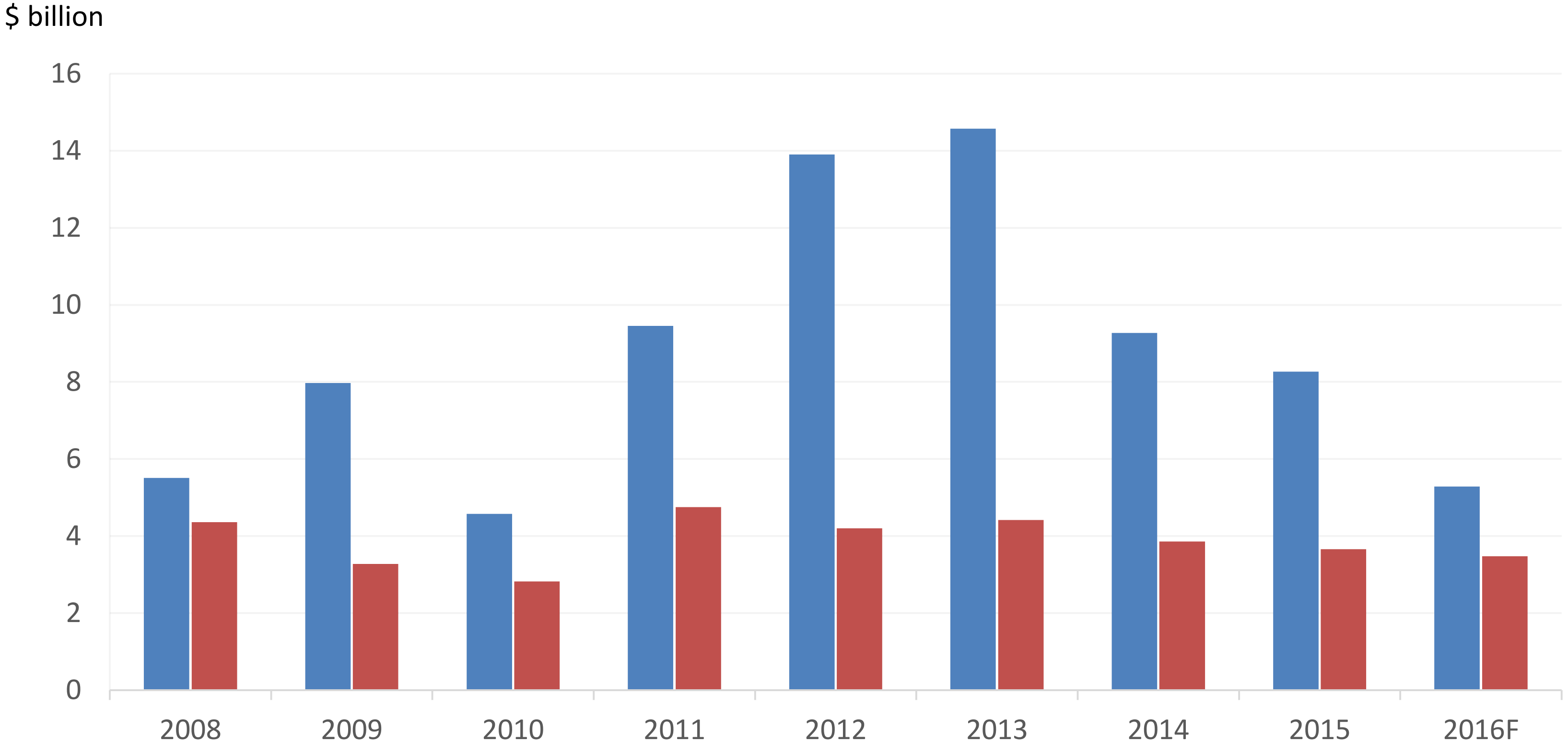
Agricultural risk coverage (ARC) payments primarily expected for corn, soybeans, and wheat.



F= Forecast.

Source: USDA, Economic Research Service, Farm Income and Wealth Statistics using FSA, NRCS, and CCC data. Data as of November 30, 2016.

Federal commodity insurance indemnities down sharply since 2013



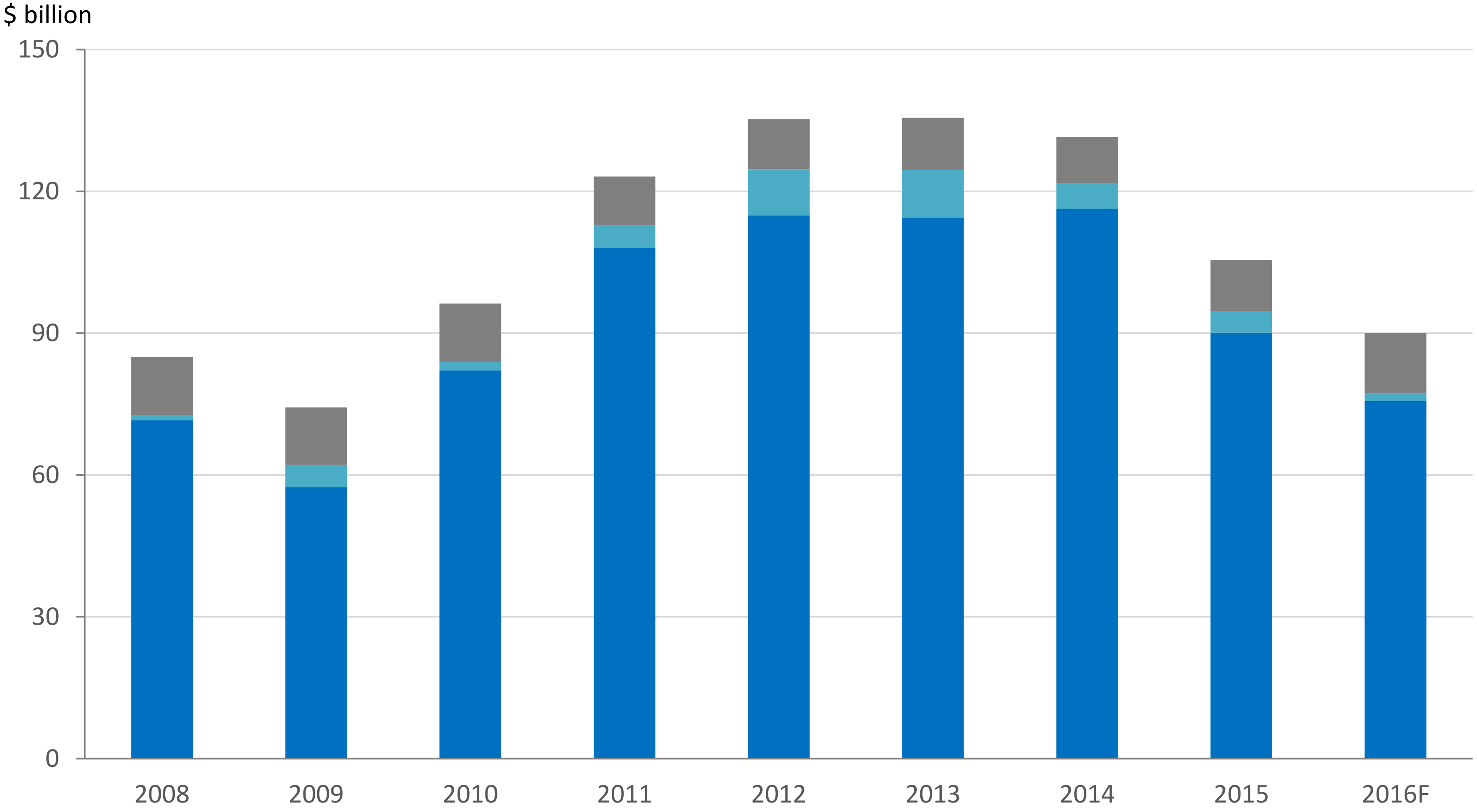
2016 **Federal commodity insurance indemnities** are forecast **down 36%** ($3 billion) from 2015. Since 2013, indemnities have fallen 64%.

The farmers' share of **Federal commodity insurance premiums**
forecast essentially unchanged (up $0.04 billion).

Leading net insurance premiums **down 64%**

F= Forecast.
Source: USDA, Economic Research Service, Farm Income and Wealth Statistics
Data as of November 30, 2016

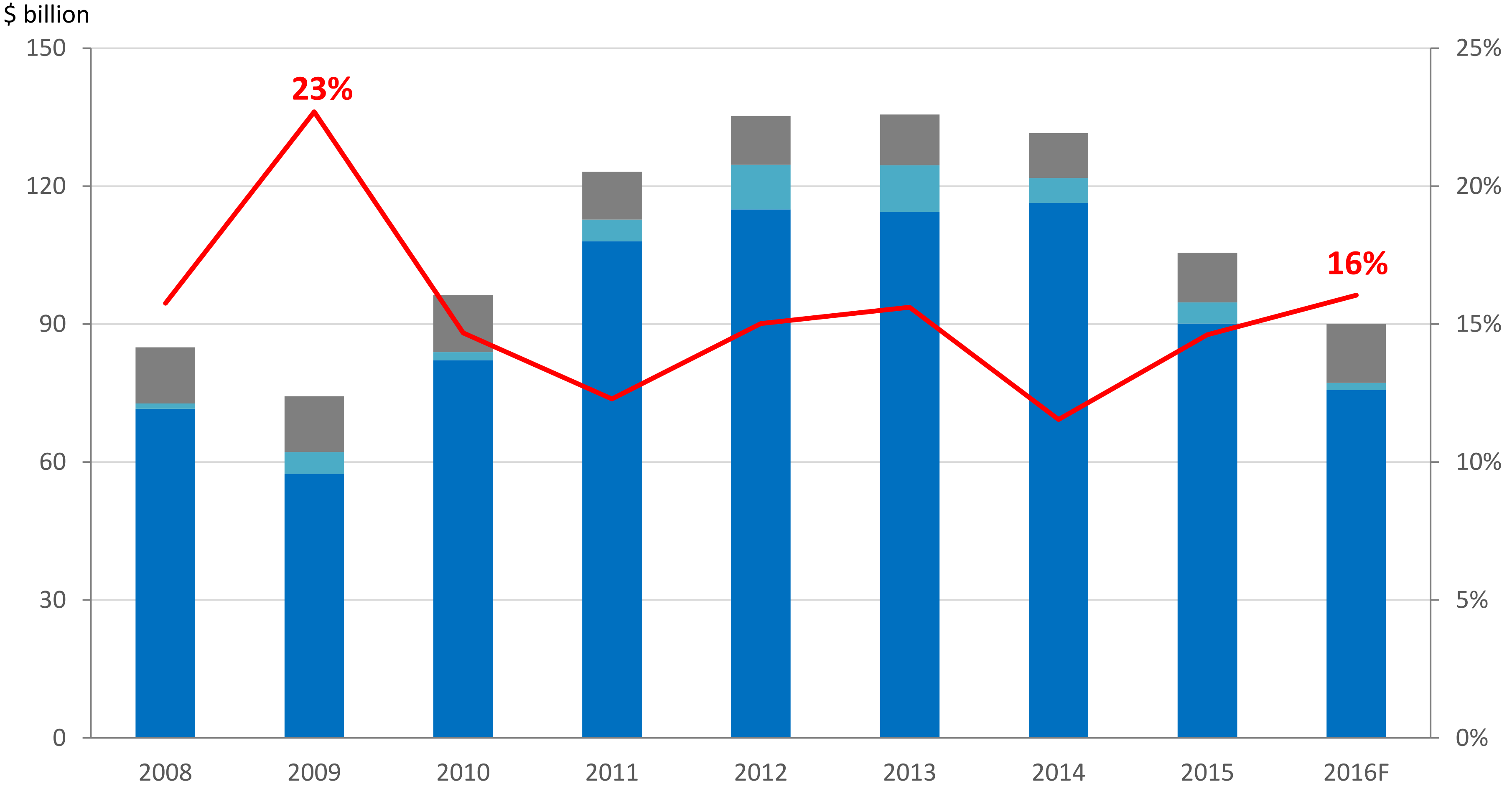
Federal Government payments and net Federal insurance indemnities contribute relatively small percentage of net cash farm income



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 November 30, 2016

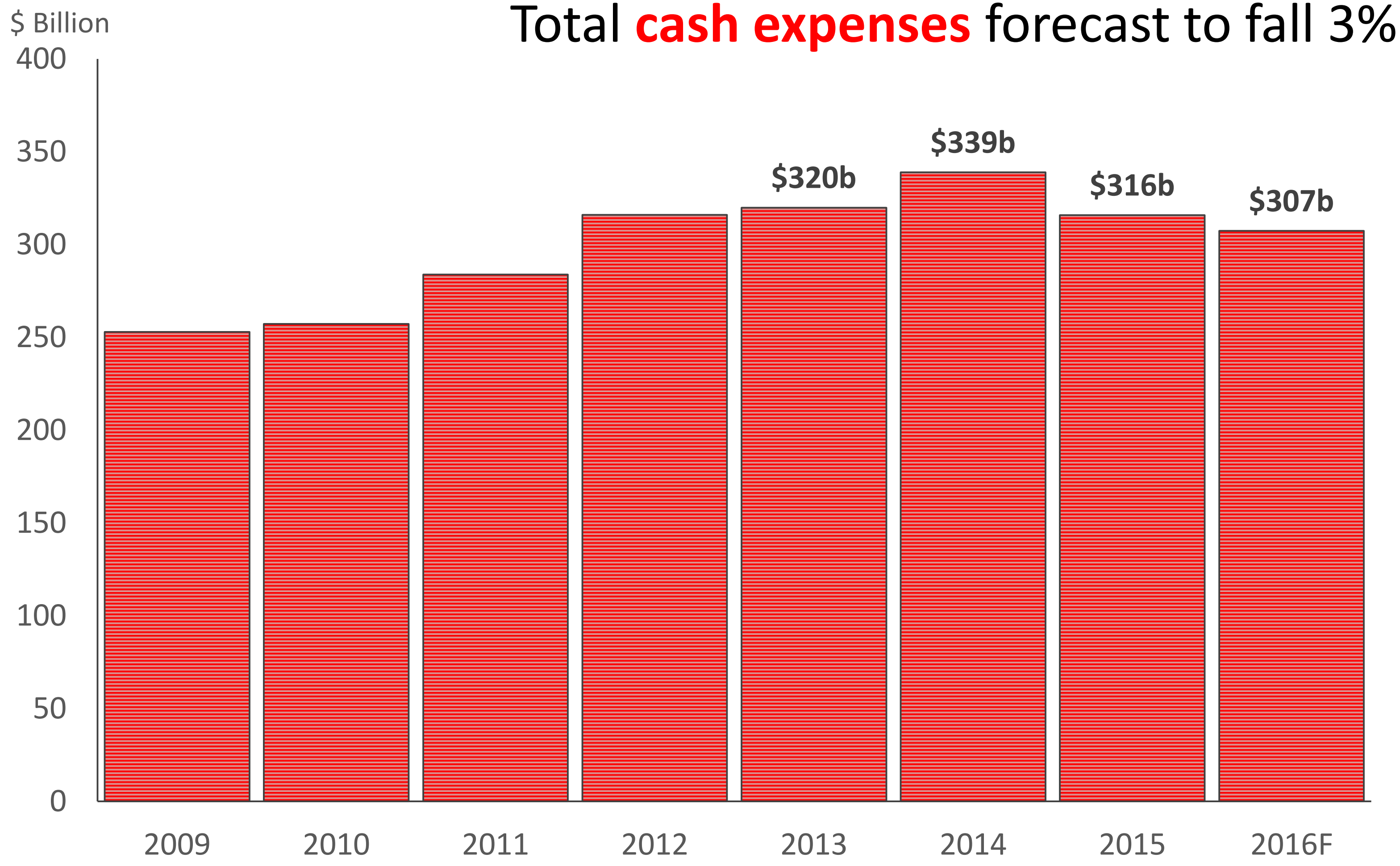
But during low net cash farm income years, Federal Government payments and net Federal insurance indemnities tend to have greater impact



Government payments and net Federal insurance indemnities comprise 16% of NCFI in 2016.

F= Forecast.
Source: USDA, Economic Research Service, Farm Income and Wealth Statistics
Data as of November 30, 2016

Total **cash expenses** forecast to fall 3% in 2016

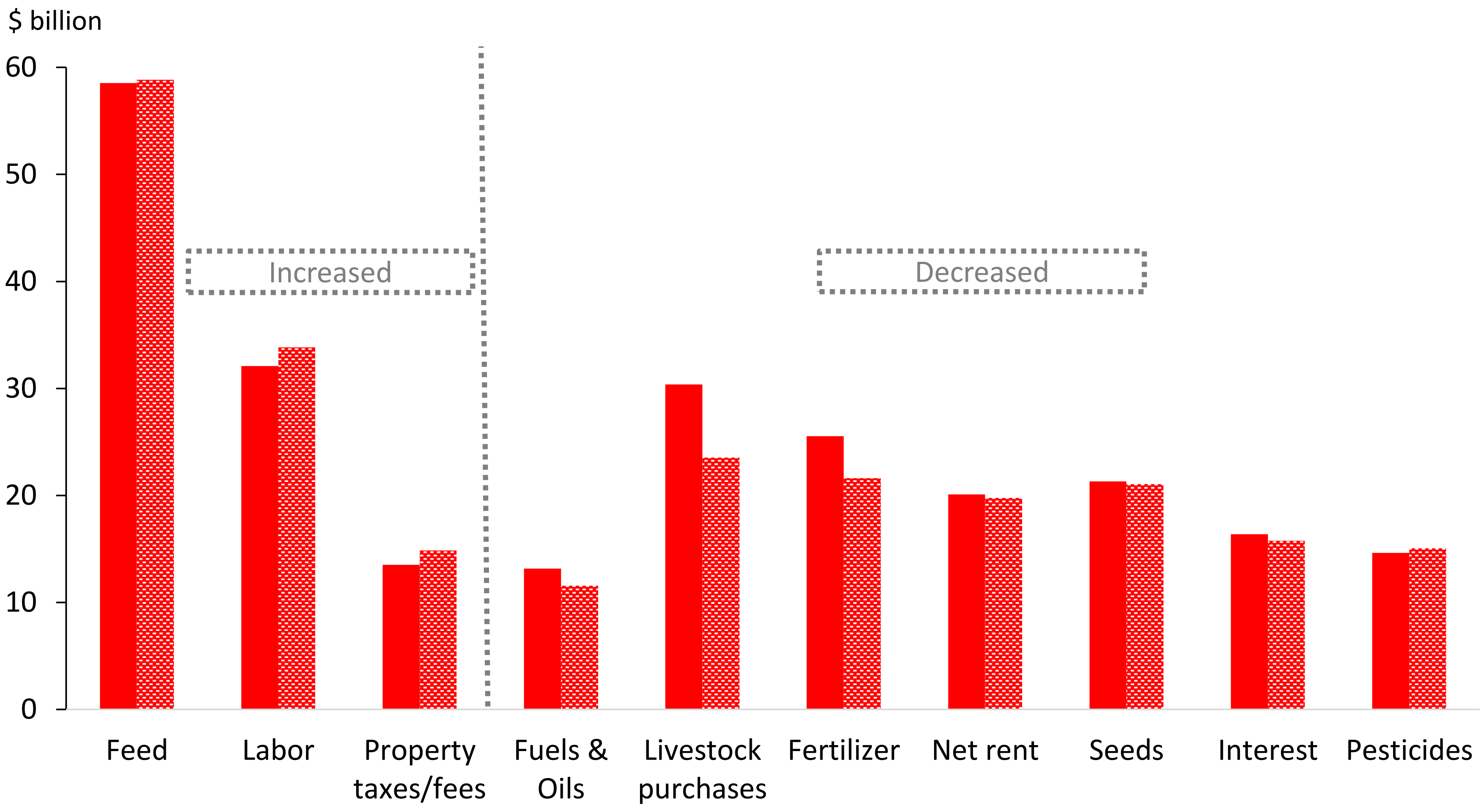


Second year of decline in **cash expenses**;

Cash expenses grew by 7.1% on average from 2010 to 2014 and have shrunk by 4.8% on average from 2014 to 2016.

F= Forecast.
Source: USDA, Economic Research Service, Farm Income and Wealth Statistics
Data as of November 30, 2016

Reduced spending on livestock purchases and fertilizer projected to lead cash expenses lower

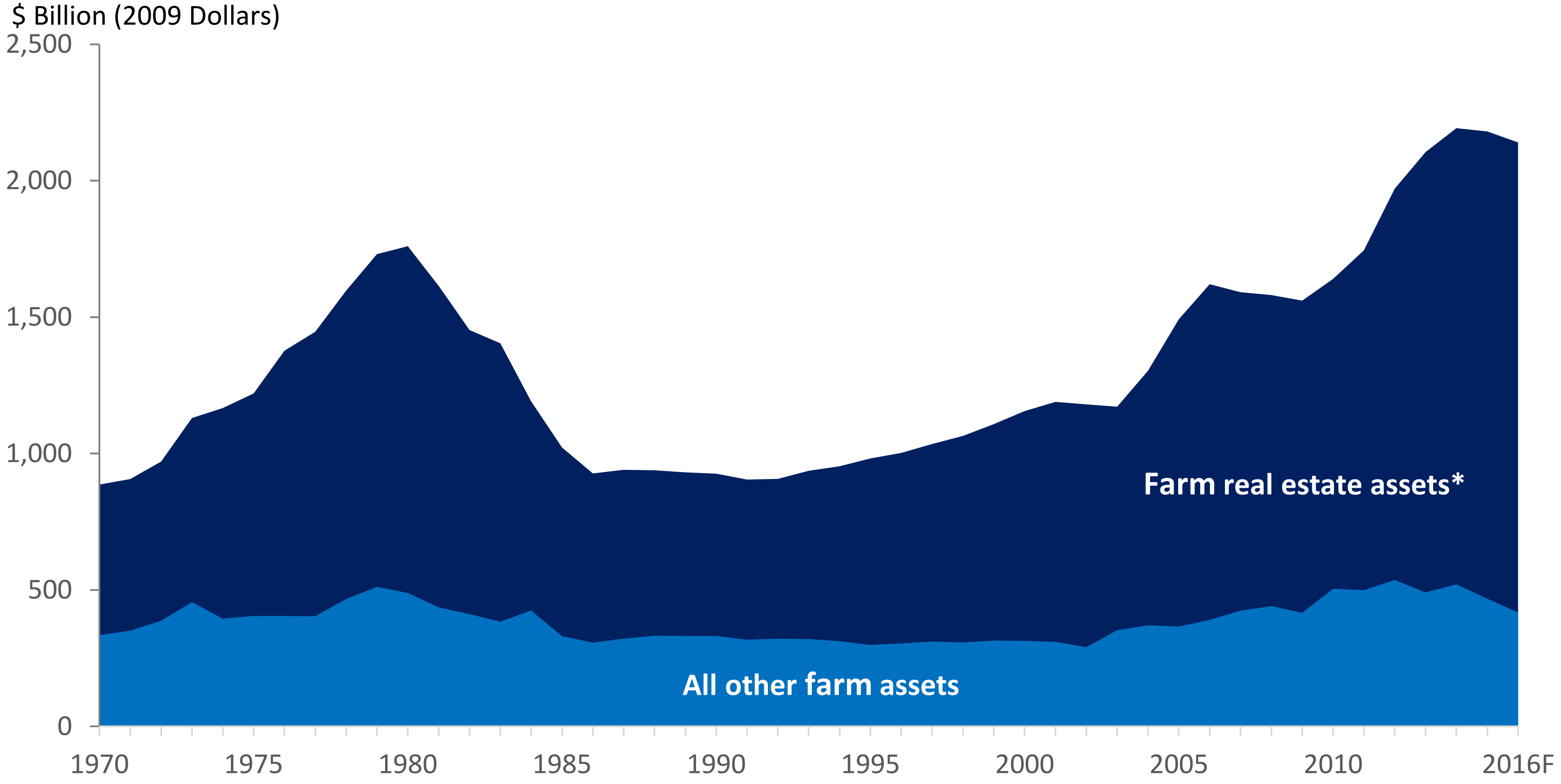


Drop in expenses for inputs that traditionally come from the farm sector, including feed, feeder cattle, and barrows/gilts.

F = forecast

Source: USDA, Economic Research Service, Farm Income and Wealth Statistics. Data as of November 30, 2016.

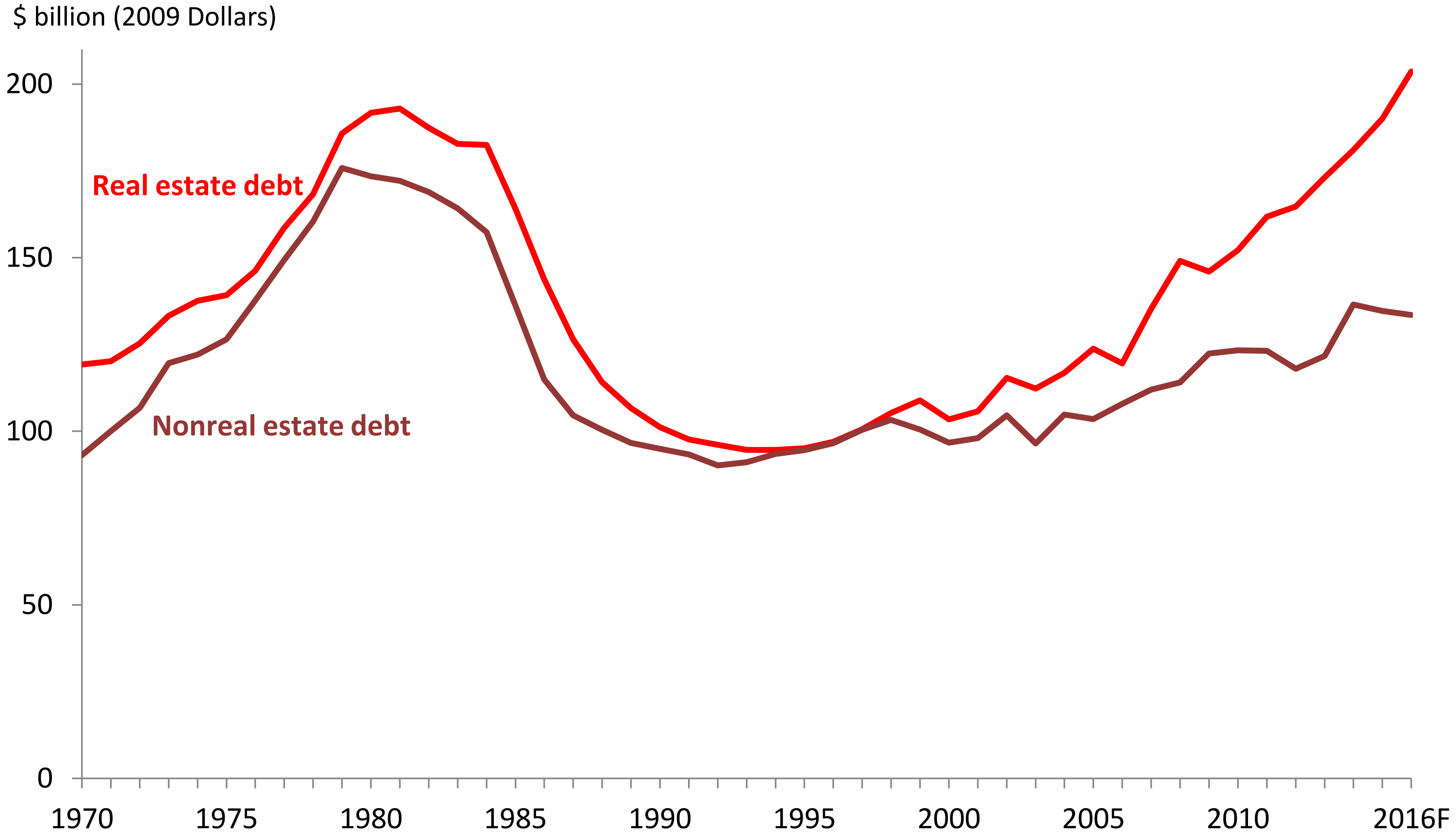
Farm real estate* represents the majority of the sector's assets



Inflation-adjusted value of farm assets forecast **down 2.1%** relative to 2015, including real estate (**down 1.8%**)

F= Forecast. Values are adjusted using the chain-type GDP deflator, 2009=100.
*Real estate includes the value of land and buildings
Source: USDA, Economic Research Service, Farm Income and Wealth Statistics. Data as of November 30, 2016.

Farm **real estate debt** expected to expand in 2016

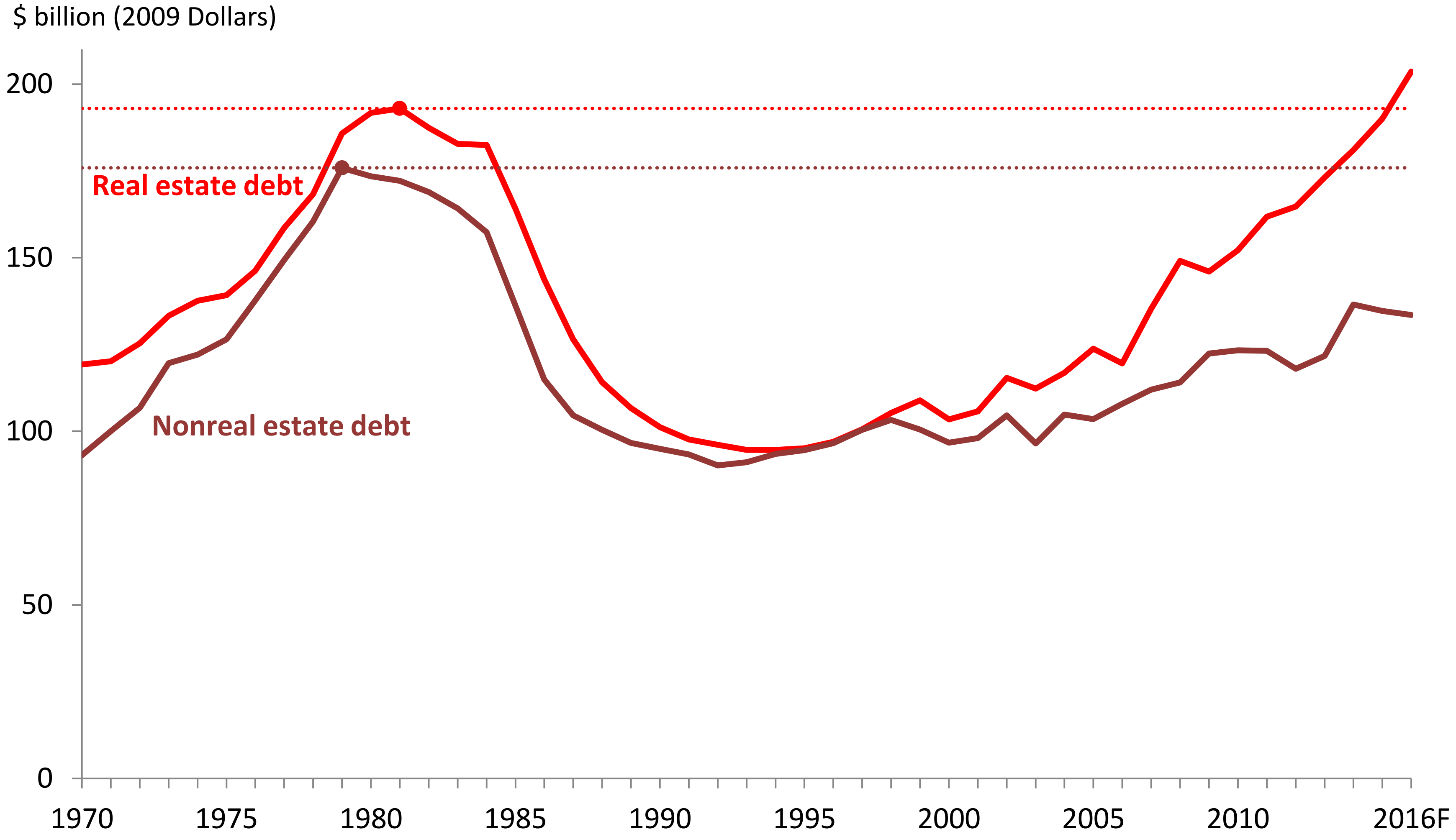


Nonreal estate debt peaked in 2014 and remained stable since.

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 November 30, 2016.

Farm **real estate debt** forecast above early 80's peak



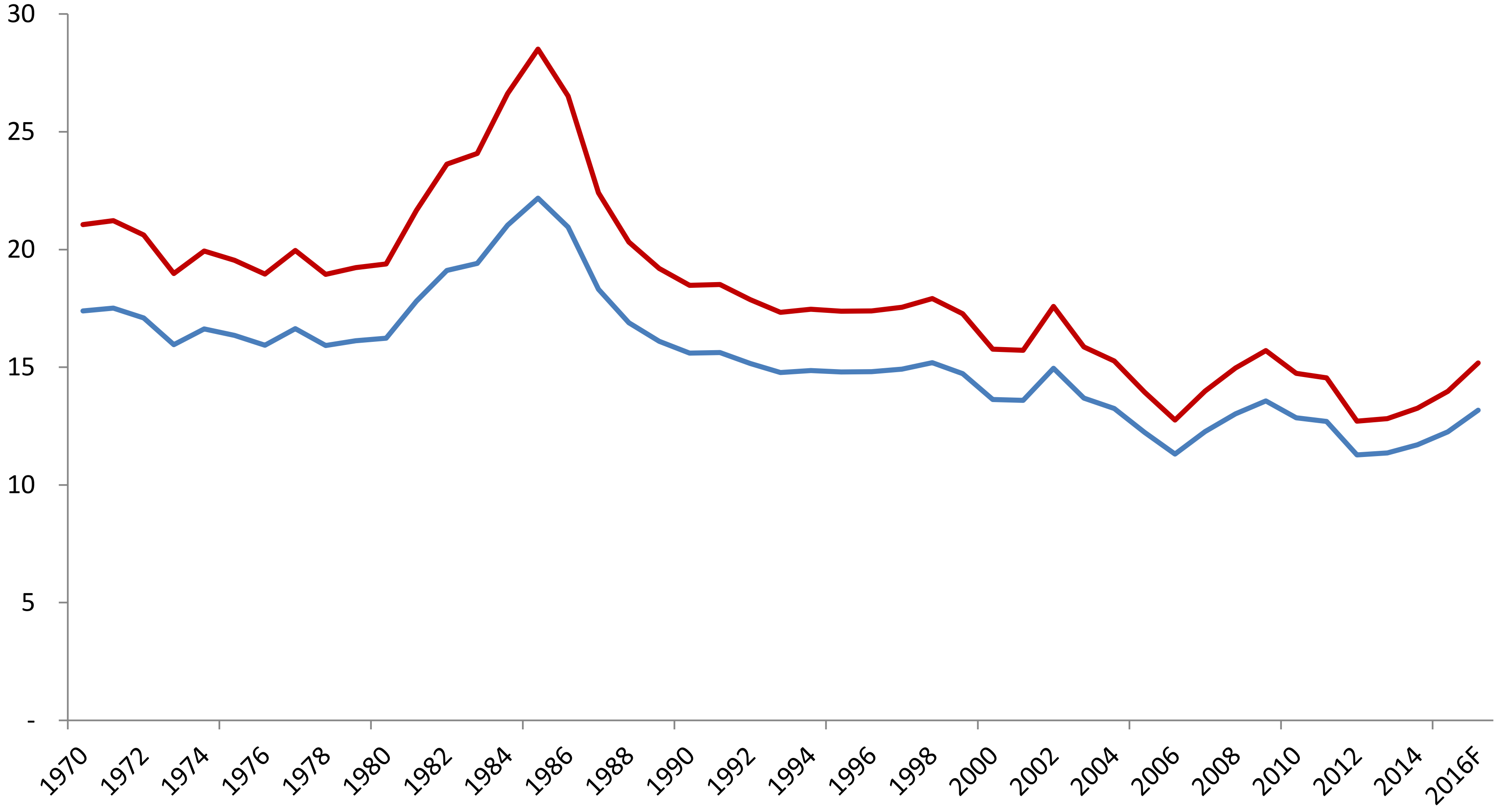
F= Forecast. Values are adjusted using the chain-type GDP deflator, 2009=100.
Source: USDA, Economic Research Service, Farm Income and Wealth Statistics. Data as of November 30, 2016.

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

	1981	2016F
Real estate	9.4%	4.4%
Nonreal estate	13.3%	3.9%

$$Interest\ rate_t = \frac{Interest\ expense_t}{(Debt_t + Debt_{t-1})/2}$$

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

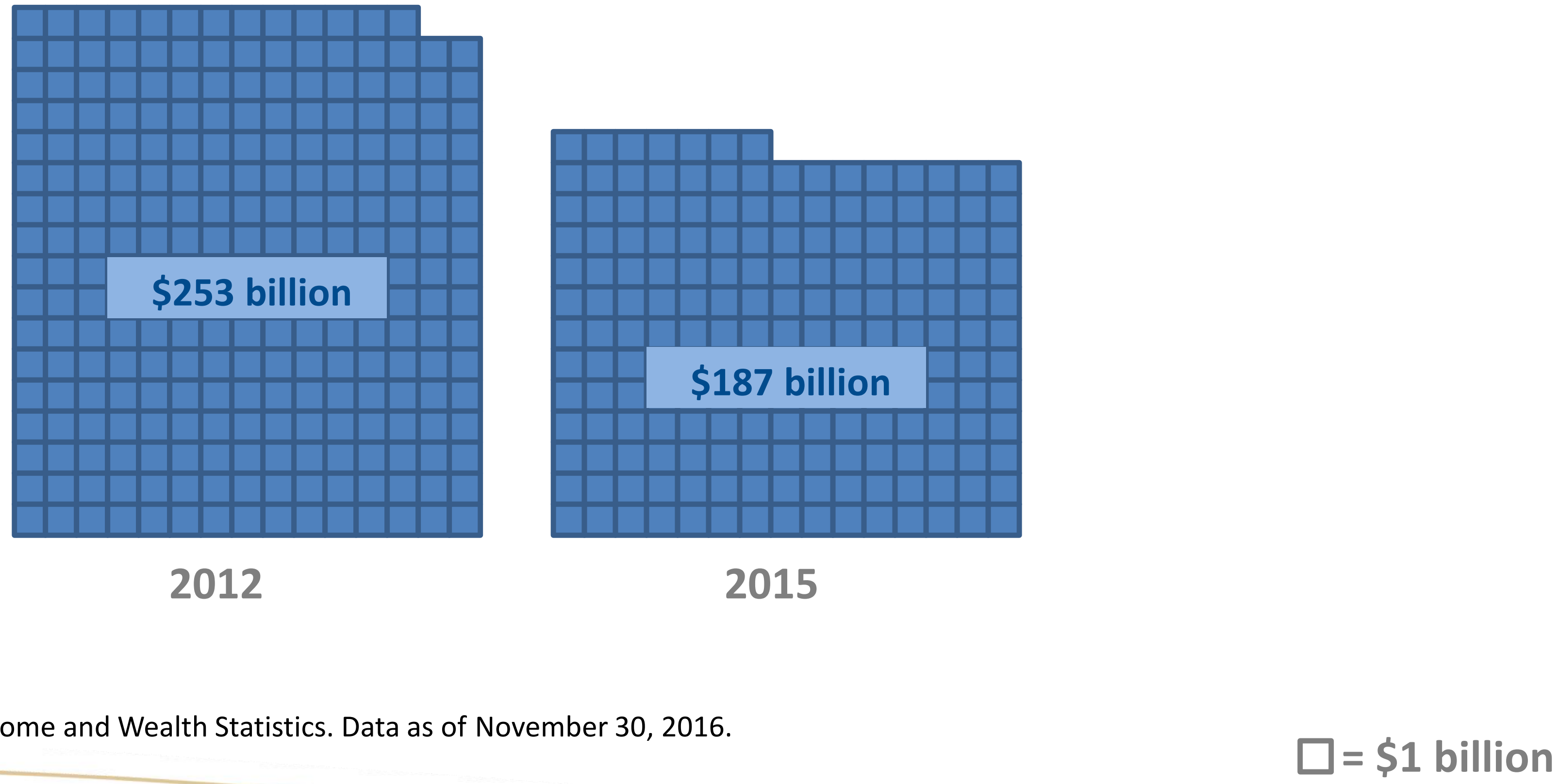


Debt-to-asset (D/A) and **debt-to-equity (D/E)** are solvency ratios. Higher ratios indicate higher likelihood of default and decreased ability to overcome adverse financial events.

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).

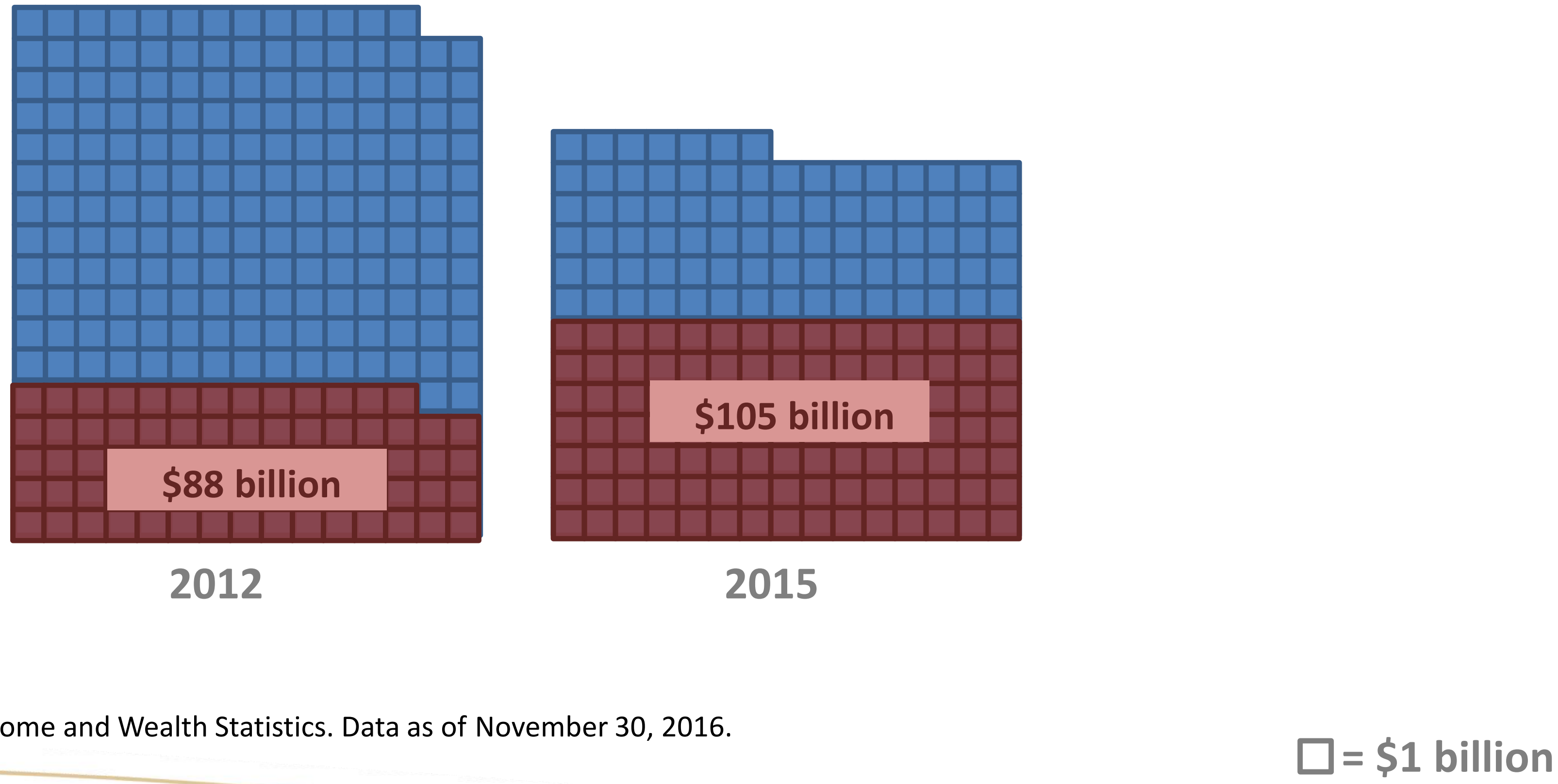
F= Forecast.
Source: USDA, Economic Research Service, Farm Income and Wealth Statistics. Data as of November 30, 2016

Current assets down $66 billion between 2012 and 2015



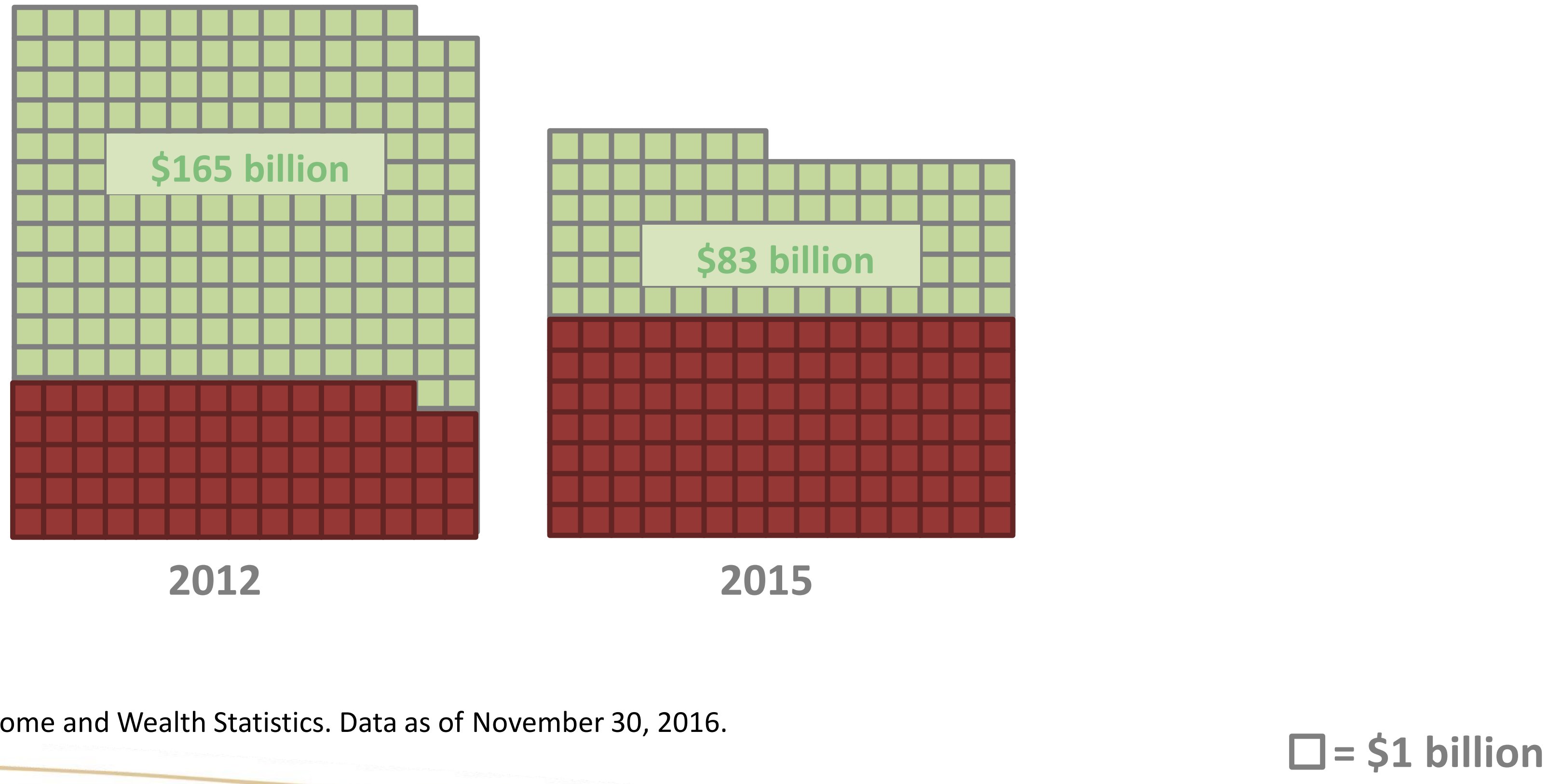
Source: USDA, Economic Research Service, Farm Income and Wealth Statistics. Data as of November 30, 2016.

Current debt grew by **$17 billion** between 2012 and 2015



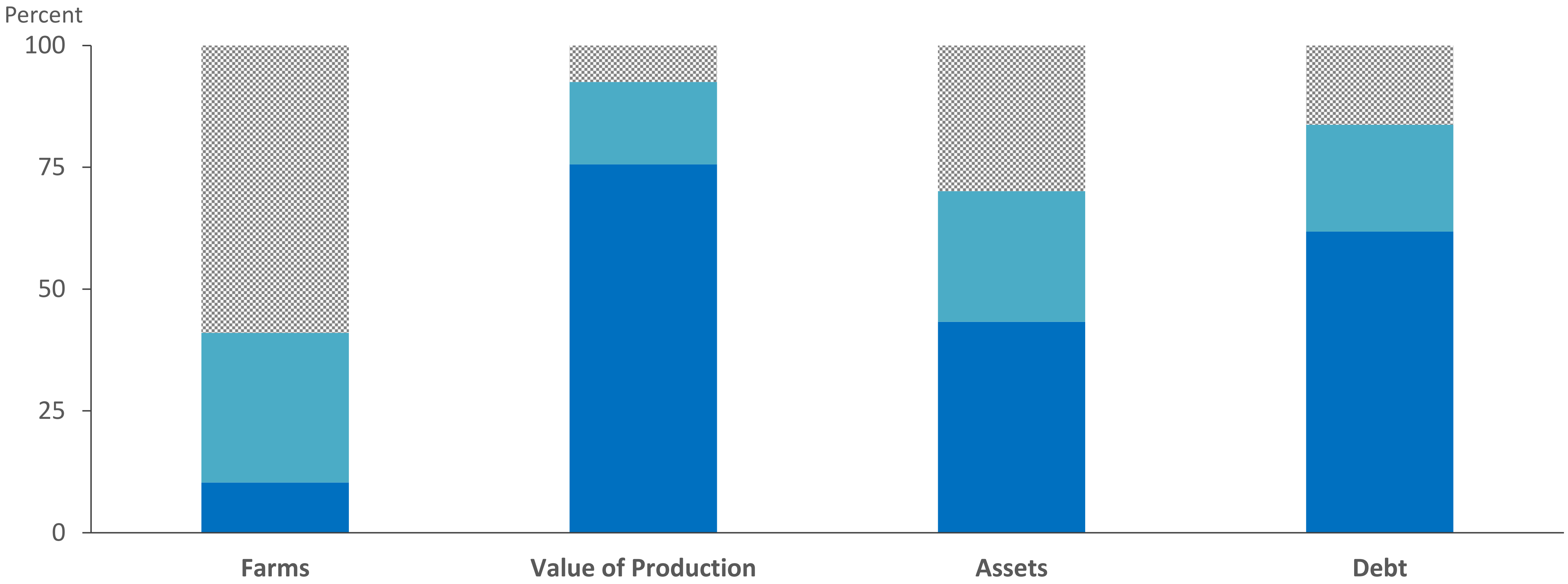
Source: USDA, Economic Research Service, Farm Income and Wealth Statistics. Data as of November 30, 2016.

Working capital shrinks by **50 percent in three years**



Source: USDA, Economic Research Service, Farm Income and Wealth Statistics. Data as of November 30, 2016.

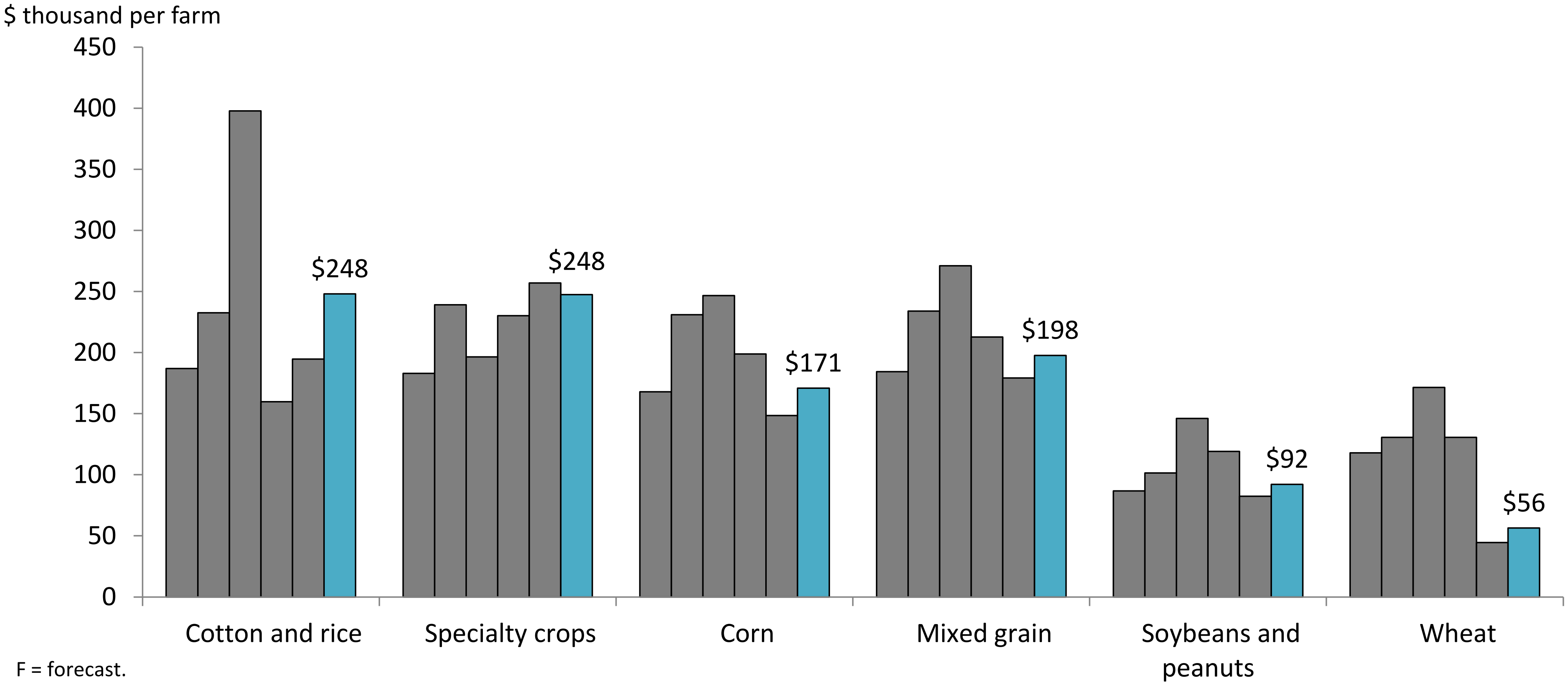
Farm businesses account for 41% of farms, but over 90% of value of production



	Farm Businesses	
Residence	**Intermediate**	**Commercial**
Operators report they are retired or have a major occupation other than farming.	*Gross cash farm income less than $350,000 and operators report farming as their major occupation.*	*Gross cash farm income greater than $350,000 or farms organized as nonfamily corporations or cooperatives.*

Source: 2015 Agricultural Resource Management Survey (ARMS)

Average net cash farm income up for most crop farm businesses except specialty crops in 2016 1/

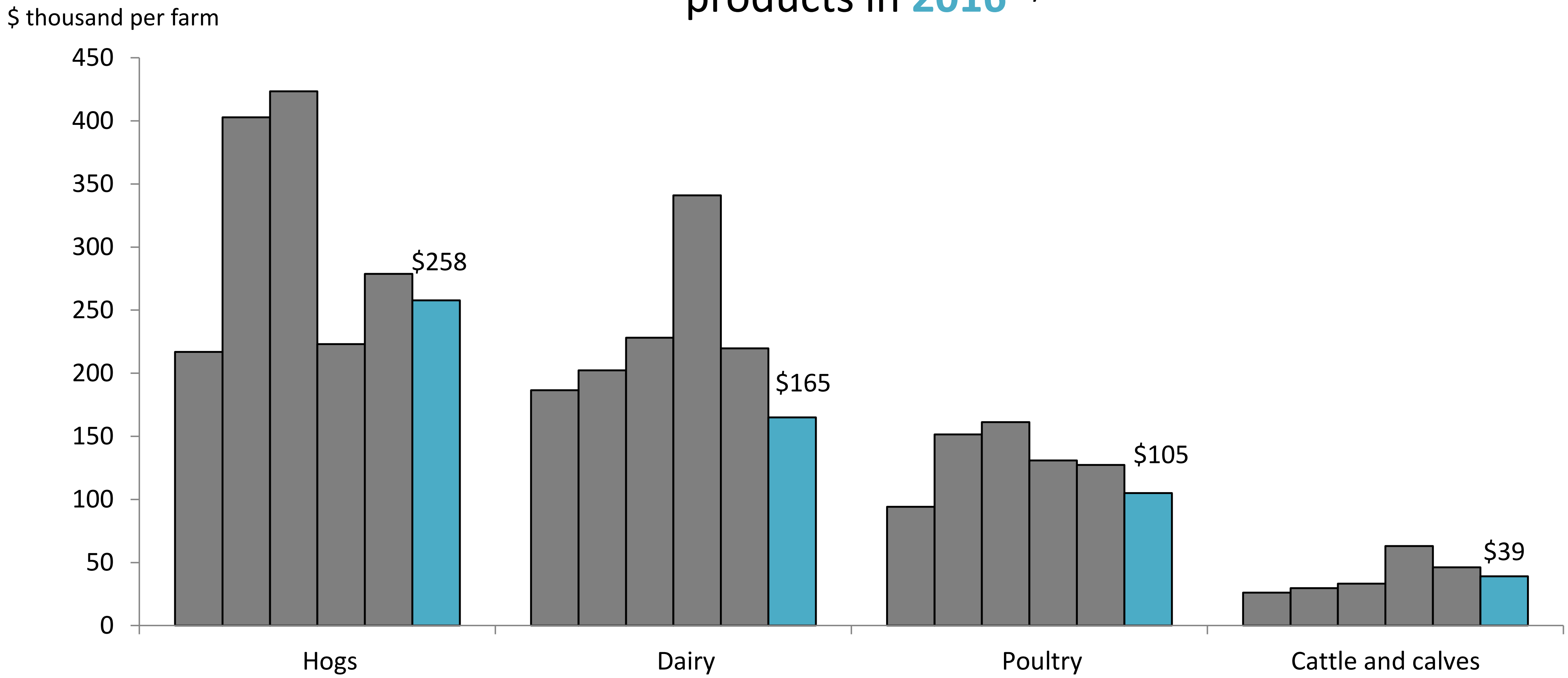


F = forecast.

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 November 30, 2016.

2010 2011 2012 2013 2014 2015 2016F

Average net cash income expected to fall for most farm businesses specializing in animals and products in 2016 1/



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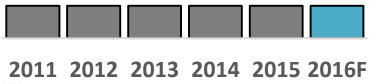
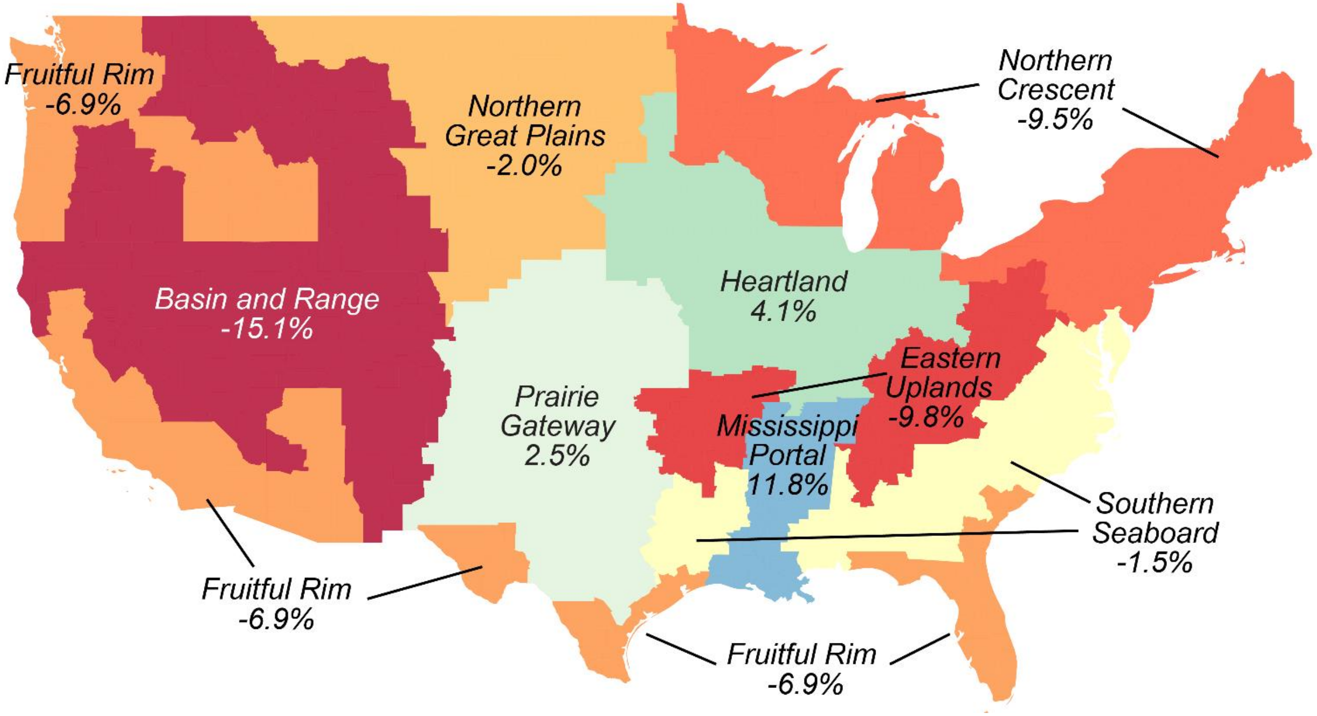


2016 net cash farm income regional impacts are expected to be mixed for farm businesses



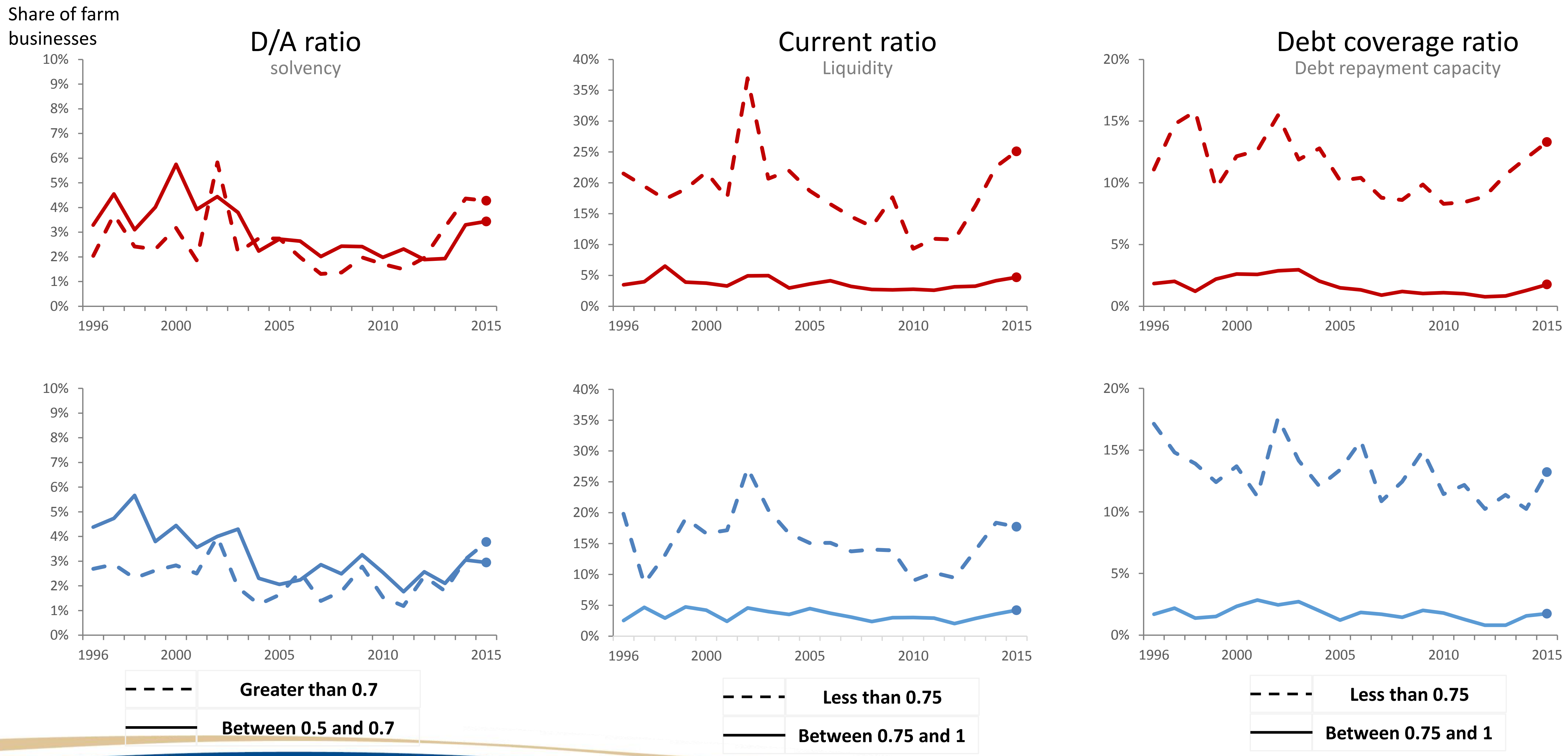
The partial budget forecast model is based on the 2015 Agricultural Resource Management Survey (ARMS) using parameters from the sector forecasts. The model is static and does not account for changes in crop rotation, weather, and other location-based production impacts that occurred after the base year.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

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

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

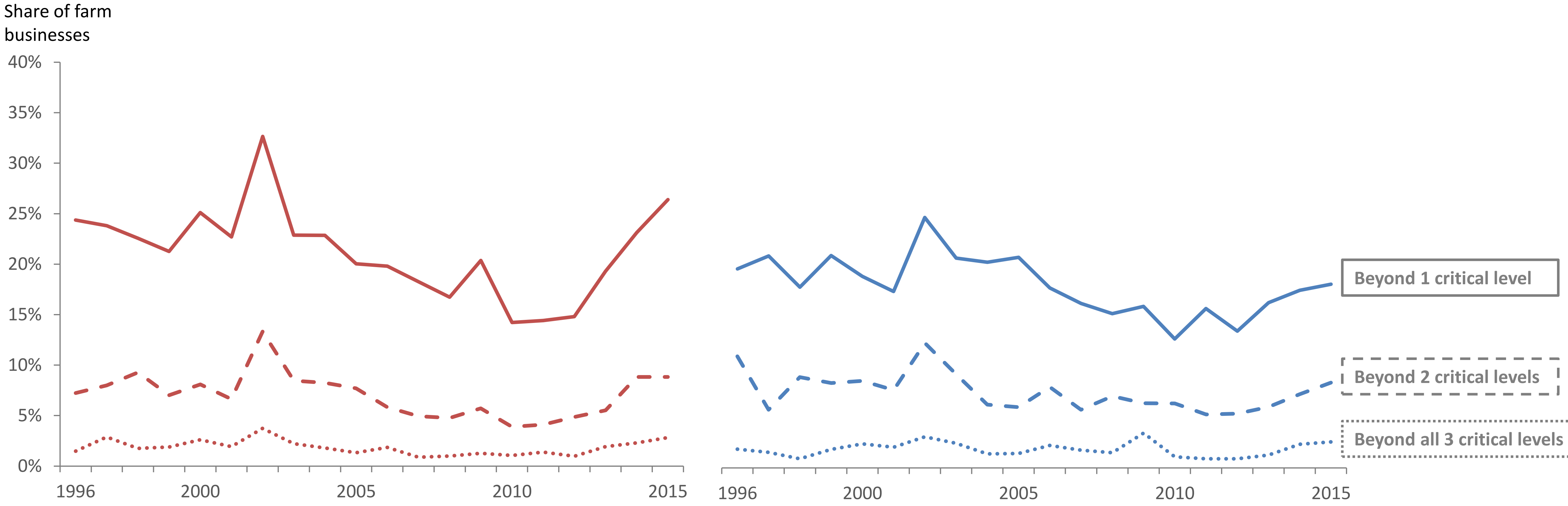
Dairy's forecast drives **Northern Crescent** and **Fruitful Rim** cash incomes lower.

Increasing share of crop and livestock farm businesses with financial ratios beyond critical levels



Source: 1996-2015 Agricultural Resource Management Survey (ARMS)

Increasing share of crop and livestock farm businesses with financial ratios beyond critical levels

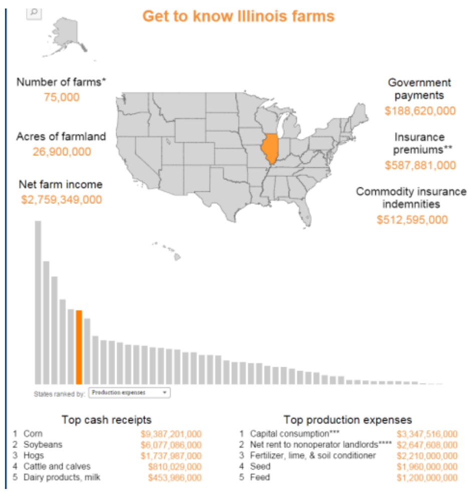


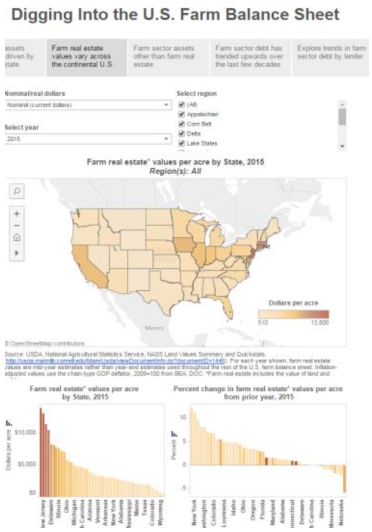
	D/A ratio solvency	Current ratio Liquidity	Debt coverage ratio Debt repayment capacity
Critical level:	**Greater than 0.5**	**Less than 1**	**Less than 1**

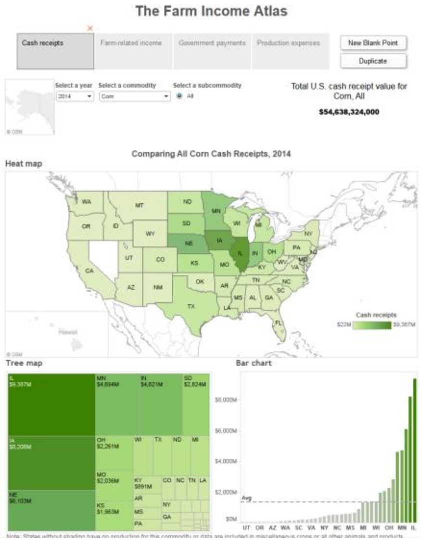
Source: 1996-2015 Agricultural Resource Management Survey (ARMS)

Want more…?

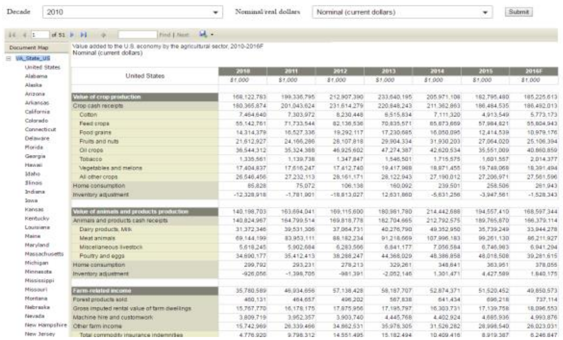
Interactive Data Visualizations



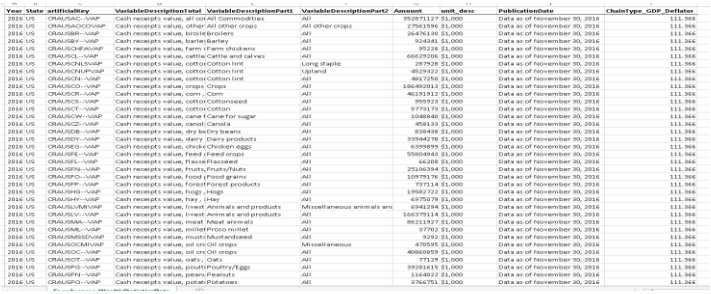




Tailored financial reports



Current and archived comprehensive datasets



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