U.S. Agricultural and Rural Outlook

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Nate Kauffman
Omaha Branch Executive and Economist
Federal Reserve Bank of Kansas City

The views expressed are those of the speaker and do not necessarily reflect the opinions of the Federal Reserve Bank of Kansas City or the Federal Reserve System.
The Kansas City Fed District is highly rural.

Source: BEA and staff calculations.

Share of Counties Classified as Rural

- Minneapolis
- Kansas City
- St. Louis
- Dallas
- Chicago
- Cleveland
- San Francisco
- Atlanta
- Richmond
- Boston
- Philadelphia
- New York

Source: BEA, USDA, and staff calculations

FEDERAL RESERVE BANK OF KANSAS CITY
Of the 12 Fed Districts, the KC District is also the most concentrated in agriculture by some measures.

Source: BEA and staff calculations.

Share of Counties with Moderate Farm Concentration or Higher

Source: BEA, USDA, and staff calculations

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Outlook Themes

• The U.S. economy has gained momentum in recent years, in contrast to the outlook for agriculture and the rural economy.

• The U.S. farm sector continues to adjust to lower commodity prices, which have also impacted rural areas.

• Unemployment is low in both rural and urban areas. In addition to lower commodity prices, though, rural areas also face ongoing demographic and workforce challenges.
From 2007 to 2013, the ag economy outperformed the broader U.S. economy.

Indicators for Ag Economy and Broader U.S. Economy
Change from 2007 to 2013

Source: USDA, University of Michigan, Federal Reserve Board, and Haver Analytics.
Since 2013, the outlooks have reversed.

**Indicators for Ag Economy and Broader U.S. Economy**

Change from 2013 – 2018

Source: USDA, University of Michigan, Federal Reserve Board, and Haver Analytics.
Farm income has dropped from recent highs and is expected to decline again in 2018.

U.S. Farm Income

Source: USDA.
Demand for agricultural products has been steady, and has even increased recently.

U.S. Agricultural Exports and Ethanol Production

Source: USDA, EIA, and Renewable Fuels Association.
But production of major ag commodities has been significantly higher than expected the last few years.

**U.S. Corn and Soybean Yields**

Deviation from Trend

Source: USDA and staff calculations.
U.S. production of commodities especially relevant in Wyoming has also increased.

**U.S. Cattle Inventory**

<table>
<thead>
<tr>
<th>Year</th>
<th>Million Head</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>94.5</td>
</tr>
<tr>
<td>2011</td>
<td>93.0</td>
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<tr>
<td>2012</td>
<td>91.5</td>
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<tr>
<td>2013</td>
<td>90.0</td>
</tr>
<tr>
<td>2014</td>
<td>89.5</td>
</tr>
<tr>
<td>2015</td>
<td>90.0</td>
</tr>
<tr>
<td>2016</td>
<td>91.5</td>
</tr>
<tr>
<td>2017</td>
<td>93.0</td>
</tr>
</tbody>
</table>

Source: USDA.

**U.S. Crude Oil Production**

<table>
<thead>
<tr>
<th>Year</th>
<th>Million barrels per day</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>5.0</td>
</tr>
<tr>
<td>2012</td>
<td>6.0</td>
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<tr>
<td>2014</td>
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<tr>
<td>2016</td>
<td>10.0</td>
</tr>
<tr>
<td>2018</td>
<td>11.0</td>
</tr>
</tbody>
</table>

Source: Energy Information Administration.
As a result, agricultural commodity prices generally remain low and are a primary concern for the sector.

Agricultural Commodity Prices

Index, 2010 = 100

Source: USDA and staff calculations.
Rising interest rates are an additional headwind for some producers.

Source: Federal Reserve Bank of Kansas City.
Farm income is projected to remain low in the coming years.

U.S. Farm Income

Source: USDA.
Changes in commodity prices have been a significant driver of incomes in rural areas.

Per Capita Personal Income, 2008 to 2012

Per Capita Personal Income, 2013 to 2017

Percent Change
- Below -5
- -5 to 0
- 0 to 5
- 5 to 8
- Above 8

Percent Change
- Below -5
- -5 to 0
- 0 to 5
- 5 to 8
- Above 8
Over the past few years, employment growth in rural areas has been sluggish.

**Metro and Nonmetro Employment**

Percent change from previous year

Source: BLS.
A significant part of the economic challenges in rural areas is workforce availability.

Population Trends

Index; 1980 = 100
The number of youth living in rural areas has diminished relative to urban locations.

Source: Census Bureau, Haver Analytics.
Young to mid-career individuals have also continued to take up residence in metropolitan areas.
Meanwhile, the workforce in rural areas is ageing.

45-64 Population Trends

Index; 1980 = 100

WY Metro
WY Nonmetro
U.S. Metro
U.S. Nonmetro

Source: Census Bureau, Haver Analytics.
And the strongest population growth in rural areas is at retirement age.

65+ Population Trends

Index; 1980 = 100

Source: Census Bureau, Haver Analytics.
Along with job growth, demographics are an important component to labor market tightness.

**Average Unemployment Rate in Wyoming by County**

Percent, seasonally adjusted

Source: BLS, Haver Analytics.
It is also important to note significant regional variation during national recessions and expansions.

Change in Unemployment Rate, 2008 to 2012

Change in Unemployment Rate, 2013 to 2018
Concluding Remarks

• Following a period of extraordinary profits, the U.S. agricultural economy has been in a prolonged downturn that has affected the outlook for rural communities in the region.

• Some rural challenges, connected to commodity markets and their cycles, are not new.

• Increasingly, though, a challenge for rural areas of the KC Fed District is population decline and workforce availability.
Questions?

Nate Kauffman
Economist and Omaha Branch Executive
Federal Reserve Bank of Kansas City
Email: Nathan.Kauffman@kc.frb.org
Website: http://www.kansascityfed.org/omaha/