Agricultural Economic Outlook

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The views expressed here 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.
Large parts of the country, particularly in the Midwest are dependent on the farm economy.

Sources: BEA and staff calculations.
Commercial banks with significant ties to agriculture are also concentrated in the Midwest.

Agricultural Banks*

*Banks with agricultural loans totaling 25% or more of total loans.

Source: Board of Governors
Outlook Themes

• In contrast to the broader economy, U.S. agriculture has been in the midst of a gradual but prolonged downturn.

• Financial stress among agricultural producers continues to rise, albeit modestly.
  • Dairy operations and farms in the Midwest have been most exposed.

• In general, ag prices are likely to remain low in 2020, but depend heavily on the outlook for trade.
Despite ongoing growth in the U.S. economy, the ag sector has been in a prolonged downturn.

*Annual average through Q3 2019

The 8th District is particularly concentrated in corn, soybeans, and poultry.

Eighth District: Ag Commodity Concentrations (2018)

Top Commodity (% of Sales)

Commodity Concentrations (% of Sales)

Sources: USDA and staff calculations.
Farm income began to rise sharply in the early 2000s, alongside gains in commodity prices.

U.S. Net Farm Income and Agricultural Prices

Source: USDA and staff calculations.
Significant increases in key sources of demand supported agricultural commodity prices.

U.S. Agricultural Exports and Ethanol Production

Sources: USDA and U.S. Energy Information Administration.
Exports of major ag commodities increased sharply, supported by growth in China.

Change in U.S. Ag Exports
2000 - 2013

Note: Based on top commodities and destinations in 2013
Source: USDA.
Farm real estate values also increased significantly.

Farm Real Estate Values

*Average of indices for each individual state

Sources: USDA and staff calculations.
Beginning in 2013, however, ag commodity prices and farm incomes began to drop.

**Change in Commodity Prices**

2013 to 2016

- Corn
- Soybeans
- Cattle
- Milk
- Chicken

**Change in Farm Income**

2013 to 2016

- U.S.
- AR
- IL
- IN
- KY
- MS
- MO
- TN

Source: USDA.
While demand for ag products remained high, the pace of growth had begun to slow.

U.S. Agricultural Exports and Ethanol Production

Sources: USDA and U.S. Energy Information Administration.
A stronger U.S. dollar presented a notable headwind to ag exports beginning in 2014.

Value of U.S. Dollar*

U.S. Dollar Exchange Rates

*Nominal, broad, trade-weighted exchange value of the U.S. Dollar

Sources: Federal Reserve Board, WSJ, World Bank and Haver Analytics.
Alongside demand headwinds, agricultural production continued to trend higher.

**U.S. Agricultural Production**

**World Agricultural Production**

Sources: USDA and staff calculations.
The growth of farm real estate values also slowed noticeably, with declines in some areas.

Change in Farm Real Estate Values: 2013 to 2016

Sources: USDA and staff calculations.
Since 2018, trade disputes have weighed on demand and industry sentiment.

Timeline of U.S. Trade Disputes

2017
- Ongoing NAFTA renegotiation (starting in 2017)

2018
- January: U.S. imposes tariff on steel and other select imports from all suppliers
- April: China retaliates with tariff on select U.S. imports

2019
- July: Additional U.S. tariffs on China imports
- July: Additional China tariffs on U.S. imports (including soybeans)

2020
- June: Mexico ratifies USMCA
- January: Phase 1 Trade Deal signed
- January: U.S. ratifies USMCA

Tariffs from both parties largely remain in place with escalation of some, ongoing negotiations and further disputes.
Ag exports, particularly to China, dropped in 2018 and remained subdued through 2019.

**U.S. Food and Agricultural Exports**

- To All Others (Left)
- To China (Right)

**U.S. Soybean Exports**

- Billion dollars

Source: USDA.
Recently, farm income has increased slightly, but with support from government payments.

Note: 2019 Forecast
Source: USDA.
Farm loan delinquency rates and bankruptcies have trended higher, but at a modest pace.

Farm Loan Delinquency Rates

- Percent
- 2001: 3
- 2005: 2
- 2007: 3
- 2009: 4
- 2011: 5
- 2013: 6
- 2015: 7
- 2017: 6
- 2019: 5

Commercial Banks
- Farm Credit System

U.S. Farm Bankruptcies

- Number
- 1995: 1,200
- 1997: 1,000
- 1999: 800
- 2001: 600
- 2003: 400
- 2005: 200
- 2007: 100
- 2009: 200
- 2011: 400
- 2013: 600
- 2015: 800
- 2017: 1,000
- 2019: 1,200

Note: Includes all chapter 12 filings which are defined as “family farmers” and “family fishermen” with “regular annual income”. Annual bankruptcies are reported as the number of filings in the 12-month period ending 12/31 each year. Source: United States Courts.

Sources: Board of Governors and FCA.
Farmland values have declined in some areas, but have generally remained strong.

U.S. Farmland Values
Change from 2000 to 2013

U.S. Farmland Values
Change from 2013 to 2019

Source: USDA.
Looking ahead, farm income is expected to remain similar to recent years.

U.S. Net Farm Income

Note: 2019 and 2020 are forecasts
Source: USDA.
The recent trade deal with China may provide some optimism, but uncertainty remains.

U.S. Farm Exports to China: ‘Phase 1’ Trade Deal

- Soybeans: +60%
- Other Products: +70%

Note: Projections assume increases from 2017 baseline of $12.5 billion in 2020 and $19.5 billion in 2021. % Changes indicated percent increase in exports from 2017. A 60% increase in soybean exports to China would total 90% of all U.S. soybean exports.

Sources: USDA and WSJ.
Government payments provided significant support in 2019, but are questionable for this year.

2019 Market Facilitation Program (MFP) Payment Rates

Source: USDA.
Incomes may be rising, and solvency is relatively strong, but liquidity is (still) a key concern.

**Farm Sector Debt-to-Asset Ratio**

- **Average (2000-2012)**

**Farm Sector Working Capital**

*Note: Forecast for 2019 and 2020*

*Source: USDA.*
Concluding Thoughts

• The U.S. farm economy is likely to remain subdued in 2020 alongside low ag commodity prices.
  • Much focus remains on U.S. trade deal with China, but has been complicated by the coronavirus.

• Some agricultural banks appear likely to experience (slightly) higher rates of loan delinquencies in the coming year.
  • Areas concentrated in dairy, corn, and soybeans.
  • High percentage of borrowers with limited equity.
  • Very rural locations