

PURDUE CENTER FOR COMMERCIAL AGRICULTURE

James Mintert, Michael Langemeier & Jason Henderson
Purdue Center for Commercial Agriculture

Fred Seamon, CME Group

Purdue.edu/commercialag

The Big Picture of Agriculture

❖ **Ag Booms ...**

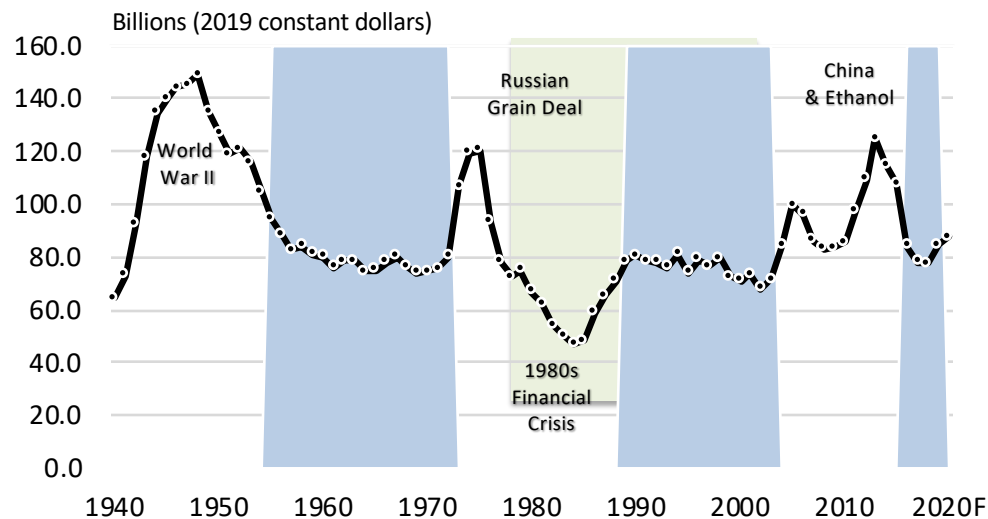
❖ **The Booms Fade ...**

❖ **Then Ag Plateau's.**

❖ **What's the New Plateau?**

Plateaus in U.S. Agriculture

What can farmers expect for farm incomes?



Source: Economic Research Service, US Dept. of Agriculture

The Plateaus

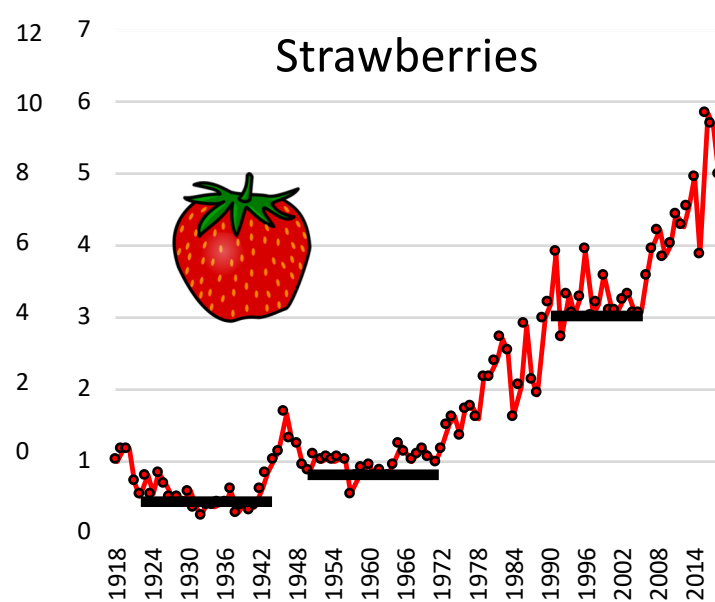
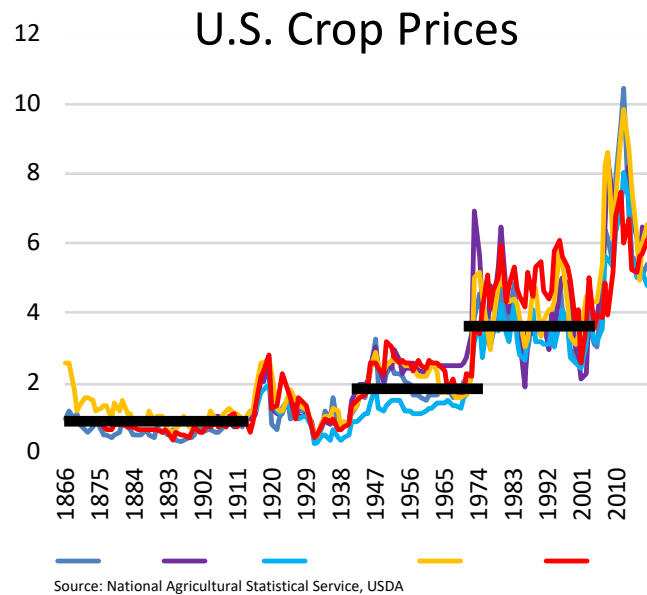
1955-1972
\$79.5 billion

1989-2003
\$75.9 billion

2016-2019?
\$80-85 billion?

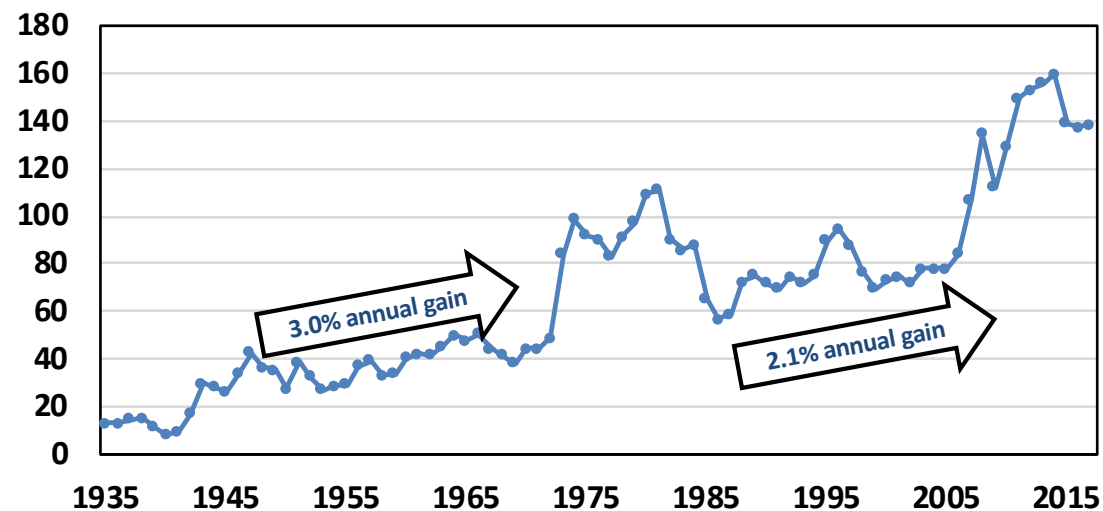
USDA expects net farm incomes to rise 1.4% in 2020

Plateaus Occur in all Types of Crops



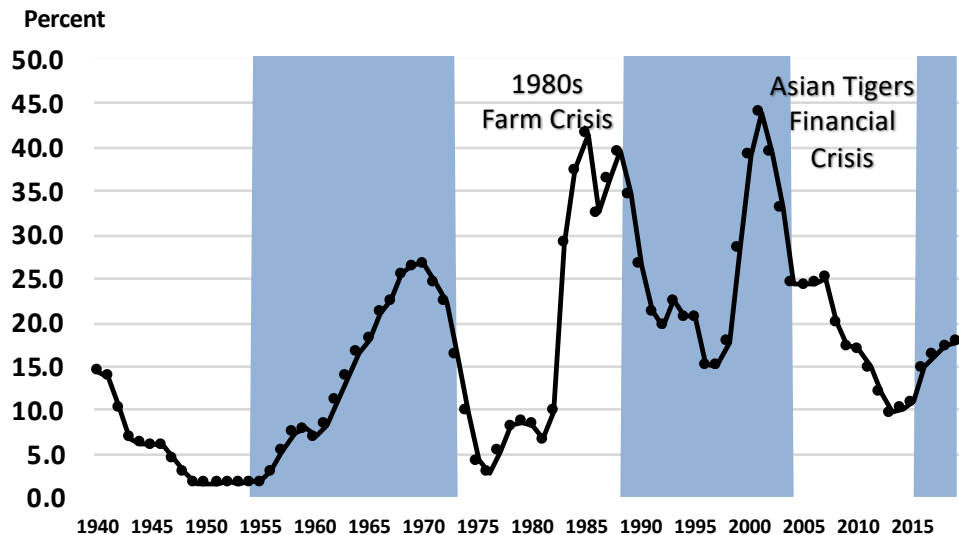
What Causes Plateaus?

Slower Export Growth and Soft Demand



What Happens in the Plateau?

Government Payments Surge



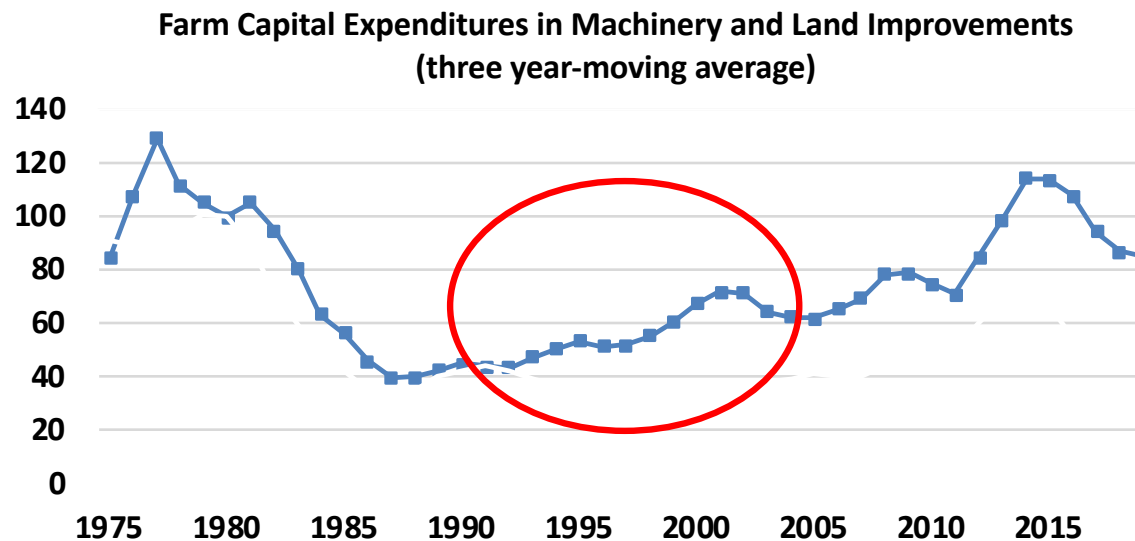
By early 70's, government payments were 25% of farm incomes

By 2003, government payments were 45% of farm incomes

How high will government payments rise?

How do farmers respond ?

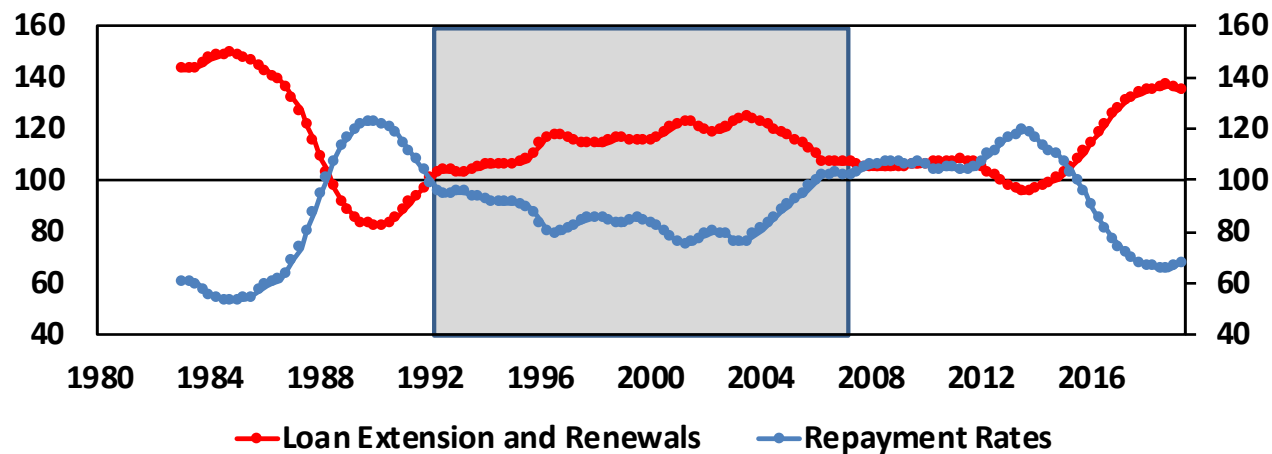
Farmers limit capital investments... except for land



What does this mean for ag financing?

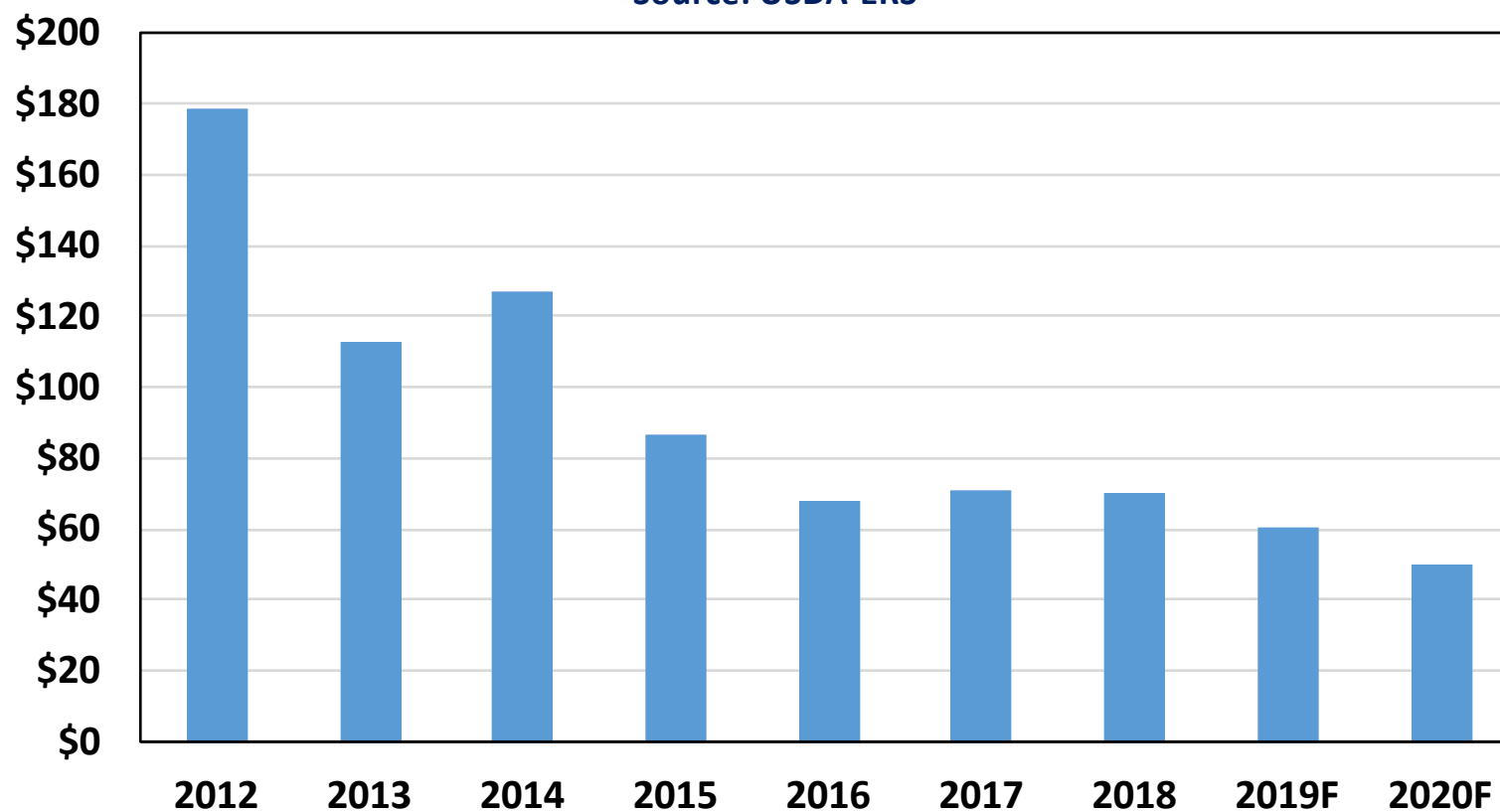
Farmers roll their operating loans.

Credit Conditions at Ag Banks in Federal Reserve Bank of
Kansas City District (three year average)



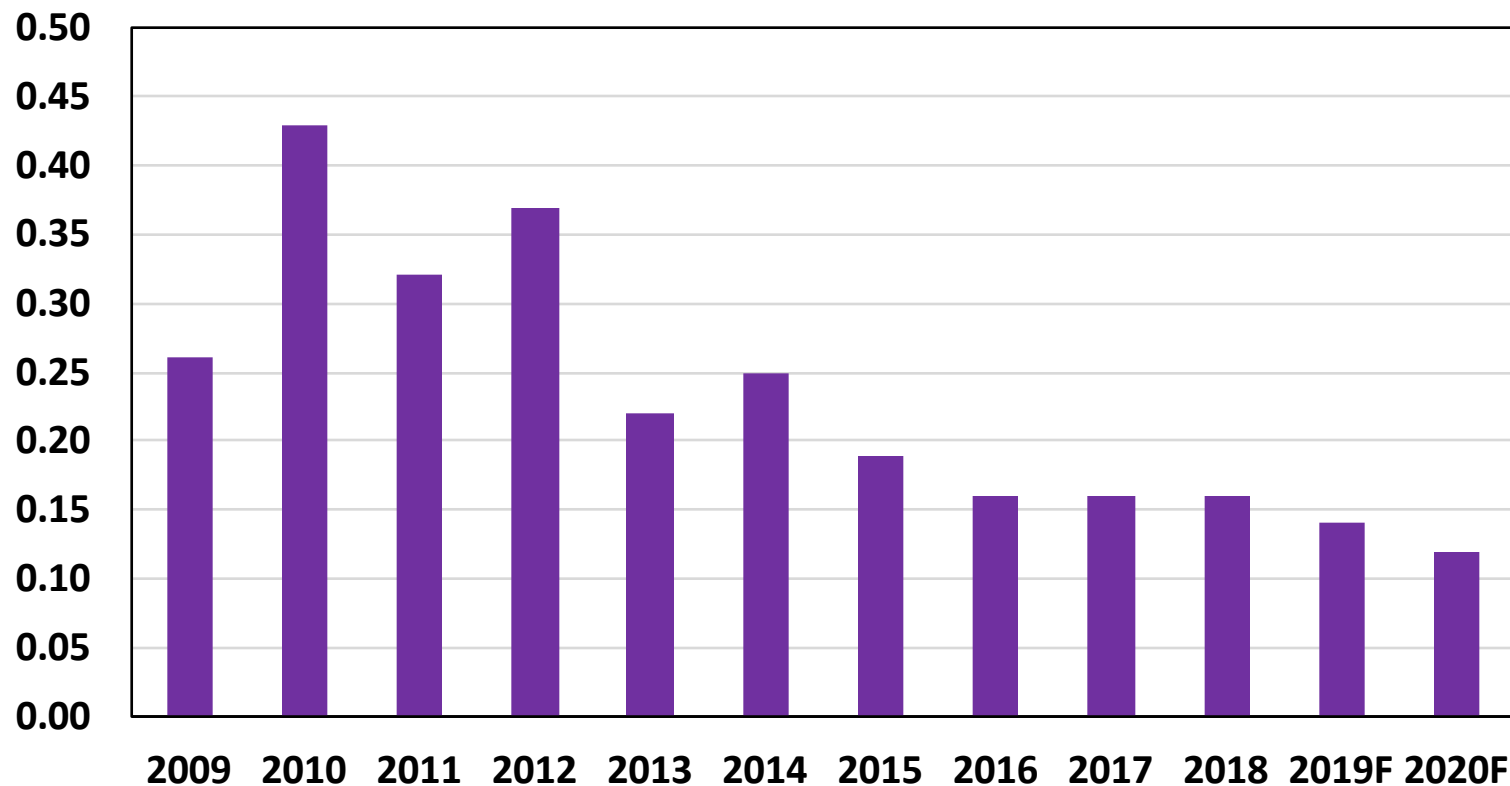
U.S. Farm Sector, Real Working Capital (Billions of \$)

Source: USDA-ERS



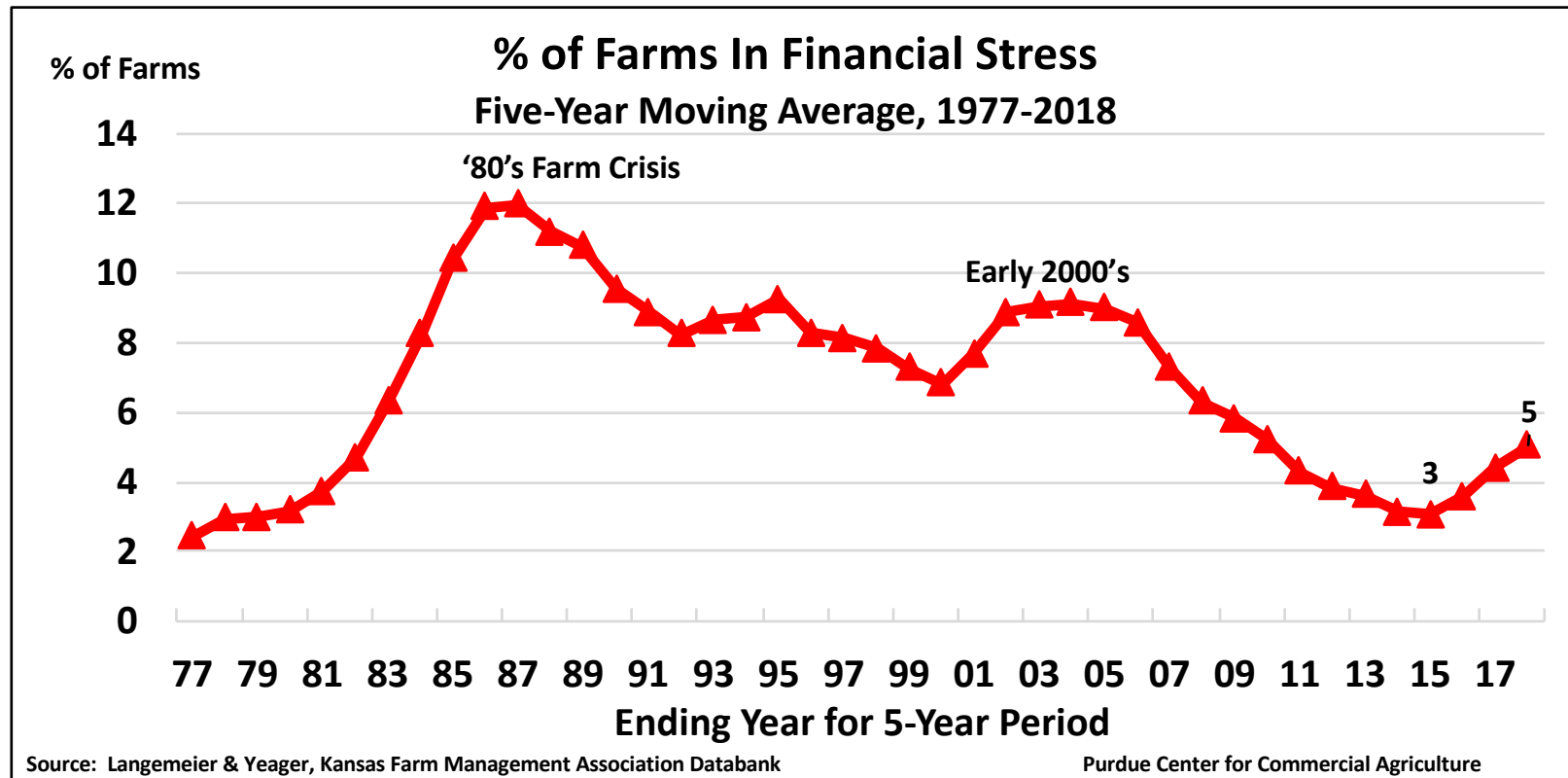
U.S. Farm Sector, Working Capital to Gross Revenue Ratio

Source: USDA-ERS



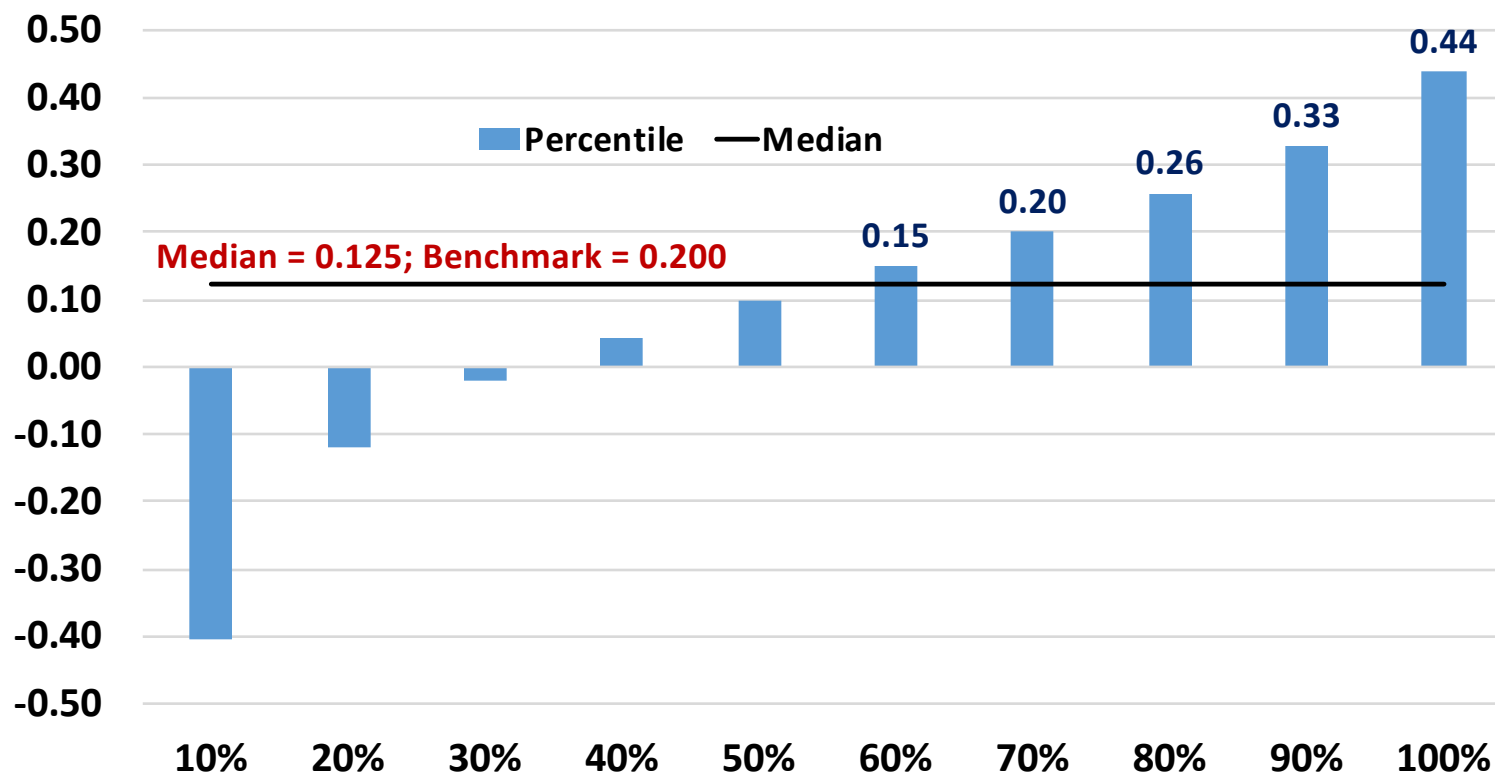
Farms in Financial Stress Climbing

But Remains Below Most of the Last 3 Decades



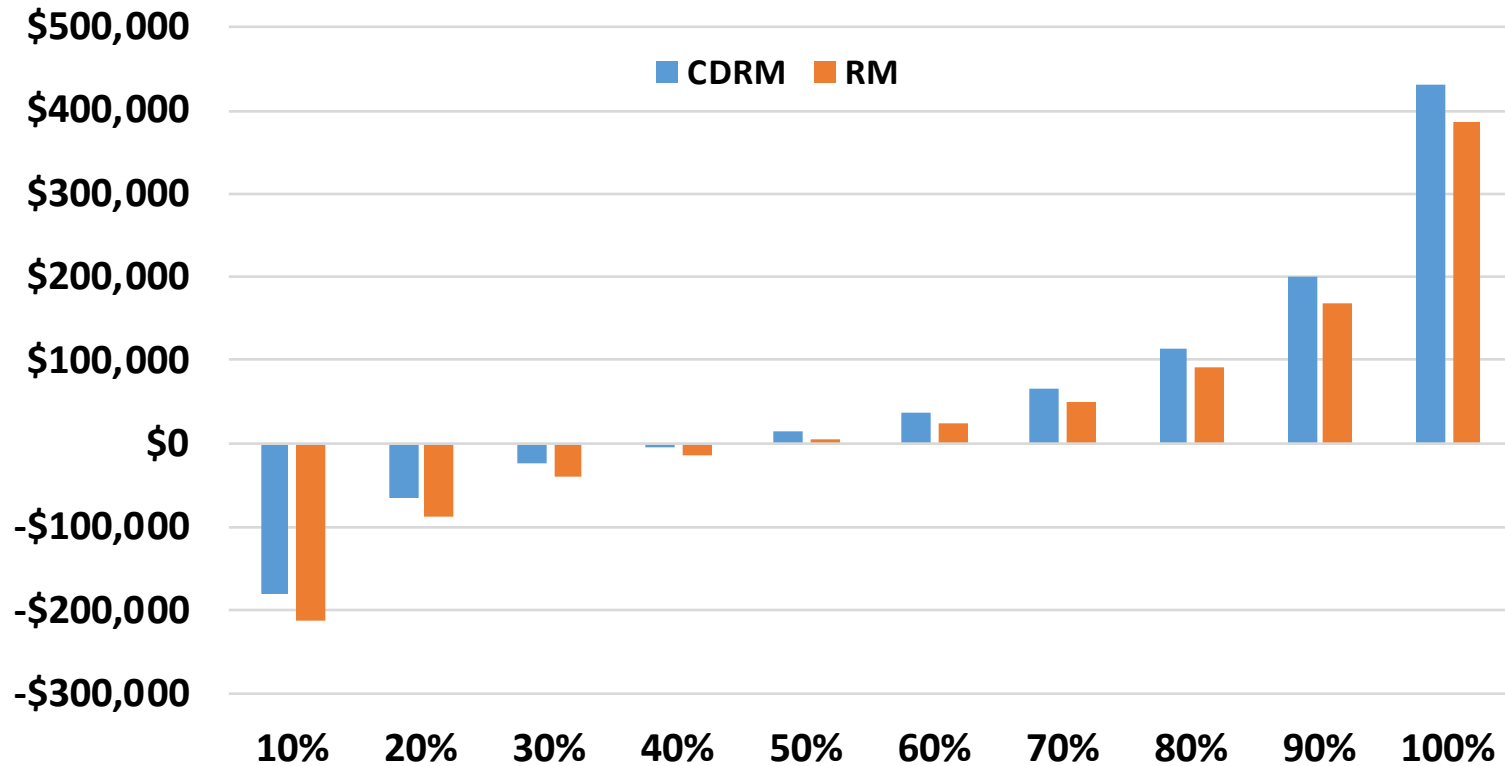
Operating Profit Margin Ratio, Averages by Percentiles, 2009 to 2018

Source: University of Minnesota, FINBIN

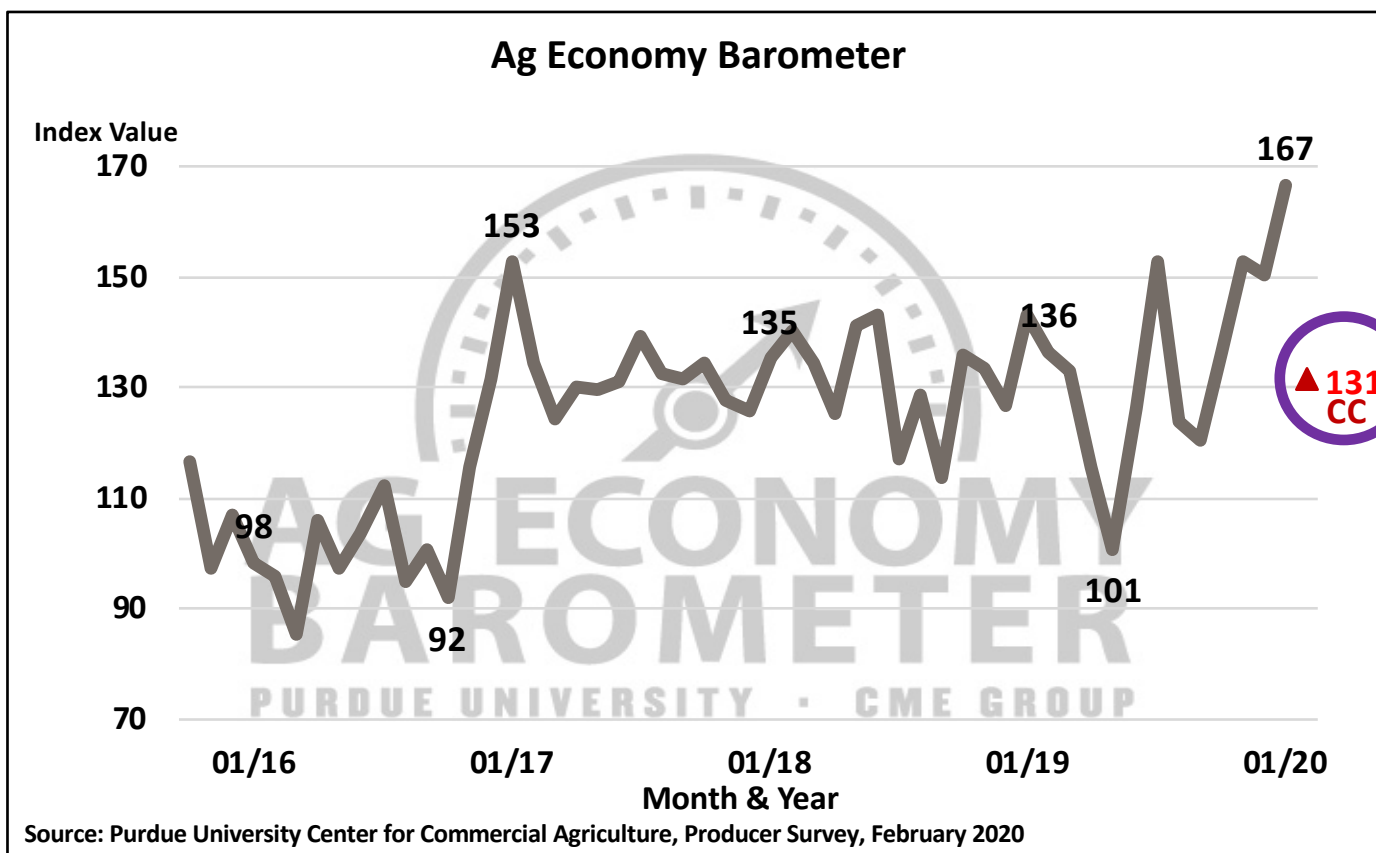


Capital Debt Repayment Margin (CDRM) and Replacement Margin (RM)

Source: University of Minnesota, FINBIN, 2009 to 2018 Data

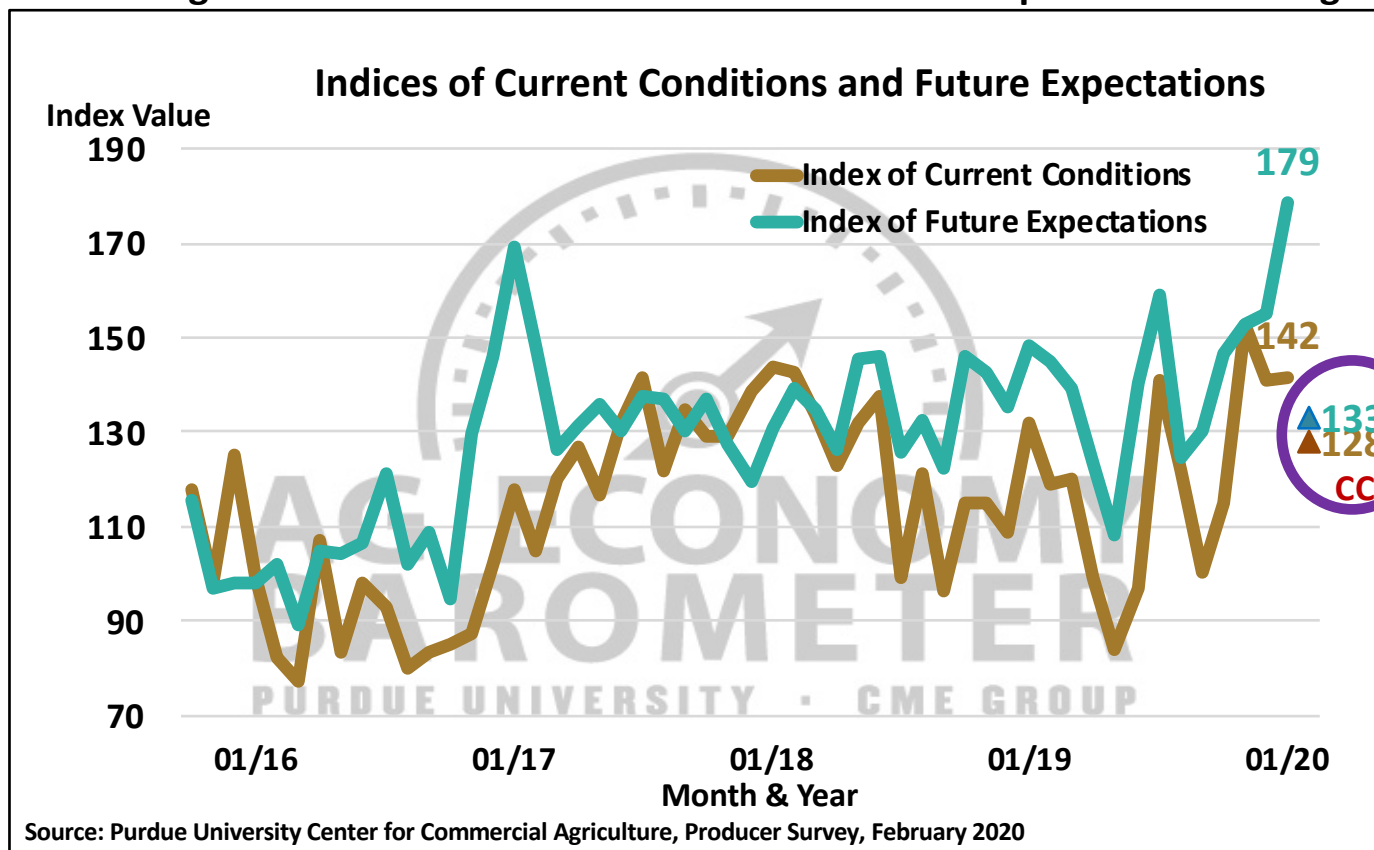


Marked Farmer Sentiment Improvement...Classic Attendees Not as Optimistic

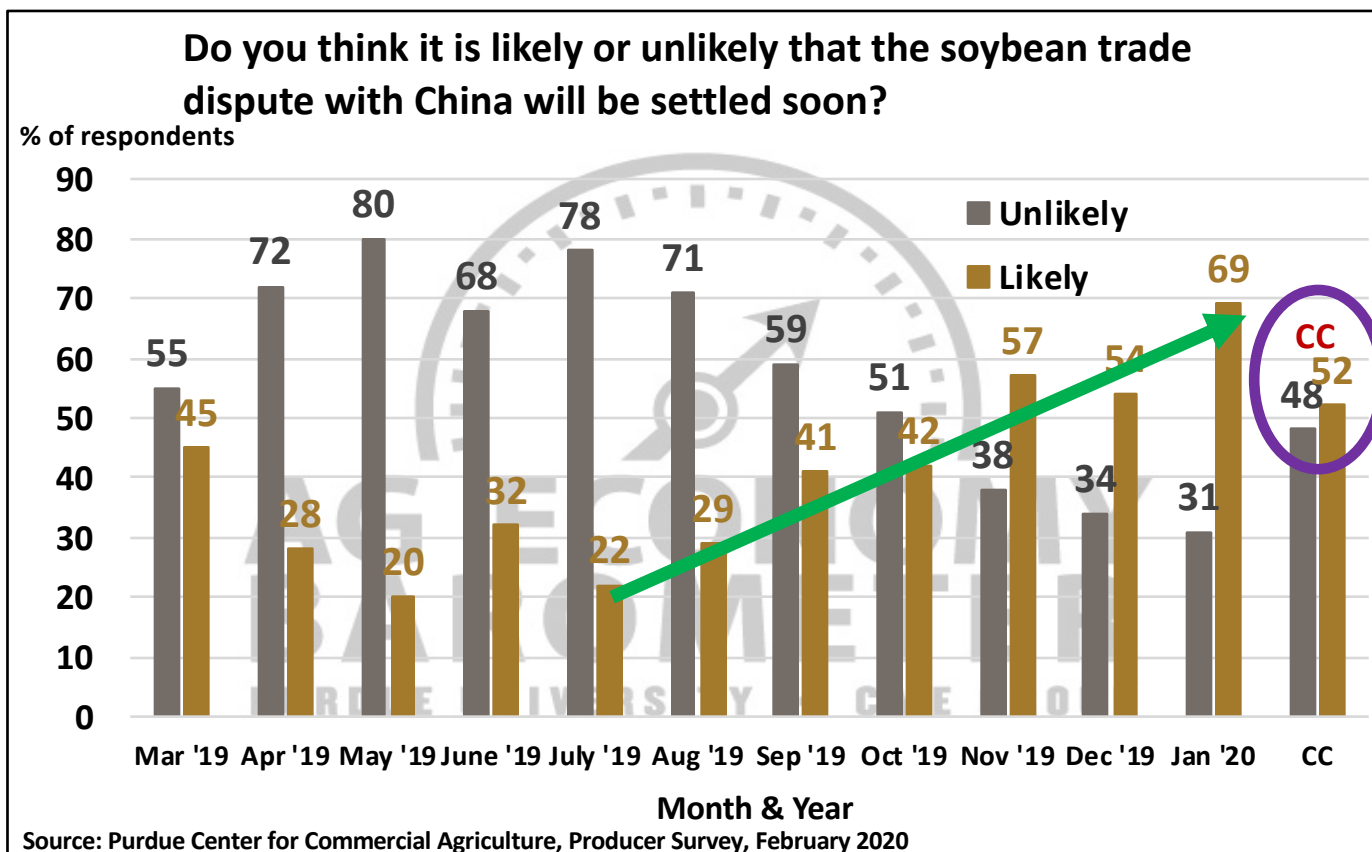


Optimism About the Future Was the Driver Behind Sentiment Improvement

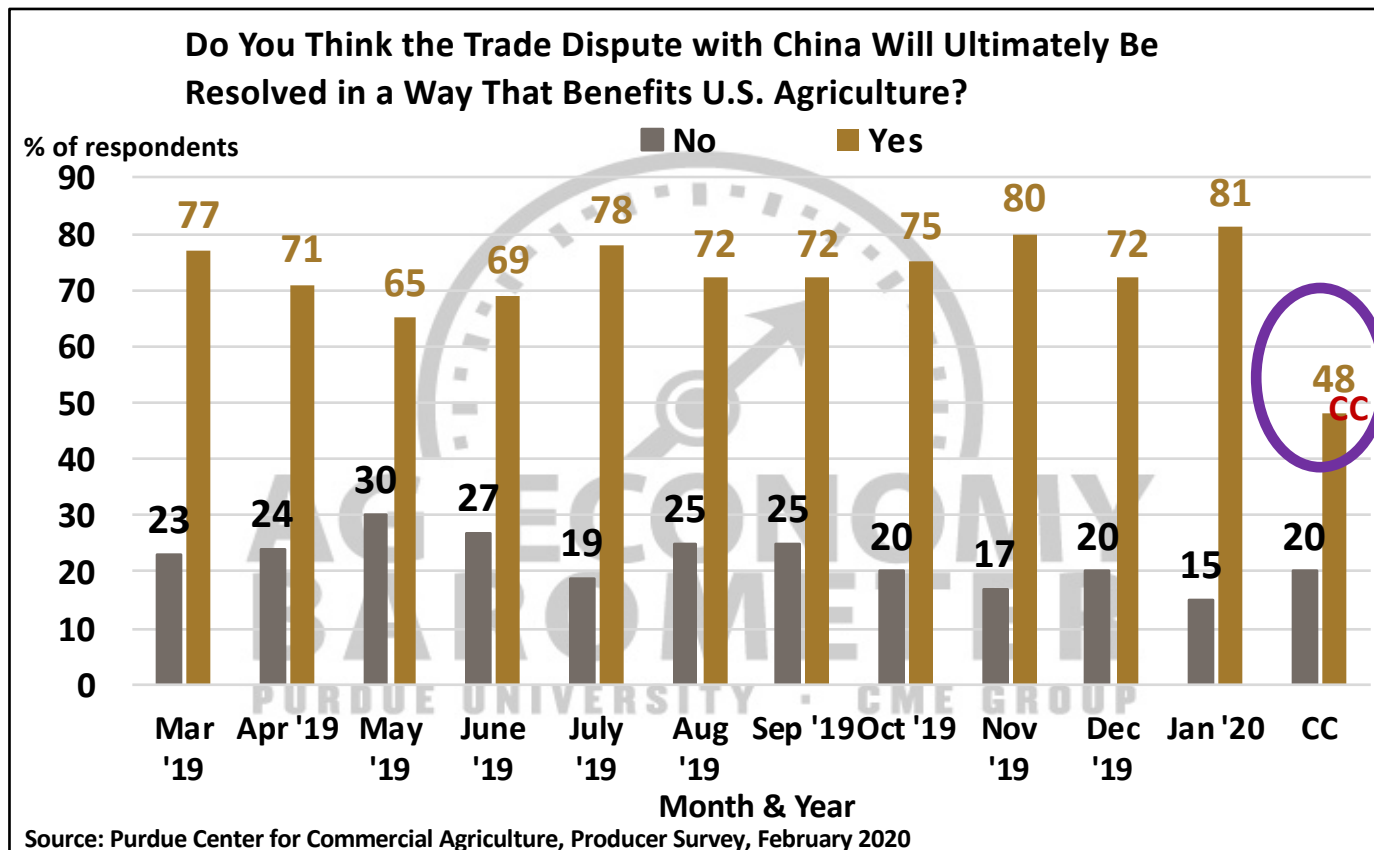
Not As Much Divergence Between Current Conditions & Future Expectations Among Classic Attendees



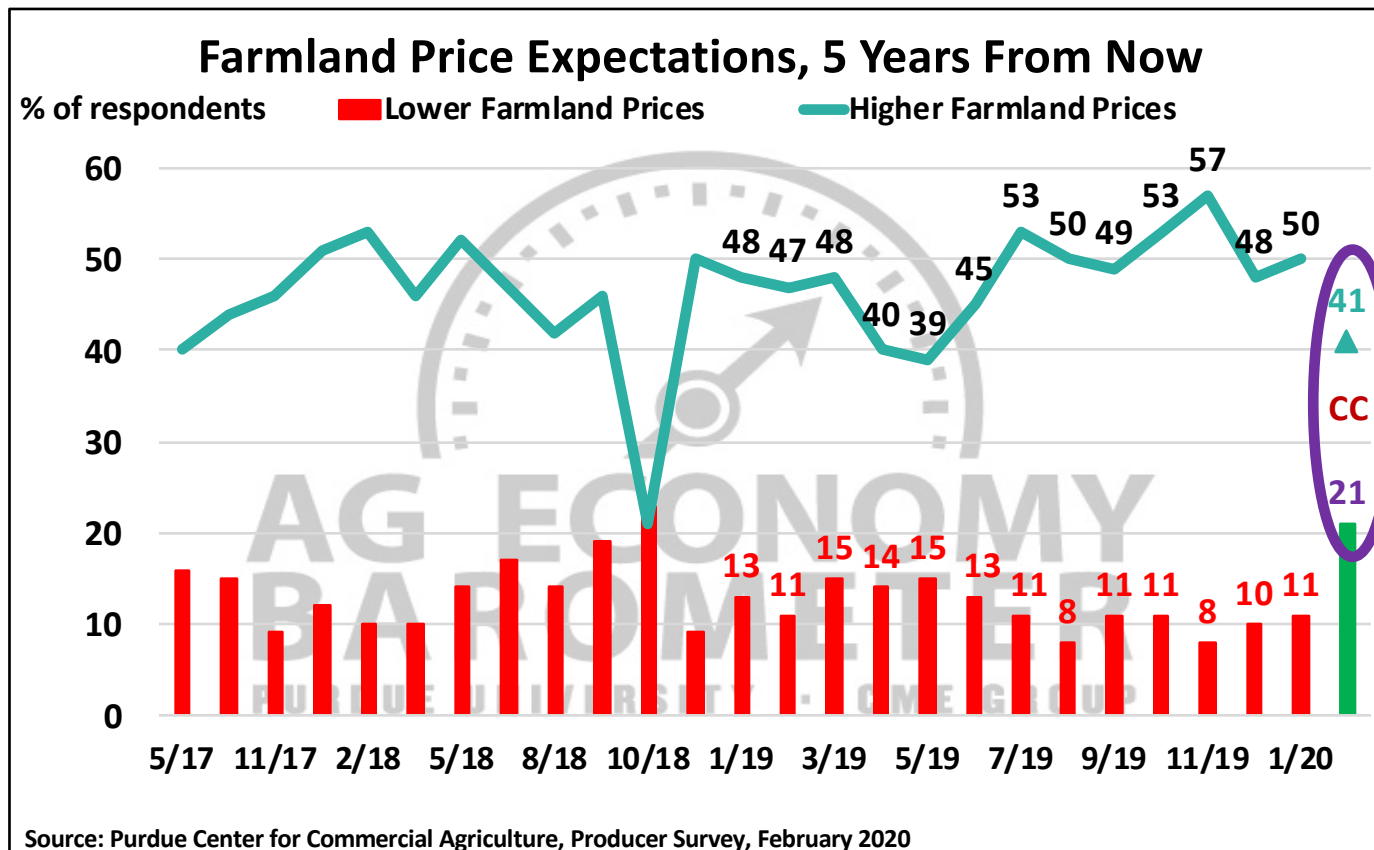
Farmers More Optimistic About Trade Resuming Soon



Farmers Optimistic About Outcome...Classic Attendees More Uncertain



Classic Attendees Less Likely to Expect Higher Farmland Values



Getting the Most from On-Farm Storage

Disclaimer

Neither futures trading nor swaps trading are suitable for all investors, and each involves the risk of loss. Swaps trading should only be undertaken by investors who are Eligible Contract Participants (ECPs) within the meaning of Section 1a(18) of the Commodity Exchange Act. Futures and swaps each are leveraged investments and, because only a percentage of a contract's value is required to trade, it is possible to lose more than the amount of money deposited for either a futures or swaps position. Therefore, traders should only use funds that they can afford to lose without affecting their lifestyles and only a portion of those funds should be devoted to any one trade because traders cannot expect to profit on every trade. All references to options refer to options on futures.

Any research views expressed those of the individual author and do not necessarily represent the views of the CME Group or its affiliates. The information within this presentation has been compiled by CME Group for general purposes only. CME Group assumes no responsibility for any errors or omissions. All examples are hypothetical situations, used for explanation purposes only, and should not be considered investment advice or the results of actual market experience.

All matters pertaining to rules and specifications herein are made subject to and are superseded by official rulebook of the organizations. Current rules should be consulted in all cases concerning contract specifications

CME Group is a trademark of CME Group Inc. The Globe Logo, CME, Globex and Chicago Mercantile Exchange are trademarks of Chicago Mercantile Exchange Inc. CBOT and the Chicago Board of Trade are trademarks of the Board of Trade of the City of Chicago, Inc. NYMEX, New York Mercantile Exchange and ClearPort are registered trademarks of New York Mercantile Exchange, Inc. COMEX is a trademark of Commodity Exchange, Inc. All other trademarks are the property of their respective owners.

S&P 500 and S&P are service and/or trademarks of Dow Jones Trademark Holdings LLC, Standard & Poor's Financial Services LLC and S&P/Dow Jones Indices LLC, as the case may be, and have been licensed for use by Chicago Mercantile Exchange Inc.

Copyright © 2020 CME Group. All rights reserved.

The United States supplied the world

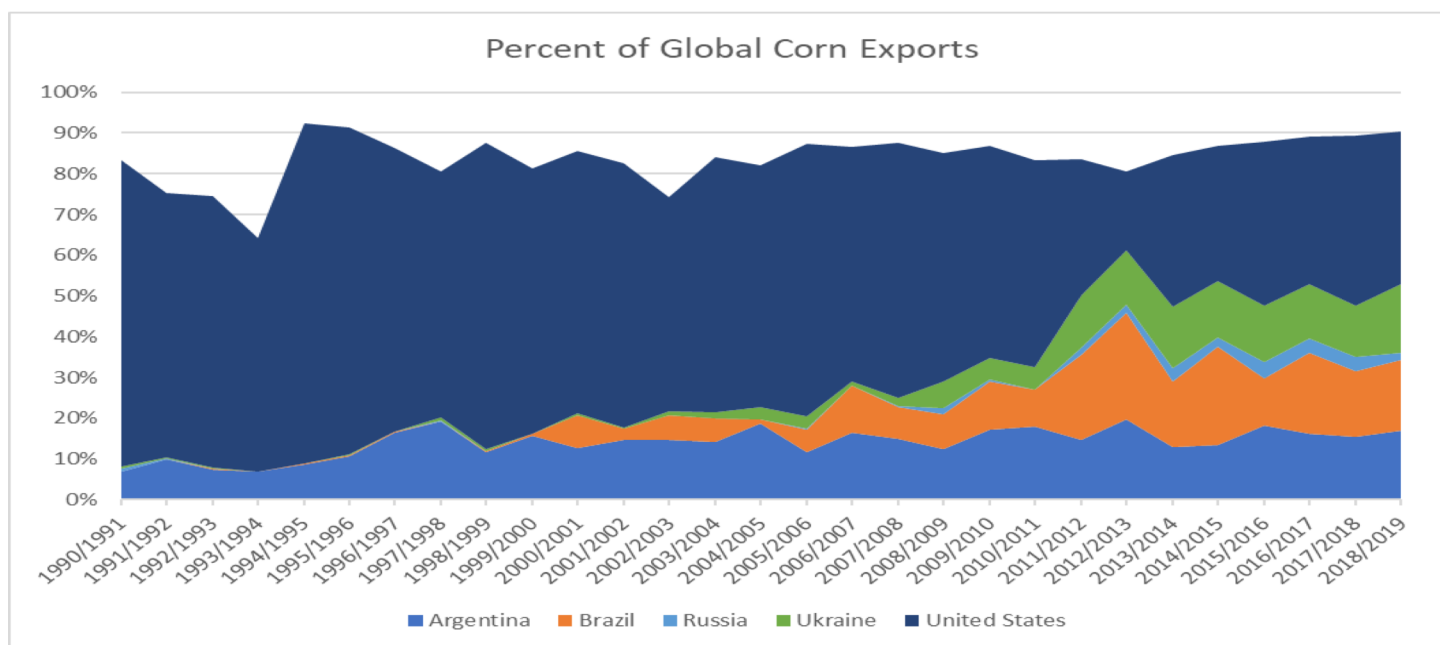
US Agriculture

- Historically the United States was the #1 global exporter of soybeans.
 - One out of every three to four rows of soybeans planted in the US was destined for China.
- Historically, the United States was the largest supplier of corn.
 - Mexico imports almost \$3 billion in corn annually, plus products like HFCS and DDGs that are derived from corn.
- Until the last few years, the United States exported more wheat than any other country.
 - The Black Sea is now the largest export origin, and South America is growing.
 - Is the wheat situation portending the future of US agriculture?



The U.S. no longer exports the majority of the world's corn

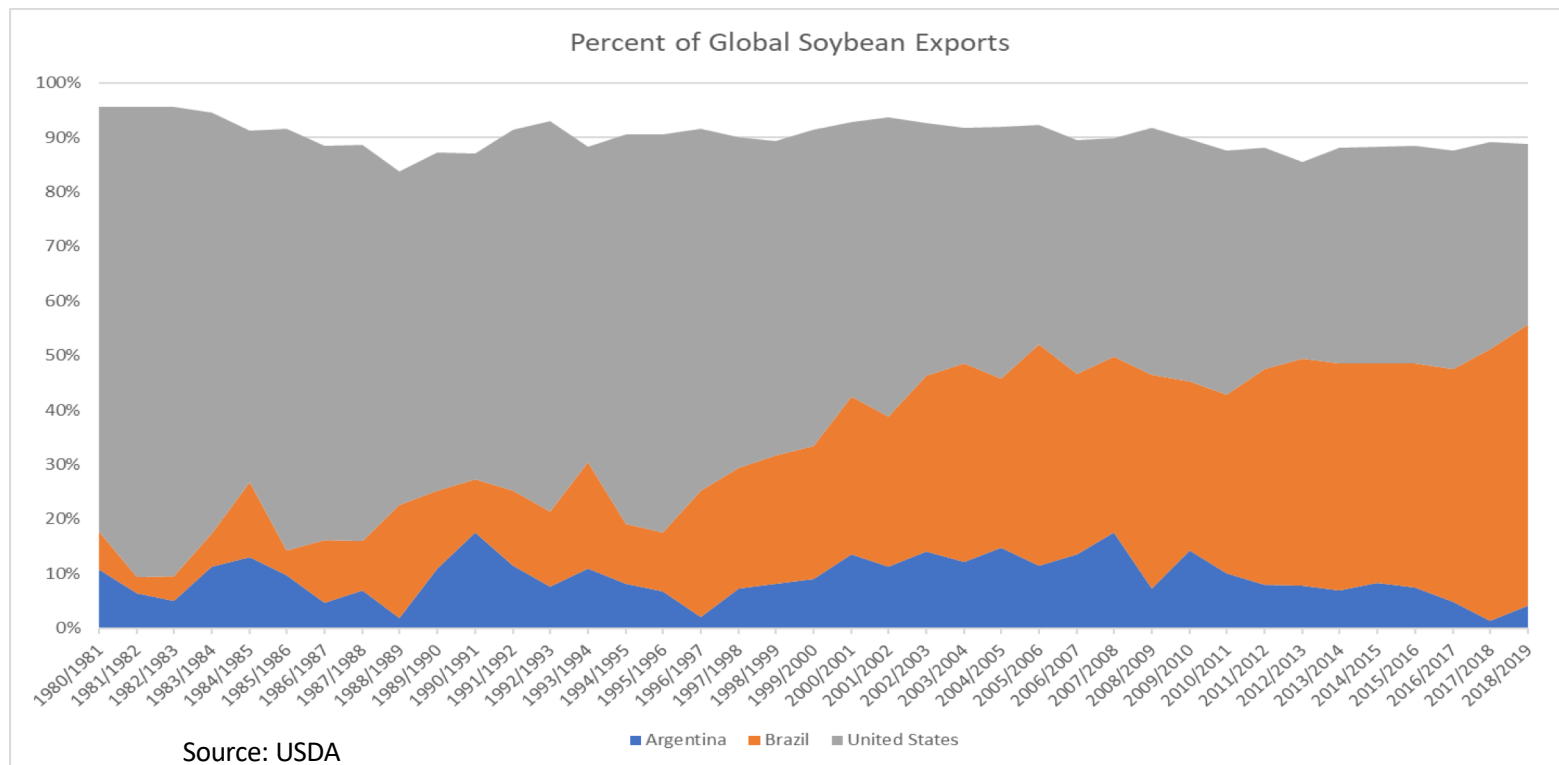
Corn Exports by Country



Source: USDA

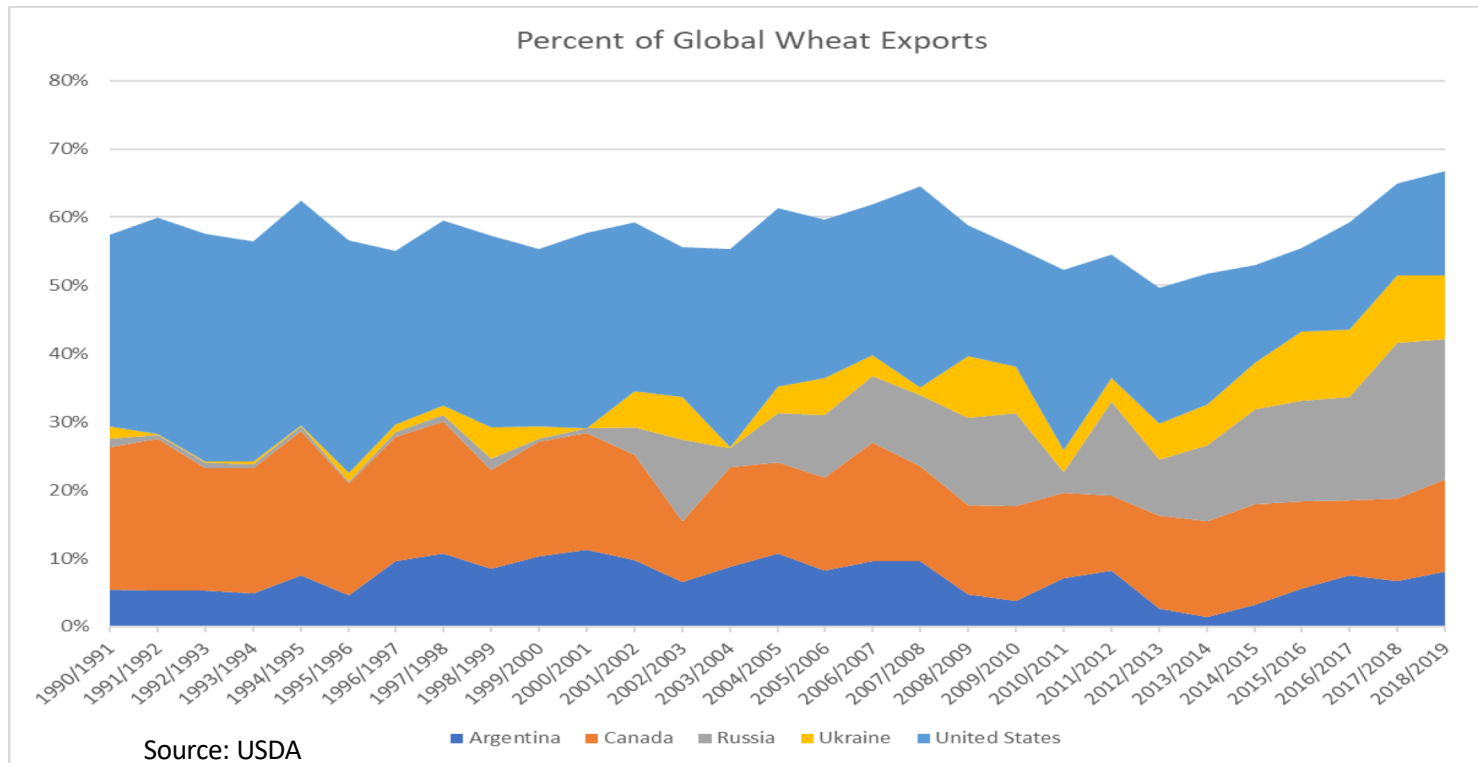
South America is not emerging anymore – they are dominant

Soybean Exports by Country



This is what diversification looks like

Wheat Exports by Country



With Change Comes Opportunity

- As a residual rather than primary supplier to the world, it's possible there will be more years where the market pays holders to store commodities.

Efficient Commodity Allocation

- How does a Commodity Produced One Time per year get Efficiently Allocated Throughout an Entire Calendar Year?
- Futures Contracts have Multiple Deliveries Throughout a Crop Year (e.g., Dec, Mar, May, Jul, and Sep for Corn)
- The Price Spreads between these Different Delivery Months represents the Return From Storage.
- When Supplies are Sufficient, the Spreads are Wide, and the Market Pays Warehouses and Farmers to Store.
- However, when Supplies are Tight, the Market Penalizes Storage.



Source: U.S. Commodities, Inc.

Strategies for Capturing Storage

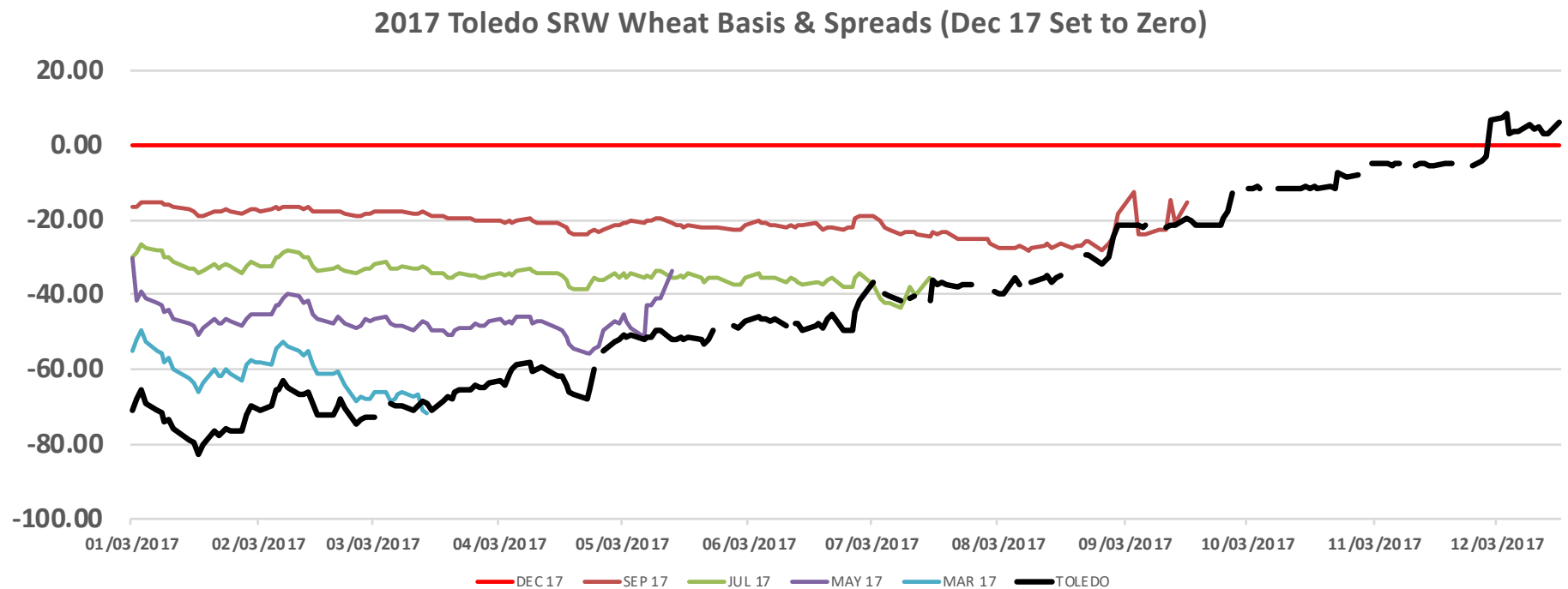
- Store Unhedged
 - Face both Price & Basis Risk
 - Return from Storage is any Rise in Price from Harvest less Storage Costs
- Use Futures and try to Capture “Carry” in the Market
 - May Eliminate Price Risk but still Faces Basis Risk
 - Return from Storage is any Improvement in Basis less Storage Costs
 - Current Market Conditions Provide Clues about Potential Basis Movements

Example of Earning a Storage Return

- Corn Harvest: Oct. 20
- Dec Futures: \$4.05
- Basis: \$0.30 UNDER
- Harvest Cash Price: \$3.75 ($\$4.05 - \0.30)
- May Futures: \$4.20
- Expected May Basis: \$0.10 UNDER
- Expected May Cash Price: \$4.10 ($\$4.20 - \0.10)
- Expected Gross Storage Return: \$0.35 ($\$4.10 - \3.75)

Typical Carry Market – Good Storage Prospects

Market Conditions Conducive to Storage

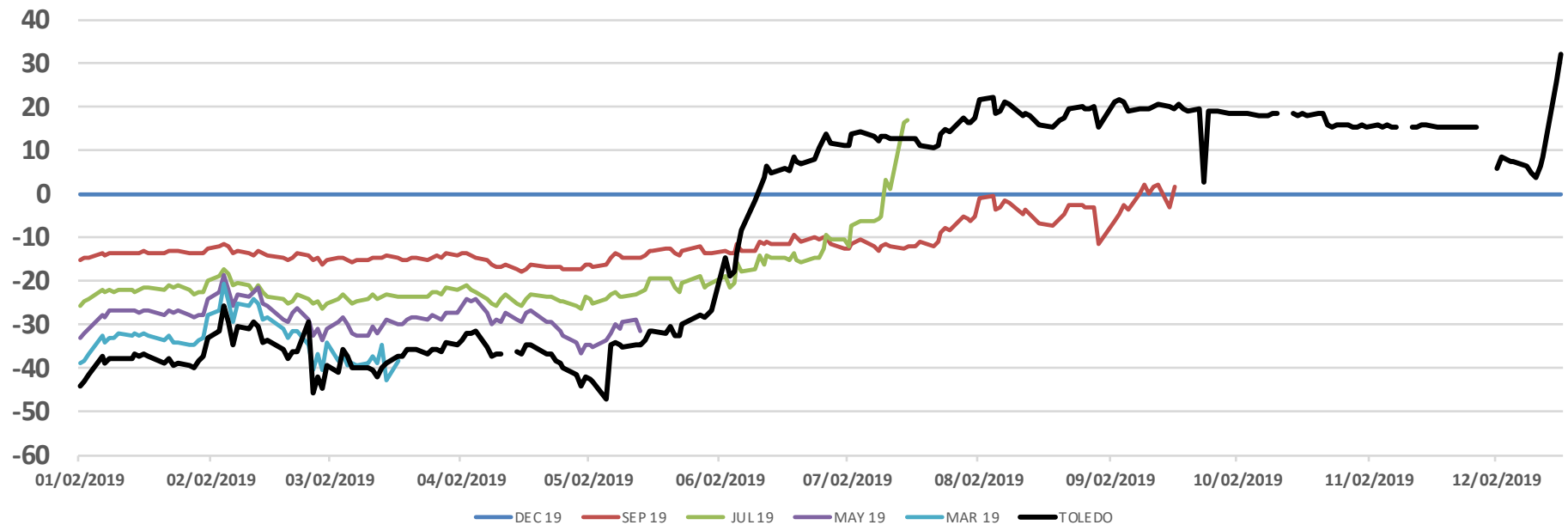


Source: Cash Market Data from USDA

Inverted Markets – Bad Storage Prospects

Market Conditions Not Conducive to Storage

2019 Toledo SRW Wheat Basis & Spreads (Dec 19 Set to Zero)



Source: Cash Market Data from USDA

Key Takeaways

- U.S. has Become Residual Supplier to the World in Major Grains & Oilseeds
- This Could Result in More Storage Markets
- Storage Markets – Distant Futures Trade at a Premium to Nearby Futures
- Farmers with On-Farm Storage can Participate
- Unhedged Storage – Often More Risky than Hedged Storage, but Potentially still Positive in Carry Markets
- Hedged Storage – Powerful Tool for Reducing Risk and Capturing Futures Market Carry
- To Better Understand using Futures for Hedging Storage – Talk to your Broker or Visit www.CMEGroup.com/agriculture

Farm Management Strategies in Times of Volatility

We're in midst of a plateau in U.S. agriculture...commodity margins will remain tight

- Look for ways to add value

Working capital has declined sharply

- Financial management skills will pay dividends

- Benchmark key financial ratios against other farms &, over time, against your farm

Become a merchandiser of your crop production

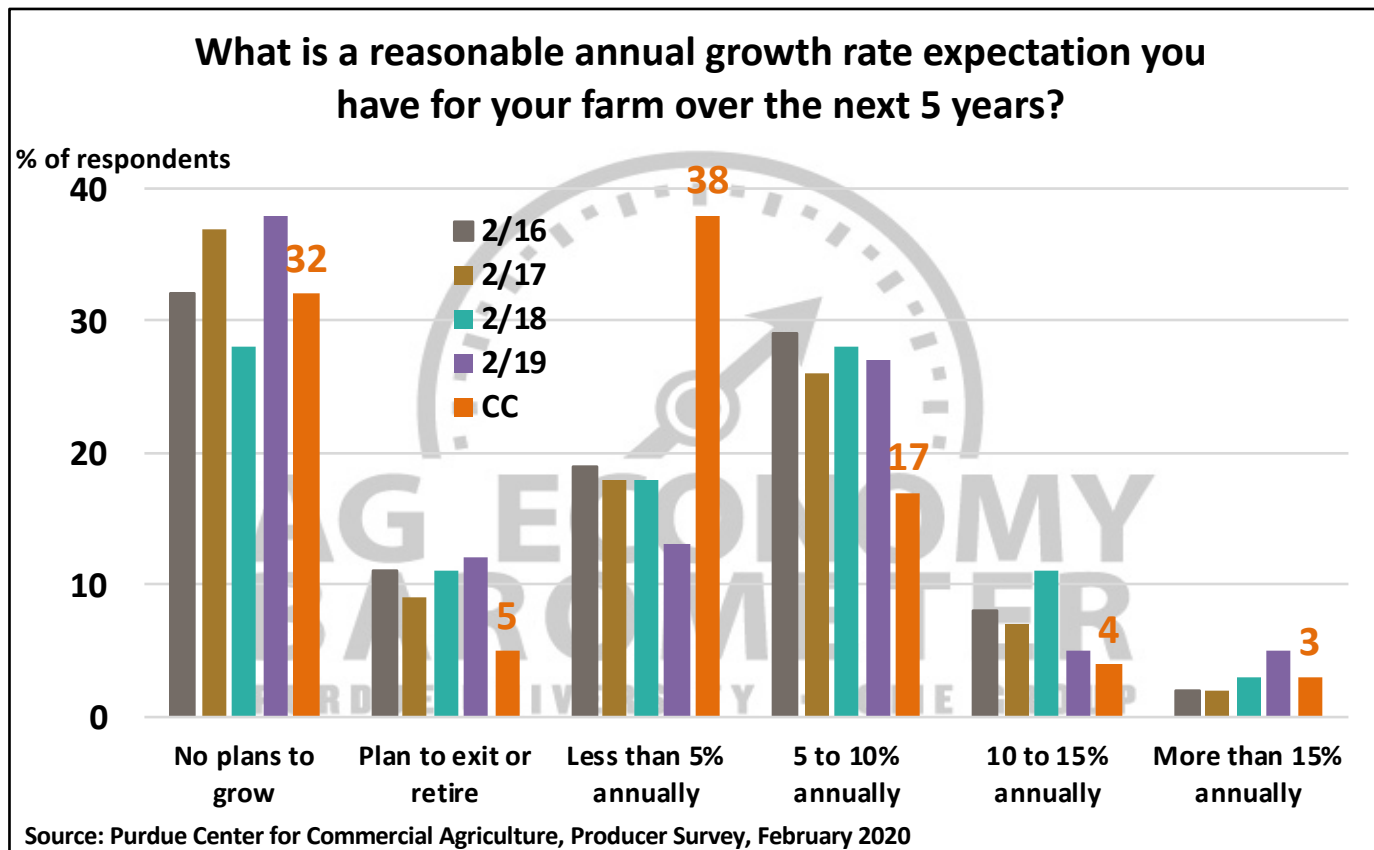
- Take advantage of seasonal price strength

- Improve your storage returns

 - capture seasonal increases in basis

 - capture seasonal increases in futures contract spreads

Think About Opportunities



PURDUE
UNIVERSITY

Center for
Commercial Agriculture



CME Group

Home

Reports

Charts

Tables

Survey Methodology

About the Barometer

Team

Media

Email Updates

purdue.edu/commercialag
purdue.edu/agbarometer



Commodity Classic, February 27, 2020