



2020

# *ANNUAL REPORT*



Center for Commercial Agriculture





## DIRECTOR'S LETTER

Looking back to the beginning of 2020, none of us anticipated the pandemic and the impact it would have on everyone. Overnight, it changed how we educate, work and play and, as a result, disrupted wide swaths of the U.S. and world economy including food production, processing, and distribution. The pandemic generated the demand for more information and created opportunities for the Center for Commercial Agriculture to reach new audiences using a multitude of delivery techniques.

After starting the year with a great turnout at the annual *Purdue Top Farmer Conference* in early January, it looked like a relatively normal winter programming season. The Center conducted several *Farm Bill Decision Making Workshops* and webinars as well as a series of *Crop Marketing and Farm Finance Workshops* in February, culminating in one of the best attended sessions at the *Commodity Classic* in San Antonio, Texas at month's end. But the world changed when we turned the calendar to March and all in-person programming came to a halt.

The Center pivoted to even more online program delivery than in the past. Webinar offerings increased to fill the need for updated information regarding shifting market forces and the *Purdue Commercial AgCast* was launched in April. The Center provided 14 webinars during 2020, a new record for webinar offerings and, combined with 35 editions of the *Purdue Commercial AgCast*, we were able to offer programs focused on a wide variety of topics ranging from commodity outlook and farm bill and crop insurance decision making to the impact of COVID-19 on the U.S. food and agriculture sector. The Center's webinars generated nearly 6,000 views when broadcast or on YouTube within a week of each live broadcast. *Purdue Commercial AgCast* is available on all major podcast providers and the 35 episodes produced during 2020 were downloaded nearly 4,500 times.

The Center's monthly newsletter *Commercial AGNews*, which launched in late 2019, also helped guide producers and agribusiness personnel to the wealth of information available on the Center's website. At the beginning of 2020, the Center's newsletter went out to just over 9,100 subscribers. By year-end the subscriber base swelled to more than 10,600 subscribers helping readers tap into what's new from the Center. Increasing the Center's availability on social media was a goal

in 2020 and 369 posts were provided on Twitter to the Center's nearly 1500 followers.

Interest in the *Purdue University-CME Group Ag Economy Barometer* monthly reports increased again in 2020. The partnership with CME Group was launched in 2015 and has become a mainstay information source each month for both the ag and business media. In addition to providing a comprehensive report summarizing each month's survey results, the Center also produces a widely distributed press release and YouTube video that lead to many standing interview requests from major ag media outlets each month. The *Ag Economy Barometer* website alone recorded over 200,000 page views of the monthly reports during 2020.

The *Purdue Farm Business Internship* program was in its fourth year in 2020. The program matches Purdue student interns with progressive commercial operations to provide students with valuable work experience and an opportunity to learn more about farm business operation. Despite the limitations of the pandemic, the program successfully placed several students on farm businesses and, once again, both participating students and employers were enthusiastic about the program.

Unfortunately, one casualty of the pandemic was the annual *Purdue Farm Management Tour* that the Center hosts each summer. Limitations on crowd size and concerns for participants' health and safety led the Center to cancel the 2020 tour. We're looking forward to the day when we can again safely host the tour!

Thank you for your interest in and support of the Purdue Center for Commercial Agriculture. As always, if you have suggestions for future programs or research, or you just want to chat, we'd love to hear from you.

All the best,



James Mintert  
Director



## CENTER ACTIVITIES

# WEBINARS & VIDEOS

**Delivering key information  
to a broad audience on a  
variety of timely topics**

## WEBINARS

### December Corn & Soybean Outlook Update

*December 11, 2020*

Purdue ag economists Michael Langemeier, Nathanael Thompson and James Mintert discussed United States Department of Agriculture's (USDA) December Crop Production and World Agricultural Supply and Demand Estimates (WASDE) reports. As the end of the year neared, the Purdue team reviewed information released in the USDA reports and looked ahead at what next year may have in store regarding potential profitability estimates for corn and soybeans during the webinar.

*YouTube views (first week): 178*

*Live viewership: 186*

*Registrations: 665*

### November Corn & Soybean Outlook Update

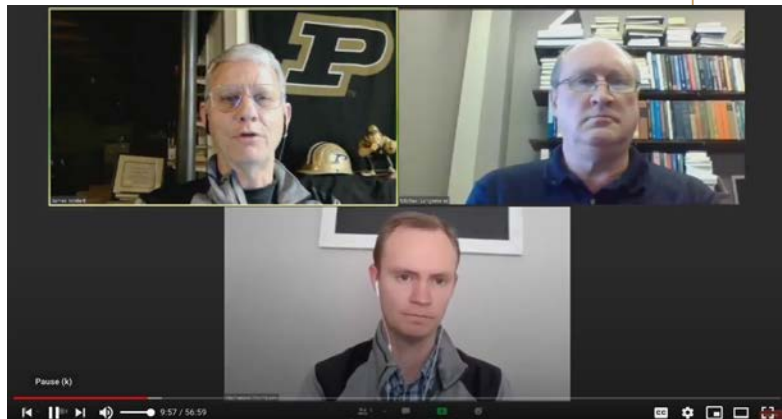
*November 11, 2020*

Purdue ag economists Nathanael Thompson and James Mintert discussed United States Department of Agriculture's (USDA) November Crop Production and World Agricultural Supply and Demand Estimates (WASDE) reports on November 11. The webinar provided key changes in the USDA's corn and soybean balance sheet, implications on the ag trade outlook and marketing strategies, and updated potential profitability estimates for 2021.

*YouTube views (first week): 147*

*Live viewership: 192*

*Registrations: 578*



*The Center's faculty broadcast many of these webinars live from their homes with the help of the Purdue Video & Multimedia Production studio. Registered participants can join via livestream or catch the recording on YouTube at their convenience.*

### October Corn & Soybean Outlook Update

*October 9, 2020*

Purdue ag economists Michael Langemeier, Nathanael Thompson and James Mintert discussed United States Department of Agriculture's October Crop Production and World Agricultural Supply and Demand Estimates (WASDE) reports. The webinar provides information released in the USDA reports and updated profitability estimates and marketing strategies for both corn and soybeans.

*YouTube views (first week): 115*

*Live viewership: 95*

*Registrations: 397*

### Fall 2020 Crop Outlook

*September 11, 2020*

Purdue agricultural economists Michael Langemeier and James Mintert discussed USDA's September Crop Production and World Agricultural Supply and Demand Estimates (WASDE) reports on September 11, 2020. The reports provided USDA's first objective yield estimates for the 2020 corn and soybean crops. The webinar included an updated corn and soybean outlook, market analysis, and a discussion on marketing considerations for the 2020 crops.

*YouTube views (first week): 152*

*Live viewership: 168*

*Registrations: 547*

## Purdue USDA Crop Production Report Panel

August 12, 2020

Purdue Extension and United States Department of Agriculture (USDA) experts gathered virtually on August 12 to discuss the results of the 2020 USDA crop report and the current status of Indiana's major cash crops. Karen Plaut, Glenn W. Sample Dean of Purdue Agriculture, convened the panel, which is traditionally held at the Indiana State Fair. Participants included Shaun Casteel, Purdue associate professor of agronomy and Extension soybean and small grains specialist; Bob Nielsen, Purdue professor of agronomy and Extension expert in Indiana's corn management systems; Beth Hall, the Indiana state climatologist; Michael Langemeier and James Mintert, professors of agricultural economics and Extension economists; and Marlo Johnson, regional director USDA, National Agricultural Statistics Service (NASS).

YouTube views (first week): 111

Live viewership: 117

Registrations: 357

## Indiana Farmland Values and Cash Rents: 2020 Update

August 7, 2020

Purdue agricultural economists Todd Kuethe, James Mintert, and Michael Langemeier broke down the results from the Purdue Farmland Values and Cash Rents Survey conducted in June 2020 and compared that with USDA's recent Land Values report.

YouTube views (first week): 204

Live viewership: 166

Registrations: 523

# 13.4K

IEWS IN 2020

The Center has delivered 125 webinars and recorded videos on farm and financial management, agricultural outlook and strategic topics, as well as on the Purdue/CME Ag Economy Barometer since 2014.

## 2020 Corn & Soybean Outlook

July 13, 2020

Purdue agricultural economists Michael Langemeier and James Mintert provided an updated ag outlook featuring information from USDA's latest reports, balance sheet estimates, and updated crop condition information. The webinar also included profitability estimates and provided some insight into marketing and management decisions for corn and soybean producers.

YouTube views (first week): 170

Live viewership: 171

Registrations: 581

## Ag Outlook

June 12, 2020

Purdue agricultural economists Michael Langemeier and James Mintert provided an updated ag outlook, which included information from USDA's June World Ag Supply & Demand (WASDE) report along with updated profitability estimates for corn and soybeans. The webinar also addressed questions regarding eligibility for and assistance provided by USDA's CFAP program.

YouTube views (first week): 156

Live viewership: 229

Registrations: 395

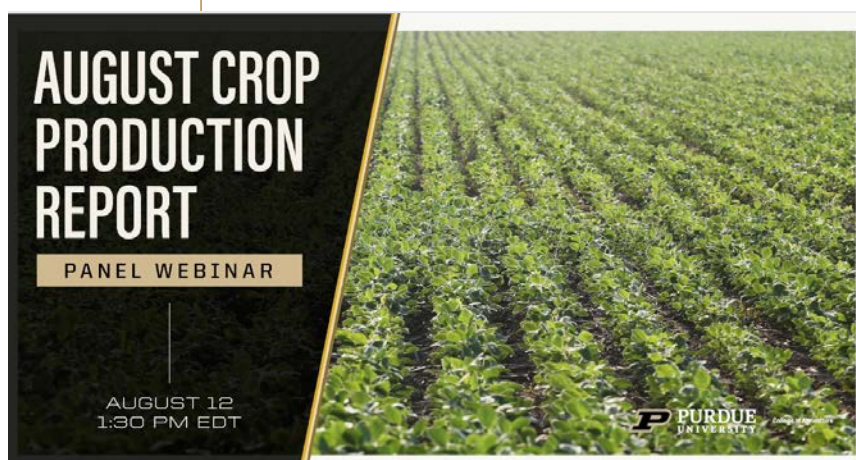
## Ag Outlook

May 15, 2020

Purdue agricultural economists Michael Langemeier and James Mintert provide updated information from USDA's May World Ag Supply & Demand Estimates (WASDE) release along with updated profitability estimates for corn and soybeans as a result of the COVID-19 global pandemic.

YouTube views (first week): 313

Live viewership: Tech issues – recording only available



## CENTER ACTIVITIES

*Registrations: 744*

### COVID19's Impact on U S Food and Agriculture

*April 20, 2020*

COVID-19 disrupted U.S. food distribution and marketing, reducing demand for key agricultural commodities and producing severe financial pressure among agricultural producers. Purdue ag economists Jayson Lusk, Michael Langemeier, and James Mintert discussed what happened to retail and wholesale food markets and how supply chain issues had produced stock-outs at retail. They also examined the impact demand destruction is having on corn and soybean markets, what it means for crop revenue and how it could impact program payments for producers who recently enrolled in either USDA's ARC or PLC programs. The impact on meat and livestock markets was especially severe and they discussed how packing plant shut-downs affected both livestock producers and retail consumers.

*YouTube views (first week): 507*

*Live viewership: 529*

*Registrations: 850*

### Spring 2020 Crop Outlook

*April 1, 2020*

Purdue agricultural economists Michael Langemeier and James Mintert provided updated information from USDA's March 31st release of their Prospective Plantings and Grain Stocks reports along with implications of COVID-19 on the outlook for corn and soybeans.

*YouTube views (first week): 261*

*Live viewership: 300*

*Registrations: 634*

### Making Your 2020 Crop Insurance Decisions

*February 24, 2020*

Purdue agricultural economists Nathan Thompson and James Mintert discussed 2020 corn and soybean crop insurance choices and provided insight into decision making for corn and soybean farmers.

*YouTube views (first week): 124*

*Live viewership: 81*

*Registrations: 313*

### Farm Bill 2020 Decision Making

*January 16, 2020*

Kaitlin Myers, State Agricultural Program Specialist from USDA's Indiana Farm Service Agency, and Purdue ag economist Michael Langemeier and James Mintert provide an overview of options for enrolling your farm in the 2018 Farm Bill program.

*YouTube views (first week): 529*

*Live viewership: 370*

*Registrations: 954*

## INFORMATIONAL VIDEOS

### Strategic Crop Marketing Series

In November 2020, Purdue University's Center for Commercial Agriculture recorded a series of short videos to help producers improve their crop marketing skills. The first two videos review the importance of understanding basis when marketing crops and how to use historical data to forecast basis. Subsequent videos detail how storage hedging can work to your advantage, provide a comparison of historical returns to both unpriced storage and storage returns and discuss using knowledge of seasonal patterns in corn futures prices and corn futures price spreads to improve returns.

- *Importance of Crop Basis When Marketing Grain - YouTube views (since posting): 39*
- *Forecasting Corn & Soybean Basis - YouTube views (since posting): 31*
- *Role of Basis When Making Corn & Soybean Storage Decisions - YouTube views (since posting): 24*
- *Comparing Historical Returns of Hedged vs Unhedged Corn & Soybean Storage Strategies - YouTube views (since posting): 19*
- *Improving Corn Storage Returns - YouTube views (since posting): 37*

**SERIES DETAILS ON PAGE**

18



## Growing Your Digital Agriculture Strategy

August 2020

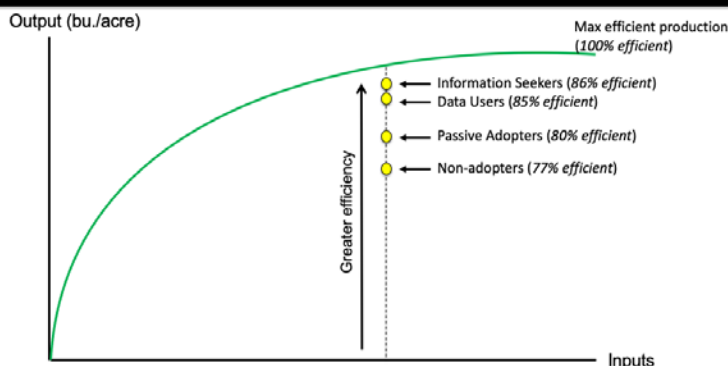
Purdue ag economists Nathan Delay, Nathanael Thompson, and James Mintert examined trends in digital ag technology usage by U.S. corn and soybean farms and identify technology usage patterns that have an impact on productivity and efficiency. Results indicate farms that are “Passive Adopters” of technology are losing ground compared to farms identified as “Data Users” and “Information Seekers”, the two categories of farm operations that have effectively harnessed the power of bundling ag technologies to improve their efficiency. See where your farm operation is on the precision ag technology adoption curve and think about what your future digital ag strategy should be.

YouTube views (since posting): 309



Farm operations that “touch the data” more frequently are better able to gain the benefits of precision agriculture. The difference in efficiency between the most effective users of precision ag and non-adopters is large and has implications for future industry structure.

### PRECISION AG USAGE & TECHNICAL EFFICIENCY



## Coronavirus Food Assistance Program (CFAP) Application Details

May 27, 2020

Beginning May 26th, USDA's Farm Service Agency accepted applications for the Coronavirus Food Assistance Program (CFAP) from producers who suffered losses. Indiana FSA Director Steve Brown and staff joined Jim Mintert for a discussion on eligibility requirements, payment rates and application details of the 2020 CFAP program.

YouTube views (since posting): 1,083

## Update on the Livestock and Meat Situation

April 29, 2020

Pork and beef packing plant shutdowns along with reductions in demand from the hotel, restaurant, and institutional sector disrupted U.S. meat and livestock markets. Purdue ag economists Jayson Lusk and James Mintert reviewed the resulting dramatic shifts in pork and beef production along with the impact these shifts had on U.S. wholesale beef and pork prices as well as prices for cattle and hogs.

YouTube views (since posting): 232

## Is USDA's ARC-IC Program A Good Fit For You?

February 3, 2020

Purdue ag economists Michael Langemeier and James Mintert focus just on the ARC-IC 2018 Farm Bill program to help clarify where it fits best. A longer more detailed version of all farm bill program choices was discussed in the January 16th webinar. Decide how to choose from among USDA's ARC-County, ARC-IC or PLC program choices when you sign your farm up for the 2019 and 2020 crop years. USDA's sign-up deadline is March 15th.

YouTube views (since posting): 866

## Ag Economy Barometer Breakdown Videos

The Center in partnership with the CME Group, recorded monthly videos breaking down producer survey results toward the agricultural economy and drivers of sentiment.

December 1 - YouTube views (since posting): 113

November 3 - YouTube views (since posting): 199

October 6 - YouTube views (since posting): 99

September 1 - YouTube views (since posting): 119

August 4 - YouTube views (since posting): 116

July 7 - YouTube views (since posting): 123

June 2 - YouTube views (since posting): 138

May 5 - YouTube views (since posting): 218

April 7 - YouTube views (since posting): 259

March 3 - YouTube views (since posting): 171

February 4 - YouTube views (since posting): 120

January 7 - YouTube views (since posting): 164

## CENTER ACTIVITIES

# PODCAST EPISODES

## Convenient with easy access on-the-go

The pandemic created a need for improved remote access to information and the Center responded by launching the Purdue Commercial AgCast podcast in late April. Podcasts make it possible to connect with a broader audience in a more convenient way. Since launching the podcast, the center has delivered 35 episodes with over 4,300 downloads. Purdue ag economists Brady Brewer and James Mintert serve as the weekly hosts of the podcast, geared towards covering farm management news and advice for top agricultural producers and agribusinesses, which covers a variety of topics from ag outlooks, farm succession-transition planning, and agribusiness/farm research, as well as insights from the Purdue/CME Group Ag Economy Barometer. The podcast can be accessed directly from the Center's website or all major podcast apps including Apple Podcasts, iTunes, Stitcher, Spotify or Podbean.

### Episode 35: Farm Succession: Conflict Management for Transition Planning

*December 18, 2020*

In the fifth episode of our series about Farm Transition Planning, the focus is on conflict management – what is conflict, what causes it, how do we handle it within a farming business to come to a resolution. Purdue agricultural economists Brady Brewer and members of the Purdue Farm Transition team Renee Wiatt, Dr. Maria Marshall and Heather Caldwell discussed the levels and sources of conflict within today's farm businesses. Working together as a team, possibly across generations of families, the team reviews how to resolve conflict and not avoid it.

*Downloads (in first month): 133*

### Episode 34: December Corn & Soybean Outlook Update

*December 15, 2020*

In this episode, Purdue agricultural economists Michael Langemeier, Nathanael Thompson, and James Mintert discussed USDA's December Crop Production and World Agricultural Supply and Demand Estimates (WASDE) reports. As the end of the year is nearing, the Purdue team reviews information released in the USDA reports and looks ahead at what next year may have in store regarding potential profitability estimates for corn and soybeans. Find more information on the current crop outlook and farm economy by visiting the Purdue Center for Commercial Agriculture's website.

*Downloads (in first month): 128*

### Episode 33: December 2020: USDA Farm Income Forecast Update

*December 9, 2020*

In this episode, Purdue agricultural economists James Mintert and Brady Brewer discussed the latest December release of the USDA Farm Income Forecast report. Each year, United States Department of Agriculture (USDA) forecasts farm income in February and then releases additional updates throughout the year as more data becomes available. This Purdue Commercial AgCast episode discussed the latest updates to the 2020 forecast released by USDA on December 2nd. In an earlier episode, we shared more about how to interpret the adjustments - find that episode at 'Understanding USDA Farm Income Forecasts'.

*Downloads (in first month): 115*

### Episode 32: Farmer Sentiment Pulls Back Post-Election: Regulation, Trade, and Taxes Rated As Top Concerns

*December 1, 2020*

U.S. farmers' sentiment weakened following the November 2020 elections, as the Purdue University-CME Group Ag Economy Barometer fell 16 points from a month earlier to a reading of 167. The decline in the Ag Economy Barometer was the result of weakened expectations for the future on the part of agricultural producers. Purdue ag economists James Mintert and Michael Langemeier reviewed the results and gave their insight into the November 2020 Ag Economy Barometer survey, a nationwide monthly survey of 400 agricultural producers.

*Downloads (in first month): 107*



# 4.5K

## DOWNLOADS IN 2020

*Launched in April, the Center delivered 35 weekly episodes in 2020. Apple Podcast is the favorite platform with nearly 50% of the downloads.*

### Episode 31: Crop Cost and Returns

*November 24, 2020*

The Purdue Crop Cost and Return Guide offers farmers a resource to project financials for the coming cropping year. Purdue ag economists Michael Langemeier and Brady Brewer discussed the latest numbers from the Purdue Center for Commercial Agriculture's decision tool along with tips on how to use this tool to make farm operating decisions. The guide tool discussed in this episode can be accessed and downloaded at the Center for Commercial Agriculture's website.

*Downloads (in first month): 122*

### Episode 30: November Update on the Crop Outlook

*November 12, 2020*

On this episode, Purdue agricultural economists Nathanael Thompson and James Mintert discussed USDA's November Crop Production and World Agricultural Supply and Demand Estimates (WASDE) reports. They provide updates on key changes in USDA's corn and soybean balance sheet, implications on the ag trade outlook and marketing strategies, and updated potential profitability estimates for 2021.

*Downloads (in first month): 155*

### Episode 29: Ag Economy Barometer Rises to Record High On Improving Financial Conditions

*November 3, 2020*

Farmer sentiment hit a new record high in October as the Purdue University-CME Group Ag Economy Barometer climbed to a reading of 183, a 27-point increase compared to September. The reading easily eclipsed the previous record high set back in February, before the pandemic's onset. Purdue ag economists James Mintert and Michael Langemeier review the results and give some insight into the October 2020 Ag Economy Barometer survey, a nationwide monthly survey of 400 ag producers.

*Downloads (in first month): 141*



### Episode 28: Farmer Adoption of Enhanced Conservation

*October 28, 2020*

What are and what drives the adoption of "enhanced conservation practices" on the farm? In this episode, Purdue agricultural economists Allan Gray and Brady Brewer discussed their recent research that examines the adoption practices of enhanced conservation practices. This study consisted of focus groups with farmers and agricultural retailers across the Midwest. Dr. Gray and Dr. Brewer discuss what constitutes an enhanced conservation practice according to the study participants along with what drives producer adoption and how retailers view their role in helping farmers analyze what practices they may benefit from adopting.

*Downloads (in first month): 113*

### Episode 27: October Corn & Soybean Outlook Update

*October 12, 2020*

Purdue agricultural economists Michael Langemeier and James Mintert discussed United States Department of Agriculture's October Crop Production and World Agricultural Supply and Demand Estimates (WASDE) reports. This podcast provided information released in the USDA reports and updated profitability estimates and marketing strategies for both corn and soybeans.

*Downloads (in first month): 147*

### Episode 26: Ag Barometer Rises as Crop Prices Rally and USDA Announces CFAP 2

*October 6, 2020*

U.S. agricultural producers became more optimistic again in September as the Purdue University-CME Group Ag Economy Barometer climbed to 156, the highest reading for the index since the pandemic

## CENTER ACTIVITIES

began last winter and 12 points higher than one-month earlier. Purdue ag economists James Mintert and Michael Langemeier reviewed the results and gave some insight into the September 2020 Ag Economy Barometer survey, a nationwide monthly survey of 400 ag producers.

*Downloads (in first month): 101*

### Episode 25: Farm Succession: Human Resources for Transition Planning

*September 30, 2020*

Adding to our series about Farm Transition Planning, in this fourth episode, we focused on the human resource side of succession planning. Keeping the farm business running between generations and management tiers can be difficult, but job descriptions and keeping open communication is key. Purdue agricultural economists Brady Brewer and members of the Purdue Farm Transition team Jenna Nees, Denise Schroeder, and Kyle Weaver discussed the importance of having a strong HR strategy and some common issues that many farms face as they transition management roles.

*Downloads (in first month): 85*

### Episode 24: Understanding USDA Farm Income Forecasts

*September 23, 2020*

The United States Department of Agriculture (USDA) releases a number of reports throughout the year. In this episode, Purdue agricultural economists Todd Kuethe and Brady Brewer discussed the latest September release of the USDA Farm Income Forecast report. Each year, USDA forecasts farm income in February and then releases four additional updates throughout the year as more data becomes available. This Purdue Commercial AgCast episode discusses the accuracy and bias of these forecasts along with how to interpret the adjustments.

*Downloads (in first month): 92*

### Episode 23: Fall Corn & Soybean Outlook Following USDA's September 2020 Reports

*September 14, 2020*

Purdue agricultural economists Michael Langemeier and James Mintert discussed USDA's September Crop Production and World Agricultural Supply and Demand Estimates (WASDE) reports



*The Center in partnership with the Purdue Farm Transition and Purdue Institute for Family Business teams brought a series of episodes on tips for succession planning. Pictured above were Extension educators Denise Schroeder (top-left), Jenna Nees (bottom-left), and Kyle Weaver (bottom-right) recording an episode on human resources with Brady Brewer.*

on September 11. The reports provided USDA's first objective yield estimates for the 2020 corn and soybean crops. The webinar includes an overview of the information on the two reports along with a discussion regarding implications of the changes for the corn and soybean outlook in addition to a review of the likely changes in corn and soybean profitability and what that portends for 2021 cash rental rates.

*Downloads (in first month): 111*

### Episode 22: Ag Barometer Rebounds as Commodity Prices Rally & Agriculture Trade Prospects Improve

*September 1, 2020*

Farmer sentiment improved markedly in August as the Purdue University-CME Group Ag Economy Barometer rose to a reading of 144, 26 points higher than a month earlier. Purdue ag economists James Mintert and Michael Langemeier reviewed the results from the August 2020 Ag Economy Barometer survey, a nationwide monthly survey of 400 ag producers. The barometer and its two sub-indices all posted their most positive readings since February 2020 when record highs were established and before the pandemic began.

*Downloads (in first month): 123*

### Episode 21: Using Vendor and Trade Credit for Farm Purchases

*August 28, 2020*

Purdue University agricultural economist Brady Brewer is joined by Purdue Agricultural Economics graduate student Chad Fiechter and Kansas State

agricultural economist Jennifer Ifft to discuss issues surrounding vendor and trade credit in the agricultural finance sector. There has been a lot of growth in farmer use of vendor and trade credit as terms and conditions for this credit can sometimes be cheaper for farmers. This episode focuses on what this credit means for farmers and what pitfalls there may be for a producer that is thinking about using this type of financing for the purchase of equipment or inputs.  
*Downloads (in first month): 125*

### Episode 20: Farm Succession: Feasibility of Adding a Family Employee

*August 20, 2020*

Adding to our series about Farm Transition Planning, in this third episode, how to evaluate whether the farm can add an employee is discussed. As a farm expands, it is important to evaluate the feasibility of adding an operator and/or hired employees as well as the feasibility of purchasing or renting additional land, and machinery and equipment. Purdue agricultural economists Michael Langemeier and Brady Brewer discuss two critical factors: gross revenue and profitability.  
*Downloads (in first month): 87*

### Episode 19: Indiana Farmland Values & Cash Rental Rates: 2020 Update

*August 10, 2020*

Purdue University agricultural economists Todd Kuethe, James Mintert, and Michael Langemeier breakdown the results from the Purdue Farmland Values and Cash Rents Survey conducted in June 2020 and compared that with USDA's recent Land Values report. The annual Purdue Farmland Value and Cash Rent Survey is conducted by the department of agricultural economics and produced through the cooperation of numerous professionals knowledgeable of Indiana's farmland market. These professionals provided an estimate of the market value for bare poor, average, and top quality farmland in December 2019, June 2020, and a forecast value for December 2020.  
*Downloads (in first month): 105*

### Episode 18: Ag Economy Barometer Stable, But Farmers Less Optimistic About Future

*August 4, 2020*

Farmer sentiment in July was virtually unchanged from a month earlier as the Purdue University-CME Group Ag Economy Barometer rose just one point to a reading of 118. Purdue ag economists James Mintert

and Michael Langemeier reviewed the results from the July 2020 Ag Economy Barometer survey, a nationwide monthly survey of 400 ag producers. The Purdue University-CME Group Ag Economy Barometer small change left it 30 percent below its February 2020 peak and 23 percent below its level a year ago.  
*Downloads (in first month): 82*

### Episode 17: Farm Succession: Transitioning Business Management

*July 22, 2020*

Following our episode about Farm Transition Planning, we now take a closer look at some of the key areas of forming and executing a farm succession plan. To kick this series off, Purdue Agricultural Economists Michael Langemeier and Brady Brewer covered the topic of transitioning management of a farm from one generation to the next. From goals and objectives, strategy considerations, to how best to structure the management of the farm, key aspects of transitioning management are discussed.  
*Downloads (in first month): 95*

### Episode 16: Corn & Soybean Outlook

*July 14, 2020*

Purdue agricultural economists Michael Langemeier and James Mintert provided an updated corn and soybean outlook featuring information from USDA's July World Agricultural Supply and Demand Estimates (WASDE) report and updated crop condition information. Also included are estimated 2019 and 2020 ARC-County and PLC payments, 2020 corn and soybean profitability estimates and some insights into marketing and management decisions for corn and soybean producers.  
*Downloads (in first month): 97*

### Episode 15: Forecasting Eastern Corn Belt Corn & Soybean Basis

*July 10, 2020*

On this episode, Purdue ag economist Nathan Thompson joins Jim Mintert to discuss corn and soybean basis in the Eastern Corn Belt. Learn about the Crop Basis Tool, which is updated weekly, to forecast basis and provides regional corn and soybean basis information for Illinois, Indiana, Michigan and Ohio. They conclude with a look ahead to 2020 corn and soybean basis and provide marketing suggestions for both old-crop still in storage as well as new-crop corn and soybeans.  
*Downloads (in first month): 86*



## CENTER ACTIVITIES

### Episode 14: Farmer Sentiment Rebounds Amidst Ongoing COVID-19 Concerns

July 7, 2020

Farmer sentiment improved for the second month in a row, rebounding from sharp declines that took place in both March and April. Purdue ag economist James Mintert reviews the results from the June 2020 Ag Economy Barometer, a nationwide monthly survey of 400 ag producers. The improvement in farmer sentiment left the Ag Economy Barometer 7 percent below one year earlier, while the Index of Future Expectations was still 10 percent below its June 2019 level. The Index of Current Conditions, however, was two percent higher than in June 2019, likely reflecting considerably improved spring planting conditions throughout much of the nation, in addition to support from USDA's Coronavirus Food Assistance Program (CFAP).

*Downloads (in first month): 98*

### Episode 13: Cover Crop Profitability

July 1, 2020

Utilizing cover crop treatments can have significant agronomic benefits for a farm. However, implementing this technology introduces additional costs. On this episode, Purdue agricultural economists Brady Brewer and Ph.D. student, Megan Hughes, evaluated the relationship between applied nitrogen and corn yield, and how this relationship is impacted by introducing three different species of cover crops: annual ryegrass, cereal rye, and an oat/radish blend.

*Downloads (in first month): 93*

### Episode 12: Farm Transition Planning

June 24, 2020

Maria Marshall, professor and director of Purdue's Institute for Family Business, joins Brady Brewer to discuss farm succession planning. They answer why it's important to start planning both a management and an ownership transfer ahead of time, who to have on your team of advisors, and the things you can do to start to prepare. The resources discussed in this episode can be found at the Purdue Institute for Family Business website.

*Downloads (in first month): 67*

### Episode 11: Data and Precision Ag Usage

June 17, 2020

There is a lot of talk about "big data" in agriculture these days. The farm of the future is said to use multispectral imagery, soil and micro-climate sensors, equipment telematics data, and GPS to drive yield-enhancing decisions. Purdue ag economists, Nate Delay joins Brady Brewer to discuss how farms actually collect, manage, and analyze data during today's episode.

*Downloads (in first month): 104*

### Episode 10: Ag Outlook Following USDA June World Ag Supply and Demand Estimates

June 13, 2020

Purdue agricultural economists Michael Langemeier and James Mintert provide an updated ag outlook, which includes information from USDA's June World Ag Supply & Demand (WASDE) report along with updated profitability estimates for corn and soybeans. The podcast also addressed questions regarding eligibility for and assistance provided by USDA's CFAP program.

*Downloads (in first month): 90*

### Episode 9: COVID-19 Continues to Impact Farmer Sentiment; Majority Indicate Economic Assistance Bill Necessary

June 2, 2020

Farmer sentiment improved slightly in May after falling sharply in both March and April. Purdue ag economists James Mintert and Michael Langemeier reviewed the results from the May 2020 Ag Economy Barometer survey, a nationwide monthly survey of 400 ag producers. The Purdue University-CME Group Ag Economy Barometer reading in May was 103; the 7 point improvement from April left the gauge of farmer sentiment nearly 40 percent below its February peak of 168.

*Downloads (in first month): 109*

### Episode 8: Coronavirus Food Assistance Program (CFAP) Application Details

May 27, 2020

Beginning May 26th, USDA's Farm Service Agency accepted applications for the Coronavirus Food Assistance Program (CFAP) from producers who have suffered losses. Indiana FSA Director Steve Brown and staff join Jim Mintert for a discussion on eligibility requirements, payment rates and application details of the 2020 CFAP program.

*Downloads (in first month): 151*

### Episode 7: Farmland Values in Today's Market May 20, 2020

Purdue agricultural economists Brady Brewer and Todd Kuethe discussed the farmland market during today's episode. With the COVID-19 pandemic and the unprecedented year 2020 is presenting, Todd talks about what has been happening in farmland pricing, sales, policy, and interest rates. He discussed where he thinks the market is headed and may look like over the next 3-5 years.

*Downloads (in first month): 119*

### Episode 6: Ag Outlook

May 15, 2020

Purdue agricultural economists Michael Langemeier and James Mintert provided updated information from USDA's May World Ag Supply & Demand Estimates (WASDE) release along with updated profitability estimates for corn and soybeans as a result of the COVID-19 global pandemic.

*Downloads (in first month): 122*

### Episode 5: Contingency Planning with Cash Flow Shortages

May 15, 2020

As cash flows from the farm operation become tighter due to COVID-19 and weaker commodity prices, it is necessary to find other funds to help pay for asset purchases or delay asset purchases, and to repay debt. On this episode, Purdue agricultural economists Michael Langemeier and Brady Brewer discuss contingency planning, a course of action designed to help a business determine how to respond to possible future events. Contingency plans are often referred to as "Plan B".

*Downloads (in first month): 47*

### Episode 4: What the Food Value Chain Has Learned and Should Apply Post COVID-19

May 13, 2020

COVID-19 has sent shock waves throughout the world, challenging every aspect of life. During this time of great tragedy and uncertainty, the concepts of communication, distance, work, food, and even shopping are suddenly being redefined. Purdue ag economists Allan Gray and Brady Brewer examine many aspects of agricultural business from the design of supply chains to impacts on consumer buying behaviors to the future of international trade.

*Downloads (in first month): 72*

### Episode 3: Agricultural Finance and Credit Update

May 6, 2020

Agricultural finance topics such as farm income, equity, debt, federal reserve policy, bank positioning, and credit analysis are covered. Purdue ag economists Jason Henderson and Brady Brewer discuss the current agricultural finance conditions affecting farms and agricultural lenders.

*Downloads (in first month): 78*

### Episode 2: April Ag Barometer Drops Below 100 as Coronavirus Disrupts Agriculture

May 5, 2020

Coronavirus concerns, commodity price declines, and supply-chain disruptions sink producer sentiment to a three-year low. Purdue ag economists Michael Langemeier and James Mintert discuss the April Purdue University/CME Group Ag Economy Barometer. The Ag Economy Barometer is based on responses from 400 U.S. agricultural producers and this month's survey was conducted from April 19-24, 2020.

*Downloads (in first month): 82*

### Episode 1: Update on the Livestock & Meat Situation

April 29, 2020

Pork and beef packing plant shutdowns along with reductions in demand from the hotel, restaurant, and institutional sector have disrupted U.S. meat and livestock markets. Purdue ag economists Jayson Lusk and James Mintert review the resulting dramatic shifts in pork and beef production along with the impact these shifts have had on U.S. wholesale beef and pork prices as well as prices for cattle and hogs.

*Downloads (in first month): 38*



United States  
Department of  
Agriculture

## Coronavirus Food Assistance Program (CFAP)



*Broadcasting to a wider audience on time sensitive material has been a benefit of the Center's response to COVID, especially evident in the CFAP resources with over 1,200 total downloads between YouTube and the podcast.*

## CENTER ACTIVITIES

# PROGRAMS & PUBLICATIONS

## Innovative farm management for producers

### Association of Agricultural Production Executives

The membership of the Association of Agricultural Production Executives (AAPEX), an organization that is now more than two decades old, is composed of many of the nation's leading agricultural producers. AAPEX is devoted to ongoing executive education for its members. The Center for Commercial Agriculture delivered the 2020 AAPEX Annual Meeting in Orlando, Florida, January 28 – 31, 2020. Over 140 AAPEX members attended the 2020 meeting representing 28 states and three countries. There were several great speakers and topics covered, but the conference highlight was the farm business profile series. This series consisted of three AAPEX members sharing the story of their business, lessons learned through both success and failure. In 2020 the program continued the pre-meeting field tour that included a visit to a

very diverse horticulture farm as well as a behind the scenes tour of the Lands exhibit at Disney World's Epcot. Working with this group of producers provides the Purdue faculty and staff with insights into the research and educational needs of America's leading farmers and provides opportunities for further collaboration.

### Purdue Top Farmer Conference

The Purdue Top Farmer Conference is one of the most successful and longest running management programs geared specifically for farmers. The 52<sup>nd</sup> conference took place on January 8, 2020, with an optional half-day pre-conference workshop held on January 7. The 2020 conference focused on strategies for mitigating risk in 2020 and featured some of the nation's top experts on marketing, risk management and crop production. The pre-conference workshop provided farmers with hands-on experience developing strategies for managing risks in their operation. The main conference included sessions on: long- and short-term ag outlook; recent trends and prospects for farmland markets across the Corn Belt; insights into the use of and impacts of using cover crops; and a comparison of the ARC and PLC programs as farmers prepared for their Farm Bill decisions. Speakers included agricultural experts from the Center for Commercial Agriculture, Iowa State University, University of Nebraska-Lincoln, University of Wyoming, Nutrien Ag Solutions, Purdue's Department of Agricultural Economics, and Purdue's Department of Agronomy. In addition to educational sessions, the more than 170 conference participants had multiple opportunities to network with their peers from across the country.

# 10.5K

**SUBSCRIBERS IN 2020**

*Before the pandemic struck, the Center had five events with total attendance of over 700. The Center's virtual impact grew in 2020 with 10.5k newsletter subscribers, 283.7k website visits and over 340 new social media followers.*





## Indiana Master Farmers

Although the 2020 Purdue Farm Management Tour was canceled as a result of the pandemic, we were still able to hold the 2020 Indiana Master Farmers Reception on August 19<sup>th</sup> at the Hendrick's County Fairground to honor the 2020 Master Farmer recipients: Max and Karen Beer; David and Gloria Sommer; Jim and Carol Droege; Jim and Jane Gillooly; in addition to Purdue Extension's Bob Nielsen who was named the 2020 Honorary Master Farmer.

## Crop Marketing & Farm Finance Workshops

The center held a series of *Crop Marketing & Farm Finance Workshops* to help producers improve profitability at three Indiana locations during the winter of 2020. Each workshop provided farmers an opportunity to improve both their crop marketing and financial management skill sets. James Mintert, Nathan Thompson, and Michael Langemeier, all from Purdue's Center for Commercial Agriculture, conducted the workshops co-sponsored by Purdue Extension's Agriculture & Natural Resource Educators in Vermillion, Dubois, and Wells Counties. Over 80 producers registered for one of three regional workshops, where the Purdue team was able to share with attendee's information about local basis patterns, crop storage opportunities, enterprise profitability, and how to develop whole-farm financial projections.

## Farm Bill Decision Making Workshops

Focused on helping producers make their Farm Bill decision for 2020, the Center partnered with Purdue Extension, Indiana's Farm Service Agency,



*Michael Langemeier and James Mintert presenting at a Farm Bill Decision workshop in Huntington, IN.*

Indiana Farm Bureau, the Indiana Soybean Alliance and Indiana Corn Marketing Council to offer two regional Farm Bill Decision Making Workshops in February 2020. Workshops held in Knox and Huntington counties provided farmers information on their 2018 Farm Bill program choices. The workshops included presentations from USDA's Indiana FSA State Agricultural Program Specialist, Kaitlin Myers, and Purdue's James Mintert and Michael Langemeier. During lunch, Indiana Farm Bureau's Megan Ritter spoke about Indiana Farm Bureau's Health Plan. Nearly 150 workshop participants attended one of the regional workshops and learned about program options from the 2018 Farm Bill and relative merits of signing up for the ARC-County (ARC-CO), ARC-Individual Coverage (ARC-IC), and Price Loss Coverage (PLC) programs for 2019 and 2020.





James Mintert, Fred Seamon, Michael Langemeier and Jason Henderson speaking during the Learning Center Session at Commodity Classic in San Antonio, Texas.

## Commodity Classic

The Center gave a learning center session presentation entitled *Farm Management Strategies in Times of Rising Volatility* and also hosted an educational booth at the 2020 Commodity Classic held in San Antonio February 27-29, 2020. In addition to discussing the *Ag Economy Barometer*, the Center's team of James Mintert, Michael Langemeier and Jason Henderson discussed the current business climate in U.S. agriculture, export trends and prospects, and strategies for capturing storage returns and adjusting to the current business climate. One of the major highlights of the session was a comparison of the *Ag Economy Barometer* with results from a survey of Commodity Classic attendees.

## Farm Business Internship

The Center for Commercial Agriculture's Farm Business Internship moved into its fourth year in the summer of 2020. The program continues to place several Purdue agriculture students on Midwest farm operations to help improve their farm management skill sets and better prepare them for careers in production agriculture or agribusiness.

## Center's Newsletter

First launched in November of 2019, the Center delivered its monthly newsletter, *Commercial AgNews*, throughout 2020. The list of subscribers receiving the newsletter continues to grow and by yearend was reaching over 10,500 individuals. The newsletter provides information regarding upcoming Center programs as well as new articles and other resources available on the Center's website.

## Center's Website

2020 was a year to remember but one also that helped solidify the need for virtual resources. Maintaining four active websites, the faculty and staff from the Center for Commercial Agriculture and Purdue's Agricultural Economics department create excellent farm management content. The center launched a new search-friendly main website in 2019. Resources on this website can be filtered by topic, author, or keyword. As the reader begins to read, other topic relevant items populate in the sidebar to help with navigation. This site alone reached nearly 100,000 pageviews in 2020, many of those resulting in webinar or program registrations, file downloads, or resource consumption.

Other websites the Center maintains are the *Ag Economy Barometer* site, the *Managing Farm Risk* site, and the *Crop Basis Tool*. The *Purdue/CME Ag Economy Barometer* website had over 243,000 pageviews where visitors could access the latest survey results and insight into farm sentiment. In partnership with the Indiana Soybean Alliance and the Indiana Corn Marketing Council, the Center offers information and tools to help producers better understand farm risk and develop an integrated approach to managing it. Since 2018, the Center has also provided a web-based *Crop Basis Tool* that provides access to weekly historical and contemporaneous corn and soybean basis data for local market regions in the Eastern Corn Belt.

## Social Media

The Center is on Twitter (@PUCommercialAg) with nearly 1500 followers and newly on Facebook with over 150 followers. The Center's social media accounts provide an additional outlet for posting contemporaneous information and drive traffic to the Center's website for more information. During 2020 the Center provided 369 tweets that, combined with Facebook postings, resulted in users clicking through to the Center's website over 1,200 times.

# AG ECONOMY BAROMETER

## The Rise, Fall and Subsequent Rise in Farmer Sentiment During 2020

James Mintert & Michael Langemeier

What a year! Farmer sentiment started 2020 off very strong, plummeted as the pandemic unfolded, but then recovered to set a new record high in the fall. The January 2020 reading of the *Ag Economy Barometer* was 167 which, at the time, was a new record high for the farmer sentiment index. In particular, U.S. farmers indicated they were optimistic about the future as the rise in the overall measure of farmer sentiment was driven in large part by an improvement in the expectations for the future as the January reading of the *Future Expectations Index* jumped 24 points from December 2019 to January 2020. The sharp improvement in future expectations coincided with the signing of the Phase One Trade Agreement between the U.S. and China on January 15, 2020. In the agreement, China agreed to increase purchases of U.S. manufacturing, energy, and agricultural goods and services by at least \$200 billion over two years, leading to expectations of a rapid improvement in U.S. ag exports to China.

U.S. farmers' optimism remained strong in February but as the pandemic unfolded in March and April, and ag commodity prices plummeted amid widespread processing disruptions especially in the ethanol and meat sectors, farmer sentiment declined sharply. The barometer bottomed out at a reading of 96 in April, a 72-point decline from its wintertime peak amid correspondingly large declines in both the *Index of Current Conditions* and *Index of Future Expectations*. Farmers' concerns about the pandemic were evident as 74% of survey respondents in April said they



worried about its impact on their farm's profitability. Unsurprisingly, farmers also indicated they were likely to pull back on capital expenditures as the *Farm Capital Investment Index* fell from 72 (near its all-time high) in February to just 38 in April.

Farmer sentiment improved modestly in late spring and early summer as the July 2020 barometer reading was 118, 22 points higher than in April. The modest rise in the barometer in late spring and early summer was driven primarily by farmers becoming more confident about current conditions on their farms as the *Current Conditions Index* rose to 111 in July, up from 72 in April.

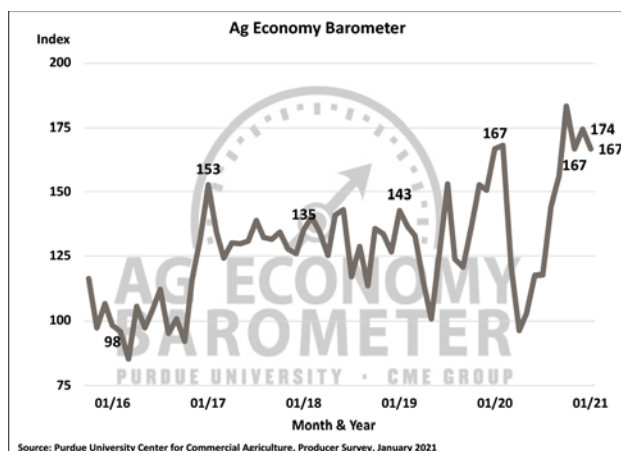
The improvement in farmer sentiment continued into late summer and early fall as the barometer



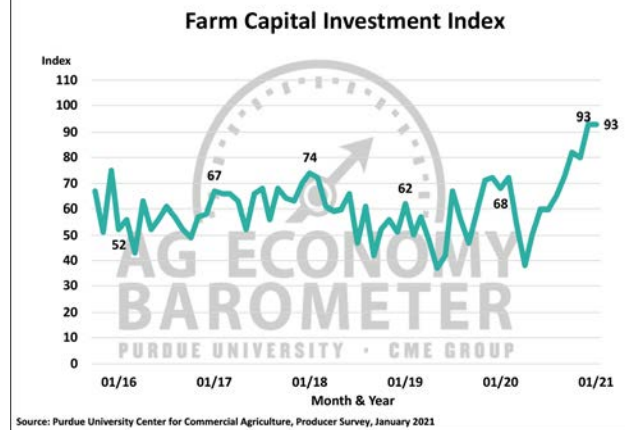
rose sharply in August and hit a new index high in October of 183. The improvement in the barometer was driven by increases in both the *Index of Current Conditions*, which rose 67 points from July through October and the *Index of Future Expectations*, which rose 65 points over the same time frame. A sharp rise in crop prices over this time frame, driven by tightening U.S. crop supplies and rising exports, appeared to be the primary source of rising optimism among U.S. agricultural producers.

Following the November election, however, there was a noticeable shift in farmer sentiment. In November the barometer weakened to a reading of 167, driven entirely by a sharp decline in the *Future Expectations Index*, which fell 30 points from October to November. In contrast and reflecting the strength in crop prices in fall 2020, the *Current Conditions Index* rose 11 points from October to November.

The divergence in farmers' perceptions about current conditions vs. their future expectations following the November election appears to be motivated by several factors. A series of questions posed both before and after the November election helped reveal some of the key issues affecting farmer sentiment. For example, over 80 percent of farmers in the December survey said they expect environmental regulations to become more restrictive in the future, compared to 41 percent who felt that way in October. Over 70 percent of producers in December said they expect to see higher income and estate taxes over the next five years compared to 35 and 40 percent, respectively, who felt that way in October. One-third of farmers said they expect the farm income safety



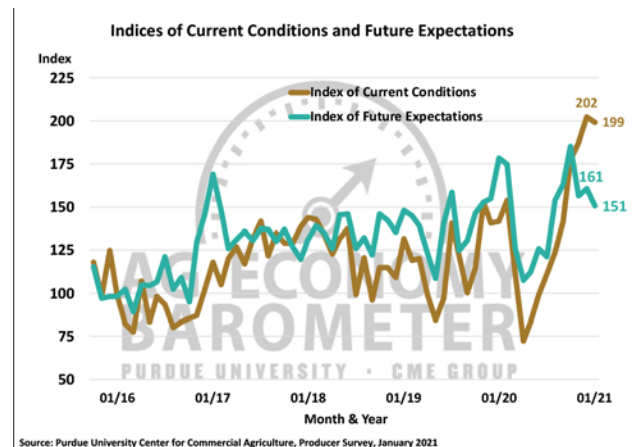
Purdue/CME Group Ag Economy Barometer, October 2015-January 2021.



Farm Capital Investment Index, October 2015-January 2021.

net to weaken in the future compared to 18 percent who felt that way in October and just over one-fourth of producers said they expect government support for the ethanol industry to weaken over the upcoming five years compared to 17 percent who felt that way in October. Somewhat surprisingly in light of robust ag exports in fall 2020, producers also became somewhat less optimistic about U.S. agriculture's trade prospects as year-end approached. In the three months from August through October, an average of 63 percent of farmers in our survey said they expected U.S. ag exports to increase over the next five years. However, ag trade expectations were less optimistic in November and December with an average of just 52 percent of respondents expecting to see growth in U.S. ag exports over the upcoming five years.

What's ahead in 2021? Stay tuned to upcoming monthly reports of the Purdue University-CME Group Agricultural Economy Barometer to learn what farmers are thinking!



Indices of Current Conditions and Future Expectations, October 2015-January 2021.

# FINANCIAL MANAGEMENT SERIES

Michael Langemeier, Michael Boehlje & Elizabeth Yeager

Financial management involves the evaluation of liquidity and solvency, financial planning, acquisition and use of financial resources, asset purchases and farm growth, and relationships with agricultural lenders. This series starts by taking a deep dive into the key components of financial statements such as a market value balance sheet, an income statement, a sources and uses of funds statement, and a statement of owner's equity. Key ingredients to this section include computing the sources of changes in farm equity, and the measurement of profitability and the efficiency of farm asset utilization. With this background, a producer is ready to examine benchmarks of financial performance, repayment capacity, crop machinery investments and costs, and labor efficiency and productivity, and to stress test their financial position and performance.

## ARTICLES:

### Market Value Balance Sheet And Analysis

A market value balance sheet estimates asset values using current prices for similar assets. The market value balance sheet is relatively easy to derive, more comparable across farms, includes opportunity cost, and is often required by lenders. The market value balance sheet allows us to examine the liquidation values of the assets.

### Components Of An Accrual Farm Income Statement

An accrual income statement contains one of the most important financial measures used by farms, net farm income. Because this measure is accrual, it

measures the actual performance of a farm during the year.

### Sources And Uses Of Funds Statement

A sources and uses of funds statement, often referred to as a flow of funds report, provides a mechanism for reporting how a farm's performance during an accounting period influenced and was influenced by major funding activities.

### Statement Of Owner's Equity

This article is one of a series of financial management articles that examine financial statements and financial analysis. In this article, the components of a statement of owner's equity are illustrated and described

### Computation Of Deferred Tax Liabilities

Income tax liabilities arise from differences between balance sheet values of certain assets and liabilities, and the tax basis of those same assets and liabilities. Deferred taxes reconcile the tax basis of balance sheet assets and liabilities with the basis currently being used to value assets and liabilities on a balance sheet, which is usually market value.

### U.S. Farm Sector Balance Sheet

Since its peak in 2013 at \$123.7 billion, average U.S. net farm income has averaged \$82.7 billion or approximately 33% less than the peak value. This article discusses changes in the U.S. farm sector balance sheet as well as liquidity and solvency ratios.

## Working Capital: What Is It And Do You Have Enough?

Maintain your working capital! This phrase is commonly heard in discussions with lenders, advisors, and management specialists in today's environment of relatively low crop net returns or margins.

## How Much Debt Can A Farm Carry?

There are numerous factors impacting a farm's debt holding capacity. It is important to remember that financial leverage or debt directly impacts a farm's growth rate through its effect on expected returns and risk.

## Schedule F Net Farm Profit And Accrual Net Farm Income

It is widely accepted that accrual accounting provides a more accurate estimate of annual farm profitability than cash accounting or Schedule F net farm profit. This article compares cash and accrual net farm income for a case farm in west central Indiana given alternative scenarios pertaining to prepaid expenses and crop inventories.

## Measuring Farm Profitability

The rates of return on assets and equity are extremely useful when comparing farm investments with other investments. However, these two measures are sensitive to how farm assets are valued on the balance sheet. For this reason, the operating profit margin is more conducive for benchmarking profitability among farms.

## Measuring Efficiency Of Farm Asset Utilization

A farm's ability to operate on the production frontier depends on its ability to produce crop and livestock enterprises efficiently, while a farm's ability to produce on the cost frontier pertains to its ability to produce on the production frontier, manage costs, and market crop and livestock commodities. The asset turnover ratio, on the other hand, measures how efficiently farm assets are being used to generate value of farm production (a gross income measure).

## Du Pont Financial Analysis

The Du Pont financial analysis model is a useful method of illustrating the relationship between the asset turnover ratio, the operating profit margin ratio, return on assets, and return on equity. In this article, a

case farm is used to examine the relationships between profitability and financial efficiency ratios, and to examine the impact of a change in revenue, variable costs, or owning rather than leasing 150 acres on financial performance.

## Measuring Repayment Capacity And Farm Growth Potential

For a farm to grow, it is essential that the replacement margin be large enough to repay term debt, replace assets, and purchase new assets, and that the replacement coverage ratio be greater than one. This article defines and illustrates the use of key repayment capacity measures.

## Benchmarking Crop Machinery Investment And Cost Per Acre

The continued increase in the size of tractors, combines, and other machinery has enabled farms to operate more acres and reduce labor use per acre. However, this increase in machinery size also makes it increasingly important to evaluate the efficient use of machinery. Two commonly used benchmarks to evaluate the efficient use of machinery are machinery investment per acre and machinery cost per acre.

## Benchmarking Labor Efficiency And Productivity

It takes a lot of family and hired labor to run modern farms. Labor is an important and costly input and farm managers need to ask if they are getting the efficiency and productivity needed from that labor to be competitive. One way to evaluate this question is to use benchmarks created using data from similar farms. Labor benchmarks should include family and operator labor as well as hired labor.

## Benchmarking Profitability And Financial Efficiency

This article is one of a series of articles that examine financial statements and financial analysis. In this article, a case farm in west central Indiana is used to illustrate financial performance benchmarks for profitability and financial efficiency ratios.

## Benchmarking Repayment Capacity Measures

This article is one of a series of financial management articles that examine financial statements and financial analysis. In this article,



OCTOBER 2020

## SERIES

# FINANCIAL MANAGEMENT

## STATEMENTS AND ANALYSIS

**Contents**

Market Value Balance Sheet and Analysis	2
Components Of An Accrual Farm Income Statement	8
Sources And Uses Of Funds Statement	11
Statement Of Owner's Equity	14
Computation Of Deferred Tax Liabilities	17
U.S. Farm Sector Balance Sheet	23
Working Capital: What Is It And Do You Have Enough?	28
How Much Debt Can A Farm Carry?	34
Schedule F Net Farm Profit And Accrual Net Farm Income	38
Measuring Farm Profitability	41
Measuring Efficiency Of Farm Asset Utilization	43
Du Pont Financial Analysis	46
Measuring Repayment Capacity And Farm Growth Potential	49
Benchmarking Crop Machinery Investment And Cost Per Acre	54
Benchmarking Labor Efficiency And Productivity	57
Benchmarking Profitability And Financial Efficiency	59
Benchmarking Repayment Capacity Measures	64
Operating Profit Margin Benchmarks	67
Persistence In Financial Performance	73
U.S. Farm Sector Capital Expenditures	78
U.S. Farm Sector Financial Performance	82

**OVERVIEW**

Financial management involves the evaluation of liquidity and solvency, financial planning, acquisition and use of financial resources, asset purchases and farm growth, and relationships with agricultural lenders. This series starts by taking a deep dive into the key components of financial statements such as a market value balance sheet, an income statement, a sources and uses of funds statement, and a statement of owner's equity. Key

ingredients to this section include computing the sources of changes in farm equity, and the measurement of profitability and the efficiency of farm asset utilization. With this background, a producer is ready to examine benchmarks of financial performance, repayment capacity, crop machinery investments and costs, and labor efficiency and productivity, and to stress test their financial position and performance.



Center for Commercial Agriculture

1

repayment capacity measures are illustrated for a case farm and discussed.

### Persistence In Financial Performance

This article examines the persistence of financial performance measures for a sample of farms over a five-year period. Specifically, using KFMA whole-farm data for farms with continuous data from 2015 to 2019, the operating profit margin ratio is computed for each farm and year.

### U.S. Farm Sector Capital Expenditures

We examine trends in capital expenditures and compares capital expenditures to capital consumption (i.e., economic depreciation).

### U.S. Farm Sector Financial Performance

If we want to include capital gains on assets in our financial performance metrics, return on assets and return on equity are preferable. This article examines trends in return on assets and its components for the U.S. farm sector.

*This resource can be read and referenced as individual modules of the entire series on the Center's website or downloaded as a whole series in pdf format.*



## RESOURCE HIGHLIGHT

# STRATEGIC CROP MARKETING SERIES

Nathanael Thompson & James Mintert

The Strategic Crop Marketing Video Series is comprised of 5 short videos to help improve your crop marketing skills. The first two videos review the importance of understanding basis when marketing crops and how to use historical data to forecast basis. Subsequent videos detail how storage hedging can

work to your advantage, provide a comparison of historical returns to both unpriced storage and storage returns and discuss using knowledge of seasonal patterns in corn futures prices and corn futures price spreads to improve returns.

## *Purdue Center for Commercial Agriculture Crop Basis Tool*

- Provides historical corn and soybean basis data
  - 2004/2005 crop year to current crop year
- Weekly (Wednesday) basis observations
- Updated every Friday
- Basis averaged by crop reporting district
- You select the county and the tool chooses correct district for you
- Available at  
[Purdue.edu/commercialag](http://Purdue.edu/commercialag)



Center for Commercial Agriculture

## VIDEOS

### Importance Of Crop Basis When Marketing Grain

In this short video learn about how an improved understanding of basis, the relationship between cash and futures market prices, can help you become a better grain marketer. During the video you'll learn how to use the Purdue Center for Commercial Agriculture's Crop Basis Tool to track historical basis patterns in your area as well as keep up with weekly regional changes in corn and soybean basis.

### Forecasting Corn & Soybean Basis

One of the keys to improving your corn and soybean marketing skills is learning how to forecast basis. In this video you'll learn how to use the Purdue Center for Commercial Agriculture's Crop Basis Tool to help you generate corn and soybean basis forecasts for your local market region.

### Role Of Basis When Making Corn And Soybean Storage Decisions

Learn how storage hedging provides an opportunity to capture the seasonal increase in basis that occurs during the storage season without speculating on corn or soybean futures prices. The details regarding how to implement, as well as calculate the returns to storage, for each strategy are discussed.

### Comparing Historical Returns Of Hedged Vs Unhedged Corn And Soybean Storage Strategies

In this video Purdue ag economists Nathan Thompson and James Mintert examine the historical returns to hedged and unhedged corn and soybean storage. Average returns over the past 30 years are discussed.

### Improving Corn Storage Returns

In this video learn how to improve corn storage returns by better understanding seasonality in both futures contract prices and futures contract price spreads. Purdue ag economists Nathan Thompson and James Mintert how to design a corn marketing strategy that maximizes your marketing flexibility and makes it possible for you to take advantage of these seasonal price patterns.



*James Mintert and Nathanael Thompson recorded this series of videos with the goal of improving farmers' crop marketing skills and knowledge of local historical basis data. The Center's Purdue Crop Basis Tool was highlighted.*





## FACULTY & STAFF



**Mike Boehlje**  
Distinguished Professor  
Emeritus



**Liza Braunlich**  
Distance Education  
Specialist



**Brady Brewer**  
Assistant Professor



**Kyle Bymaster**  
Chief Development Officer



**Nathan Delay**  
Assistant Professor



**Bruce Erickson**  
Agronomy Education  
Distance and Outreach  
Director



**Ken Foster**  
Professor



**Brent Gloy**  
Founding Director,  
Center for Commercial  
Agriculture  
and Visiting Professor



**Aissa Good**  
Business Development  
Manager



**Kami Goodwin**  
Department  
Communication &  
Marketing Specialist



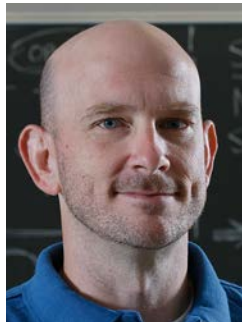
**Allan Gray**  
Professor and Land  
O'Lakes Chair in Food and  
Agribusiness



**Jason Henderson**  
Associate Dean and  
Director of Purdue  
Extension



**Danielle Latta**  
Program Manager



**Roman Keeney**  
Associate Professor



**Todd Kuethe**  
Associate Professor,  
Schrader Endowed Chair of  
Farmland Economics



**Michael Langemeier**  
Associate Director, Center  
for Commercial Agriculture  
and Professor



**Jayson Lusk**  
Department Head and  
Distinguished Professor



**Mindy Mallory**  
Associate Professor,  
Clearing Corporation  
Charitable Foundation  
Endowed Chair of Food &  
Agricultural Marketing



**Jim Mintert**  
Director, Center for  
Commercial Agriculture  
and Professor



**Nathanael  
Thompson**  
Assistant Professor



**Nicole Widmar**  
Professor and Grad Chair



**Elizabeth Yeager**  
Associate Professor,  
Kansas State University



**Sarah Zahn**  
Assistant, Center for  
Commercial Agriculture

## COUNCIL MEMBERS

### *CCA INDUSTRY COUNCIL*



BECK'S



### *CCA FARMER COUCLIL*

- Jodi Anson
- John Halcomb
- Sam Halcomb
- David Hardin
- David Howell
- Levi Huffman
- Bryan Johnson
- Lisa Koester
- Kyle Lennard
- Scott Maple
- John Nidlinger
- Danita Rodibaugh
- Mike Shuter
- Kip Tom
- Don Vilwock
- Bob Wade



*Join us in January for the 54th Purdue Top Farmer Conference*





Center for Commercial Agriculture

403 W. State Street West Lafayette, IN 47907-2056  
(765) 494-7004 • <https://ag.purdue.edu/commercialag>



PUCommercialAg



PurdueCenterforCommercialAgriculture