



2024

ANNUAL REPORT

DIRECTOR'S LETTER

Thanks for checking in to see what we've been up to at the Purdue Center for Commercial Agriculture during 2024. One thing we've learned over the last decade is that U.S. farmers and agribusiness professionals like to receive information and education in a wide variety of formats and we've responded by providing in-person programs, webinars and videos, podcasts, short web postings, occasional long-form articles, decision aids, and tools! I'll provide some key highlights from this past year and in the remainder of the report you'll find details about the diverse programming we provided during the year.

The *Purdue Top Farmer Conference* was held on January 5th in West Lafayette. Given the success we had with offering the conference online the last few years, we decided to provide the conference in a hybrid format with the program conducted in-person at Purdue's Beck Center and simultaneously offered via Zoom. Over 230 farmers and agribusiness professionals registered for the conference with a near 50-50 split between in-person and online attendance. Providing the conference in-person and online made it possible to reach producers and agribusiness personnel in 28 different states and countries. This year's program focused on the U.S. economy's outlook, the future impact of biofuels on agriculture, the long-term outlook for corn and soybeans, and prospects for ag policy changes.

Next up in late January and early February was the annual Association of Agricultural Production Executives (AAPEX) annual conference held in Palm Springs, California. This was the eighth year that the Center collaborated with the AAPEX board of directors on the program attended by 140 AAPEX members from across the country. Just a few weeks later, the Center provided a Learning Center program focused on positioning a farm for long-term success at the Commodity Classic held in Houston, Texas.

The 2024 *Purdue Farm Management Tour* was held in Randolph County, Indiana in mid-July with 150 farmers and agribusiness community members in attendance for the tour and reception. Thanks to the Clements, Miller, and Goltstein families for their willingness to open up their farming operations to visitors and to share how their farms have successfully integrated the next generation of family members into their farming operation. Tour attendees also gained insights into drainage management, dairy production, and risk management.

In addition to providing written content pertaining to crop basis, crop budgets, custom rates, farmland values and cash rental rates, ag jobs, agricultural policy,

business strategy, financial management, and strategic risk; the Center continues to deliver information online. Since launching the podcast, the Center has delivered 180 *Purdue Commercial AgCast* podcast episodes with over 59k downloads by listeners. The Center's monthly newsletter *Commercial AgNews* continues to be a great way to stay up-to-date regarding upcoming programming as well as what's new on the Center's website with over 9.3k subscribers. Social media is also an important way to get information out to users and the Center is active on both X/Twitter and Facebook with over 2.3k followers.

As the nation's only monthly survey of commercial ag producers, the *Purdue University-CME Group Ag Economy Barometer* provides insights into producer sentiment while also providing opportunities to learn more about producers' reactions to contemporaneous events affecting the agricultural sector. Each month during 2024 the Center published an *Ag Economy Barometer* report summarizing survey results, posted a short YouTube summary video and an in-depth podcast interpretation of the current month's barometer survey, all accessible via the Center's website and by free subscription. The barometer is widely reported in both the ag and business press and is the subject of a large number of media interviews each month.

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, feel free to contact us.

Sincerely,



Michael Langemeier
Director



PROGRAMS

ASSOCIATION OF AGRICULTURAL PRODUCTION EXECUTIVES

PALM SPRINGS, CALIFORNIA

Association of Agricultural Production Executives (AAPEX) is devoted to providing ongoing executive



education for its members. The Center for Commercial Agriculture delivered the AAPEX annual meeting in Palm Springs, California, January 30 – February 2, 2024. Over 140 AAPEX members attended the 2024 meeting representing 28 states and 2 countries. There were several great speakers including sessions with Ray Starling, Jim Weisemeyer, Anja Manuel and Linda Hubbard. In 2024, the program continued the pre-meeting field visit which was an educational tour of Woodspur Organic Date Farms. 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. The conference marked the Center's eighth year of collaboration with the association in organizing and hosting the annual conference.



A crowd gathered at the Beck Agricultural Center in West Lafayette for the Purdue Top Farmer Conference.

PURDUE TOP FARMER CONFERENCE

HYBRID CONFERENCE

The Purdue Center for Commercial Agriculture welcomed over 230 farmers and agribusiness professionals to the 2024 Purdue Top Farmer Conference on Friday, January 5th. The annual farm management conference provided a great networking opportunity for top producers and industry professionals. The 2024 conference was offered in a hybrid format, and attendance was split with approximately one-half of the participants attending in person at Purdue's Beck Agricultural Center while remaining attendees from 28 different states and countries joined remotely via Zoom.

This year's agenda focused on the U.S. economic outlook, the future impact of biofuels on agriculture, the long-term outlook for corn and soybeans and prospects for ag policy changes in a new Farm Bill. James Bullard, Dr. Samuel R. Allen Dean of the Daniels School of Business at Purdue University and former president of the St. Louis Federal Reserve Bank kicked off the morning as he shared his insight into Federal Reserve policy and the key factors influencing the U.S. economy in a fireside chat on stage with then center director James Mintert. Next Brad Lubben, ag policy specialist from the University of Nebraska-Lincoln, discussed the status of the new farm bill's development and the outlook on farm policy and crop insurance decisions in 2024. Conference-goers also had the opportunity to take a survey on their sentiment on the ag economy and views on strategic risk. Michael Langemeier, then associate center director, and graduate student Margaret Lippsmeyer compared results from participants survey responses to those from a national survey and provided management insights to the audience.

Following lunch, Scott Irwin, who holds the Norton Chair of Agricultural Marketing at the University of Illinois, focused on renewable diesel prospects and soybean markets. Dr. Irwin explained what's driving the renewable diesel boom and the limitations regarding the industry's growth prospects. After the conference's conclusion, Scott was available to sign copies of his new book *Back to the Futures*, copies of which were provided to registered conference participants. Chad

Hart, a professor at Iowa State University, provided a long-term outlook for both corn and soybeans to help conference attendees think about what's ahead and make plans for their farm operation's future. The conference concluded with a wide-open Q&A panel discussion featuring Chad Hart, Scott Irwin, Brad Lubben and James Mintert taking questions from the audience.

Special thanks to conference sponsor Farm Credit Mid-America. See more insights and photos from the conference <https://purdue.ag/ptfc24>.

PURDUE FARM MANAGEMENT TOUR & INDIANA MASTER FARMER RECEPTION

RANDOLPH COUNTY



Chad Hart (Iowa State), James Mintert (Purdue University), Scott Irwin (University of Illinois), and Brad Lubben (University of Nebraska-Lincoln) take questions from the audience during the Purdue Top Farmer Conference on January 5, 2024.

The Center partnered with Purdue Extension to hold the 91st annual Purdue Farm Management Tour on Wednesday, July 17, 2024, in Randolph County in east central Indiana. One of the tour's primary goals is to encourage Hoosier farmers to develop high-level management knowledge and skills. The free event provided an opportunity for nearly 150 farmers and agribusiness community members to gain insights from Rex Clements and Wade Miller at the Clements-Miller Farm and from the entire Goltstein family who related their experiences in launching and operating Union Go Dairy.



Starting at 9:00 a.m., Rex Clements and Wade Miller's farm near Lynn hosted farm tour attendees. They shared how they have positioned their farm to seamlessly transition from one generation to the next and how improved drainage management has been key to their success. Then at 1:00 p.m., the Goltstein family discussed their Union Go Dairy farm's operation at the Willow's Edge event center in Winchester. The Goltstein family members shared insights into how they've integrated three next generation family members into the farm business, how their farm's production and risk management approach has evolved as they work with Dannon as the exclusive purchaser of their milk along with a birds-eye view into a modern dairy operation.

The Tour wrapped up in mid-afternoon and at 4:00 p.m. the 2024 Indiana Master Farmer class was honored at Willow's Edge with a reception followed by a panel discussion. Congratulations to this year's Indiana Master Farmer honorees: Tim Gauck (Greensburg), Troy & Lisa Furrer (Wolcott), Ron & Sherry Cash (Greencastle), Keith & Darla Schoettmer (Tipton), and Honorary Master Farmers Steve Nichols (Delphi) and Harry Pearson (Hartford City). The Master Farmer program is a long-standing tradition in Indiana. It honors farmer leaders who, in addition to being top-notch agricultural producers, have made valuable contributions to Indiana and U.S. agriculture as well as their community.

A special thanks to the Clements-Millers and Goltstein families for sharing details about their farm operations, and to the Tour's local coordinator, Amy Alka, Purdue Extension's Randolph County Educator, as well as this year's Tour sponsors, Indiana Farm Bureau Insurance and Farm Credit Mid-America. A photo recap from the day can be viewed on the Center's website (<https://purdue.ag/pfmt24>)



Above (right to left): Rex & Cheryl Clements with daughter Jill & son-in-law Wade Miller and their two kids. Below: daughters Sanne & Mikae, Tony & Yvonne Goltstein, son Rob & wife with three grandkids of Union Go Dairy.



Wade Miller of Clements-Miller farm near Lynn, Indiana, stands in front of his tiling plow with James Mintert during the Purdue Farm Management Tour and shared with attendees how improved field drainage has been a key to the farm's success.

COMMODITY CLASSIC

HOUSTON, TEXAS

Brady Brewer, Michael Langemeier and James Mintert conducted a session focused on financial strategies for long-term viability entitled "Positioning Your Farm for Long-Term Success" at Commodity Classic in Houston, Texas on Thursday, February 29, 2024. During the session they discussed the strategic risks farm operations face and how farmers might go about managing those risks. Included in the session were results from a national survey of farmers assessing their farms' resilience and agility in responding to shocks along with a comparison of responses to the same questions from audience members.

The session concluded with the Purdue agricultural economists responding to questions posed by producers attending the session. The Center's faculty and staff also welcomed show visitors to the Commodity Classic trade show at the Purdue Center for Commercial Agriculture's booth.



Above: Brady Brewer, James Mintert and Michael Langemeier are introduced before their Learning Center session on managing strategic risks in Houston, Texas at Commodity Classic on February 29, 2024. Below: A crowd gathers at Willow's Edge event center in Winchester, Indiana to hear from the Goltstein family and the operation of Union Go Dairy.





PURDUE COMMERCIAL AGCAST

OVERVIEW

The Center launched the *Purdue Commercial AgCast* podcast in April 2020 as the COVID-19 pandemic created a need for improved remote access to information and a broader reach in a more convenient way. Geared towards highlighting farm management news and advice for top agricultural producers and agribusinesses, *AgCast* covers a variety of topics ranging from ag outlook, agricultural finance and farm management in addition to insights gleaned from the *Purdue University-CME Group Ag Economy Barometer*. Purdue ag economists Brady Brewer and James Mintert served as the podcast hosts as they welcome new and returning guests from within the agricultural economics department at Purdue University and elsewhere. The Center also recorded video with several of the podcast episodes and released the video podcast to the Center's YouTube channel. The goal of providing video in addition to the audio was to meet more of the Center's audience on a platform where the Center already has a strong following with over 1,000 YouTube subscribers. The podcast can be accessed directly from the Center's website or via all major podcast providers including Apple Podcasts, Spotify, and Google Podcasts.



VIDEO PODCASTS

A series of short podcasts and accompanying videos were recorded to help agricultural producers improve their strategic risk management skills. Farms are exposed to strategic risks that are caused by a wide variety of unanticipated shocks to the operating environment ranging from government policy shifts to disease outbreaks. Although it's not possible to accurately forecast strategic risks, it is possible to position farm businesses to successfully navigate the risks that might occur. After listening to this podcast series, farmers know more about strategic risk, what they can do to help mitigate their farm's strategic risk exposure, and how they can position their farm to not only survive but actually thrive in a risky world.



**4 YEARS
LATER**

180

EPISODES

59K

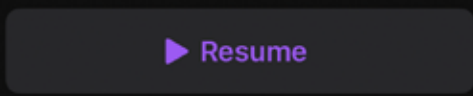
DOWNLOADS



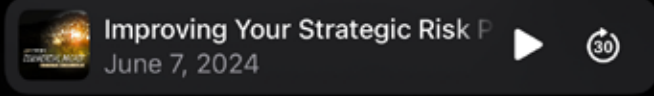
June 7, 2024 · Episode 166 · 37 min left

Improving Your Strategic Risk Plan

Purdue Commercial AgCast >



In the third episode of the strategic risk series, the Purdue University Center for Commercial Agriculture's team of ag economists, James Mintert, Michael Langemeier, and Brady Brewer discuss the tradeoff between improving efficiency and resilience of the farm business. This episode provides a series of questions you can use to help evaluate tradeoffs on your farm. The discussion concludes with five key managerial levers you can focus on when



Top left: Brady Brewer, James Mintert, and Michael Langemeier record in Krannert. Above: Apple podcast player - Viewership comes from many different platforms.

2024 HIGHLIGHTS

Since launching the podcast, the Center has delivered 180 episodes with over 59k downloads by listeners. The Center delivered 31 new AgCast episodes in 2024, averaging nearly 225 downloads within the first 30 days of an episode's posting for a total of 11,150 during the year. Show notes with the full audio transcription, slide decks, and related links and/or resources that were discussed during an episode are posted alongside the episode player on the Center's website. Apple's Podcast is the favorite platform for listening providing 44% of the downloads followed by about 28% of listeners choosing to access the podcast directly from the Center's website.

QUICK POPULARITY

In **episode 174**, *2024 Indiana Cash Rent Trends*, Purdue ag economists Todd Kuethe, Michael Langemeier and James Mintert discussed the 2024 Purdue Farmland Value & Cash Rental Rates survey in a two-part video podcast where they shared results which confirm that the average value for Indiana farmland hit a new record high this summer. This 31-minute episode was very popular with an **astounding 4.1K viewers** on YouTube plus another 150 podcast listeners. Each June, Purdue's department of agricultural economics surveys knowledgeable professionals regarding Indiana's farmland and cash rental market. The trio of ag economists reviewed survey results and long-term trends in Indiana cash rental rates, including an examination of regional variation in rates within Indiana. The discussion concludes by examining the relationship between cash rental rates and estimated net returns to land as well as the long-term farmland price to cash rent ratio. The first episode of the series, episode 173: *2024 Farmland Values & Market Trends*, was a popular episode also with over 1,050 views.



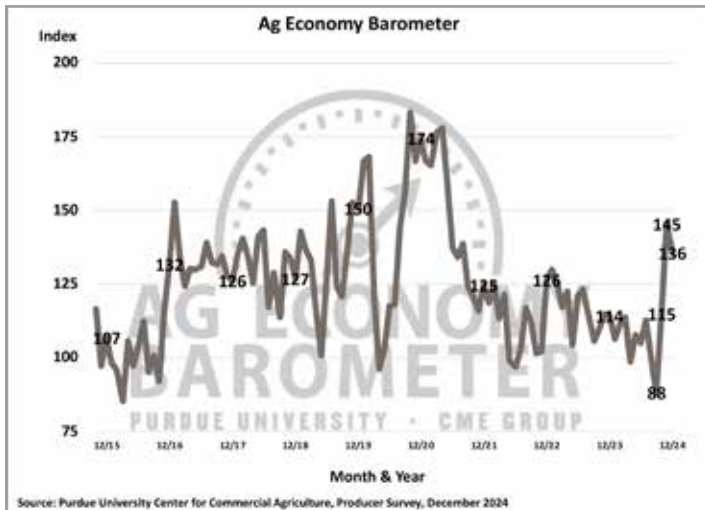
FAN FAVORITE

A favorite episode of 2024, with a total of 553 since posted, was **episode 152**: *The Outlook for Corn & Soybeans*. The short 8-minute episode, a recap of highlights from Iowa State Dr. Chad Hart's presentation at the Purdue Top Farmer Conference, was hosted by Brady Brewer. The episode explores the shift to "normalcy" for crop prices and farm incomes in 2024 and provides insights into the challenges and opportunities ahead ranging from the impact of possible drought on USDA projections to projected increases in soybean acres. Average consumption on the episode was 91%, proving Chad and Brady gave listeners food for thought.

HOSTS: BRADY BREWER, JAMES MINTERT
PRODUCTION & MARKETING: SARAH ZAHN

AG ECONOMY BAROMETER

MONTHLY FARMER SENTIMENT SURVEY ON THE AG ECONOMY



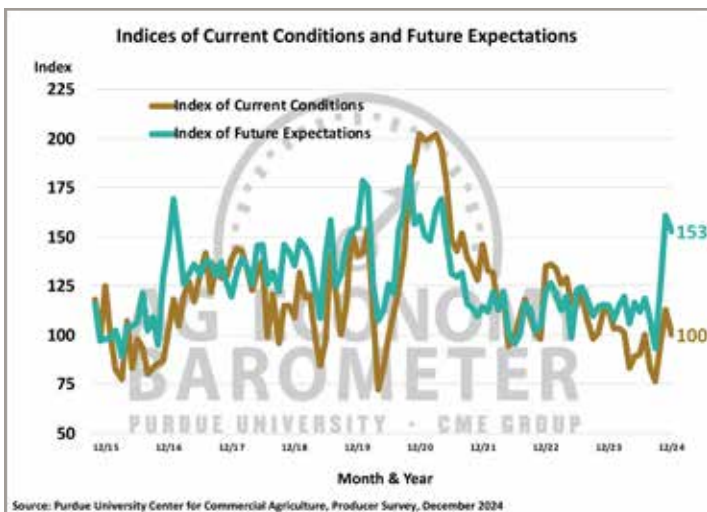
Purdue/CME Group Ag Economy Barometer, Oct 2015-Dec 2024.

The *Purdue University/CME Group Ag Economy Barometer* is a nationwide measure of U.S. agricultural producers' sentiment regarding both their farms and the U.S. agricultural economy's health. Each month the Center surveys 400 commercial scale agricultural producers from across the U.S. Respondents each month are drawn from a large database of commercial agricultural producers and each month's survey pool is stratified to mirror the percentage contribution to the value of U.S. farm production for principal crop (corn, soybeans, wheat and cotton) and livestock (beef, pork, and dairy) enterprises as estimated by the U.S. Census of Agriculture. Results are reported on the first Tuesday of each month and include not only the barometer but also the *Index of Current Conditions*, the *Index of Future Expectations*, the *Farm Capital Investment Index*, the *Farm Financial Performance Index*, and both the *Short and Long-Term Farmland Value Expectations Indices*.

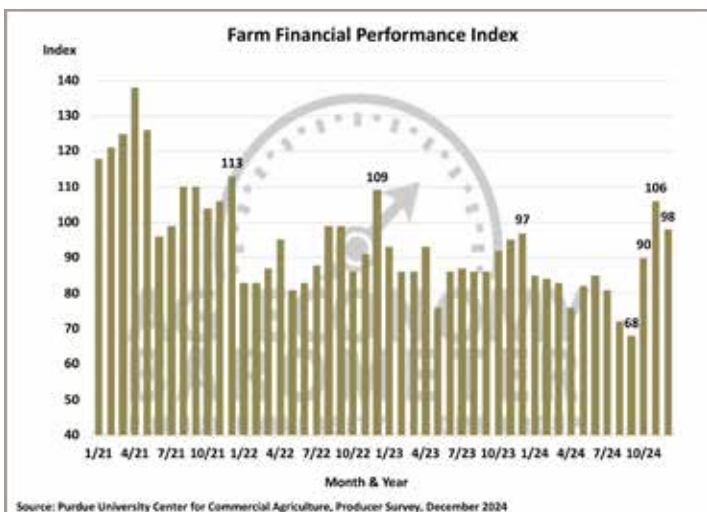
The Center has a dedicated website where online viewers can read the latest *Ag Economy Barometer* full report, media release, detailed charts, historical tables, and learn more about the methodology and team. A barometer breakdown video with Purdue ag economist James Mintert, which includes a short summary of that month's survey results, is published and available on the website each month, as well as shared on the Center's YouTube channel and social media. James Mintert and Michael Langemeier also share insights into the *Ag Economy Barometer* survey results each month in a video episode of the *Purdue Commercial AgCast* podcast, which is shared on all major podcast providers and on the Center's YouTube channel.

	PODCAST	YOUTUBE	WEB	
DATE	DOWNLOADS	VIEWS*	PAGEVIEWS*	
<i>U.S Farmer Sentiment Stable As Inflation Expectations Subside</i>	1/2/24	214	181	1264
<i>Weakening Commodity Prices Cast A Shadow On Farmer Sentiment</i>	2/6/24	230	212	1292
<i>Modest Improvement In Farmer Sentiment, Yet Financial Concerns Loom</i>	3/5/24	221	126	1288
<i>Farmer Sentiment Improves As Interest Rate Expectations Shift</i>	4/2/24	228	187	1878
<i>Farmer Sentiment Declines To Lowest Level Since June 2022 Amid Weakened Financial Outlook</i>	5/7/24	216	181	1735
<i>Farmer Sentiment Recovers In May; Interest In Solar Leasing Rising</i>	6/4/24	179	196	1613
<i>Farmer Sentiment Drifts Lower On Weaker Future Expectations</i>	7/2/24	230	217	1759
<i>Farmer Sentiment Improves Despite Financial Performance Concerns</i>	8/6/24	195	252	1556
<i>Weakening Farm Income Prospects Weigh On Farmer Sentiment</i>	9/3/24	174	259	2080
<i>Farmer Sentiment Reaches Lowest Levels Since 2016 As Income Expectations Weaken</i>	10/1/24	197	374	2780
<i>Farmer Sentiment In October Rebounded Ahead Of The U.S. Election</i>	11/5/24	183	248	1792
<i>Farmer Sentiment Following The U.S. Election Reaches Highest Levels Since May 2021</i>	12/3/24	177	272	2028

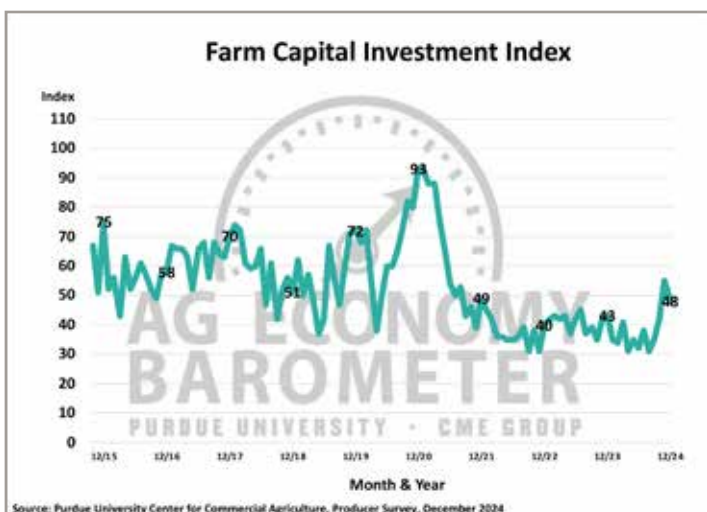
*all time views since publication, data pulled January 17, 2025



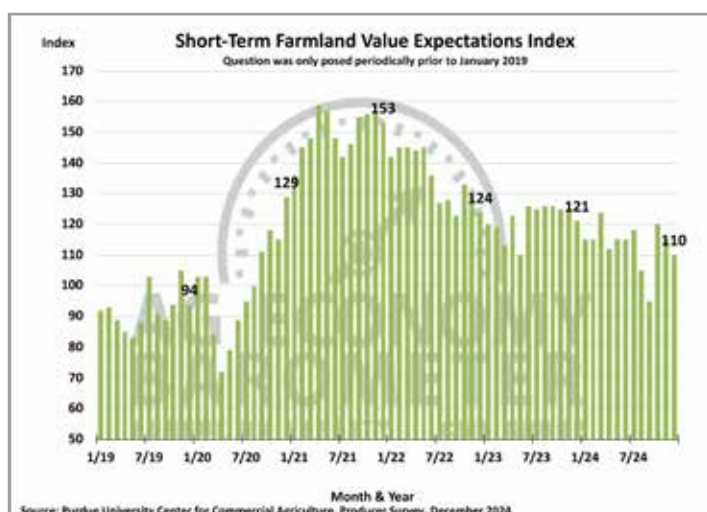
Indices of Current Conditions & Future Expectations, Oct 2015-Dec 2024.



Farm Financial Performance Index, Apr 2018-Dec 2024.



Farm Capital Investment Index, Oct 2015-Dec 2024.



Short-Term Farmland Value Expectations Index, Jan 2019-Dec 2024.

The Center for Commercial Agriculture, in partnership with the CME Group, reached an estimated 3.48 billion – 3.44 billion in print and online news; 40.5 million in radio, TV, and podcast broadcasts; 21,000 in report, charts, and table views on the official Purdue ag barometer website; and over 15,000 subscribers each month with a monthly email update highlighting the results from that month's *Ag Economy Barometer* survey. The *Ag Economy Barometer* in 2024 had a total of over 6,100 media placements and is regularly highlighted in RFD-TV, KMJ Now, Farms.com, CBS, Brownfield Ag, FOX, AgriTalk, as well as many others.

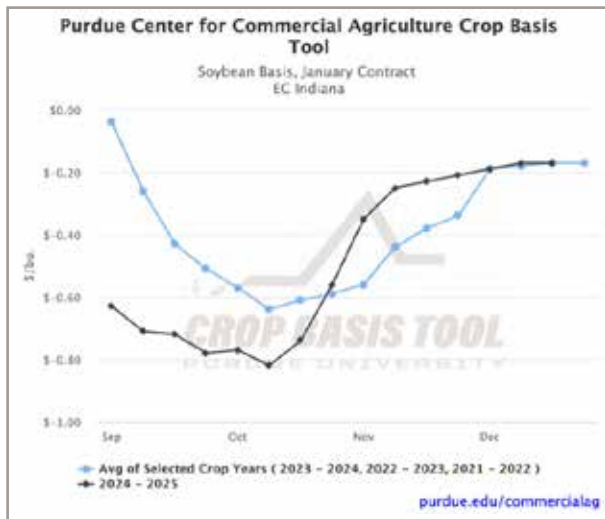
In 2024, the *Ag Economy Barometer* exhibited notable fluctuations, reflecting the volatility and complexity of the agricultural economy. The index peaked in November at 145, indicating heightened optimism following the U.S. presidential election. Just a couple months before, in September, the *Ag Economy Barometer* was 30 points lower and at its lowest of the year, at 88 as income expectations weaken around harvest. The *Index of Current Conditions* and *Future Expectations* mirrored this trend, with both indices showing notable highs in November (113 and 161, respectively) and significant dips in September (76 and 94, respectively). The *Farm Capital Investment Index* remained subdued for much of the year, with a low of 31 in August but rose to 55 in November, suggesting a late-year boost in investment confidence. Farmland Value expectations diverged between short- and long-term indices; short-term values fluctuated modestly, peaking at 124 in March, while long-term expectations remained consistently higher. The *Farm Financial Performance Index* experienced a steady climb from a low of 68 in September to close at 98 in December, highlighting an improvement in financial outlooks. Other topics surveyed in 2024 included carbon sequestration, solar energy, cover crop usage, ag policy, taxation and regulations.

DECISION TOOLS



The Center's Crop Basis Tool is a powerful resource for producers and grain industry participants, enabling them to analyze weekly nearby and deferred basis data for corn and soybeans in Indiana, Illinois, Iowa, Michigan, and Ohio. Leveraging daily cash price data from approximately 2,000 buyers provided by DTN, the tool computes regional average basis using Wednesday cash and futures prices. The data reflects activity across crop reporting districts, with buyer participation varying by week and region.

The tool includes state-level Ethanol Plant Basis and Soybean Processor Basis, as well as average Ohio River Basis, providing insights into export market dynamics and river-based terminal activity. These features complement the ability to view regional basis data across reporting districts, offering comprehensive coverage of basis trends. Users can also compare individual crop years simultaneously or analyze an average of selected historical years, a functionality that



Purdue Crop Basis Tool, Soybean January Contract for East Central Indiana, December 2024.

enhances understanding of basis patterns over time.

Since its launch at the Top Farmer Conference in January 2018, the Crop Basis Tool has become an invaluable resource in the Eastern Corn Belt. It supports decision-making through current and historical basis information, has served as the foundation for numerous in-person workshops on commodity marketing, has become a mainstay on the Center for Commercial Agriculture's monthly newsletters, and is used in the Department of Agricultural Economics undergraduate commodity marketing courses. In 2024, the Crop Basis Tool webpage was visited by over 2.3k people.

CROP BUDGETS



The Purdue Crop Cost and Return Guide offers farmers a resource to project financials for the coming cropping year. Prepared by Purdue faculty members Michael Langemeier, professor of ag economics, Shaun Castell, associate professor of agronomy, Dan Quinn, assistant professor of agronomy, Tony Vyn, professor of agronomy, and Bill Johnson, professor of weed science. The spreadsheet tool helps users to evaluate up to three full-season crops, and the wheat double-crop soybean system. Gross revenue, cost, and net returns are evaluated on a per acre and per unit basis. Breakeven prices to cover variable and total cost are computed for each crop.

Crop	Corn (Pounds/Buf)					Soybean (Pounds/Buf)					Wheat (Pounds/Buf)				
	Cost	Ret	Net	Unit	Yield	Cost	Ret	Net	Unit	Yield	Cost	Ret	Net	Unit	
Variable cost	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	
Fixed cost	0.50	0.50	0.00	0.50	0.50	0.50	0.50	0.00	0.50	0.50	0.50	0.50	0.00	0.50	
Total cost	1.50	1.50	0.00	1.50	1.50	1.50	1.50	0.00	1.50	1.50	1.50	1.50	0.00	1.50	



AG JOBS DASHBOARD

The Ag Jobs Dashboard provides real-time insights into the agricultural job market across the United States, offering a dynamic snapshot that contrasts with the USDA's five-year job market projections. By analyzing job postings, salaries, and categories within the agricultural sector, the system identifies key applicant qualifications, such as specific software skills or educational requirements. This tool enables users to validate emerging trends and aligns job market data with industry demands to inform career decisions and workforce development.

Area	Land Class	Corn Bu/A	Land Value						Land Value/bu			Projected Land Value	
			June 2023 \$/A	Dec 2023 \$/A	June 2024 \$/A	6/23-6/24 %	6/23-12/23 %	12/23-6/24 %	Amount 2023 \$	Amount 2024 \$	% Change 6/23-6/24 %	Dec 2024 \$	% Change 6/24-12/24 %
North	Top	222	13,000	14,500	14,222	9.4	11.5	-1.9	58.50	64.00	9.4	13,778	-3.1
	Average	191	10,083	11,469	11,250	11.6	13.7	-1.9	52.72	58.82	11.6	10,781	-4.2
	Poor	160	7,468	8,656	8,625	15.5	15.9	-0.4	46.68	53.91	15.5	7,938	-8.0
Northeast	Top	219	13,793	14,200	14,386	4.3	3.0	1.3	62.95	65.66	4.3	14,300	-0.6
	Average	187	11,583	11,610	11,727	1.2	0.2	1.0	61.85	62.62	1.2	11,525	-1.7
	Poor	157	8,692	9,420	9,300	7.0	8.4	-1.3	55.43	59.30	7.0	9,140	-1.7
W. Central	Top	233	13,965	15,030	13,941	-0.2	7.6	-7.2	60.06	59.96	-0.2	14,241	2.2
	Average	204	11,490	12,300	11,512	0.2	7.0	-6.4	56.34	56.45	0.2	11,310	-1.8
	Poor	179	9,321	9,532	9,432	1.2	2.3	-1.0	52.20	52.82	1.2	9,229	-2.2
Central	Top	225	14,852	14,633	14,600	-1.7	-1.5	-0.2	65.91	64.79	-1.7	14,267	-2.3
	Average	199	12,576	12,490	12,282	-2.3	-0.7	-1.7	63.09	61.61	-2.3	12,010	-2.2
	Poor	172	9,657	10,100	9,833	1.8	4.6	-2.6	56.04	57.06	1.8	9,417	-4.2
Southwest	Top	226	12,857	16,444	16,078	25.0	27.9	-2.2	56.83	71.06	25.0	16,072	0.0
	Average	191	9,450	11,833	11,578	22.5	25.2	-2.2	49.57	60.74	22.5	11,689	1.0
	Poor	149	7,182	7,744	7,644	6.4	7.8	-1.3	48.28	51.39	6.4	7,533	-1.5
Southeast	Top	203	12,213	11,500	11,000	-9.9	-5.8	-4.3	60.31	54.32	-9.9	10,400	-5.5
	Average	183	10,031	9,250	9,250	-7.8	-7.8	0.0	54.97	50.68	-7.8	8,500	-8.1
	Poor	158	8,125	6,500	6,500	-20.0	-20.0	0.0	51.59	41.27	-20.0	5,750	-11.5
Indiana	Top	226	13,739	14,831	14,392	4.8	7.9	-3.0	60.88	63.77	4.8	14,325	-0.5
	Average	196	11,210	11,982	11,630	3.7	6.9	-2.9	57.10	59.24	3.7	11,405	-1.9
	Poor	167	8,689	9,197	9,071	4.4	5.8	-1.4	52.08	54.37	4.4	8,758	-3.5
	Transition ²		25,228	29,916	30,666	21.6	18.6	2.5					-3.6
Recreation ³		8,170	8,067	8,089	-1.0	-1.3	0.3					2.6	



INDIANA FARMLAND VALUES & CASH RENTAL RATES

The Purdue Farmland Value and Cash Rent Survey is conducted annually in June. The survey respondents are knowledgeable of Indiana's farmland market and include farm managers, rural appraisers, farmland brokers, agricultural loan officers, farmers, and Farm Service Agency (FSA) county office directors. These professionals provide an estimate of the market value for poor-, average-, and top-quality farmland in the prior December, June of the current year, and a forecast for the upcoming December. To assess productivity of the farmland, respondents provide an estimate of long-term corn yield for top, average, and poor productivity farmland. Respondents also provide a market value estimate for land transitioning out of agriculture and for recreational land.

Indiana farmland prices reached record highs in 2024, according to the survey. Top-quality farmland averaged \$14,392 per acre, a 4.8% increase from June 2023, with average- and poor-quality land prices also rising by 3.7% and 4.4%, respectively. Most price growth occurred in late 2023, driven by limited land supply despite downward pressures from high interest rates and lower farm incomes. Regional trends varied significantly, with the Southwest surpassing the Central region in top-quality land values, while the Southeast experienced the most notable declines. Development-driven demand surged, increasing non-agricultural land values by 21.6%, while recreational land values dipped. Minimal statewide changes in cash rents reflected these broader land value trends.



INDIANA FARM CUSTOM RATES

The Center conducts a farm custom rate survey every other year to farmers, farm owners, farm custom operators and professional farm managers in Indiana who provide an estimate of the market value for custom work for hire. Last March, Michael Langemeier, with the help of Purdue Extension educators and specialists, published the 2023 Indiana Farm Custom Rates for land preparation, fertilizer and chemical application, grain planting, grain harvesting, machinery rental, grain hauling, and/or mowing/baling work.

RESEARCH & PUBLICATIONS

OVERVIEW

The Center’s vision is to be the leading source of management education and knowledge generation for the farmers in the business of producing the world’s agricultural products. Our research, education, and delivery will be world class. Our perspective will be global and science-based, but with impact for stakeholders in their local setting.

Focus from the Center’s expertise can be placed in five categories. The Center’s faculty have extensive knowledge and research in farm business management & strategy, farm financial management, farmland economics, crop & livestock marketing, and farm policy topics. In 2024, the Center produced a total of 70 new online resources, including 21 written web articles, 29 podcasts and 20 videos.

AG POLICY

FARM BILL PROGRAM & CROP INSURANCE DECISIONS

This year, the Center featured three key publications on agricultural policy and law. Brad Lubben, policy specialist and extension associate professor from the University of Nebraska-Lincoln, shared insights at the Purdue Top Farmer Conference on the one-year extension of the current farm bill and the economic challenges shaping farmers’ safety net and commodity program choices for 2024. Another discussion, led by Purdue economists James Mintert and Michael Langemeier alongside Lubben, explored the differences between PLC and ARC programs, equipping farmers to make informed program selections for the 2024 crop year. A third publication focused on 2024 crop insurance decisions, offering practical guidance on revenue protection coverage levels, SCO insurance considerations, and strategies tailored to farmers enrolled in the PLC program. These resources provide actionable insights for navigating the evolving ag policy landscape.



Michael Langemeier and James Mintert discuss key farm policy issues on the Purdue Commercial AgCast.

	PODCAST	YOUTUBE	WEB
DATE	DOWNLOADS	VIEWS*	PAGEVIEWS*
<i>Farm Bill Directions & Decisions</i>	1/10/24	402	626
<i>Plc Or Arc: Making Your 2024 Farm Bill Program Price Protection Decision</i>	2/29/24	179	739
<i>Making Your 2024 Crop Insurance Decision</i>	3/4/24	150	536

*all time views since publication, data pulled January 17, 2025

BUSINESS STRATEGY

MANAGEMENT DECISIONS & SKILLS

In 2024, the Center’s farm business management and strategy publications provided comprehensive insights into the evolving agricultural landscape. We explored the surge in renewable diesel production and its implications for the soybean market, featuring discussions with experts like Dr. Scott Irwin from the University of Illinois. Our series on strategic risk management offered practical guidance on enhancing farm agility and resilience, addressing unanticipated challenges such as policy shifts and disease outbreaks. Additionally, we delved into the importance of key resources, including human capital and information technology, in shaping the future of farming operations. These publications aimed to equip producers with the knowledge and tools necessary to navigate uncertainties and position their farms for long-term success.

SCAN ME

Find out how you can mitigate your farm’s strategic risk exposure and how you can position your farm to not only survive but thrive in a risky world. This 3-part video podcast series can be found by scanning the QR code.



	PODCAST	YOUTUBE	WEB
DATE	DOWNLOADS	VIEWS*	PAGEVIEWS*
<i>Renewable Diesel Boom & Where Biofuels Are Headed</i>	1/24/24	370	290
<i>Farm Agility, Resilience & Strategic Risk</i>	1/31/24	348	301
<i>Producer Sentiment & Resilience At The Purdue Top Farmer Conference</i>	2/6/24	230	32
<i>Positioning Your Farm For Long-Term Success Commodity Classic 2024</i>	3/6/24		310
<i>Farm Resilience, Management Practices, And Producer Sentiment: Segmenting U.S. Farms Using Machine Learning Algorithms</i>	4/4/24		13
Managing Strategic Risks On Your Farm			
<i>Importance Of Managing Strategic Risks, Part 1</i>	5/26/24	111	52
<i>The Impact Of Strategic Risks, Part 2</i>	5/31/24	68	42
<i>Improving Your Strategic Risk Plan, Part 3</i>	6/7/24	42	21
Key Resources			
<i>Improving Your Strategic Risk Plan</i>	6/7/24		21
<i>The Impact Of Strategic Risks</i>	5/31/24		42
<i>Maintaining Key Resources Amid Strategic Uncertainty</i>	5/29/24		21
<i>Importance Of Managing Strategic Risk</i>	5/24/24		52
<i>Discussing Key Resources And Risk Exposure In Your Farm Business Plan</i>	5/7/24		27
<i>Key Resources Determining The Future Of The Farm: Human Capital & Information Technology</i>	4/4/24		9
<i>Integrated Risk Management: Developing An Asset-Based Business Strategy</i>	3/15/24		4
Farm Retirement & Succession Preparedness	6/25/24	167	138
<i>Corn Was King: The Transition To Soy In U.S. Production Agriculture</i>	7/11/24		45
<i>Agricultural Jobs & Labor Update</i>	8/2/24	166	44
<i>Understanding Generational Differences Within A Family Business</i>	8/9/24	192	88
<i>Trends In Corn Plant Populations</i>	9/5/24		84
<i>Connecting Soil Health To Economics: A Look At Balancing Farm Goals</i>	9/16/24		22
<i>The Economics Of Reduced Tillage And Cover Crops: Exploring Aggregated Data</i>	9/16/24		23
<i>The 2024-25 Financial Downturn: Who Is The Most Vulnerable</i>	10/2/24		176
<i>Exploring The Organic Grain Industry: Challenges And Opportunities</i>	10/18/24	163	103
<i>Long-Term Trends In Pigs Per Litter</i>	11/12/24		54
<i>Ag Innovation & Policy Direction: A Preview Of Upcoming Purdue Top Farmer Conference</i>	12/11/24	228	13

*all time views since publication, data pulled January 17, 2025

FINANCIAL MANAGEMENT

STATEMENTS & PROFITABILITY ANALYSIS

The Center provides resources on basic financial statements and analysis, as well as more advanced competitive strategy concepts. A case farm is often used to provide as an example on topics and Purdue ag economists Michael Langemeier often writes on cropping system financials, benchmarking, strategic management, cost of production, and technical and economic efficiency. Purdue ag economists Brady Brewer specializes in agricultural finance and production topics that include farm profitability, credit availability, production efficiencies, credit choice of farmers, and farmland values.

In 2024, Dr. Brewer and Dr. Langemeier released a couple Purdue Commercial AgCast episodes reviewing the USDA Farm Income Forecast updates in addition to discussing the Federal Fund interest rate and implications for the farm economy.

2024 Purdue Crop Cost & Return Guide
March 2024 Estimates

Table 1. Breakdown per Acre Crop Budgets for Low, Average, and High Productivity Indiana Soils

Crop	Low Productivity Soil			Average Productivity Soil			High Productivity Soil		
	Yield	Cost	Return	Yield	Cost	Return	Yield	Cost	Return
Corn	110	\$1.10	\$1.10	120	\$1.20	\$1.20	130	\$1.30	\$1.30
Soybeans	40	\$1.00	\$1.00	45	\$1.10	\$1.10	50	\$1.20	\$1.20
Wheat	40	\$1.00	\$1.00	45	\$1.10	\$1.10	50	\$1.20	\$1.20
Beans	10	\$1.00	\$1.00	10	\$1.00	\$1.00	10	\$1.00	\$1.00

Note: This table provides a general overview of crop costs and returns. Actual costs and returns may vary based on local conditions, soil types, and management practices. For more detailed information, please refer to the full report available at [purdue.edu/agcost](#).

	PODCAST	YOUTUBE	WEB
	DATE	DOWNLOADS	VIEWS* PAGEVIEWS*
<i>International Benchmarks For Corn Production</i>			193
<i>USDA Farm Income Forecast, February 2024 Update</i>	2/14/24	337	472
<i>International Benchmarks For Soybean Production (2024)</i>	3/6/24		659
<i>International Benchmarks For Wheat Production (2024)</i>	4/4/24		221
<i>Interest Rate Dilemma - Fixed Or Variable</i>	4/12/24		135
<i>Navigating Farm Loan Interest Rates</i>	4/19/24	232	430
<i>Conventional & Organic Enterprise Net Returns, Finbin Data From 2019 To 2023</i>	7/12/24		65
<i>Crop Budget Spreadsheet</i>	11/12/24		2,881
<i>Prospects For Swine Feed Costs In 2025</i>	12/10/24		43
<i>2025 Crop Cost And Return Guide</i>	12/12/24		514
<i>Benchmarking Crop Machinery Cost And Investment</i>	45646		459

**all time views since publication, data pulled January 17, 2025*



LAND MARKETS

FARMLAND PRICES & RENTS

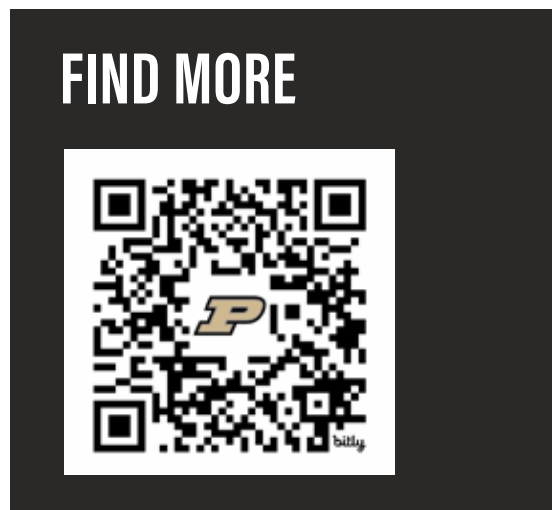
The Purdue Farmland Value and Cash Rent Survey is conducted annually in June. The survey found in 2024, Indiana farmland prices reached record highs. Top-quality farmland averaged \$14,392 per acre, a 4.8% increase from June 2023, with average- and poor-quality land prices also rising by 3.7% and 4.4%, respectively. Most price growth occurred in late 2023, driven by limited land supply despite downward pressures from high interest rates and lower farm incomes. Regional trends varied significantly, with the Southwest surpassing the Central region in top-quality land values, while the Southeast experienced the most notable declines. Development-driven demand surged, increasing non-agricultural land values by 21.6%, while recreational land values dipped. Minimal statewide

changes in cash rents reflected these broader land value trends. Read more on this survey under decision tools section of this report (page 13) – the full survey results can be found online by scanning the QR code.

Purdue ag economist and principal investigator Todd Kuethé discuss the 2024 farmland price and cash rent results and insights on a couple episodes of the *Purdue Commercial AgCast* with hosts James Mintert and Michael Langemeier. The team also produced a follow-up podcast episode providing advantages and disadvantages between flexible and fixed cash rent leases – a topic especially relevant this year as crop margins tightened.

	PODCAST	YOUTUBE	WEB
	DATE	DOWNLOADS	VIEWS* PAGEVIEWS*
<i>Producer Sentiment, Farmland Value Expectations, And Farm Financial Performance</i>	1/17/24		71
<i>Comparing Net Returns For Alternative Leasing Arrangements</i>	8/7/24		528
<i>(Part 1) 2024 Indiana Farmland Values & Market Trends</i>	9/11/24	175	903 261
<i>(Part 2) 2024 Indiana Cash Rent Trends</i>	9/26/24	157	4077 286
<i>Flexible Vs. Fixed Cash Rent Farmland Leases</i>	10/25/24	163	277 232

*all time views since publication, data pulled January 17, 2025



MARKETING & OUTLOOK

FORECASTS USING THE CROP BASIS TOOL & USDA REPORTS

Basis is an important component for crop producers to consider when marketing grain because it is used to convert the futures price to a local cash price. Futures prices and basis follow different seasonal patterns so the ability to manage futures price risk and basis risk independently creates an opportunity to improve returns.

Since its inception the Center's Crop Basis Tool has allowed users to examine weekly nearby and deferred basis for corn and soybeans in Indiana, Illinois, Iowa, Michigan, and Ohio. The tool includes state-level Ethanol Plant Basis and Soybean Processor Basis, as well as average Ohio River Basis, providing insights into export market dynamics and river-based terminal activity.

Purdue ag economists and co-creators of the *Purdue Crop Basis Tool*, Nathanael Thompson and James Mintert, regularly discuss the corn and soybean basis, while demonstrating use of the Center's [Crop Basis Tool](#). Josh Strine, Purdue agricultural economist graduate student, reviews trends in basis patterns each month and his write-up is included in the Center's monthly AgNews-letter. Also in 2024, following the Purdue Top Farmer Conference, Brady Brewer hosted Chad Hart, a professor and crop marketing specialist at Iowa State University, on an episode of the Purdue Commercial AgCast. The popular episode explored the shift to "normalcy" for crop prices and farm incomes in 2024 and provided insights into the challenges and opportunities ahead.

	PODCAST	YOUTUBE	WEB
DATE	DOWNLOADS	VIEWS*	PAGE/VIEWS*
<i>Corn & Soybean Basis Continue To Strengthen</i>			70
<i>The Outlook For Corn & Soybeans</i>		553	675
<i>Corn & Soybean Basis Steady To Stronger In Most Locations, Weaker At Ohio River Terminals</i>			95
<i>Corn And Soybean Basis Continue To Steadily Strengthen At Most Eastern Corn Belt Locations</i>			58
<i>Corn & Soybean Basis Steady To Slightly Stronger Across The Eastern Corn Belt</i>			60
<i>Corn & Soybean Basis Continue To Strengthen Despite Being Significantly Weaker Than Historical Basis Levels</i>			114
<i>Stay Tuned For Possible Basis Swings This Summer</i>			116
<i>Corn & Soybean Basis Strengthen Through June & July</i>			91
<i>July Crop Basis Movement Varies Significantly By Region As Marketing Year Nears End</i>			65
<i>Crop Basis Levels Finish Weaker Than Recent Years</i>			77
<i>Northern Indiana Corn Basis Begins Weaker, But Narrows Gap With Southern Indiana As Harvest Proceeds</i>			66
<i>Indiana Corn And Soybean Basis Rally Heading Into November</i>			43
<i>Indiana Basis Strengthening Slows To End 2024</i>			24

*all time views since publication, data pulled January 17, 2025



MAINTAINING KEY RESOURCES AMID STRATEGIC UNCERTAINTY

Margaret Lippsmeyer, Michael Langemeier, and Michael Boehlje

INTRODUCTION

Changes in production agriculture have altered the level and type of risk faced by farmers. Farm managers face a variety of challenges including shifts in decision making processes (data driven insights), changing metrics for farm performance (sustainability), different day-to-day practices, new technologies, increased global competition in commodity markets, and novel strategies to manage risk at the farmgate. These challenges present significant risks which permeate through targeted risk management strategies and prompt the need for an integrated risk management approach. This article ties together our previous discussions of risk in production agriculture, which includes integrated risk management (Lippsmeyer, Langemeier, and Boehlje, 2024a) and the importance of strengthening key resources (Lippsmeyer, Langemeier, and Boehlje, 2024b; Lippsmeyer, Langemeier, and Boehlje, 2024c).

CHANGE ON THE HORIZON

Many of the risks in production agriculture are also present for large scale agribusinesses and manufacturing companies, but risk mitigation strategies and resource availability differ. Agribusinesses often have a much greater focus on mitigating strategic risk and strengthening organizational resources including process efficiency, brand recognition, business strategy, knowledge sharing, and cross training of employees. For larger businesses it is more common to have multi-year forecasts, long-run business plans, and a full-time risk officer in charge of mitigating risk and guiding the business plan through disruptions.

Allocation of resources to this purpose leads to being more aware of emerging risks and more proactive in developing contingency plans.

Costs associated with allocating time or funds to perform market research, developing strategy, assessing risks, and evaluating changes in the business environment are high. Farms may be unable to justify costs associated with hiring a risk officer, lack qualified employees for that position, or only have limited time to dedicate to performing such duties.

An alternative solution to hiring an employee for market research and risk evaluation is involvement in peer groups. Peer groups with constituents that are not your competitors nor necessarily in the same industry can provide meaningful insights on major economic shifts of concern. Discussions about labor retention, data analytics, interest rates, evolution of trade agreements are all factors influencing production agriculture, but also many other industries. Engaging in peer groups is useful to identify challenges to key business resources and pinpoint strategies to maintain or improve your farm's resource base in anticipation of shocks or stressors in the business environment.

For production agriculture there is significant opportunity and risk associated with the development of artificial intelligence and automation. This is an example of where observing change in other industries or other geographic regions can be useful in developing an effective adaptation strategy. In many ways manufacturing closely resembles farming – some describe it as biological manufacturing. However, the manufacturing industry has more effectively

incorporated the use of data driven insights and automation. Manufacturing firms use immense levels of automation combined with human resources to improve effectiveness of labor and reduce production costs (Acemoglu and Restrepo, 2022). As U.S. production agriculture is faced with increasing labor costs; growing use of artificial intelligence; and automation for planting, spraying, and harvesting; innovations and adaptations in other industries should be used as an antecedent in developing farm strategy.

Solinftec's Solix Sprayer is one of the early examples of automation in production agriculture. This company is very successful in South America using solar powered autonomous sprayers equipped with artificial intelligence driven see and spray for weed and pest prevention. Solinftec monitors more than 80% of all sugar cane production in Brazil and is steadily expanding field trials year after year for corn and soybean production in the U.S. (Solinftec, 2024). This is an example of a cutting-edge technology for U.S. production agriculture which has already been adopted more broadly in other geographic regions (South America). Other changes in the production environment include shifts towards yield-based guarantees which further reduce production risk. Growers Edge, in partnership with Munich Re, has developed a Crop Plan Warranty Program which encourages adoption of their new products and production practices by offering compensation for yield levels below an established benchmark (Growers Edge, 2024). Adoption of this model has the potential to further increase the speed of technology adoption and the use of new production practices by reducing downside risk. Farmers should keep a watchful eye on trends evolving in their local areas, but also regions with greater consolidation levels and similar cropping practices, as they likely foreshadow evolution of domestic production systems.

The potential for product differentiation presents another source of strategic uncertainty. Production and cost efficiency were historically the core determinants of U.S. farm performance. That is, most producers were successful if they were proficient on the production side and had relatively low per-unit costs. However, global commodity markets are challenging this strategy. U.S. producers are steadily shifting away from commodity markets and into differentiated product markets at the farm level, rendering production efficiency alone an inadequate business strategy. This shift is characterized by production of value-added products where producers are focused on strategies to capture premiums.

As a result, portfolio complexity is becoming much more common with farms producing commodity corn, waxy corn, popcorn, white corn, non-GMO soybeans,

conventional soybeans, and seed soybeans all within the same operation. Differentiated products use many of the same production technologies but expand the revenue stream for the farm and decrease dependence on any singular revenue source.

PRESSURE TO EVOLVE

Changes in production technologies, data collection capabilities, and risk mitigation strategies have occurred in recent years, making it difficult to sustain a farm's competitive advantage. Technological advancements improve yields and drive down production costs, while novel risk mitigation strategies aim to protect farms from downside risk. These changes have resulted in more complex decisions for farm managers, having to weigh the benefits and costs of adopting new technologies, business strategies, and risk mitigation efforts. The rapid rates of change create difficulties for producers to adapt to emerging market trends in an effective manner, particularly for smaller scale farmers with various duties and responsibilities. As a result, the complexity of farm management has been identified as a key contributor to consolidation in production agriculture (Langemeier and Boehlje, 2017). Decision makers are spread thin managing these uncertainties, causing producers that are unable to adapt effectively to exit the industry, and those able to adapt managing larger farming operations.

Farm management and production technologies have progressed considerably in recent years. Changes include adoption of genetically engineered seeds, use of irrigation, varying tillage methods, use of contract sales, increases in production efficiency with mechanization, and product differentiation (O'Donoghue, et al., 2011). However, with high investment costs and varying degrees of uncertainty, adoption rates for new "smart farming" technology and management practices have been modest for even the most proactive farm managers.

A survey by the Purdue University Center for Commercial Agriculture assessed farm adoption of several precision agriculture technology practices in April of 2023. Survey results indicated that less than 75% of commercial producers had adopted one or more of the listed precision agriculture technologies with 69% having adopted yield monitors and a much smaller proportion (27% of respondents) adopting drone technologies (Lippsmeyer, et al., 2024). Additionally, the study surveyed adoption of various management practices, finding only 55% of producers reported using succession plans, 61% using written crop lease agreements, and 51% using financial ratios to inform on farm decisions. These low adoption rates for precision agriculture technologies and their connection with perceived managerial ability indicate

that while adoption of management practices and precision agriculture technologies has increased, there remain significant disparities between practices farm managers have adopted versus what could be adopted. These variations across farms are what create competitive advantages for early adopters, but also high degrees of inefficiency for laggards.

Compounding these stressors, formal management training is not comprehensive, creating variability in management acumen and dependence on trial and error (accumulated experience). Most training programs are structured with management training and risk mitigation strategies which fit into predetermined silos: managing farm finances and financial risk; managing market risk; managing human resources and human risk; legal risk management including contract growing or lease agreements; and managing production technologies, inputs, and production risk. Courses are often effective at guiding improvement of management in each aforementioned area and reducing these specific types of risk, yet they leave managers unprepared to effectively manage interaction between resources, particularly organizational resources and mitigate risks which seep further into an operation. As a result, even producers who pursue formal management training may still lack an effective business strategy to mitigate risks that simultaneously affect several risk types.

In our previous discussion of key resources, we devoted significant attention to organizational resources, including business strategy, reputation, and process efficiency, and resilience (Lippsmeyer, Langemeier, and Boehlje, 2024c). These resources lack tangibility but are highly relevant for farm managers in an industry characterized by profound structural change with a significant chance of being out of position strategically. Managing organizational resources can be addressed using an integrated risk management approach which addresses different types of risk in a comprehensive manner, rather than the “siloed” approach commonly used in agriculture. In contrast, this integrated approach encourages producers to reflect on current and future business strategy, assess performance, and even develop a “smart exit” strategy if a business’s strategic positioning needs realignment. An integrated risk management approach uses scenario analysis and contingency planning in addition to off the shelf risk management tools to mitigate potential losses.

CONCLUSION

Changes in global competition, production technology, new product development and resource constraints have increased the strategic uncertainty faced by individual agricultural producers. Compounding factors, including capital constraints, labor shortages,

and technological complexity, complicate the role of farm management and a farm’s ability to maintain parity with rates of change in the industry. Management training and risk mitigation strategies which fit into predetermined silos are often ineffective in preparing farm managers to effectively manage their operation amid strategic uncertainty. The degree and speed of change in agriculture presents a need for integrated risk management at the farm level, which requires implementation of a clearly defined business strategy - agile enough to adapt to unanticipated events. This article is meant to explore challenges in agriculture and foreshadow those expected to develop further in years ahead. We encourage producers to use this article as a starting point in discussions for developing their farm’s strategic plan.

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COMPARING NET RETURNS FOR ALTERNATIVE LEASING ARRANGEMENTS

Michael Langemeier

Obtaining control of land through leasing has a long history in the United States. Leases on agricultural land are strongly influenced by local custom and tradition. However, in most areas, landowners and operators can choose from several types of lease arrangements. With crop share arrangements, crop production and often government payments and crop insurance indemnity payments are shared between the landowner and operator. These arrangements also involve the sharing of at least a portion of crop expenses. Fixed cash rent arrangements, as the name implies, provide landowners with a fixed payment per year. Flexible cash lease arrangements provide a base cash rent plus a bonus which typically represents a share of gross revenue in excess of a certain base value or threshold. Each leasing arrangement has advantages and disadvantages. These advantages and disadvantages are discussed on the Ag Lease 101 web site ([here](#)). Rather than focusing on the advantages and disadvantages of various lease arrangements, this article uses a case farm in west central Indiana to illustrate net returns to land derived from crop share, fixed cash rent, and flexible cash lease arrangements. This article updates an article written by Langemeier (2023).

LEASING ARRANGEMENTS

Net return to land from 2007 to 2024 from a landowner perspective were computed for a case farm in west central Indiana. Information for 2024 was projected using income and cost projections in late July. The case farm had 3000 crop acres and utilized a corn/soybean rotation. Lease arrangements examined

included a crop share lease, a fixed cash rent lease, and a flexible cash lease.

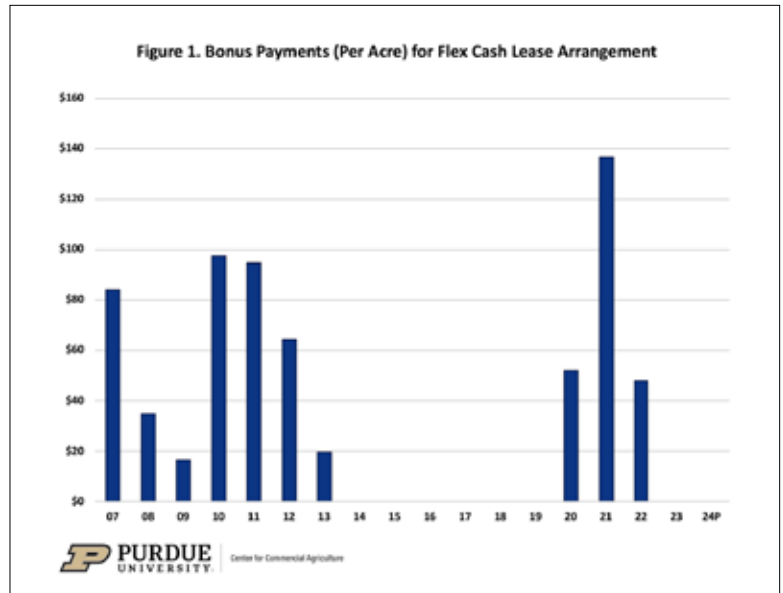
With the crop share lease the landlord received 50 percent of all revenue (crop revenue, government payments, and crop insurance indemnity payments). In addition to providing the land, the landowner paid 50 percent of seed, fertilizer, and chemical (herbicides, insecticides, and fungicides) expenses as well as 50 percent of crop insurance premiums. The case farm participated in government programs (e.g., ARC-CO and PLC programs), and purchased 85 percent revenue protection coverage.

Fixed cash rents were obtained from the annual Purdue Farmland Value Survey. Specifically, cash rents for average productivity land in west central Indiana were used. The flexible cash lease arrangement used a base cash rent that was 90 percent of fixed cash rent. In addition to the base case rent, the landowner received a bonus of 50 percent of the revenue above non-land cost plus base cash rent if revenue exceeded non-land cost plus base cash rent. Revenue included crop revenue, government payments, and crop insurance indemnity payments. All cash and opportunity costs, except those for land, were included in the computation of non-land cost. More discussion regarding possible parameters that can be used for flexible cash leases can be found in Langemeier (2018).

COMPARISONS OF NET RETURN TO LAND AMONG LEASING ARRANGEMENTS

Before making comparisons between leases, we will briefly discuss bonus payments for the flexible cash lease. Per acre bonus payments for the flex cash lease arrangement are illustrated in figure 1. During the 2007 to 2024 period, bonus payments were incurred in 10 years. Bonus payments ranged from \$0 to \$137 per acre, and averaged \$36 over the 2007 to 2024 period. From 2007 to 2013, the average bonus payment was \$59 per acre. The annual bonus payment from 2014 to 2019 was zero. The bonus payment from 2020 to 2022 averaged approximately \$79 per acre. There was no bonus payment in 2023 and the projected bonus payment in 2024 is \$0. The largest bonus payment, \$137 per acre, occurred in 2021.

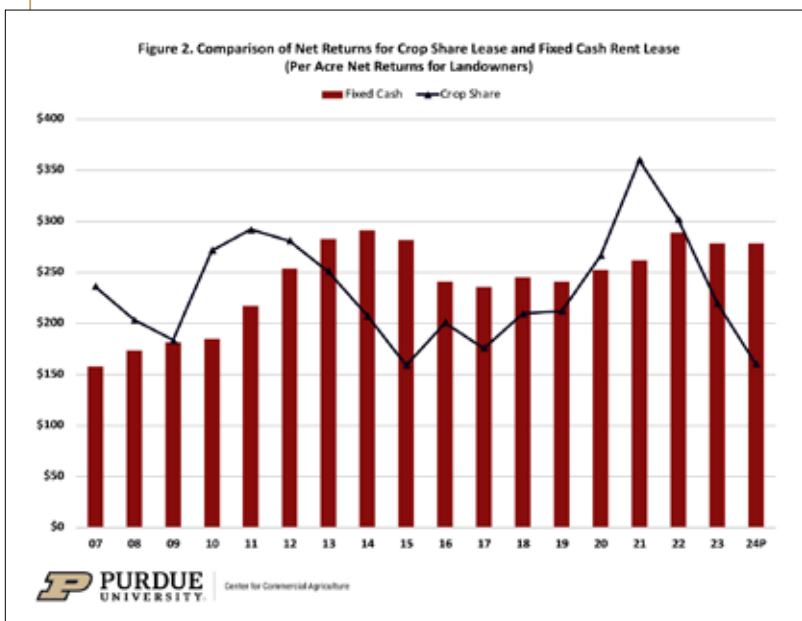
Pairwise comparisons were used to compare the three leasing arrangements. Figure 2 compares the crop share lease to the fixed cash rent lease. The landowner net return for the crop share lease was more variable. As would be expected, net return for the crop share lease increased faster when revenue was increasing, but also decreased more rapidly when revenue was declining. The net return for the crop share lease was higher than the net return for the fixed cash rent lease from 2007 to 2012. From 2013 to 2019, the net return for the crop share lease was from \$29 per acre (in 2019) to \$122 per acre (in 2015) below the net return for the fixed cash rent lease. On average, from 2013 to 2019, the net return for the crop share lease was \$57 per acre below the net return for the fixed cash rent lease. From 2020 to 2022, the net return for the



crop share lease was from \$12 to \$98 higher than the net return for the fixed cash rent lease. The average difference during the 2020 to 2022 period was \$41 per acre. The net return for the crop share lease was \$58 per acre lower than the net return for the fixed cash rent lease in 2023. Due to relatively high input costs and relatively low crop prices, the net return for the crop share lease is projected to be \$118 per acre lower than fixed cash rent in 2024.

Figure 3 compares the net return for the flexible cash lease to the net return for the fixed cash rent lease. This graph looks remarkably similar to figure 2. Net returns for the flexible cash lease were more volatile than the net returns for the fixed cash rent lease. The net return for the flexible cash lease was relatively higher in 2007-2008, 2010-2012, and 2020-2022.

During the 2007 to 2013 period, the average net return for the flexible cash lease was similar to the average net return for the share rent lease, and \$38 per acre higher than the average net return for the fixed cash rent lease. From 2014 to 2019, the annual net return for the flexible cash rent lease was on average \$26 per acre below the net return for the fixed cash rent lease. However, it is important to note that during this same period the net return for the flexible cash lease was \$36 per acre higher than the net return for the crop share lease. From 2020 to 2022, the net return for the flexible cash lease was \$52 per acre higher than the net return for the fixed cash rent lease and \$11 per acre higher than the net return for the crop share lease. As noted above, a bonus payment was not made in 2023 and is not expected in 2024. Thus, the 2023 and 2024



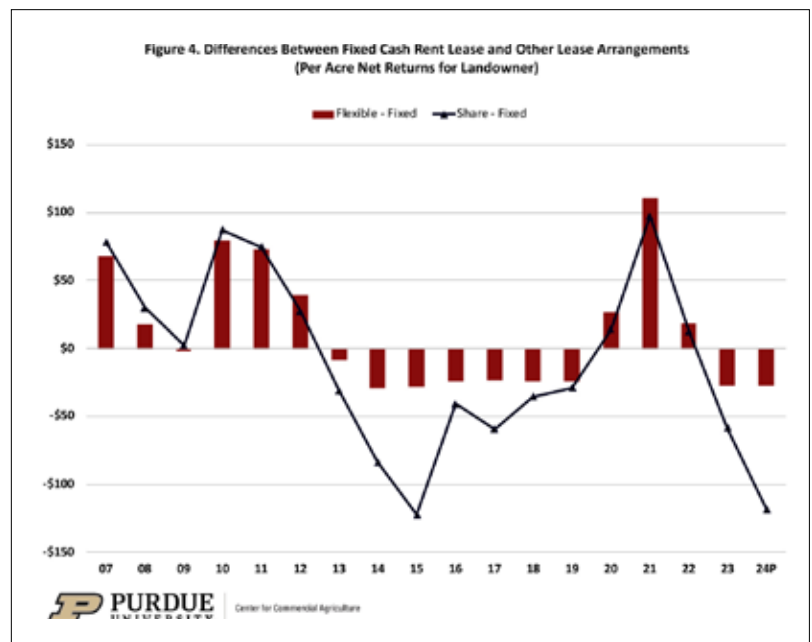
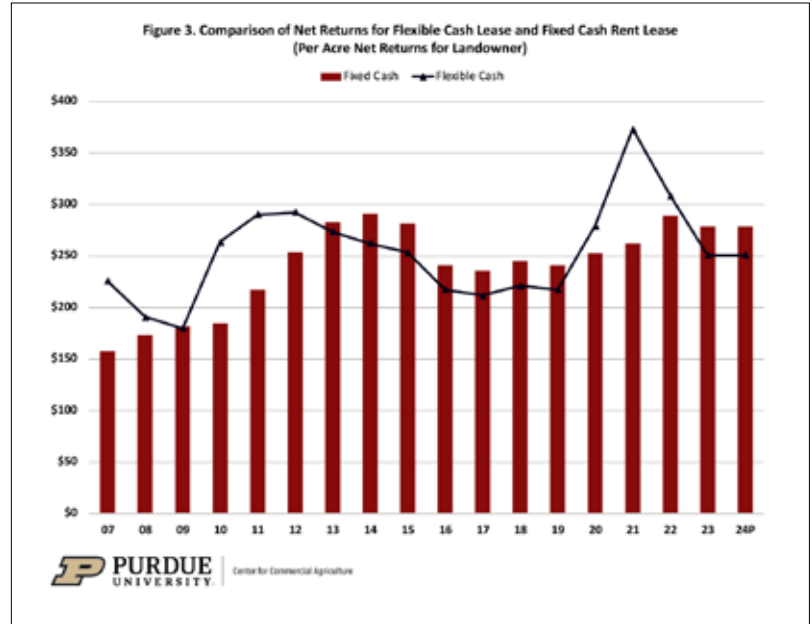
net returns for the flexible cash rent lease are expected to be \$28 per acre lower than the net return for the fixed cash rent lease.

Differences between the fixed cash rent lease and the other two leasing arrangements are illustrated in figure 4. This chart was created by subtracting fixed cash rent payments per acre from the net return for the flexible cash lease and the net return for the crop share lease. As noted above, the net returns for the flexible cash lease mimic those for the crop share lease. However, there are a few differences in the trends for these two leases. The flexible cash lease did not increase as much as the crop share lease in 2007, 2008, and 2010. More importantly, from a downside risk perspective, the flexible cash lease did not decrease as rapidly as the crop share lease from 2013 to 2015, and in 2023 and 2024. The net return for the flexible cash rent lease has been relatively higher than the net return for the crop share lease since 2012.

What about differences in the potential net returns for the three crop leases in 2025? Early projections for 2025 show a potential bonus for the flexible cash rent lease of \$0. The crop share lease is also projected to have lower net returns than both the fixed cash rent lease and the flexible cash rent lease. Continued high input prices and relatively low crop prices are adversely impacting potential net returns for crop share and flexible cash rent leases. Of course, the projections for 2025 are sensitive to income and cost budget assumptions.

SUMMARY & CONCLUSIONS

This article used a case farm in west central Indiana to compare the net return to land for crop share, fixed cash rent, and flexible cash leases. The average net returns to land from a landowner perspective were similar among the three lease arrangements. The flexible cash lease mimicked the ups and downs of the crop share lease. However, the upward and downward spikes for the flexible cash lease were less pronounced than those for the crop share lease. Choosing among the leases depends on a landowner's desire to capture improvements in crop share revenue and ability to withstand downside risk. The crop share and flexible cash leases allow landowners to more fully capture annual improvements in crop revenue, but also increase the probability of downward movements in annual net returns.



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WAYS WE SHARE

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TOTAL PAGEVIEWS IN 2024



WEBSITES

The department's *Purdue Agricultural Economics Report* (PAER) is hosted on the Center's website along with other articles, publications, upcoming events and programs, recorded videos and podcasts, presentations and tools. In 2024, the Center's home website averaged 8k visitors per month with over 174k pageviews.

The Center also hosts an additional website for the *Purdue University/CME Group Ag Economy Barometer*. The site is updated monthly with survey results including a comprehensive report, press release, updated charts, tables and media files. With an average of 1.5k visitors per month, the Center's *Ag Economy Barometer* website averaged 49k pageviews in 2024.



PODCASTS

The Center delivered 31 new *Purdue Commercial AgCast* podcast episodes in 2024, averaging nearly 225 downloads within the first 30 days of an episode's posting for a total of 11,150 during the year. Show notes with the full audio transcription, slide decks, and related links and/or resources that were discussed during an episode are posted alongside the audio player on the Center's website. Apple's Podcast is the favorite platform for listening providing 44% of the downloads followed by about 28% of listeners choosing to access the podcast directly from the Center's website.

EMAILS

Making producers and agribusiness personnel aware of the information available from the Center is a challenge. The Center's monthly newsletter, *Commercial AgNews*, has proven to be an effective way to provide updates regarding upcoming programming as well as what's new on the Center's website to over 9.3k subscribers.

The Center also sends email notices on newly released articles, podcasts, and videos. With an average open rate 39%, it's proven to be an effective way to reach a larger audience. The *Commercial AgNews* e-newsletter often highlights web postings an additional time in case readers missed it in the first email.

DECEMBER 20, 2024

COMMERCIAL AGNews

HIGHLIGHTS

Ag Innovation & Policy
Direction: A Preview of
Upcoming Top Farmer
Conference

Indiana Basis
Strengthening Slows to
End 2024

Benchmarking Crop
Machinery Cost and
Investment

Update from the Center

The *Purdue Top Farmer Conference* is coming up on January 10th and it will provide you with a great opportunity to think about what the future holds for U.S. agriculture. Our keynote speaker, Matt Erickson, will share insights into how legislation affecting U.S. agriculture could play out in 2025. Having served as Chief Economist for the U.S. Senate's Agriculture Committee, Matt has over a decade of Washington experience and will discuss the challenges ag legislation will face in the new year. He'll be followed by Gary Schnitkey from the University of Illinois who has been thinking about how you should look at your farmland and machinery acquisition strategies in these challenging times. The conference will also include sessions focused on how farmland markets are changing, how AI can help you improve your financial management, the payoff to precision ag and wrap up with real world strategies to help reduce your cost per bushel of corn and soybeans in 2025. Registration information and details are available on the [Center's website here](#). You can attend the conference virtually via Zoom or in person and registrants can view videos and the speakers' slide decks at any time following the conference.

Farmer sentiment jumped again in November, with the *Purdue University/CME Group Ag Economy Barometer* climbing 30 points to a reading of 145. This marked the highest level of farmer optimism since May 2021. Both of the barometer's sub-indices increased in November. The *Future Expectations Index* saw the largest jump, rising 37 points to 161, while the *Current Conditions Index* increased 18 points to 113. The November sentiment boost reflected growing optimism about a more favorable regulatory and tax environment for agriculture following the U.S. election. The November survey was conducted from Nov. 11-15, 2024, the week following the U.S. presidential election.

Finally, I wanted to let you know that we are transitioning the Center for Commercial Agriculture's leadership to my long-time colleague, Dr. Michael

SOCIAL MEDIA

Ranging from sharing barometer reports and monthly highlights to promoting upcoming programs and recently released resources, social media is an important way to reach a wider audience and get information into new hands. The Center is active on both X/Twitter and Facebook with over 2.3k followers.



SHORTS IMPROVE REACH

Short-form videos have gained popularity this year on most social media platforms and YouTube shorts, 60-sec or less videos, have proven especially successful in sharing the Center's *Ag Economy Barometer* monthly hot topics – 3 short videos on solar leasing payments, biggest concerns for producers, and cover crop acreage topics were shared as shorts in 2024 as trial videos. The shorts alone reached over 8,000 YouTube feeds with 3.7k views, gained 62 likes and 8 subscribers to the Center's channel.

MOST VIEWED

2024 Indiana Cash Rent Trends, video AgCast episode 174, outperformed any video the Center's EVER posted! The video had over 16k impressions, resulting in over 4,000 views and gained the channel 39 new subscribers. Farmland markets and cash rents are always a topic of great interest to producers and the annual updates are always favorites, but we believe this year's video did exceptional well due to the shorter 30-minute length and YouTube's suggestion algorithm on related content on its platform.



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YOUTUBE SUBSCRIBERS

During 2024, 26 new videos were added to the Center's YouTube channel with over 16.8k views, 1.5k watch time hours, and the channel gained 120 new subscribers.



YOUTUBE

Podcasts and informational videos from the Center are shared with a broad audience from the Center's YouTube channel. Participants can view programs when it's convenient. Since the channel's launch in May 2016, the Center has delivered 247 recorded long-form videos on farm and financial management, land markets and insights into the Purdue/CME Group Ag Economy Barometer survey results. The Center's channel has over 84k lifetime views, 13.4k watch time hours and 1046 subscribers.

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