Purdue Farm Policy Study Group Meeting Summary

December 9, 2025

The following members were in attendance: Grant Bell, Dave Clark, Kendell Culp, Zeb Davis, Sarah Delbecq, Otto Doering, Ken Foster, Tim Galena, John Hardin, Scott Harper, Stephanie Harper, Stephanie Hopper, David Howell, Kenzie House, Levi Huffman, Joe Kelsay, Alan Kemper, Lisa Koester, Marshall Martin, Tom McKinney, Doug Mills, Peyton Mohler, Doug Morehouse, Shelby Myers, John Nidlinger, Olivia Reynolds, Danita Rodibaugh, Michael Shuter, Mark Townsend, Rick Ward, Steve Warner, Nicole Widmar and Mike Yoder

Excused: Brent Bible, JoAnn Brouillette, Tim Brusnahan, Tim Foltz, David Hardin, Bryan Kirkpatrick, Don Lamb and Christy Welch

NOTE: Please visit Farm Policy Study Group to access presentation documents.

View the Agenda here

Agenda Items

1. Student Attendees

A group of interested Purdue undergraduate students were able to join our discussions again this year: Clara Shoopman, Brady Wiley, Kyla Wolfe and Yixuan Xu. We will continue to host student attendees. We will invite undergraduate students for our December meetings and graduate students at July meetings going forward.

2. Expanding Membership

It was great to welcome several new members at the meeting. We continue to seek increased diversity in the membership of the group across a wide range of factors. We have made several great additions in the past couple of years but continue to seek new members and their perspectives. Please forward names and contact information to Ken Foster (kfoster@purdue.edu) if you would like to nominate an individual for membership. We also encourage you to invite such individuals as your guest to a future meeting if their preference is to explore the group before joining. According to traditions of the group, members should be actively engaged in farming in the state of Indiana. The lunch and fees for any first-time attendees will be paid out of Purdue Farm Policy Study Group residual funds.

3. Crop updates and go around

Generally, most were pleased or surprised that crops yields performed as well as they did. In some areas, folks experience record yields. A few areas were hurt by drought and other weather influences.

4. A Macro Indicator Analysis of the Evolving Urban-Rural Divide

Dr. Roberto Gallardo from Purdue University's Vice President for Engagement and Associate Professor of Agricultural Economics presented a comprehensive analysis of Indiana's evolving demographic, economic, and social patterns, with particular attention to the widening divide between metropolitan and rural areas. His data-driven presentation examined key indicators spanning population, workforce, education, agriculture, and digital infrastructure from 2013 to 2024.

Defining Rural Indiana

The presentation began by clarifying the varied definitions of rural Indiana. According to the USDA Rural-Urban Continuum Code classification for 2024, Indiana's 6.9 million residents break down into 5.4 million in metro areas and 1.5 million in rural areas. Rural areas further divide into 1.2 million in rural-adjacent counties and 264,000 in non-adjacent rural counties. The 2024 Decennial Census uses slightly different boundaries, classifying 5.4 million as urban and 1.5 million as rural.

Population Trends and Distribution

Examining population changes from 1970 to 2024 reveals striking divergence between metro and rural growth trajectories. While US metro areas grew 73% over this period and US rural areas grew 37%, Indiana's metro areas increased 34% and rural areas grew just 24%. This gap has widened considerably since 2010, with rural population growth essentially stalling.

Between 2013 and 2023, Indiana gained approximately 297,000 residents. However, this growth concentrated heavily in metropolitan areas, particularly Hamilton County, which added over 74,000 residents. In contrast, Delaware County lost the most population at 5,400 residents. Six counties surpassed 200,000 residents (Allen, Elkhart, Hamilton, Lake, Marion, and St. Joseph), while six remained below 10,000 (Benton, Martin, Ohio, Switzerland, Union, and Warren).

Components of Population Change

Analysis of the components driving population change between 2013 and 2023 reveals critical insights. Only 50 of Indiana's 92 counties experienced natural population increase (births exceeding deaths), indicating widespread aging and declining birth rates. Just 39 counties gained population through domestic migration, suggesting significant internal population redistribution. However, 89 counties benefited from international migration, making the international component the primary driver of Indiana's overall population growth during this period.

Aging Communities and Household Composition

Indiana faces significant demographic aging, though at a slower pace than the nation overall. Between 2000 and 2024, the state's population aged 0-14 declined by 13,562, with rural areas losing 45,447 youth even as metro areas gained 31,885. Meanwhile, residents aged 65 or older increased by 461,079 statewide, with metro areas adding 351,810 and rural areas gaining 109,269.

The Older-Younger ratio, which divides residents aged 65 or older by those aged 0-14, reached 93.6 for Indiana in 2024, compared to 102.5 nationally. Rural Indiana's ratio of 109.6 significantly exceeds rural America's ratio of 124, indicating more severe aging in rural communities. The percentage of households with children has declined across all areas, dropping from 32.8% to 30.0% in rural Indiana between 2013 and 2023, while remaining essentially flat in metro areas.

Labor Force Dynamics

Labor force participation rates increased modestly between 2013 and 2023, with notable differences between genders and geographies. Male working-age participation (ages 16-64) rose from 78.8% to 79.8% in rural Indiana, slightly outpacing increases in metro areas and the nation. Female participation grew from 68.8% to 69.7% in rural areas, though this increase lagged behind metro areas, which climbed from 70.7% to 72.7%.

Despite these overall increases, 45 of Indiana's 92 counties experienced declining labor force participation during this period. Geographic patterns show considerable county-level variation, with some rural counties maintaining very high participation rates while others struggle. Persistent gaps between male and female participation rates remain across all geographic categories.

Educational Attainment Challenges

Educational attainment represents a significant challenge for Indiana, particularly in rural areas. In 2023, only 18.4% of rural Indiana residents aged 25 or older held a bachelor's degree or higher, compared to 31.9% in metro areas and 35.0% nationally. This represents growth from 14.4% in 2013, but the gap with metro areas widened during this period.

However, Indiana shows strength in middle-tier educational credentials. Nearly 70.5% of rural residents aged 25 or older completed high school or some college by 2023, down slightly from 70.8% in 2013 but still substantial. This large population with high school or some college education represents a significant opportunity for reskilling and upskilling initiatives to address workforce needs.

County-level maps reveal stark geographic patterns, with bachelor's degree attainment concentrated in and around major metropolitan centers and university towns, while many rural counties show significantly lower rates.

Geographic Mobility Patterns

One of the most striking findings concerns geographic mobility, or rather the lack thereof. In 2023, 89.6% of rural Indiana residents had not moved in the past year, compared to 86.1% in metro areas and 86.9% statewide. Only 8.9% of rural residents moved from within the same state, and just 1.4% moved from a different state or abroad.

This low mobility, while creating population stability in some communities, may also contribute to the creation of "left-behind places" that struggle to adapt as economic opportunities shift geographically. The pattern mirrors national trends, where rural areas (89.4% non-movers) show considerably less mobility than metro areas (87.0% non-movers).

Agricultural Transformation

Indiana's agricultural sector experienced significant consolidation between 2017 and 2022. The total number of farms declined from 56,649 to 53,599, a loss of 3,050 operations. This decline concentrated among smaller operations, with farms selling less than $10,000 annually dropping from 28,639 to 24,550, and those selling between $10,000 and $249,999 decreasing from 19,286 to 18,829.

In contrast, larger operations flourished. Farms with sales of $250,000 or more increased from 8,724 to 10,220, a gain of 1,496 operations. This consolidation toward larger, more commercially viable operations represents a continuation of long-term structural changes in American agriculture.

Digital Divide Persistence

Despite substantial public and private investment in broadband infrastructure, significant quality gaps persist. The Broadband Quality Score (BQS), which ranges from 0 to 100 based on download speed, upload speed, and latency, shows large swaths of Indiana scoring poorly in 2020, with most rural areas in the lowest categories.

While both download and upload speeds have improved substantially from 2020 to 2024, with Indiana matching or nearly matching national averages, county-level quality remains highly variable. Many rural areas continue to experience significantly lower broadband quality than metropolitan areas, affecting economic development, education, healthcare access, and quality of life.

Key Implications

Dr. Gallardo's analysis reveals several critical trends shaping Indiana's future. Population is increasingly concentrating in urban areas, yet geographic mobility has stalled, potentially creating "left-behind places" that lack the dynamism to adapt to economic change. International migration

has become the primary driver of population growth, even as natural increase declines and domestic migration provides minimal net benefit.

Indiana is aging at a slower pace than the nation, but rural areas face more severe aging challenges with the Older-Younger ratio reaching 109.6. While labor force participation has increased overall, significant county-level variation and persistent gender gaps remain. The state lags nationally in bachelor's degree attainment, particularly in rural areas, though high rates of high school and some college completion offer opportunities for workforce development through reskilling and upskilling.

The agricultural sector continues consolidating toward fewer, larger operations, while persistent broadband quality gaps threaten rural economic competitiveness and quality of life. These interconnected trends underscore the complexity of addressing the evolving metro-rural divide and the need for targeted, evidence-based policies to support all of Indiana's communities.*

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* For additional insights from Dr. Gallaro, subscribe to his Substack "Data Whisperer"

5. Renewable Energy and Farmland Market Dynamics

Binayak Kunwar, a second-year doctoral student in Agricultural Economics at Purdue University, presented research examining how renewable energy development is reshaping Indiana farmland markets. His presentation drew from his MS thesis—named the Outstanding MS Thesis by the Agricultural and Applied Economics Association in July 2025—as well as ongoing research conducted in collaboration with Drs. Todd Kuethe and Chad Fiechter.

Context and Motivation

Farmland accounts for more than 80% of the value of total US farm assets, making it not only farmers' largest single investment but also their primary source of collateral for loans. Indiana farmland values have grown steadily over the past two decades, with top-quality land now exceeding $14,000 per acre.

Meanwhile, renewable energy is expanding rapidly onto agricultural land. Solar power represented 49% of US electric capacity additions in 2022, followed by wind at 22%. In Indiana, solar capacity is projected to grow from roughly 850 MW in 2023 to over 9,000 MW by 2027, while wind capacity is expected to exceed 4,500 MW. Much of this expansion is occurring on farmland, raising important questions about how these developments affect land values and landowner decision-making.

Landowner Options and Lease Economics

Kunwar outlined the financial returns associated with different land uses. Traditional crop production typically generates $250–$350 per acre annually. Solar leases, by contrast, can yield $1,000–$1,700 per acre during the 25–35 year operations phase, though they remove land from crop production. Wind leases allow continued farming on most of the parcel, with payments structured either per megawatt of generating capacity or as a combination of per-turbine and per-acre payments.

Using an 80-acre example, Kunwar showed that solar leases could generate approximately $82,000 annually, compared to $65,000 under one wind lease structure, $32,000 under an alternative wind structure, and $24,000 from crop production alone.

Key Research Findings

Farm Income and Renewable Energy Adoption: In purely agricultural counties, farm income levels do not significantly affect whether landowners adopt renewable energy leases. Landowners either accept leases because the payments exceed farming returns, or they decline because they place value on keeping land in agricultural production. Farm income becomes a factor primarily in counties where residential or commercial development represents an alternative land use.

Solar Proximity and Farmland Prices: Using quantile regression analysis of over 40,000 Indiana farmland sales, Kunwar found that proximity to solar energy installations provides a price premium to neighboring farmland. Each additional mile of distance from a solar farm is associated with a 0.8% to 1.9% decrease in farmland prices, with the effect strongest for high-value land.

IEDC Land Acquisition Impacts: Extending beyond renewable energy, Kunwar examined the Indiana Economic Development Corporation's large-scale land acquisition in Boone County for the LEAP innovation district, announced in Q2 2022. The research found that this acquisition increased farmland prices in Boone County by approximately 40%, with spillover effects raising prices in neighboring counties by about 7%. The localized price effects emerged roughly two quarters after the announcement, while spillover effects appeared after five to six quarters.

Conclusions

Kunwar concluded that Indiana landowners now face an expanded set of choices for their land, shaped not only by financial incentives but also by county zoning regulations and local attitudes toward development. The research demonstrates that renewable energy development provides measurable premiums to surrounding farmland and that large-scale land acquisitions can produce substantial and persistent effects on regional land markets.

Binayak Kunwar can be reached at kunwarb@purdue.edu.

6. The Department of Agricultural Economics Current Status and Vision for the Future

Dr. Nicole Olynk Widmar, Professor and Head of the Department of Agricultural Economics at Purdue University, provided an overview of the department's current status, recent developments, and strategic direction for the future.

Rankings and Recognition

Purdue Agriculture ranks 3rd in the United States and 6th in the world according to the 2025 QS World University Rankings. The Department of Agricultural Economics is ranked 4th globally (tied with Michigan State University) by the Center for World University Rankings, based on quality of education, research output, citations, and alumni employment.

Faculty and Staff

The department currently includes 33 tenure-track faculty (5 assistant professors, 9 associate professors, 17 professors, and 2 associate deans serving the College of Agriculture), along with 7 research faculty and 1 clinical professor. The staff totals 71 members, with the majority working in the department's self-sustaining centers. Three lecturers—Dr. Leeann Moss, Dr. Elizabeth Byrd, and Dr. Daniel Pastor—support the teaching mission.

New Faculty

Three faculty members joined the department in August 2025. Dr. Ellen Van Loo, Associate Professor, came from Wageningen University and Research in the Netherlands, where her work focuses on consumer food choice behavior and promoting healthy, sustainable diets. Dr. Joana Colussi, Research Assistant Professor, joined from the University of Illinois Urbana-Champaign with expertise in farm management, technology adoption, and international agriculture. Dr. Jonathan Bauchet, Associate Professor, transitioned fully into the department after previously holding a joint position; his research centers on helping low-resource households in developing countries build sustainable livelihoods.

Indianapolis Expansion

The department is actively recruiting two additional faculty positions to be based in Indianapolis, with anticipated start dates in August 2026. The search has attracted over 280 applicants. The Indianapolis location offers strategic advantages including proximity to state policymakers and the Indiana State Department of Agriculture, access to major value-chain firms such as Cargill, Corteva, and Elanco, opportunities in urban food systems, and connections to the 16 Tech innovation district and AgriNovus Indiana. Faculty in Indianapolis will develop nationally recognized programs in

agricultural economics, agribusiness management, food business management, or agricultural and food policy.

Retirements

The department is honoring two distinguished colleagues upon their retirements. Dr. Thomas Hertel, Distinguished Professor of Agricultural Economics and founder of the Global Trade Analysis Project, was celebrated on December 1, 2025. Dr. Frank Dooley, Professor of Agricultural Economics and former Purdue Global Chancellor, will present a valedictory lecture titled "Feeding One Another: The Relationship Between the Industrial Revolution and Higher Education" on December 16, 2025.

Center Updates

The department houses six major centers. The Center for Commercial Agriculture continues to produce influential work including the Ag Economy Barometer and will host the Top Farmer Conference on January 9, 2026. The Center for Food and Agricultural Business is preparing for a leadership transition in 2027, with Dr. Trey Malone named as incoming director. The Center for Food Conservation and Waste Reduction advances its mission to promote food conservation. The Global Trade Analysis Project (GTAP) continues providing leadership in economic policy analysis, with upcoming conferences planned in Kyoto (2026), Montreal (2027), and Brussels (2028). The Indiana Council for Economic Education offers programs including the Econ and Personal Finance Camp for teachers. The North Central Regional Center for Rural Development focuses on resilient communities, civic engagement, and community health.

Student Programs

The department serves over 420 undergraduate students across four majors: Agribusiness, Agricultural Economics, Farm Management, and Sales and Marketing. A new Spring Start option and enhanced transfer programs are now available. A new seventh edition of the *Agribusiness Management* textbook, authored by Jay Akridge and Trey Malone, has been released.

Graduate programs include fully funded in-residence MS (18 students) and PhD (35 students) programs, the hybrid MS-MBA in Food and Agribusiness Management delivered in partnership with Indiana University's Kelley School of Business (approximately 40–45 students), a joint MJ-MS degree with the law school, and a Professional Masters in International Agribusiness.

Strategic Pillars for the Future

Dr. Widmar outlined key pillars guiding the department's future direction. These include maintaining national and international leadership in quantitative, applied economics with signature strengths in commodity markets, price analysis, risk management, farm management, and industrial organization. The department remains committed to policy and public engagement

through farm policy analysis, trade economics, and extension programs that translate research into actionable insights. Strong agribusiness and industry engagement continues through executive education and corporate partnerships. The department is also expanding into digital agriculture, artificial intelligence, and data analytics for agricultural decision-making.

The department's core value propositions include serving as a national leader in applied, data-driven agricultural economics; a trusted source of market insight and decision support; a partner with deep industry engagement; a producer of impactful policy-relevant research; a pipeline for highly skilled graduates; an innovator in digital agriculture; and a strong servant of Indiana agriculture through the land grant mission.

For more information about the Department of Agricultural Economics, visit https://ag.purdue.edu/department/agecon/ .

7. Future meeting dates

Barring unforeseen circumstances, the following will be the dates for the group's next two meetings: July 7, 2026 and December 8, 2026. Please note that the Indiana Prairie Farmer Master Farmer Awards Program will be likely held following our July 7th meeting. Both events will take place at the Purdue Beck Ag Center. To accommodate attendance at both events, we will shorten the Purdue Farm Policy Study Group meeting beginning at 11:45am and ending at approximately 3:30pm. The Master Farmer Awards Program will begin at approximately 4pm.

8. Proposed Future Topics

The following topics were suggested for future meetings:
- Artificial Intelligence
    - in Food and Agriculture
    - Labor and Economic Impacts
- Data Centers
    - Infrastructure and spillover impacts
    - Economics development impacts
- What's happening with current administration "Farmers First" activities
- Alternative crops for Indiana farms in the future
- Implications of Make America Healthy Again report
- Interstate regulation on food and agriculture
- Investment in agricultural science and research
- Glyphosate implications for farmers
- Affordable rural housing

If you have thoughts on these or other topics of interest, then please forward those to Ken Foster (kfoster@purdue.edu).

9. Adjournment at 3:15 pm

Respectfully Submitted,

Ken Foster
Professor – Agricultural Economics
Director – Purdue Farm Policy Study Group