

# THE DIVERSE CORN BELT PROJECT:

## YEAR 3 HIGHLIGHTS



After decades of corn-soybean rotations, American farmers have become extremely efficient producers of both commodities. A strong corn-soybean culture has shaped agronomics, infrastructure, and policy throughout the Corn Belt. Though yields have grown and economics generally reward farmers for specializing, concerns exist about possible long-term impacts of a limited rotation on economic returns, communities, and the environment—in short, limiting the ecological and economic resilience of Corn Belt farms.

Resilience in biological systems improves with diversity. The same can be said for economic and social resilience. The Diverse Corn Belt (DCB) project is exploring the hypothesis that diversifying crop production and markets will generate an array of economic, social, and ecosystem services that will benefit more people than the current corn-soybean and confined livestock system.

More than 30 collaborators, representing a wide range of institutions and disciplines, are helping DCB develop concrete, viable, evidence-based frameworks that can guide the Midwest to a more diversified agricultural system at the farm, market, and landscape scale. After two years of planning, study design, and research start-up, team members gathered data and began publishing results in 2023-2024, the third year of the project.

### KEY ACCOMPLISHMENTS: DCB BY THE NUMBERS

After extensive planning, coordination and groundwork, data and publications are beginning to emerge from DCB research teams.

Here's a summary of our Year 3 accomplishments:

**OBJECTIVE 1:** Co-produce research and advance market development along the agricultural value chain to identify and address social, economic, agronomic, and environmental barriers to the adoption of diverse sustainable agricultural systems.

- 6 Reimagining Agricultural Diversity (RAD) Team meetings in Illinois, Indiana, and Iowa hosting 154 participants, including farmers, advisors, non-farming landowners, and decision-makers.
- 4 drivers identified to assess regenerative farming activity levels: tillage, crop density/cover crop intensity, pasture use, small grains in rotations.
- 200+ samples from 31 farms analyzed.
- 18 fields under a range of management practices sampled for soil biological health; 360 sample points' soils analyzed for key physical and chemical properties.
- 3 rounds of groundwater samples collected from 22 wells.
- 25 on-farm surveys of weeds, pests and beneficial insects; 520 pitfall traps identified 68 ground beetle and ant species.
- 4 stakeholder surveys of food wholesalers, restaurateurs, winery staffs, and retailers completed.



## OBJECTIVE 1 CONT'D

- 100+ climate funder representatives watched panel discussion at the Conference on Building an Intersectional Philanthropic Approach.
- 32 interviews with diversified farmers and survey of 725 Iowa, Illinois, and Indiana farmers completed.
- 360 sample points' soils analyzed for key physical and chemical properties.

## OBJECTIVE 2: Model economic and ecosystem impacts of diverse landscape scenarios across the agricultural value chain to develop evidence-based policy recommendations, quantify sustainability metrics, and establish conditions required for economic vitality.

- 1 collaborative geo-design decision support tool framework developed to facilitate stakeholder engagement in future visioning exercises.
- 3 hotspot/cold-spot farm-level diversity maps created, identifying areas of greater and lower diversification in Indiana, Illinois, and Iowa and guiding discussion in RAD Team meetings.

## OBJECTIVE 3: Design stakeholder-informed alternative production systems by conducting visioning sessions at the local, state, and national levels that allow participants to consider ethical choices and sustainability outcomes.

- 6 weeks of popular press sources monitored to identify dominant trends influencing agriculture's future in the Corn Belt and present visions of the future environment for diversification.
- 1 peer-reviewed paper underway to share visioning exercise results.
- Feedback from RAD Team meetings applied to guide visioning sessions and development of alternative production systems.

## OBJECTIVE 4: Develop and disseminate policy guidance to achieve resilient intensification through diversified farms, landscapes, and markets.

- DCB researchers are exploring policy opportunities and collaborating with policy advocates to develop stakeholder-informed recommendations to promote a more diverse and resilient agricultural landscape in the Corn Belt.
- The DCB team is meeting with members of other Sustainable Agricultural Systems Coordinated Agricultural Projects (SAS-CAP) to leverage collective knowledge and resources, strengthening the impact of shared policy recommendations and outcomes.

## THANKS TO OUR COLLABORATORS



## OBJECTIVE 5: Engage with diverse stakeholders through Extension to support farm diversification and market development.

- 292 attendees reached at the 2024 Practical Farmers of Iowa Annual Conference.
- 439 individuals reached by 5 DCB presentations at the Midwest Covers and Grains Conference.
- 249 attendees at 6 DCB field days.
- 167 participants in 7 Diversified Rotation Farmer Network calls.
- DCB team members are developing modules on pesticide label restrictions on forage and rotation crops for Extension pesticide applicator recertification programs.

## OBJECTIVE 6: Create, pilot, and publish educational materials to foster a workforce prepared to respond to emerging challenges and support a diversified landscape.

- 5 educational modules drafted, covering ecological, agricultural, human, and economic diversity.
- 3 connecting units (systems thinking, changing minds, principles of sustainability) in development to link and contextualize diversity units.
- Educational modules adapted for high school students.
- 25 National University of Singapore students participated in DCB field day.

**ARTICLES AVAILABLE** Year 3 of the DCB project also yielded dozens of papers, presentations, and articles. [click here](#) to find a list of publications at [diversecornbelt.org](http://diversecornbelt.org).



**GET INVOLVED** The DCB team seeks a wide range of perspectives from stakeholders throughout Indiana, Illinois and Iowa. Please contact Emily Usher ([eusher@purdue.edu](mailto:eusher@purdue.edu)) if you are willing to help shape the future of the Corn Belt.

For more information on the Diverse Corn Belt project, visit [diversecornbelt.org](http://diversecornbelt.org). For detailed annual reports submitted to the USDA National Institute of Food and Agriculture, contact Emily Usher, project manager, at [eusher@purdue.edu](mailto:eusher@purdue.edu).