

# **GROWING A SUSTAINABLE FUTURE:** **INDIANA'S 2023 CORN AND SOYBEAN** **SUSTAINABILITY REPORT**



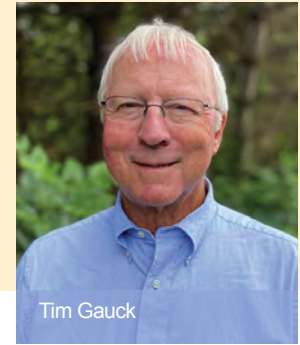
THE FUTURE IS OURS TO GROW

**INDIANA SOYBEAN ALLIANCE / INDIANA CORN MARKETING COUNCIL**

# A JOINT LETTER FROM THE ISA BOARD CHAIR AND ICMC BOARD PRESIDENT



Kevin Cox



Tim Gauck

**A**griculture is as vital to the state as any industry. As farmers and the leaders of our corn and soybean checkoff programs (the Indiana Soybean Alliance and Indiana Corn Marketing Council), we have been able to witness how corn and soybeans connect and impact many aspects of our local and world economies.

The seeds we plant, care for, and harvest become the food, fuel, feed, and feedstocks for our world and we are always looking toward the future to prepare for any challenges and opportunities we may face on our farms. A large part of those considerations is how we best sustain our operations for generations to come through stewardship of the land, being a conscientious neighbor, and ensuring that our crops have the markets needed to sustain our costs of production.

Sustainability is a popular word these days, and with it comes many different definitions. We define sustainability as a three-legged stool. Each leg must be strong and the same length. If not, then the stool is unstable.

**The first leg is environmental sustainability.** Farmers have long been known as the ultimate stewards of the land; after all, it is the source of our livelihoods and a precious resource to pass down to future generations. We work hard to take care of the land around our farms, so our children, grandchildren and community can enjoy what we've loved over the years.

**The second leg is social sustainability.**

If we don't pay attention to what we plant and how we grow it, then there is a limited market for what we produce. We succeed when our values align with our consumers, and that's what we strive to do.

**Finally, the last leg of the stool is economic sustainability** — for ourselves and our community.

Every year, the cost of planting a crop grows higher. If we don't pay attention to our balance sheets, then our farms would fail. At the same time, farming supports the wider community, and we are proud to provide that economic impact back to them, too.

We believe that farmers, as a whole, strive to do the right thing and want to continue to improve the ways they are growing their crops. Thank you for reading our sustainability story, and we hope it will provide a snapshot of the efforts corn and soybean farmers in Indiana are making to continue feeding and fueling our world today.

Sincerely,



**Kevin Cox**  
ISA Board Chair  
Brazil, IN



**Tim Gauck**  
ICMC Board President  
Greensburg, IN



# INDIANA'S CORN AND SOYBEAN SUSTAINABILITY OUTLOOK

The state of Indiana is widely recognized as a leader in agricultural production, and our corn and soybean farmers can proudly add that Indiana is also a leader in sustainability. Together corn and soybeans make up **over \$10 Billion of production value annually**, and these production systems have a significant impact on Indiana's economy and citizens<sup>1</sup>. Our industry provides food and energy for people across the country and world while simultaneously acting as responsible stewards of our environment.

The Indiana Corn Marketing Council and Indiana Soybean Alliance are excited to introduce our first corn and soybean sustainability report ***Growing a Sustainable Future***. Though Indiana farmers have a long history of stewardship, we embarked on a journey to better understand and explain our sustainability efforts. In 2022, we identified what is most important to overall sustainability efforts by embarking on a **materiality assessment**.

A materiality assessment starts with gathering survey and interview data from industry stakeholders to evaluate interest and involvement with various sustainability focus areas. This information is then analyzed and reviewed by an independent third party to determine the most relevant and important sustainability topics to the industry and its stakeholders. Our industry intersects with many sustainability topics, so the process of focusing on the topics that matter most is important to our success.

## INDIANA CORN AND SOYBEAN MATERIAL FOCUS AREAS

Through this active process of identifying and analyzing key focus areas, we established the most material sustainability focus areas for the Indiana corn and soybean industry today.

This report and our overall sustainability program are based on these key focus areas, ensuring our progress is targeted at the biggest challenges we face as a state and community of agricultural producers.

### Most Important Focus Areas:

- GHG Emissions & Removals
- Nutrient Management
- Water Quality
- Soil Health
- Efficiency, Profitability, and Financial Management



<sup>1</sup> US Department of Agriculture, National Agricultural Statistics Service. "State Agriculture Overview: Indiana."



# CONNECTIONS

The Indiana corn and soybean industry is a complex system connecting landscapes, plants, animals, and people across the state and beyond. Our sustainability story reflects these connections as well as the fundamental links between our natural resources, the community of farmers and workers that grow and process the crops, and the economic benefit that corn and soybean production brings to our state.

Sustainability is often characterized as three pillars: **environmental**, **economic**, and **social**. This inaugural report will highlight not only key progress indicators in each of these pillars, but also tell the story behind the numbers and explain the connections between each indicator and focus area we report on. We're excited to demonstrate each of these impact areas and to build on our success in the future.

ENVIRONMENTAL

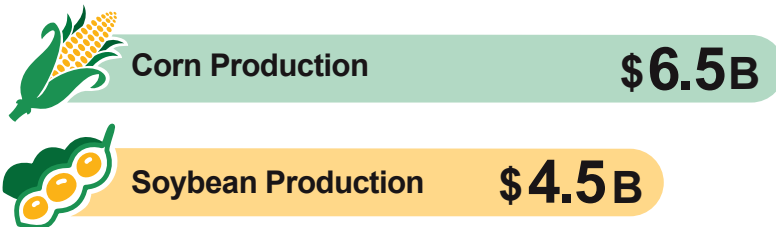


# OUR ECONOMIC IMPACT

Indiana's corn and soybean industries are some of the state's most significant sources of economic activity, producing **over \$10 billion in value** in 2023. Corn is the largest crop grown in Indiana with soybean production a close second. Nationally, Indiana is among the top five states for both corn and soybean production<sup>2</sup>. Corn and soybean producers, as well as livestock producers, processors, and others, are part of an extended value chain that supports rural communities and jobs. Corn and soybeans produced in Indiana are utilized all over the United States as food, fuel, and industrial ingredients.

Sustainable practices that corn and soybean producers implement on their fields have significant positive impacts on operational profitability. Implementing smart soil management practices not only boosts profitability and productivity, but also benefits local and regional environmental conditions. Indiana farms who adopt soil health management practices **increase their net farm income by an average of \$46.88 per acre of soybeans and \$63.18 per acre of corn**<sup>2</sup>.

## 2023 STATE OF INDIANA CORN AND SOYBEAN PRODUCTION VALUE<sup>3</sup>



<sup>2</sup> Soil Health Institute. Economics of Soil Health Systems in Indiana.

<sup>3</sup> USDA, NASS

# FARMING SUSTAINABLE CORN AND SOYBEANS PAYS OFF

With 7,000 acres near Williamsport, Indiana, **Rick Clark** plants corn, soybeans, and other crops, along with raising cattle, like many of his neighbors. Clark Land and Cattle is an early adopter of conservation practices that benefit soil health, water quality, and improve greenhouse gas emissions. As a result, Rick Clark was awarded the **2019 Conservation Legacy Award** from the American Soybean Association (ASA).

Conservation practices such as cover crops or no-till are often regarded as expensive and potentially time-consuming. But Rick Clark looks at it differently. By implementing practices like **no-till**, and minimizing fertilizer and pesticide applications, he manages input costs and boosts profitability. *“I’m all about return on investment,”* Clark said. *“I’m a low-cost producer who is also improving our land. If you think about the economic times that we’re in, my system is more economical.”*

By focusing on soil health and retention, and using the latest technologies available, the farm has maintained yield and improved soil health. *“We are a data-driven farm, forward thinking, very much so outside of the box. I don’t even know where the box is any more,”* says Clark. As cover cropping and no/low-tillage approaches become more common in Indiana corn and soybean rotations, he notes, the value is apparent in both the traditional financial sense, as well as providing for long-term sustainability of the fields, families, and well-being of our rural communities.

**“We are a data-driven farm, forward thinking, very much so outside of the box. I don’t even know where the box is any more.”**

**— Rick Clark**  
Clark Land and Cattle



Scan here to learn more

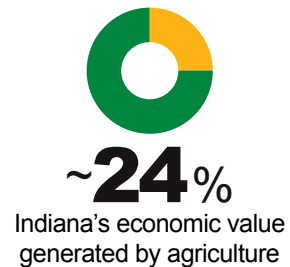
Building a sustainable agricultural economy takes action at the local level — while also considering global impact. Indiana’s corn and soybean production has a huge effect on local economic viability while influencing global commodity markets, providing feed for livestock around the world, and participating in agricultural innovation. The connection between a healthy ecosystem and a robust economy are clear when looking at the benefits of sustainable agriculture in Indiana. As more adoption of sustainable strategies emerge, Indiana’s corn and soybean production is positioned to lead a more sustainable and resilient future.

# OUR COMMUNITY

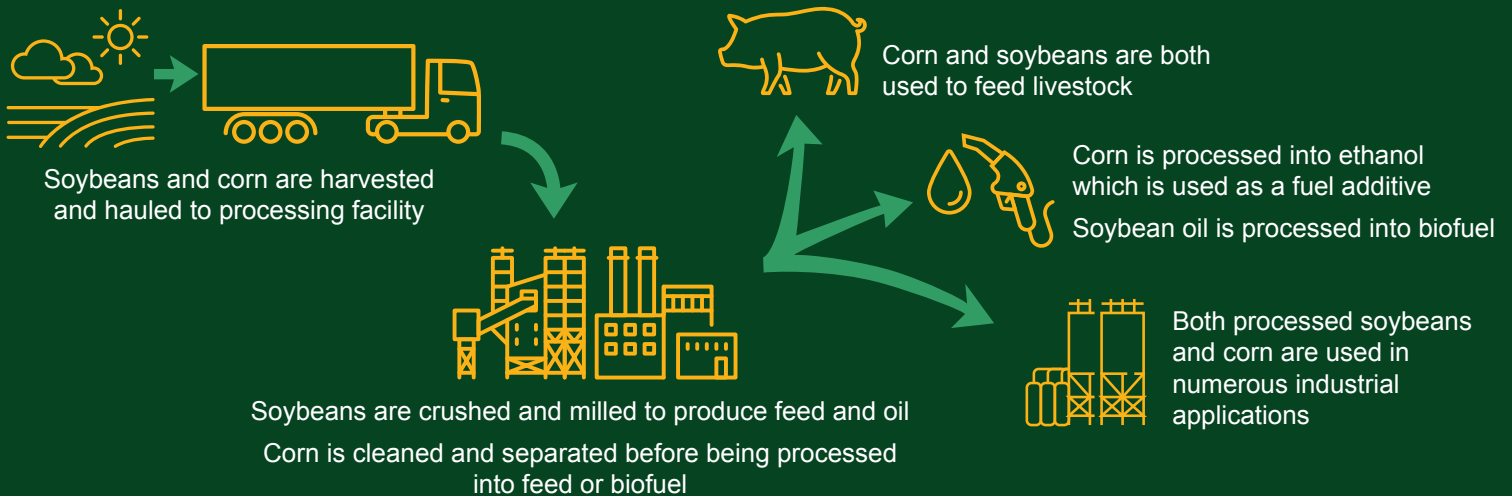
Farming is not just a job for many in Indiana's rural communities, but a way of life. Many farmers make their living on the same land their family has raised crops and livestock on for four or five generations. These farming families make up the heart of Indiana's agricultural community, but they are by no means the only ones who are economically supported by the crops they grow. Thousands of jobs beyond the farm gate are supported by processing and transportation of farm products, among other related industries like sales and marketing, equipment manufacturing and maintenance, education, and more.

Each of these community members plays a role in carrying the bounty of our land to the plates of people all over Indiana, the United States, and beyond. As Indiana's corn and soybean communities continue on their journey towards greater sustainability, we all benefit from their cooperation, innovation, and hard work.

## OUR INDIANA CORN AND SOYBEAN COMMUNITY: BY THE NUMBERS<sup>4</sup>



### Each link in the supply chain from farm to product adds value to Indiana's corn and soybeans.



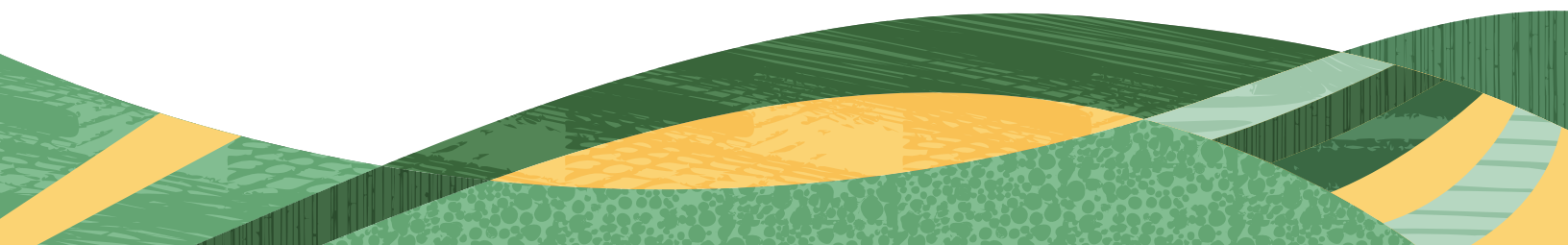
<sup>4</sup>USDA, NASS

# ADVANCING SUSTAINABILITY BEYOND THE FARM

**A**gricultural sustainability in Indiana is advancing through a combination of straightforward but effective agricultural practices and the adoption of new technologies. These innovations come in the form of novel products made from corn and soybean crops as well as on farm technical devices.

One of the most widely adopted uses for corn and soybean crops comes in the form of biofuels. Agricultural products that come from Indiana fields are included in most liquid fuels these days, whether in the form of corn ethanol added to gasoline, or as biodiesel, used to fuel your car or SUV, semi-trucks, and farm vehicles.

Beyond the widespread use of biofuels, many new applications for soybean and corn bio-based products are being developed. Recent inventions made from soybean-based products have already hit the market, often displacing petroleum-based alternatives. These new products range from additives used to manufacture car and truck tires, synthetic turf products, industrial concrete protectants, crayons, and a wide array of products made with bioplastics derived from soybeans.





## OUR COMMUNITY: AT THE FAIR, ON THE FARM



Maintaining the connection between agriculture and Indiana communities is an important part of our vision for a more sustainable future. One big part of that community connection is the **Glass Barn Education Center**.



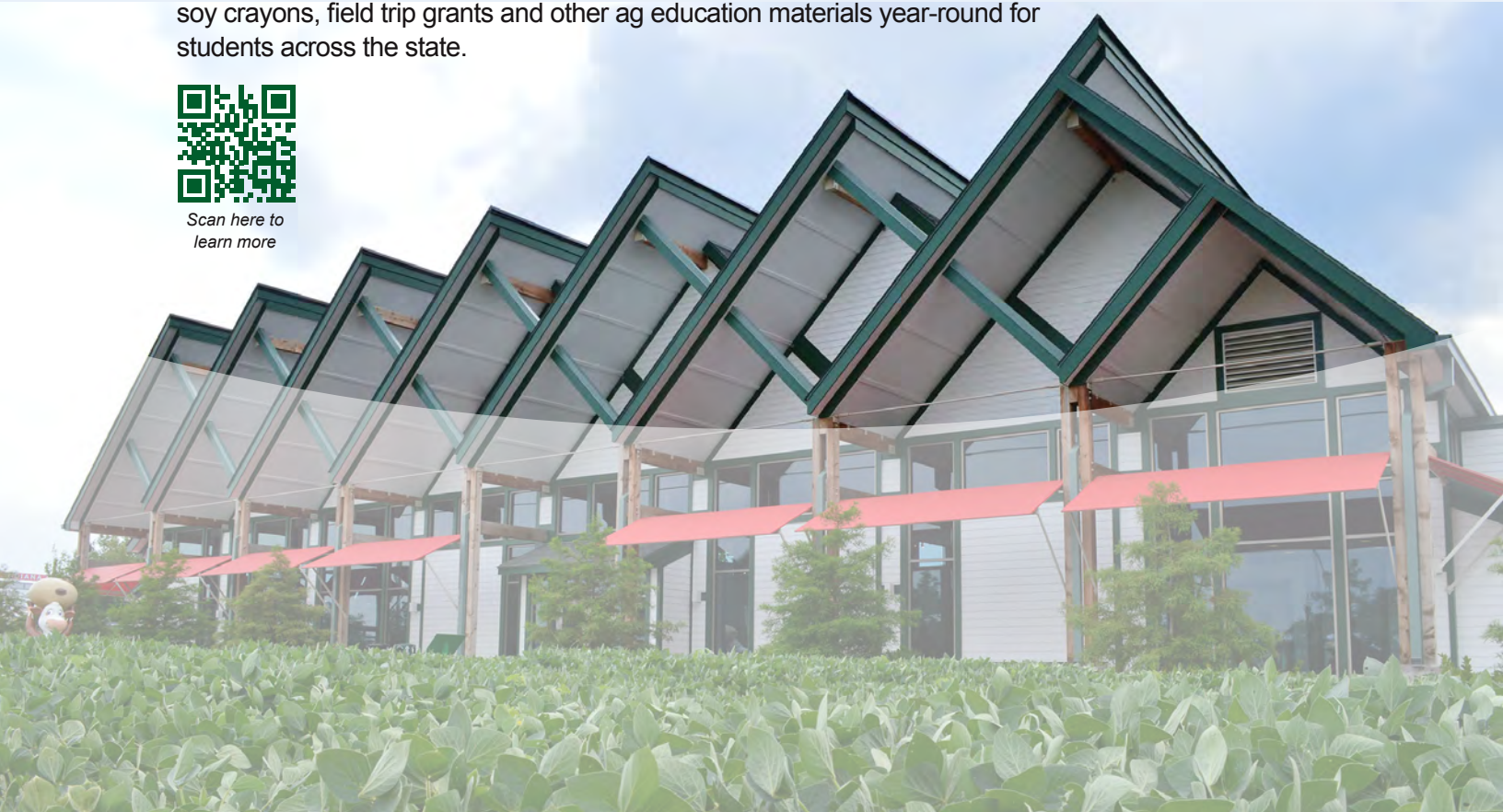
First opened in 2013, the Glass Barn is open to the public each year during the Indiana State Fair and hosts school groups the rest of the year. The Glass Barn allows visitors to interact with Indiana farmers like **Heather Hill**. Heather is a 4th generation farmer along with her kids, husband and husband's parents who operate Hill Farms in Greenfield, Indiana. The farm is a farrow-to-finish hog operation, raising 13,000 hogs annually. The Hills also raise corn, soybeans, and wheat, utilizing cover cropping and no-till practices.

For Heather, the link between corn and soybeans, and the pork raised on the farm is clear, *"livestock producers are a huge consumer of the corn and soybeans that are produced here,"* she says. The corn and soybeans that grow on their farm are processed, then incorporated into their pig's diet. At the same time, manure collected from the operation is used to fertilize the fields instead of purchasing synthetic fertilizer.

In addition to ISA's Glass Barn, ISA and ICMC provide educational displays, corn and soybean books, soy crayons, field trip grants and other ag education materials year-round for students across the state.



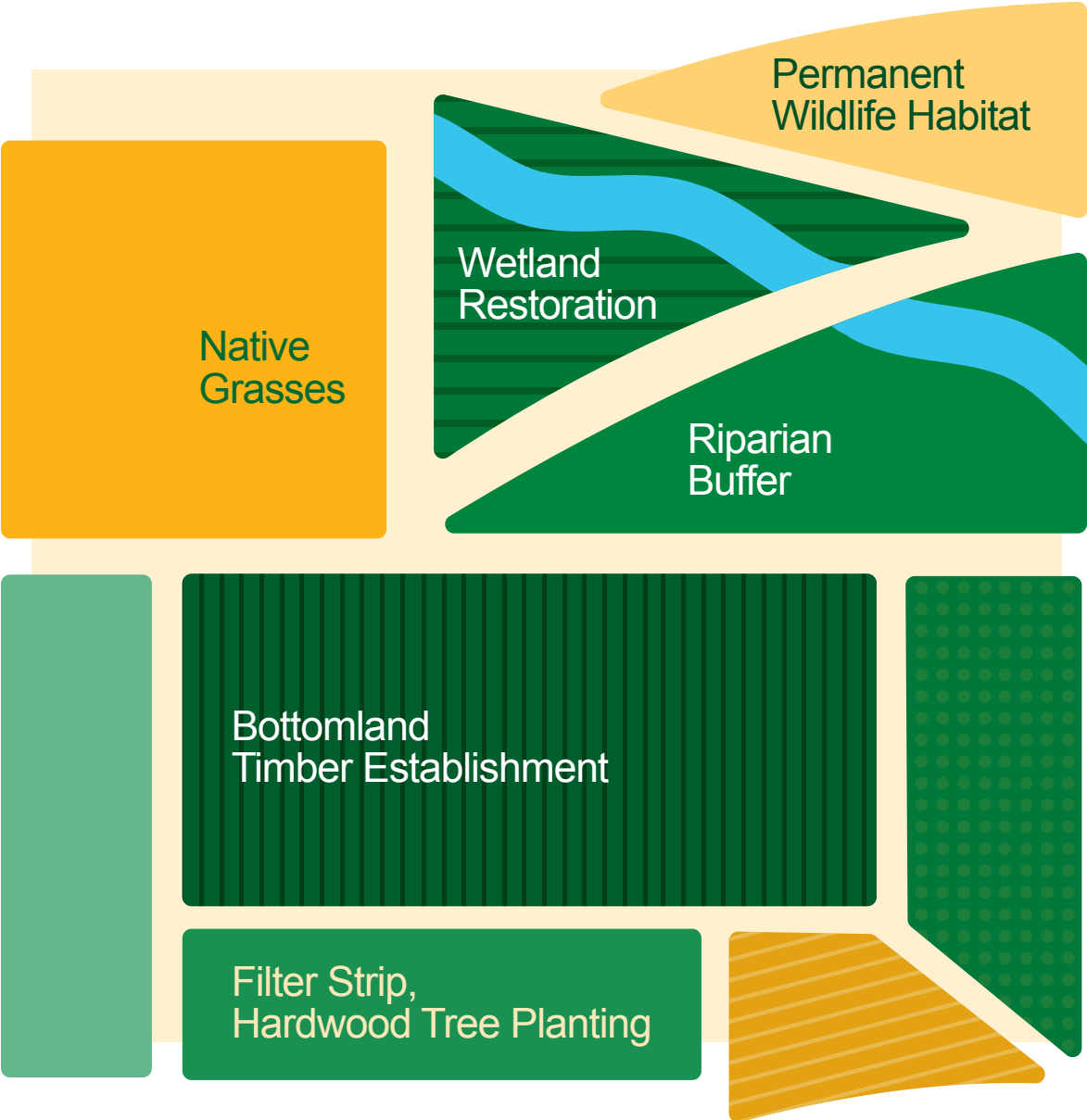
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# OUR ENVIRONMENT: WATER

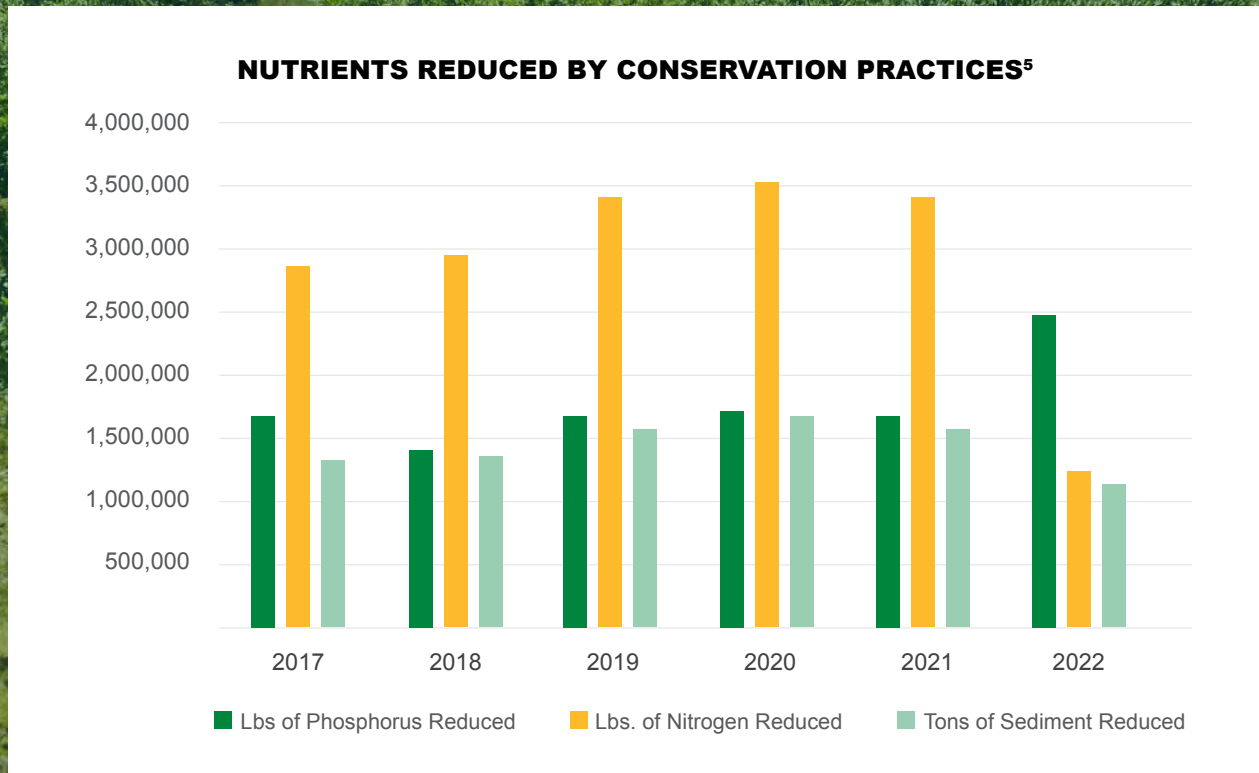
The environment is often the first sustainability pillar to come to mind, and for good reason. The natural world is fundamental to all we do, and understanding how it is affected as we use it is a core concept in sustainable agriculture. Our use of water and waterways, how we work with the soil, and what is planted and when, all connect to important environmental outcomes. These elements impact not only the quality of our soil and water, but also have downstream effects on other key areas like profitability and healthy communities.

Indiana farmers work with both state and federal agencies to manage resources and improve environmental outcomes. In 2023, the Indiana State Department of Agriculture reported Indiana farmers had converted 22,641 acres of former farmland into native habitat restoration land through the following categories:



# OUR ENVIRONMENT: WATER QUALITY AND NUTRIENT MANAGEMENT

Water quality and nutrient management go hand in hand when it comes to sustainable corn and soybean production. The connection between what happens in the field, where it meets the stream, and the ecosystems downstream is vital to understanding water and agriculture in a sustainability context.



Fertilizer application is an essential practice in corn and soybean production. Applying only what is needed is the goal of every farmer, but this can be challenging to gauge, and underapplication can affect yields. Over time, excess nutrients and sediment flow into nearby waterways and can create downstream ecological issues.

By building healthy soil that retains nutrients and creating riparian buffer zones that absorb nutrient runoff, Indiana farmers have reduced the volume of nutrients entering the watershed. Other practices like restoring native wetlands and implementing grassy waterways on agricultural land can also help to absorb excess nutrients while creating ecosystems for native plants and animals to thrive.

<sup>5</sup> Indiana Conservation Partnership, "Partnership Overview."

## OUR ENVIRONMENT: LAND

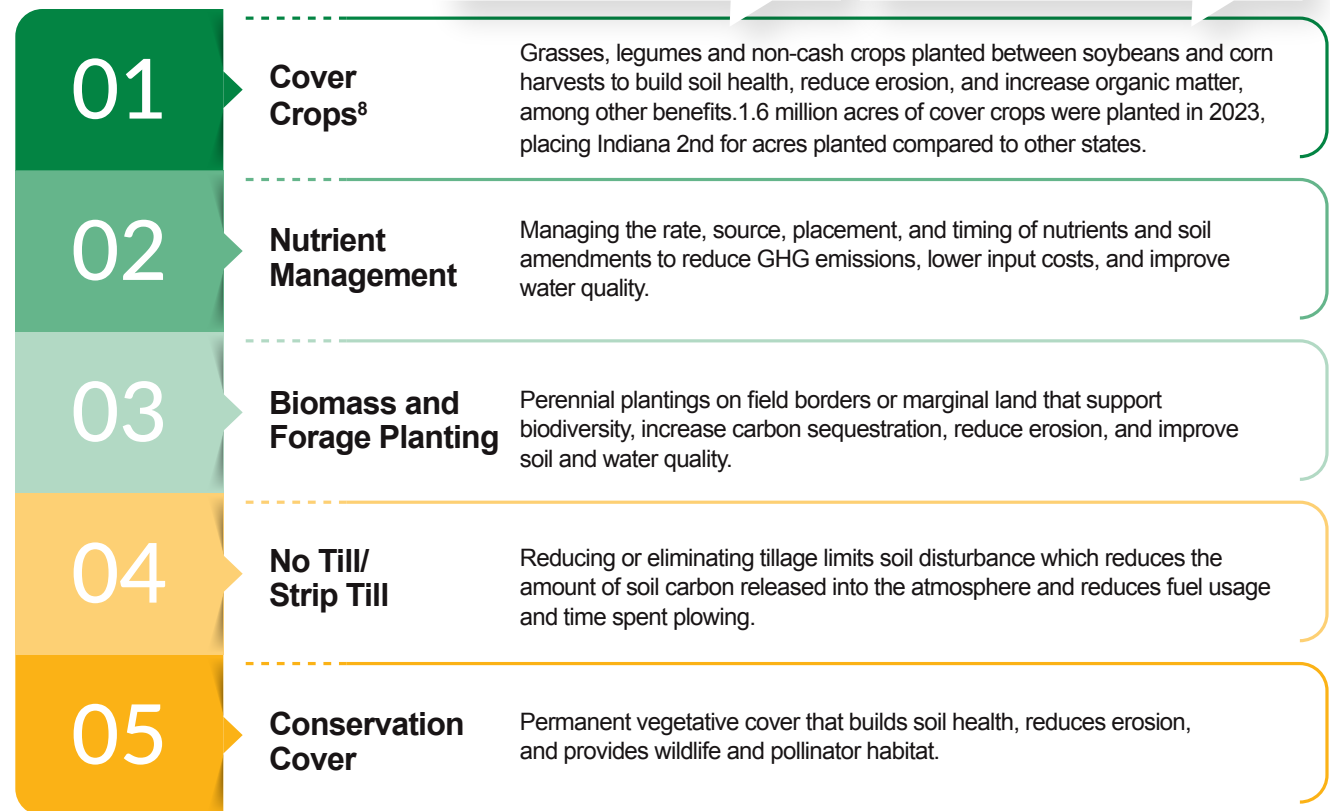
**S**ustainable agriculture means building and maintaining healthy soil. From supplying nutrients to crops, to retaining water and drawing down greenhouse gases (GHGs) in the form of carbon, any sustainable farmer can tell you that soil health is vital to a successful operation. Indiana's corn and soybean farmers continue to make progress in this area through the adoption of climate smart practices like reducing tillage and cover cropping.

### INDIANA'S TOP 5 MOST WIDELY ADOPTED CLIMATE SMART AG PRACTICES<sup>6</sup>

These practices represent the most common actions taken by Indiana farmers to build healthy soil while maintaining highly efficient production and earning additional payments through the federal Environmental Quality Incentives Program (EQIP) program.

**In 2023<sup>8</sup>:** 596,000 acres of cover crops were planted on corn acres up **153%** from 2017<sup>7</sup>

931,000 acres of cover crops were planted on soybean acres up **245%** from 2017<sup>7</sup>



<sup>6</sup> Environmental Working Group. "Conservation Database: Indiana."

<sup>7</sup> Progress Report: Adoption of Soil Health Systems.

<sup>8</sup> Indiana State Department of Agriculture. "Conservation Transect."

# MARK LEGAN: SOIL STEWARDSHIP, FARMING LEADERSHIP



First-generation corn, soybean, and hog farmer **Mark Legan** has adopted conservation practices on his Putnam County operation with the next generations in mind. *“We define stewardship as taking care of the land, water, pigs, employees, and community. . . We want to learn all we can and apply that to make our farm more efficient for the future.”*



Legan, an Indiana Soybean Alliance (ISA) board member, says it all boils down to protecting natural resources through conservation practices like no-till and cover crops. They have been no-till planting some of their acres since they started farming. Today, they are 100 percent no-till, with exceptions to level tiled ground out.

For the past three years, Legan has participated in an on-farm sustainability analysis with the National Pork Board. The goal of the analysis is to quantify management practices on the farm and how that relates to soil quality, soil erosion, and water quality.

*“We’re sequestering about one third of a ton of soil carbon per year and our erosion rate is one half a ton per acre. The USDA calculates the average erosion rate in Indiana cropland as 3.2 tons per acre. We’re well under the state average and the state average is well under the national average of 4.6 tons of soil loss per acre.”* Legan says it will be helpful to be able to quantify the environmental aspects of the practices they’re implementing, compare it year over year, and eventually use the data to inform decision-making on the farm.

Legan says the family will continue to utilize sustainable conservation practices on the farm and find new ways to leave it better than they found it.

**“We’re sequestering about one third of a ton of soil carbon per year, and our erosion rate is one half a ton per acre.”**

— **Mark Legan**  
Putnam County Farmer



Scan here to  
learn more



## LEADING SUSTAINABLY WITH TECHNOLOGY

**W**hen it comes to implementing on-farm technology solutions, Indiana's corn and soybean farmers are on the cutting edge. The rise of what is referred to as 'Precision Agriculture' is associated with higher yields, better soil health, and improved water quality, even as fertilizer and pesticide use decreases.

How are our farmers growing more with less? One answer is the use of field-level sensors that detect things like temperature, soil moisture, and more. This information is linked to cloud-based data storage that allows farmers to make timely and targeted decisions about irrigation, fertilizer or pesticide applications, and ultimately the timing of harvesting.



### ADVANCED TOOLS

Other advanced tools like **drones** and **GPS** are putting essential information into Indiana farmers' hands. Being able to scout field conditions and identify pests remotely using a drone has become a key tool for farmers working vast plots with limited personnel. GPS-guided combines and tractors have become common, and as the technology continues to advance, farmers can plan their planting, soil amendments, and harvesting

down to the inch. Precise measurement in the field reduces overapplication of pesticides and fertilizer which leads to less runoff into the local watershed. These advances are enabling fewer farmers to grow more corn and soybeans on the same amount of land, all while enriching soil and protecting waterways.

## BROCKSMITHS DEDICATED TO SOIL HEALTH AND THE FUTURE OF THEIR FARM

**S**usan and Mike Brocksmith of Vincennes, Ind., grow soybeans that are 100 percent no-till and non-GMO corn. With cover crops, rock chutes, drop boxes, gradient terraces, grassed waterways and 150 water and sediment control basins, the Brocksmiths take environmental stewardship and conservation seriously.

*“One of our big mission statements is to make what we have even better for future generations. The no-till, the cover crops have allowed us to do that. Today, we can see the tilth has come back. We can see more nutrients in our soils. It’s better. Our dirt is providing more nutrients than before because of those living organisms. Keeping Mother Nature working for us the best that we can has really made a difference to our soils.”*



They had their first no-till corn in 1977, and at first it failed, but they kept trying. They kept increasing their no-till acres as time went on. As a heavy livestock farm, they started no-tilling mainly to save time but soon realized there were a lot of other benefits.

The Brocksmith farm is home to highly erodible soil with clay hills and some sandy ground. In 1990, they began experimenting with cover crops, and now, cover crops are on all of the acres of their farm. Cereal rye is their cover crop of choice. Their future goals include more cover crop research, installing pollinator plots and continuing to tout conservation and agriculture.



**“Today, we can see the tilth has come back. We can see more nutrients in our soils. It’s better.”**

**— Susan Brocksmith**  
*Vincennes Farmer*

*Susan said, “I care about the environment. I want this world to be here in even better shape. I want my food to be safe for my children and future grandchildren. We as farmers are very aware because we work with that land, we work with those animals. This is our livelihood. It’s also our health that we’re worried about.”*



## LOOKING FORWARD



In 2024, the future of sustainable agriculture in Indiana's corn and soybean industry looks bright. Many big steps have been taken to improve on-farm sustainability through soil conservation, increased efficiency, and a thoughtful approach to raising these vital commodity crops in the context of wildlife, water quality, and ecosystem preservation. Despite these great strides, there is always more work to be done in the field and in our communities to become more sustainable.

Throughout this report, the many connections between farmer and land, communities and crops, and nature and industry have become clear. Farming corn and soybeans in Indiana is a respected and valuable tradition, with roots reaching back to time-honored practices and respect for the land. At the same time, our farmers are looking forward to tomorrow, implementing new technologies to increase yields and profits, while supporting the health of the land and water. The future holds much promise, and as more and more Indiana farmers adopt climate smart practices and continue to act as true stewards of the land by protecting vital wildlife and ecosystems, more progress towards our sustainable future lies ahead.



The Indiana Soybean Alliance and Indiana Corn Marketing Council appreciate you taking the time to read their first sustainability report.

To learn more about ISA and ICMC's work, visit:

[incornandsoy.org](http://incornandsoy.org)



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