



**SUSTAINABILITY
OVERVIEW
YEAR 2021**

SSOY



United States soybean farmers grow and develop sustainable soy-based solutions to address some of today's biggest societal challenges – producing feed, food and fuel for a growing population and preserving the planet and its resources for future generations. Every member of the U.S. Soy value chain has a role to play in creating a healthier, more prosperous world.

Farmers have long been known as the ultimate stewards of the land; after all, it is the source of their livelihoods and a precious resource to pass down to future generations. Today, as science progresses and advanced precision equipment and tools proliferate, farmers are optimizing not only protection of the land, but also preservation of water and other natural resources, even as they work to continually improve the harvests that we all depend on. U.S. Soy farmers from Delaware to the Dakotas are adopting these sustainable practices to preserve the environment, support strong communities and power progress around the world.

In the pages that follow, you will learn more about the advanced practices and techniques used by U.S. Soy farmers to maximize sustainability, and meet some of the farmers who are pioneers in sustainable agriculture.

U.S. SOY

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U.S. SOY SUSTAINABILITY GOALS • MAPPING TO UN SUSTAINABILITY GOALS

U.S. Soy's 2025 Sustainability Goals

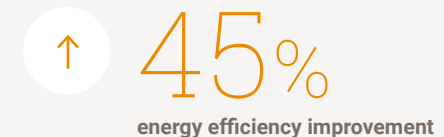
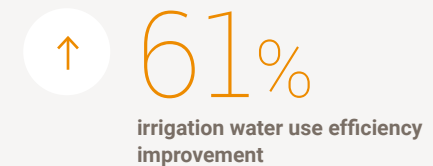
The dilemma is no secret: farming is fundamental to society, but growing the food, feed, fuel and other products that everyone depends on requires substantial resources. Sustainability in agriculture is a story of continuous improvement, using expanding knowledge and innovative technologies to increase yields while using fewer resources and preserving the land.

U.S. Soy farmers' commitment to sustainability is a long-term promise, rooted in conservation programs created by the U.S. Department of Agriculture more than 75 years ago. To continue building on this commitment, U.S. Soy farmers, represented by producer organizations, including the United Soybean Board (USB), American Soybean Association (ASA), and the U.S. Soybean Export Council (USSEC), came together to create a national strategy to further enhance U.S. soybean sustainability through the improvement of key performance indicators (KPIs) in environmental, economic, and social sectors.

U.S. Soy is committed to dedicating resources on research, outreach and measurements to make certain we achieve these targeted goals.

U.S. Soy Sustainability by the Numbers¹

Between 1980 and 2020, U.S. soybean farmers have improved resource efficiency per bushel:



2025 Sustainability Goals By 2025, U.S. Soy farmers aim to:



(measured as acres per bushel)



(measured as tons per bushel)



(measured as BTUs per bushel)



(measured as pounds CO₂-equivalent gasses emitted per year)

U.S. Soy's Mapping to United Nations Sustainability Goals

Agriculture plays an essential role in addressing the United Nations (UN) Sustainable Development Goals (SDGs). The UN SDGs provide a shared blueprint for peace and prosperity for people and the planet, now and into the future. U.S. Soy conducted in-depth stakeholder research to map the SDGs to U.S. Soy priorities.² Through collaboration with internal and external stakeholders,

We prioritized 15 environmental, social and economic factors where the industry is positioned to 'move the needle.'

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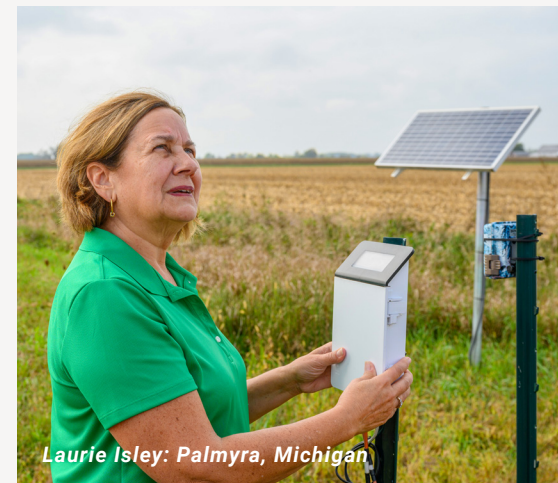
Goal 2: Zero Hunger addresses all the top U.S. Soy priorities identified in our assessment. Soy plays an integral role in supplying high-quality protein for diets, helping to alleviate hunger, and the continual improvements to climate-smart farming practices outlined in U.S. Soy’s 2025 sustainability goals are also highlighted in the targets under SDG Goal 2.

The three top priorities that emerged from stakeholder research, which all map to Goal 2, are:

- Soil health/carbon sequestration
- Water management
- Greenhouse gas (GHG) emissions

These priorities intersect with five other SDGs, which emphasize environmental responsibility and resilient agriculture, aligning naturally with agriculture and food production.

- Goal 6: Clean Water and Sanitation
- Goal 12: Responsible Consumption and Production
- Goal 13: Climate Action
- Goal 15: Life on Land
- Goal 17: Partnerships



Laurie Isley: Palmyra, Michigan



The assessment also highlighted U.S. Soy's competitive advantages: labor practices and safety, fair competition and business practices, human rights and reduced deforestation.

- Social aspects like labor and human rights protection and anti-corruption practices are required as “license to operate” in the U.S.
- While deforestation is a top issue for the global soy industry, it is not an issue for U.S. Soy, with U.S. forest land remaining essentially the same (down by 0.4%) since 1990.¹³

We will continue to seek additional opportunities to align with the UN SDGs goals and targets to support both our own sustainability goals as well as those of U.S. Soy customers.

A man with a grey beard and mustache, wearing a grey long-sleeved shirt with orange accents on the sleeves and a grey baseball cap with a logo, stands in a field. In the background, a green tractor with yellow wheels is visible. The sky is blue with some clouds.

U.S. SOY

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FOOD SECURITY · INVESTMENT IN GLOBAL AGRICULTURAL DEVELOPMENT

Greg Greving: Chapman, Nebraska



Marc Kaiser: Bowling Green, Missouri

U.S. Soy growers are committed to providing safe and dependable supplies of high-quality and sustainable ingredients that are foundational to food security around the globe. U.S. Soy provides nutritional building blocks to fortify health, and the industry drives continuous innovation to create more sustainable soy-based solutions for a wide range of other products that enhance our quality of life.

Unlike some other industries, farming is engrained throughout families; it is a lifestyle that often spans generations. U.S. Soy farmers take tremendous pride in their mission to feed and support their families, communities and customers around the world. Sustainable farming practices are central to these efforts, helping farmers make decisions that will benefit their land and families for years to come. The U.S. Soy industry invests in research programs and technology advancement to support these efforts.

USSEC actively shares our processes and progress with global buyers and consumers, helping communities across the world become more efficient and helping to ensure they have the nutrition they need to prosper.



Greg Greving: Chapman, Nebraska

FOOD SECURITY

Lance Rezac Onaga, Kansas

Greg Greving Chapman, Nebraska

Since Lance Rezac and his brother began farming together in the 1980s in Onaga, Kansas, they have had a future-forward outlook.

Their priority is to be sustainable for generations to come, and their investment in technology has played a huge role in making that possible.

“From seed to inputs, we are able to optimize almost everything,” Rezac said. “We couldn’t have been able to envision this years ago, and I’m constantly amazed by this technology. Reducing waste is good for the environment and good for us. We have reached a whole new level of efficiency we never thought we would be able to obtain years ago.”

Rezac has traveled to countries around the world on behalf of U.S. Soy to meet buyers and help them improve their production. In every discussion, sustainability has come up in some way, he reported.

“They’ll gladly adopt this technology in other countries,” Rezac said. “For example, the adoption of aquaculture in Bangladesh and Pakistan really raised people’s standard of living, giving them more protein and food. I think aquaculture will be the next big thing as fish is (one of) the cheapest protein(s) available and can really help these people.”

Greg Greving, a farmer from Chapman, Nebraska, has had a similar experience during his travels for U.S. Soy. In building U.S. Soy preference through education, farmers subsequently bolster exports and make friendships with international buyers that last for years.

“We’ve been over there beating the bricks, promoting our soybeans, and we’ve made these contacts,” Greving said. “Once you get the contact, the contract will come easy. I’ve seen that time and time again”

Food Security

With the global population expected to grow to an estimated 9 billion people by 2050 according to the United Nations, U.S.-grown soy fulfills an essential role in feeding the world. To meet this global food security need, the world needs protein in all its forms – animal and plant-based – to serve as a source of nutrition for people, animals and economies to grow.

The U.S. Soy industry provides reliable supplies of high-quality protein produced in ways that are mindful of the health of the planet. We work in partnership with other organizations to encourage collaboration between plant protein providers and the animal agriculture segment to benefit the world's population.

For example, through the national soybean checkoff, farmer funds are invested in the American Soybean Association's World Initiative for Soy in Human Health (WISHH) program. WISHH tracks trends in protein demand, works to guide and foster business development with local entrepreneurs and connects partners across global market systems, improving food security.³



Tim Bardole: Rippey, Iowa

9B

estimated global population by 2050



Heart-Healthy Soy

- Soy is the only plant protein that carries the FDA's heart-health claim, confirming it may be able to reduce the risk of coronary heart disease.
- The incorporation of soy foods in the diet may support heart health across one's lifespan.
- Soy is a source of folate, potassium and fiber, and the quality of soy protein is similar to animal protein and higher than the quality of nearly all other plant proteins.
- In 2018, the Food and Drug Administration (FDA) authorized the use of a qualified health claim for oils high in oleic acid, including high oleic soybean oil, and their relationship to a reduced risk of coronary heart disease when replacing oils higher in saturated fats.⁵

Investment in Global Agricultural Development

To keep up with continuous global advances in science and technology, USSEC frequently hosts education and training programs to further develop farmers' knowledge of developments in topics such as animal feed, nutrition, health, quality control and others.⁴

To provide agricultural expertise and help growing markets address protein challenges and needs, USSEC developed Soy Excellence Centers (SECs)⁴, which are one-stop-shops for industry training, resources and education for all members of the soy value chain.⁶ Five SECs are currently located in Egypt, Mexico, Nigeria, Singapore and Thailand.^{4,6}

Nutrition

U.S. Soy feeds society's needs for protein and essential fats, both as nutritious food for people and feed for animals. Through consistent innovation in the field and efficiency beyond it, U.S. farmers will grow more and higher-quality soybeans to meet growing nutritional needs, provide innovative solutions to many of today's complex challenges and support the progress and vitality of the communities we serve at home and abroad.

Food for People

By 2030, plant-based meat alternatives are predicted to grow by 1,800% to an \$85 billion market, up from \$4.6 billion in 2018.¹⁴ U.S. Soy is ideally positioned to provide excellent nutrition in meeting this demand. The 2020–2025 USDA Dietary Guidelines for Americans, which focus on encouraging healthy eating and meeting nutritional needs throughout all stages of life, recommend soy as part of a healthy diet across the categories of dairy, oils, vegetables and protein foods.

Soy is an excellent source of complete plant-based protein, providing all nine of the essential amino acids necessary for a healthy diet. This protein is a staple for vegans, vegetarians, flexitarians and anyone consuming plant-based food.

Sustainable U.S. Soy

The Sustainably Grown U.S. Soy Mark was launched in the U.S. to increase awareness of soybeans as a sustainable product for consumers and consumer packaged goods (CPG) companies.⁷

The mark showcases the commitment of U.S. soybean farmers and the industry to continuous environmental improvement and demonstrates how soy ingredients help CPG companies meet their own sustainability goals.





James and Laurie Isley: Palmyra, Michigan

INNOVATION

Wendy Yeager Orville, Alabama
Isley Family Palmyra, Michigan

Wendy Yeager's parents never pressured her to come back to their third-generation farm; they encouraged her to get a job she was passionate about. Yeager attended Auburn University where she earned a master's degree, then worked at a corporate job at Cargill, where she planned to stay.

However, life had other plans. "When farming is in your roots and blood, as bad as you want to deny it, that isn't going to go away," Yeager said.

Today, Yeager and her husband, Jamie, own Bell Place Farm in the heart of the Black Belt, near Orrville, Alabama, where they raise soybeans, cotton, peanuts, grain sorghum and wheat. Sustainability is a top priority for the Yeagers; in fact, they have land that has been continuously no-till for 13 years.

"With sustainability, you can never stop learning and being open-minded to innovative practices. I feel like there will always be a better way in the future," Yeager said.

The Isleys, owners of Sunrise Farms, Inc., in Palmyra, Michigan, have a similar experience

and commitment to sustainability. Laurie, her husband, James, and son Jake, don't only practice conservation – they promote it through education.

The family frequently hosts "shop talks" to share successes and learnings in sustainable farming with their community. They have found there is a lot of credibility when farmers talk directly to other farmers.

"People have different things we value, and we value our impact on the environment," Laurie Isley said. "We are proud of being farmers and that we farm in a way that leaves the land better for the next generation than we got it. We invest in our future."

Sustainable farming practices such as strip-till and no-till have made a tremendous impact on the profitability and vitality of the Yeagers' and Isleys' operations.

"It's exciting when people see what we're doing on our farm and they start realizing that not only is it better for the crop – but it makes economic sense," Isley said.

Customers can be assured that products carrying the mark contain soy ingredients that:

- Were grown in the United States.
- Are compliant with all U.S. environmental regulations.
- Protect highly erodible soils and wetlands.
- Were grown on family farms with responsible labor practices.

The pilot phase of the new mark launched in January 2021 with U.S. Soy partners from Soylent and IFF – where their products and/or ingredients are marketed as being made with Sustainably Grown U.S. Soy.⁸

Feed for Animals

Protein is an essential part of diets worldwide, and as our population grows, we will need more protein in every form to nourish people. Animal consumption of soy protein plays an essential role in global nutrition, and U.S. soybean growers are answering the call by sustainably producing feed for meat, poultry, fish and other protein sources.

The U.S. Soy industry supports animal protein producers around the world, sharing information on farming best practices to maximize efficiency and sustainability throughout the food chain. For example, USSEC provides the Soy Nutrition Value Calculator, which helps farmers to calculate the nutritional value of feed to optimize use of resources. And USSEC has been active in supporting aquaculture farmers



The United States sells more food and fiber to world markets than we import, creating a positive agricultural trade balance.

96%

of farms in the U.S. are family owned

\$139.6B

in U.S. agriculture exports in 2018

in Asia and Africa to implement In-Pond Raceway Systems, a method that enables more efficient and sustainable use of resources, including water, land, energy and labor.

U.S. Soy remains committed to supporting animal protein producers in maintaining and enhancing production methods that will increase both efficiency and sustainability as we seek to provide nourishment to a growing population.

Family Farms/Economic Impact

Continuously improving upon sustainable practices is a vital part of U.S. farmers' heritage and the health of their businesses. Today, 96% of farms in the United States are family owned.⁹ Many of these farmers will transfer ownership of their farms to their children. Simply put, the health of that land and surrounding ecosystems will dictate success or failure for those future generations.

Additionally, there are direct correlations between sustainable farming practices and increases in farm productivity. Farmers are growing more U.S. Soy per acre while also using fewer resources, improving their farms' profitability.¹

By supporting family farmers and the ecosystems around them, U.S. Soy is helping to revitalize communities across America and aiding in economic development. Farming accounts for about 1% of the entire U.S. gross domestic product¹⁰, including about \$139.6 billion in exports as of 2018. The United States sells more food and fiber to world markets than it imports, creating a positive agricultural trade balance.¹¹



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CARBON FOOTPRINT • SUSTAINABLE AGRICULTURE PRACTICES

Tim Bardole: Rippey, Iowa

The agricultural community and U.S. Soy have a grand challenge: We must increase production to feed the growing global population on less land and with fewer resources. But we also must be part of the climate solution.

While agriculture represents less than 10% of total U.S. GHG emissions – far behind the transportation, energy and industrial sectors – U.S. farmers help contribute to climate goals by reducing emissions and using climate-smart agriculture to offset them.

Carbon Footprint

Through management and preservation of grasslands, wetlands and forestland, U.S. farmers create and maintain carbon sinks that store carbon in the soil. Additionally, nutrient management practices like cover crops, conservation tillage and crop rotation also increase the amount of carbon captured in soil rather than released into the atmosphere, even as they reduce the need to use heavy equipment that emit carbon.

Since 1980, U.S. farmers increased energy efficiency by 45% and improved greenhouse gas emissions efficiency by 42%. U.S. farmers produce higher yields, use minimal fertilizer and operate efficient machinery, all of which help to minimize U.S. Soy's carbon footprint.



Rochelle Krusemark: Sherburn, Minnesota

U.S. Soy Conservation by the Numbers

↑ 45%
energy efficiency improvement

↑ 42%
greenhouse gas emissions efficiency improvement

↑ 130%
increase in production of soy by U.S. farmers, on roughly the same amount of land used for decades

Internationally, U.S. Soy’s carbon footprint is the lowest in the world when factoring in cultivation impact and land-use change – U.S. Soy growers are producing about 130% more soy today on roughly the same amount of land farmers have been using for decades.¹ This is all thanks to sustainable agriculture practices that both increase profits and drive sustainability.

Sustainable Agriculture Practices

U.S. farmers are the ultimate stewards of the land, but they’re also focused on preservation of water and other precious natural resources. Through sustainable farming and constant innovation, U.S. Soy contributes to a healthier planet today and for future generations.

Water Management and Water Conservation

Water use and quality management allow farmers to increase input efficiency, minimize the release of chemicals and ensure sustainable withdrawal. Through technological advances such as center-pivot irrigation systems, weather and soil moisture sensors and water storage ponds, farmers can precisely optimize their resources to save water and soil, while protecting against harsh weather.





The Bardole Family: Rippey, Iowa

CONSERVATION

Bardole Family Rippey, Iowa
AJ Hood Tillar, Arkansas

The Bardole family has owned farmland in central Iowa for nearly 120 years, and for about 90 of those years the Bardoles tilled that land. When they shifted their operations in 1993 to no-till, they were initially met with skepticism from fellow farmers.

“We were pretty early in adopting no-till – we were definitely mocked in the community for doing it,” said Tim Bardole. “Probably the first 15 years doing no-till made it so that we really couldn’t expand our operation because no one would rent us the ground.”

Farmers like Bardole use sustainable agriculture practices not only because they’re good for the environment, but also because they help their bottom lines. Sometimes it takes time to get operations up and running, but once sustainable agriculture solutions are implemented in full capacity, the numbers speak for themselves.

“When my father started farming in the ‘60s, 30-bushel-an-acre soybeans was a good yield. When I started in the ‘90s, it was 45,” said Tim. “Today, if we don’t grow 70-bushel-an-acre soybeans, it’s considered a disappointment. To me, that proves sustainability. If we are damaging the land, it would not produce the way it does.”

And while many of these sustainable practices aren’t obvious to the casual observer, Southeast Arkansas farmer AJ Hood found one attention-grabbing upgrade.

“Probably the biggest thing in the general public’s eye is our solar panels – it’s eye-catching,” farmer AJ explained. “It’s on a major highway; everyone can see it. It shows to the public that the growers are doing the right, sustainable things.”

U.S. Soy helps these efforts by funding research to advance water conservation practices that hold promise to further improve irrigation efficiency.

Nutrient Management

Thanks to detailed nutrient management plans, U.S. farmers can precisely apply just the right amount of nutrients for their crops when they're needed, allowing for more productive soil, less fertilizer use and protected water quality. Soil testing, cover crops and crop rotation are among the primary ways that farmers manage use of nutrients.

Conservation Tillage (Low-Till and No-Till)

No-till farming is exactly what the name implies: fields are planted without preparing the soil by tilling, which increases erosion, releases captured carbon into the air and creates GHG emissions via tilling machinery. With no-till methods, organic matter from the previous year's crop stays in the fields, improving soil nutrients and reducing moisture loss, soil erosion, GHG emissions and pests. U.S. Soy farmers have reduced soil erosion by 35% per acre of U.S. Soy production since 1980 thanks in large part to no-till, and 70% of U.S. soybean acres use conservation tillage today.

Cover Crops

By planting non-commercial crops in the off-season, U.S. Soy farmers help to add nutrients to the soil even as they protect the land from erosion. This practice



Meagan Kaiser: Bowling Green, Missouri



helps to maintain soil health and slow runoff from fields, trapping and filtering sediment, nutrients and other matter before they reach water sources.

Buffer Strips

Buffer strips, or buffer practices, are slices of fields that help keep soil healthy and manage water quality. Grass waterways and terraces allow proper drainage of fields, prevent erosion and improve biodiversity. Riparian forest buffers contain a combination of trees, shrubs, and/or other perennial plants, which help absorb excess water runoff from nearby streams, lakes, and wetlands. Buffer strips of native plants remove chemicals from runoff, reduce wind and soil erosion and support native wildlife.

Precision Agriculture

Drones, GPS and computer monitors, GPS-enabled tractors, satellite imagery, guidance control and integrated pest management are just a few of the modern tools at U.S. Soy farmers' disposal. Collectively known as precision agriculture, these advances in technology help produce more soy from the same amount of land, even as they reduce use of natural resources.

Innovations in Plant Breeding and Biotechnology

Plant breeding innovation and biotechnology make weed control more effective and reduce the amount of chemicals and inputs needed to produce crops. More than 90% of the soybeans grown in the U.S. are herbicide tolerant.

These innovations also work to increase nutritional benefits for consumers, protect against extreme weather conditions and address malnutrition around the globe.

Forestry, Land Use and Biodiversity

The United States is the No. 1 country in the world for preservation of public forestry, and U.S. Soy intends to help keep it that way. With more than 1.45 million hectares of forest land gained and 23.9 million hectares of farmland reduced over the past 50 years¹⁵, U.S. Soy is working to reduce land-use impact by an additional 10% by 2025. U.S. Soy farmers have a long history of supporting programs to help preserve wildlife habitats, enhance forestlands, conserve pollinators and improve biodiversity.

Infrastructure

The United States' transportation systems and sound infrastructure give U.S. Soy a competitive advantage no other country can boast. By leveraging U.S. Soy's shorter supply chain, the global food industry reduces its carbon footprint and transportation costs.



Wayne Fredricks: Osage, Iowa

U.S. Soy farmers have a long history of supporting programs to help preserve wildlife habitats, enhance forestlands, conserve pollinators and improve biodiversity.



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INDUSTRIAL USES • SOY-BASED PRODUCTS • BIODIESEL • LOOKING AHEAD

Jake Isley: Palmyra, Michigan

U.S. Soy wouldn't be where it is today without continuous improvement across the food value chain. Progress is the reason why our soybeans are the high-caliber, top-quality crop we are so proud to grow for our international and domestic customers. From farm to fork, we work to consistently achieve the quality and reliability to sustainably support progress of the communities and industries we serve.

The “whole” bean

From the seed to the bean and beyond, we are increasingly finding ways to use soy in each stage of its life. U.S. farmers grow more than 80 million acres of soy annually, offering an abundant and renewable supply of ingredients for food, livestock feed and hundreds of biobased products. U.S. Soy is also being used in adhesives, paper, plastics, rubber, solvents, lubricants, fiber, coatings and more.

Industrial Uses

Soy is a renewable resource, giving it a tremendous advantage for use in industrial sectors, where it can replace petroleum-based products. U.S. Soy industrial uses have a lot of room to grow. As a result of USB-funded research and development, soy is being used in biodiesel, mulch, pavement restoration, surfacing agents and tire production.



Soy-based Products

Soy biobased products can offer environmental and health benefits. This includes lower volatile organic compounds (VOCs), reduced exposure to toxic chemicals, irritation from odors and more. U.S. Soy is also being used as a sustainable alternative to harmful chemicals found in plastic, paints and fuels.

Biodiesel

In the U.S., biodiesel manufacturers rely on soybean oil as a feedstock for biodiesel, a renewable biofuel. Readily available and sustainable, biodiesel reduces greenhouse gases by up to 86% compared with petroleum diesel. U.S. Soy is part of the continued growth of the biodiesel industry and a solution for many challenges that intersect with UN SDG 7: Affordable and Clean Energy.

Looking Ahead

With continual advances in science, technology and farming practices, along with U.S. Soy farmers' ongoing dedication and commitment, the U.S. Soy sustainability story will only get better over time. We look forward to providing future updates. In the meantime, visit ussoy.org for the latest updates.



Footnotes

¹ http://fielddomarket.org/media/2021/12/Field-to-Market-National-Indicators-Report_SoybeanFactsheet_FINAL.pdf | ^{2,3} <https://daretocompare.ussoy.org/wp-content/uploads/2020/11/SDG-White-Paper.pdf> | ⁴ <https://ussec.org/soy-excellence-center/> | ⁵ <https://ussoy.org/ida-authorizes-qualified-health-claim-for-oils-high-in-oleic-acid/> | ⁶ <https://ussec.org/update-u-s-soy-and-aquaculture-in-southeast-asia/> | ⁷ SGUSS Report | ⁸ <https://www.prnewswire.com/news-releases/us-soy-launches-the-pilot-phase-of-sustainably-grown-us-soy-mark-301209784.html> | ⁹ <https://nifa.usda.gov/family-farms> | ^{10,11} <https://www.fb.org/newsroom/fast-facts> | ¹² <https://ussoy.org/sustainability-practices-infographic/> | ¹³ <https://www.fb.org/market-intel/reviewing-u.s.-carbon-sequestration> | ¹⁴ <https://markets.businessinsider.com/news/stocks/beyond-meat-ubs-plant-based-meat-market-85-billion-2030-2019-7> | ¹⁵ <https://ussec.org/ussec-ceo-emphasizes-importance-sustainability-keynote-address-international-grains-conference/>



Meagan Kaiser: Bowling Green, Missouri

PARTNERSHIP

Meagan Kaiser *Bowling Green, Missouri*
AJ Hood *Tillar, Arkansas*

Collaboration is often the key to success. That's why USB works to bring together researchers with farmers to continually address challenges and advance sustainable farming practices.

"Working directly with the PhDs, the entomologists, the weed scientists ... we're ahead of the curve," said Arkansas farmer AJ Hood. "We are working with these universities and they're bringing these things to life. It's a really cool deal!"

Meagan Kaiser is a farmer and soil scientist who serves as Vice Chair on the United Soybean Board Executive Committee. With her deep involvement across many aspects of the agriculture industry, she knows very well how collaboration between the field and lab creates superior results.

"My parents started Perry Agricultural Laboratory, a production lab in Pike County, Missouri," Meagan

explained. "Farmers bring in a soil sample, and we tell them what's in it and what, if any, course of action they should take. Our main focus is micronutrients, and how we can add them to farmers' lands to help make the crop stronger against Mother Nature."

The research that results from collaboration with farmers allows for variable-rate seed prescriptions, which help farmers to optimize planting acre by acre.

"We also run test strips, where we apply various minerals or micronutrients to small bits of field to see how they affect crops grown there," said Meagan. "We use technology like yield monitors to help us highlight how the yields differ, and we put it all together to see how much these soil additions ultimately pay off."



For more information about the sustainability
of U.S. Soy, visit ussoy.org