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Conservation Innovators

The ASA Conservation Legacy Award Program honors four farm families for stewardship achievements.

By Joann Pipkin

Innovation is everything in agriculture. And when innovation can help farmers carry on their legacies in land and water sustainability, they become true pioneers, trendsetters and industry leaders. This year, we honor four growers with a passionate agricultural heritage. Congratulations to these four outstanding soybean farmers, each a regional winner of the American Soybean Association (ASA) 2024 Conservation Legacy Award:

MIDWEST
Chris Von Holten, Illinois

UPPER MIDWEST
Jacob Kaderly, Wisconsin

NORTHEAST
Donald Morse, Michigan

SOUTH
Brad & Joyce Doyle, Arkansas

The conservation commitment and sponsorship support from ASA, United Soybean Board (USB), BASF, Bayer, Valent, Nutrien, Farm Journal and Top Producer make this distinguished award program possible.

Here's what some of our sponsors have to say as they honor the conservation achievements and sustainability efforts of this year's recipients:

"American farmers have a long history of working hard to grow crops in a sustainable manner, with a focus on continuous improvement. Farmers want to protect their legacy and preserve the environment for their community and future generations," said ASA President Josh Gackle, a farmer from Kulm, North Dakota. "The Conservation Legacy Award recipients are outstanding examples of how U.S. farmers are dedicated and responsible stewards of the land."

USB Farmer Director April Hemmes of Hampton, Iowa, shared her thoughts, "My main goal on the farm is, like all of us farmers, to leave our farm in better shape for the next generation. Healthy soils make healthy profits, and healthy crops. I'm on a farm that's been in my family almost 125 years now, and we've been doing things the way it works; but you also must look to the future. Keep the soil healthy. Call it sustainable, regenerative, whatever you choose. I call it farming."

Industry Affairs Lead for Bayer, Samantha Davis, adds, "Farmers are the original conservationists and are uniquely positioned to be part of today's solutions to climate change. Bayer joins with ASA in celebrating those who lead the way by responsibly managing their land and natural resources. Innovations and new market opportunities continue to change the game for farmers, but we must consistently prioritize and applaud good stewardship."

Senior Vice President of BASF Agricultural Solutions North America Paul Rea says, "Farming is the biggest job on Earth, and balancing numerous demands to meet the needs of a growing population is not easy. We share the same commitment as the ASA Conservation Legacy Award winners and applaud the steps they've taken to solve the challenges facing the future of agriculture with sustainable innovations."

Valent Sustainability Segment Manager Vince Restucci states, "Sustainability is a continuous journey for growers, built upon their choices in on-farm practices, machinery investments, crop inputs and agribusiness partners. Valent U.S.A. is proud to help celebrate this year's Conservation Legacy Award recipients as they are recognized for their work to ensure their farms and communities remain economically and environmentally strong for generations to come."

The ASA 2024 Conservation Legacy Award program continues to be made possible by the steadfast support of its sponsors. Congratulations, again, to this year's regional award winners.

Eye on Erosion

Illinois soybean grower Chris Von Holten focuses on soil preservation for the next generation of farmers.

By Joann Pipkin

In the early 1980s, Chris Von Holten watched as heavy rains eroded the soil away on his family's northern Illinois farm. A young teenager at the time, he worked as a seed company roguer and detasseler. He saw other area farmers face the same challenge and knew the damage needed to be prevented.

That experience would leave a lasting impression on the now fourth-generation farmer.

"I think that's the key to why we started going no-till and cover crops, to try and prevent that kind of damage again," Von Holten explains.

Today, Von Holten's stewardship journey is centered around those memories from his youth. With soil conservation at the root of his management strategy, Von Holten focuses on soil health and cover crops. The benefits he realizes are not only saving precious soil but also stepping up crop productivity and increasing farm profitability.

CHANGE IN THINKING

Chris Von Holten's fourth great-grandfather emigrated from Germany in the early 1900s to work for relatives in the Sydney, Illinois, area. He later purchased a farm near Tampico, Illinois. That same land would later become home for Von Holten's father.

Following a stint in the U.S. Army, Von Holten's dad rented a farm near Walnut, Illinois. There, his father raised cattle and hogs and grew corn, alfalfa and small grains. He also grew seed corn on contract for a local company until the business ceased operations in 1984.

"The erosion from the farming practices at that time was evident to me as I walked those fields and later drove a detasseling machine across those farms plus the others that grew seed corn," Von Holten says.

Von Holten's father farmed much like the generations before him until purchasing a chisel plow in 1970. While that helped stop some erosion, Von Holten says the chisel plow still wasn't the right practice to control soil loss.

"Dad spent a lot of time fixing up or having a contractor build new waterways to control erosion," Von Holten says.

After graduating from junior college, Von Holten returned to farm with his father in 1984. Using a moldboard plow, he worked the ground on a 160-acre farm he rented. He later switched to the chisel plow. Then, the Von Holtens learned how another local farmer had benefitted from no-till. The father-son duo each planted some no-till corn in the spring of 1987, adding row cleaners to their planter.

"1988 brought a drought that showed us the benefits of no-till and water conservation," Von Holten says. "The corn in those no-tilled fields yielded significantly better than our conventionally planted corn that year."

That drought year was all the inspiration the Von Holtens needed to begin no-tilling soybeans as well. Von Holten says their early years of no-till saw successful yields, but much was also learned from their mistakes, such as how to make improvements to the corn planter, no-till drill and weed control.

Today, Von Holten grows corn, soybeans and wheat using no-till and strip-tillage methods, which in the 1990s was incorporated into his farming practices.

"With our variable soil types and slopes, we need to control erosion and retain water in our soil profile, so that's why we started to go no-till," Von Holten says.

The move has brought favorable results to the operation through improved soil health and a positive impact on the farm's bottom line, Von Holten says.

"The retaining of fertility and moisture has increased our yields, has helped our better soils get better and our poorer soils increase air production."

BOOST FROM COVER CROPS

In the fall of 2015, Von Holten no-tilled cereal rye into a couple of cornstalk fields that he planned to rotate to soybeans the following spring. Encouraged by the results, he started planting rye on soybean ground that was due to be planted in corn.

"From those positive results, I started planting rye in the fall of 2018 on bean stubble for fields going to corn to help control erosion," Von Holten explains.

He then used a strip-till bar in the fall or spring with fertilizer application. Despite rye close to the strips, Von Holten says if a heavy rain fell on the field, the strips would wash out.

"Just like in prior years when a heavy rain would wash out the strips, it became apparent that I needed to stop strip-tilling and just rely on the rye roots for my tillage," he says.

According to Von Holten, residue from the rye has helped keep weed pressure to a minimum, resulting in lower rates of post-chemical applications. Now, the Illinois farmer works to plant 50%

to 80% of his fields in cereal rye to keep a living root in the soil as long as possible. Doing so, he says, aids the soil structure and biology.

Plus, improved water infiltration has been one of the biggest benefits cover crops have brought to Von Holten's operation. He says the soil not only holds up better to equipment but also allows for planting when soil conditions are damp.

"In the past, you'd have to worry about the soil crusting over after you did that," he says.

Planting twin row 7.5-inch wheat allows for earlier planting of double-crop soybeans between the twin rows with 22.5 inches of room for a tractor and planter to fit.

"The growth of wheat like a cover crop keeps a living root in the soil through the fall and early spring when the soil is most vulnerable to erosion," Von Holten explains. "The side benefit is the extra income from the wheat and the earlier planting of the double-crop soybeans."

With between eight and 10 soil types on most of the fields Von Holten farms, he says cover crops have helped raise performance levels on some of the poorer soils he farms. Variable fertility rates and seeding capabilities also aid Von Holten in managing the wide variations in productivity.

"My APHs (actual production history) for both corn and soybeans have been steadily growing, which has come from the addition of cover crops to my farming practices," Von Holten says.

DRIVE TO OVERCOME

As if farming amid multiple soil types wasn't arduous enough, add some slopes and rocks to the terrain.

For Von Holten, growing row crops on top of or adjacent to the glacial moraines that are found on his farm can mean as many as 14 different soil types in a field, while the productivity index might range from 98 to 138. Because of the landscape of Von Holten's farm, only one 80-acre parcel is without waterways.

"We try to keep pushing forward, trying new things, trying to expand the envelope to push conservation," Von Holten says.

Planting on contour and terraces has helped Von Holten manage the farm's terrain. With slopes over 10% on a contour field, he says planted rows would wash away even with no-till and cover crops if he planted them up and down the slope.

"The terraces at the other farm were built for my wife's grandfather by the Soil Conservation Service in the 1950s," Von Holten says. "They are still doing what they were designed for today — to catch and

slow rainwater from washing down those slopes."

EYES ON THE FUTURE

Von Holten knows how he farms today will affect future generations. And, he says if he's doing the right things, others will reap the benefits.

"That's my philosophy," he says. "I'm hopefully doing the right thing with cover crops and no-till, and I think it's shown a positive return to me."

Striving to conserve the land and water are the best ways Von Holten can build soil health and make the ground more productive.

Life is filled with choices. Some are important, others not so much. The same goes for the decision to implement a new farming practice. The outcome of that decision can follow a farmer for the rest of their life and on to the next generation.

"Only time will tell if we made the right choices of no-tilling and planting cover crops," Von Holten says, "but I think we are on the right path to making our farm and our rented farms better for the next generation."

> "With our variable soil types and slopes, we need to control erosion and retain water in our soil profile, so that's why we started to go no-till."
>
> *— Chris Von Holten, Illinois soybean grower*

All for the Soil

Soil health, cover crops frame Jacob Kaderly's picture of land stewardship.

By Joann Pipkin

Jacob Kaderly always wanted to be a farmer.

But his growing-up years had other plans. Severe allergies kept him from farming in dusty conditions. After high school, he pursued agricultural jobs that were close to farming, working alongside his dad in a fertilizer business before becoming a certified crop adviser (CCA).

Today, he credits his father's service on the Wisconsin State Conservation Board during the 1970s with fostering his passion for land stewardship. That, and the management practices his dad employed on the family farm, gave Kaderly a first-hand look at contour strips and no-till.

Thanks to cab tractors mitigating much of the dust and allergens that affected Kaderly, he's farming just like he always wanted to, with conservation and stewardship as the driving force behind his efforts.

"In today's world, with the expense of buying big equipment to do tillage, you can save so much more money going no-till," Kaderly says. "Every trip across the field costs you; it's not good for the soil and it's expensive."

> "Conservation and land stewardship are important for the future to produce high-quality food and to preserve the ability of the land to keep producing high-yielding crops."
>
> *—Jacob Kaderly, Wisconsin soybean grower*

Armed with the goal of maintaining the soil at optimum fertility levels with minimal erosion to create a profitable farm, Kaderly uses no-till and cover crops as the foundation of his conservation legacy.

SAVING THE SOIL

The rolling terrain of Kaderly's Juda, Wisconsin, farm is home to 4% to 8% slopes. Ten acres of waterways help him navigate the landscape where he grows corn, soybeans and wheat.

"We farm on the contour," he explains. "I believe that breaking up fields in those strips really helps with soil loss because we have different rotations in the hillside to keep the soil in place."

From the beginning, Kaderly says using no-till was a way for him to farm without spending a lot of money on equipment. Plus, he was already familiar with the system, having watched his father use the practice in the 1980s.

"By keeping the soil in place, I'm retaining all the nutrients and the fertility and increasing the production ability of my farm," Kaderly says.

With a close eye on runoff, Kaderly adds that no-till and cover crops have helped increase the water infiltration in the soil.

Wheat is used as a cover crop because Kaderly finds it easier to manage than rye. Then, after his wheat seed crop, he has settled on a seven-way mix for cover that includes peas, oats, red clover, sorghum-sudangrass, alfalfa, radish and hairy vetch.

"That mix generates 80 to 100 pounds of nitrogen for the next corn crop," Kaderly explains. "About five years ago, we started planting rye after beans and corn to help in the spring with erosion."

Since then, he's transitioned to wheat with a goal of keeping the soil covered year-round.

"I have seen better water infiltration, less erosion and better soil health," Kaderly says of his use of cover crops. "Because I soil test every other year, I am monitoring the fertility levels to see if the cover crops are helping to increase the fertility."

Plus, he gets a bonus with nematode control from the radishes.

FOCUSING ON FERTILITY

Kaderly conducts soil tests every two years on two-acre grids, and purposely adjusts the points to ensure fertility levels are as even as possible. One year, he uses variable rate technology to apply phosphorus, potassium and lime, while the second year, he maintains the nutrients in the soil.

The fertility program has produced consistent yields across the 12 years Kaderly has used it.

Soon, Kaderly plans to update his planter with one that can place liquid fertilizer below and slightly to the side of the seed trench.

"This will help lessen the use of salt-based fertility, which will enhance soil health and crop yields," he explains.

Always thinking ahead about achieving higher yields, Kaderly fertilizes for the most production.

"I don't want fertility to be my limiting factor," he says.

STANDING FOR THE ENVIRONMENT

Fields are scouted on Kaderly's farm every 10 days beginning in early summer. The strategy combined with Bt corn and a three-year rotation keeps insect pressure at bay. Alternating crops and chemical programs also help Kaderly manage weed resistance.

"I try to use different modes of action every couple of years in my chemical applications,"

Kaderly explains. "I also have mowed my cover crop after wheat to control water hemp seed production."

The Wisconsin soybean grower uses wildlife food plots to protect and enhance environmental quality. He also has 10 acres in the Conservation Reserve Program (CRP).

A firm believer in the benefits of no-till and cover crops, Kaderly promotes conservation practices through his work as a CCA and agricultural consultant. As an adviser to growers on about 10,000 acres, he touts what good stewardship can do to optimize soil fertility and farm profitability.

"Just for anyone to get started farming today is a big challenge," Kaderly says. "No-till made my investment minimal, and it enabled me to start farming. I also feel it's the right way to farm today."

Organizations like the Farmers of the Sugar River Watershed help Kaderly continue advocating for conservation and land stewardship. In 2018, he received the Responsible Nutrient Practitioner Award at the National No-Till Conference. And in 2020, he hosted Wisconsin Governor Tony Evers, Secretary Preston Cole of the Wisconsin Department of Natural Resources and local representatives to discuss soil health and conservation practices.

Kaderly is a regular attendee of the National No-Till Conference and recognizes that only about a third of the United States is farmed using no-till systems.

"The topsoil is just so important," he says. "If we lose it, the ability for that farm to produce is probably lost forever."

With a watchful eye on soil loss, managing cover crops and focusing on fertility, Kaderly is accomplishing his goal of keeping the soil healthy to create a profitable farm business.

After all, he knows if he preserves the farm, the next generation will be able to be profitable from it as well.

"Conservation practices for a long time have been part of our farming operation," Kaderly says. "Conservation and land stewardship are important for the future to produce high-quality food and to preserve the ability of the land to keep producing high-yielding crops."

LONG-TERM VISION

Conservation efforts create economic sustainability for Michigan farmer Don Morse.

By Joann Pipkin

His courtship with no-till began just shy of 50 years ago. Back in 1975, Michigan farmer Don Morse put conservation tillage to the test on his 3,100 acres, years before the federal government began offering subsidies to farmers as an incentive to conserve the soil.

With a keen interest in getting out of the soil what he put into it, Morse then had one clear goal: to leave the land better than when he got it so that it's sustainable for the future. Raised in a household where conservation was the conversation, the veteran farmer continues to make that his mission today.

Morse has made a career out of caring for the soil with conservation practices helping him fulfill his intentions of buying and renting farmland at a steady pace. His operation today focuses on growing soybeans, corn, sugar beets and wheat in the Great Lakes Watershed near Birch Run, between Flint and Saginaw, in the eastern part of the state.

According to his daughter, Allison Morse, who nominated her father for the ASA Conservation Legacy Award, implementing good agronomic practices helps ensure the lakes and rivers stay clean and healthy.

"Farming is constantly evolving," Allison says. "To be successful, you need to have an open mind and be willing to adapt to new technologies as they enter the marketplace. Don is always looking and learning about new developments in the ag industry and trying to find ways to implement them on his farm."

SOIL THAT SUSTAINS

As a college student at Michigan State, Morse was exposed to a plethora of information involving soil and soil management. The topic interested him so much that he earned his Bachelor of Science degree in it.

And during his tenure in farming, soil health has been the foundation of his conservation journey.

The tabletop-flat land that Morse farms calls for between 25- and 66-foot tile spacing to protect areas with open ditches where water can run off the field. No-till farming methods mean fewer trips across a field with equipment. It also reduces field compaction and soil health destruction. Plus, it saves Morse fuel and time compared to conventional farming practices.

Implementing cover crops has helped the Michigan farmer build soil organic matter and increase water-holding capacity while sequestering carbon and suppressing weeds.

"With cover crops, the roots provide year-round food for microbes," Morse explains. "I like to see a high population of soil microbes because they chew up the plant residue, the cornstalks, the wheat straw. The higher the level of microbes, the faster you'll decompose the residue and get nutrients back in a usable form to the plant."

Keeping a crop growing throughout the winter works to build the soil biome. Combined with no-till, cover crops add organic matter to the soil and improve soil health. Plus, soil erosion and surface runoff are less likely to occur with a cover crop on the ground over winter. Cover crops allow the soil to sequester carbon and create an actively growing crop over winter into spring, which creates a competitive environment for weeds. This process works to control noxious weeds like resistant Palmer amaranth, marestail and pigweed species.

"If you raise organic matter, you increase water-holding capacity and the amount of organic nitrogen that gets released," Morse says.

Although he's planted oats, wheat and clover, rye is now Morse's go-to cover crop. He calls it "tougher" than other species.

"[Rye] is just a really hardy species," Morse explains. "It puts down some roots that will make biomass."

The cover crop is aerially applied into standing corn and broadcast into standing soybeans in early to mid-September for optimum timing.

"As far north as we are, I've found that's the best way to get the rye established," Morse says. "You get it out there before soybean leaf drop, and that gives it time to get going."

In the spring, soybeans are planted directly into actively growing rye with the cover crop depleted afterward. Rye is terminated prior to corn planting so it doesn't tie up excess nitrogen. Morse also bands low salt phosphorus and potassium liquid fertilizers with the planter to promote soil health.

Making land improvements can be a slow process, Morse says.

"It all goes into making the land better when you're done with it than when you found it," Morse says. "Conservation contributes to that. The cover crop, the no-till, all those things are called conservation, and they all contribute to making the soil better now than when I found it."

ACCOMPLISHING HIS MISSION

While he's always had conservation and soil preservation at heart, Morse admits fine-tuning no-till farming has been a process. From different planters and attachments to herbicide programs and cover crop selection, his stewardship story has evolved over the years.

"Whatever we do, it needs to be financially viable," Morse says. "If it isn't, then it's not going to stand the test of time."

Because farm margins are especially tight in this day and time, Morse says growers like him must push the pencil to determine if their farming practices are financially feasible, especially in the short term.

"How does it affect your bottom line," Morse says of a grower's farming practices. "If you can raise your organic matter in the soil, you're increasing water-holding capacity, you're increasing the amount of organic nitrogen that gets released which means you don't have to buy as much synthetic fertilizer."

Looking at long-term sustainability, Morse knows organic matter is exposed to soiled oxygen every time steel enters the ground for a tillage operation. And every tillage pass burns organic matter.

"That's not really sustainable over the long term," Morse says. "I believe by doing no-till, we're helping ourselves be sustainable over the long term, and that makes us financially more viable."

A CONSERVATION CONNOISSEUR

Morse is humbled to be honored by ASA for his conservation efforts. Yet, Morse is profound in his work, truly believing in what he does.

His labor in soil management has not only benefited his operation but also has gained the respect of his peers.

Daughter Allison works with her dad through his seed business and acknowledges the accolades he receives.

"Many of our seed customers have watched me grow up," Allison says. "Don is very well respected among his peers. He's honest and people value his opinion."

Morse Farms has been featured in videos by The Nature Conservancy and the Saginaw County Farm Bureau and hosted countless lawmaker-grower sessions and one-on-one tractor/combine ride-alongs. Morse is also tapped for local media interviews regarding crop issues throughout the growing season. He cooperates in a sustainable wheat program, which Morse piloted for the company a few years ago.

In 2021, Morse received the Conservation Innovation Award from The Nature Conservancy.

Indeed, Morse believes in conservation, leaving the soil better than when he found it.

And at the end of the day, Don Morse hopes people know him as a good farmer.

"Conservation practices contribute to your farm legacy," Don says. "Farms that produce good crops and do it in a way that will stand the test of time aren't after short-term benefits. We have a long look, a long vision of where we want to be."

Allison concludes, "It's our goal to leave the soil better than we found it. That's sustainability to me, allowing future generations to farm and continue that legacy."

"I believe by doing no-till, we're helping ourselves be sustainable over the long term, and that makes us financially more viable."
—Don Morse, Michigan soybean grower

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"At the end of the day, we must make good, wise management decisions to be profitable. I think conservation could be a part of that on most farms."

— Brad Doyle, Arkansas soybean grower

Committed to Conservation

Brad and Joyce Doyle's stewardship story is marked by a steadfast intention to make the next generation profitable.

By Joann Pipkin

Brad Doyle isn't a typical farmer.

In fact, he was two generations removed from farming before he married his wife, Joyce, whom he met while in graduate school.

Yet, the agronomist and crop consultant fit right in with her family's multi-faceted farm business. A third-generation farmer herself, Joyce brought her husband back home to Northeast Arkansas, where they joined the family operation.

Together with Joyce's brother, the Doyle/Berger Farm grows soybeans, rice and wheat in the Mississippi River Delta near Weiner. A top commodity for the operation, Doyle says Poinsett County typically ranks No. 1 in the U.S. for rice production each year.

Although he might not be what he considers a typical farmer, Doyle's passion for agriculture and water conservation is unmatched by the stewardship legacy created decades before him.

LEGACY IN THE MAKING

Doyle credits his wife's father and grandfather with starting the operation's conservation story. In addition to farming, the family owned a seed company which provided Doyle with an opportunity to join the family business when he and Joyce returned to the operation.

A plant breeder himself, Joyce's father focused on soybeans, though he also worked with cereal grains. Doyle says his father-in-law wanted Joyce to earn a doctorate, so he and Joyce moved to Fayetteville to study at the University of Arkansas.

Not long after their move, Doyle's father-in-law passed away, leaving Joyce to take over the soybean breeding program while she and Doyle were still attending school.

While that segment of the operation created its own uniqueness, the farm also set itself apart by being 100% irrigated. Doyle says that being in a critical water area is the operation's biggest challenge.

"Our groundwater use is the primary source for irrigation," Doyle explains. "That alone is where the farm's conservation story begins."

Setting aside 100 acres of the family farm in the mid-1980s, Doyle's forward-thinking father-in-law built a reservoir to help conserve winter rain. Through what he calls a tailwater-recovery system, excess rainwater is collected in canals built throughout the farm and then pumped into the reservoir to be used for irrigation.

The system was such a successful addition to the operation that Doyle built a second reservoir on 50 acres that was completed in the summer of 2023.

"Not only do these reservoirs provide us irrigation water, but also habitat for waterfowl," Doyle says. Bald eagles, fish and other wildlife also frequent the area.

The family's efforts in water conservation have saved the operation in many ways.

"Because we have a high volume of water, we have shorter times that we're actually irrigating fields, and that reduces stress on the plants," Doyle says. "Reducing our runoff is critical. Anything we can do to keep water in the field and not run off into our canals and off the farm is a responsible conservation practice."

STRATEGIES MARKED BY STEWARDSHIP

Farming in an area marked by heavy tillage brought Doyle perhaps the greatest challenge to overcome in the operation in the adoption of no-till. While conventional farming with plow

and planter is commonplace and delivers high yields, Doyle knows soil is lost as a result. Plus, those traditional farming methods can be taxing on farm labor, fuel and time.

"Every pass you make across that field doesn't necessarily have to happen if you go to a no-till system," Doyle says. "Timeliness for planting is critical for us to get higher-yield potential. By simply no-tilling, that opens the door for us to possibly an earlier planting date, but it for sure reduces our labor costs."

Through research, Doyle identified the cover crops that would be best suited for the area's heavy, water-logging soil. About 25% of the farm is planted in cover crops using aerial application and drill seeding techniques. Cover crops are focused on waterways, field edges, roads and highly erodible, sloped fields.

"Many covers will not survive, but we use a combination of cereals ahead of a soybean crop," Doyle explains. "Before rice, we focus more on non-cereal crops. Cover crop grasses can leave root exudates that injure other grasses."

Radish, buckwheat and cereal rye are selected to keep nutrients near the surface and prevent weed emergence ahead of soybean planting. Expanded cover crop research is planned to test new varieties, rates and species to help Doyle identify the best choices for different soil types.

Working closely with the Arkansas Game and Fish and the National Wild Turkey Federation, Doyle's farm feeds more than 20 wildlife

species through cover cropping and food plots.

Precision leveling the ground is commonly used in rice farms to improve irrigation efficiency in the area, and Doyle says for that reason, most of their farm has been leveled. The practice helps conserve water and maximize yield while creating a migratory bird habitat when flooded in the winter.

With readily accessible poultry litter in the area, Doyle can increase organic matter and benefit soil health when using the product as a fertilizer.

"Soybeans respond very well to it," Doyle says. "It's often referred to as a circular farming system in our part of the world."

Poultry houses use rice hulls for bedding, and the chickens are fed soybean meal made from the soybeans grown in the area. The chicken litter is then turned into fertilizer to grow more rice and soybeans.

Doyle says using the litter as fertilizer helps relocate it from areas high in phosphorus to those deficient. The risk of phosphorus ending up in a stream is greatly reduced as a result.

Soil testing and grid sampling help Doyle stay on top of fertility and nutrient availability.

"We've gotten more aggressive with that through the years," Doyle says of grid sampling. "This year is one that we're really going to see a huge savings in phosphorus applications."

He adds that accurate soil testing and variable rate fertilizer applications help reduce the risk of phosphorus runoff, adding another element to his stewardship practices.

Doyle's equipment is supplied with GPS (Global Positioning System) and a computer with specialized software to monitor field conditions. The technology helps him prevent overlap when planting and applying herbicides and pesticides.

While the conservation practices currently used in the operation work well, Doyle maintains an open-minded attitude in adopting new practices that might provide additional benefits.

"At the end of the day, we must make good, wise management decisions to be profitable," Doyle says. "I think conservation could be a part of that on most farms."

THE NEXT CHAPTER

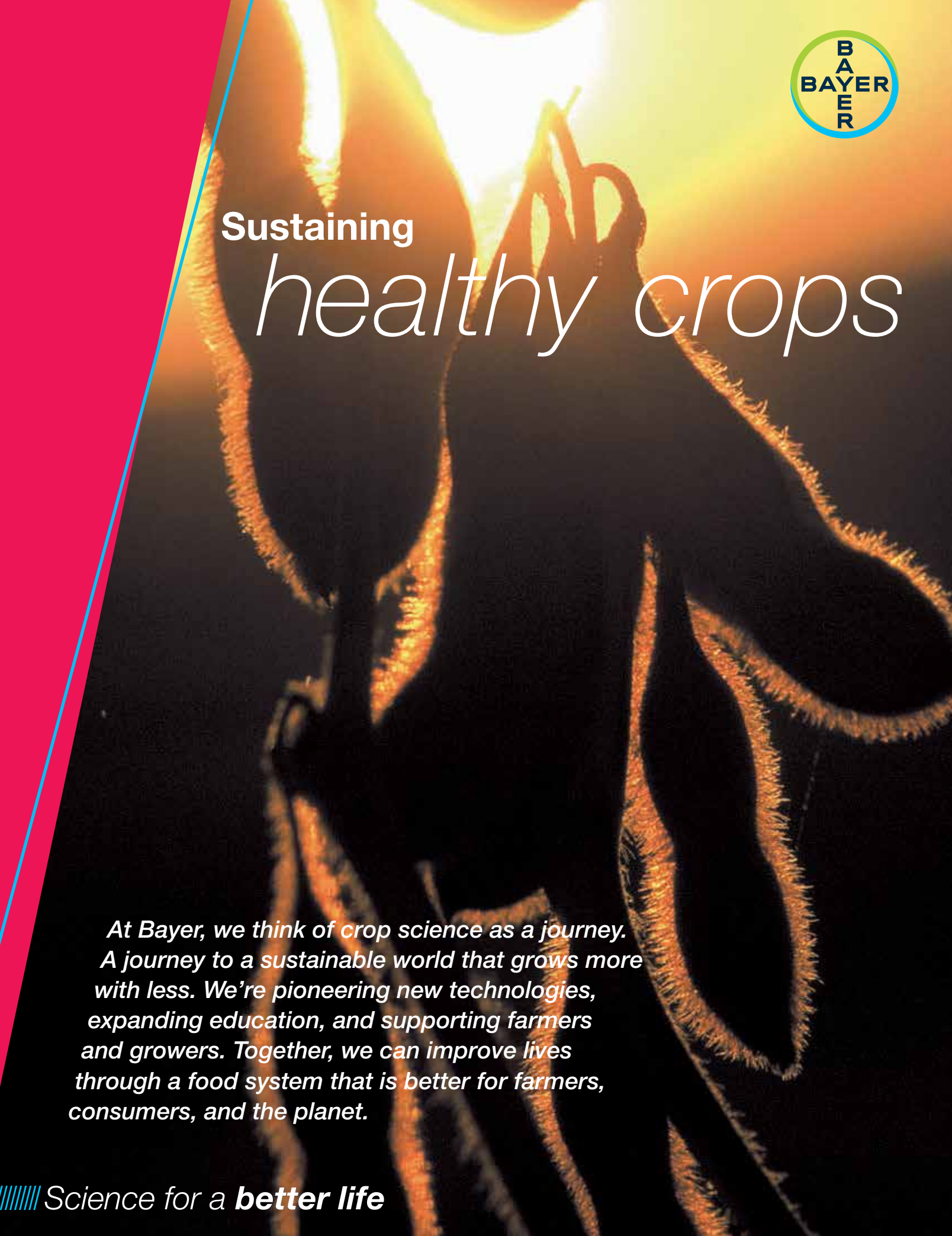
The conservation story that began with water management and reservoir construction is far from its final chapter. With sustainability efforts evident throughout the Doyle/Berger Farm, Brad and Joyce Doyle want their acts to prosper the next generation.

While Doyle believes part of the conservation methods in place on the operation have increased yield, he knows knowledge is gained through different planting practices.

Realizing equipment and seed varieties have changed in the farm's first 100 years, today's crop decisions are based upon on-farm research and extension resources. Doyle works closely with state agronomy specialists and learns all he can by attending conferences like Commodity Classic.

Education and community leadership are also treasured themes in Doyle's conservation story. From interacting with the public through social media to hosting field days and planting seeds in a learning park, sharing his stewardship with others marks the epilogue of this farm's memoir.

"As we have learned, it is possible to improve the soil, attract more animals, save water and watch the yields climb," Doyle points out. "We want to make it easy for the next generation to be profitable and happy."



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