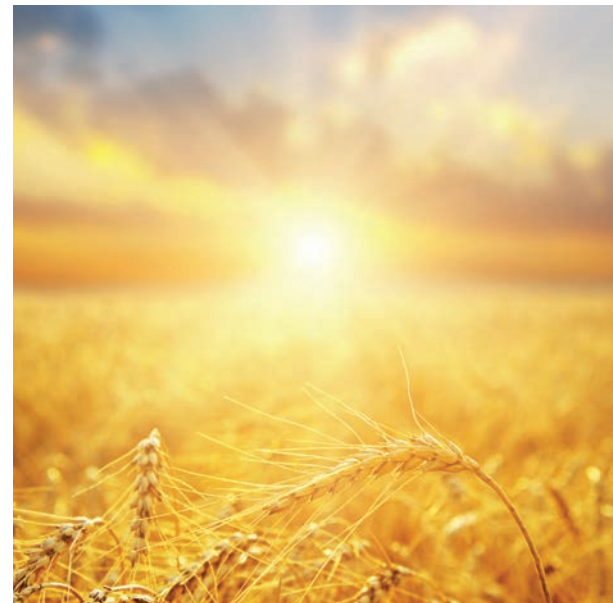
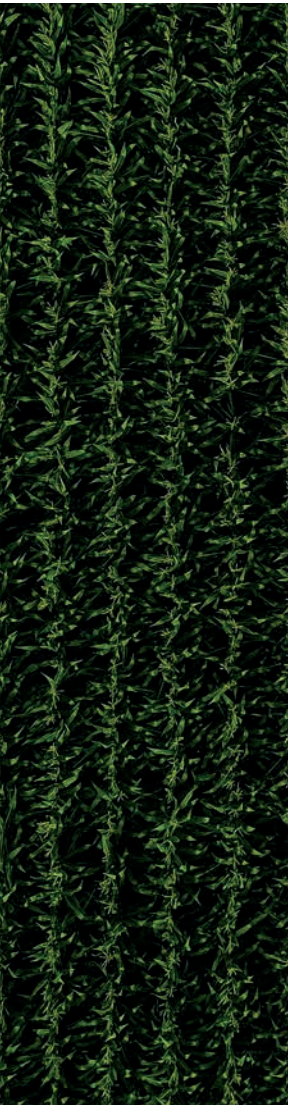




PARTNERING WITH OUR CUSTOMER-OWNERS TO BUILD SUSTAINABLE FUTURES



A LETTER FROM OUR PRESIDENT

Sustainability has long been a focus of our customer-owners and our Associations. While much attention today is focused on environmental sustainability, it represents just one facet of a multidimensional effort.

Indeed, when we ask our customers to describe what sustainability looks like in their operations, they start with the time and care they put into financial and generational sustainability. Without these foundational elements, there would be little or nothing to pass on to future generations.

When it comes to production methods, these vary across operations. The choice of methods is driven not only by responsible stewardship of natural resources, but also the ability to build economic resiliency and social well-being for producers' families, their operations and, by extension, their broader communities. Improving soil health, managing water usage, reducing inputs – our customers pursue these benefits to make their operations stronger and healthier for future generations.

At Farm Credit Services of America (FCSAmerica) and Frontier Farm Credit, our role is to support and enable our customer-owners in their individual sustainability journeys. In 2022, we added a focus on environmental sustainability to our long-standing efforts to support economic and generational, or social, well-being for ag producers. This is important if we are to keep pace with the changing expectations of consumers, policymakers and the investors who bring capital to rural America through their purchase of Farm Credit System bonds.

As a financial services cooperative, our job is to finance and insure agriculture as it comes. To that end, we do not and will not prescribe production methods to our customer-owners – those are individual choices best made by each producer.

We are committed to:

- Educating our customers about opportunities, trends and challenges in sustainable agriculture.
- Enabling customers who choose to participate in sustainable practices through specialized products and programs.
- Engaging with third-party organizations to collaborate on partnerships and new opportunities that bring value to our customers, Associations, communities and agriculture more broadly.

This first annual sustainability report shares more detail about our efforts. It also highlights the long-standing work of our customers to embrace sustainability in ways that make their operations stronger for the future.

Agriculture is continually evolving, and so is the view of sustainability. What remains constant is our Associations' dedication to helping our customer-owners succeed and thrive in changing times.



Mark Jensen
President and CEO



WHAT SUSTAINABILITY MEANS TO US

One of the first examples of sustainability in U.S. agriculture was the creation of the Farm Credit System more than 100 years ago. Congress understood that access to dependable credit was essential to a reliable, sustainable food system.

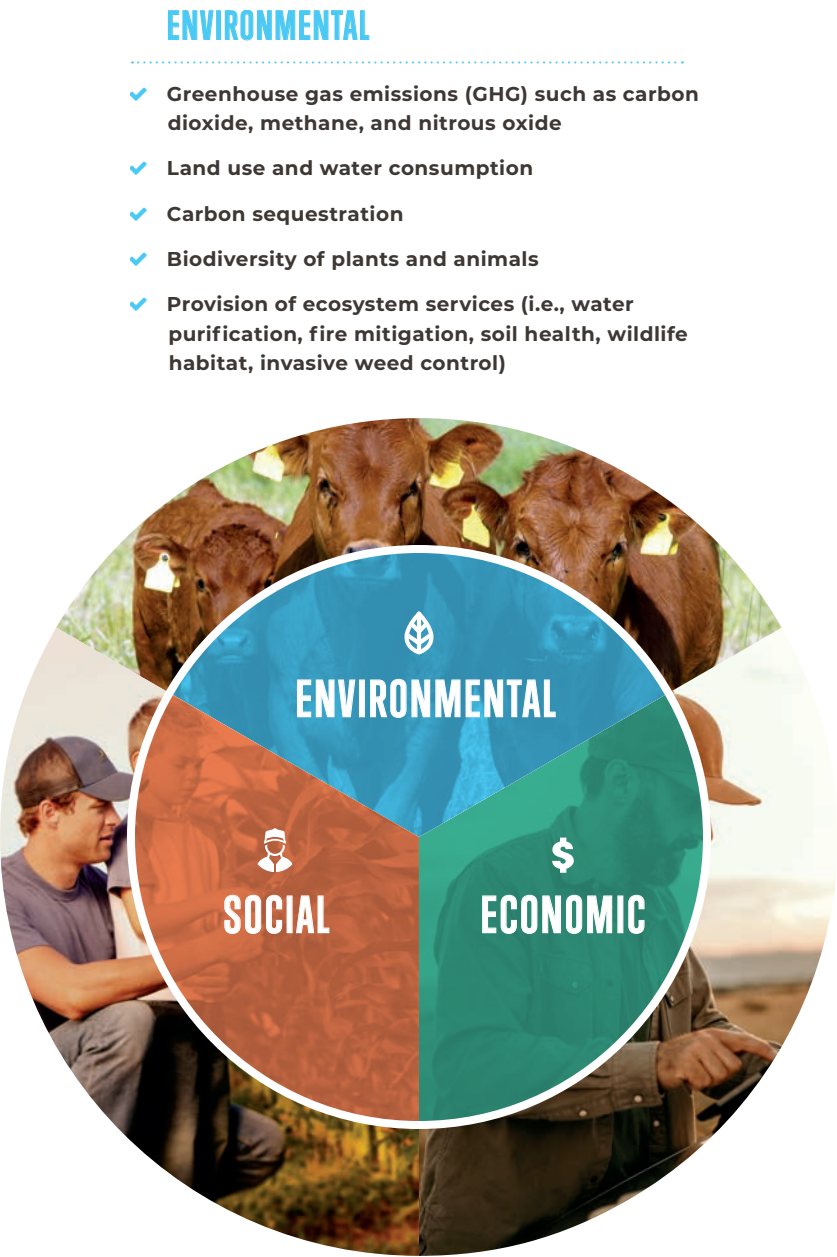
FCSAmerica and Frontier Farm Credit are committed to being the lenders our customer-owners can count on. That includes working with customers to continually improve and move their operations forward, now and into the future.

While economic sustainability remains the bedrock of who we are, sustainability also means growing with the agricultural industry. The three pillars of our new sustainability program are environmental, economic and social, as seen on the next page. The focuses detailed within are not an exhaustive list. Rather, they represent topics that our customers and the agricultural industry are interested in around sustainability.

Each is inextricably interwoven, as demonstrated by some of the customer stories later in this report. Improving soil health can cut production costs and improve profitability while also benefiting wildlife. Investing in a methane digester can allow a dairy to reuse water and sand, provide fertilizer to local growers of feedstuff and heat homes in area communities.

This report highlights the important work that has and continues to be done to ensure U.S. agriculture remains a global leader.

THREE CORE AREAS OF SUSTAINABILITY



ENVIRONMENTAL

- ✓ Greenhouse gas emissions (GHG) such as carbon dioxide, methane, and nitrous oxide
- ✓ Land use and water consumption
- ✓ Carbon sequestration
- ✓ Biodiversity of plants and animals
- ✓ Provision of ecosystem services (i.e., water purification, fire mitigation, soil health, wildlife habitat, invasive weed control)

SOCIAL

- ✓ Worker safety and training
- ✓ Cultural, recreational and community-wide quality of life
- ✓ Animal health and well-being
- ✓ Safe and healthy food supply

ECONOMIC

- ✓ Generational transfer
- ✓ Producer profitability
- ✓ Economic impact and rural development: tax contributions, donations, job creation, economic growth, supporting other businesses, enhanced livelihoods, economic resilience

HOW WE SUPPORT PRODUCERS

FCSAmerica and Frontier Farm Credit work with producers to help them build financially sustainable operations, reflecting a core element of our mission: to secure a safe, reliable, and affordable supply of food for families in the U.S. and around the world by providing sound and constructive credit to agricultural producers in good times and bad.

We share our financial expertise in daily conversations with producers, emphasizing the fundamental importance of working capital and cost of production, then utilizing that knowledge to inform marketing decisions.



ADDING SUSTAINABILITY EXPERTISE

In 2022, at the recommendation of our internal working group, we created a position to focus exclusively on our sustainability efforts. Myriah Johnson, our new vice president of corporate sustainability, has years of experience in the industry, including time as senior director of beef sustainability research at the National Cattlemen’s Beef Association.

Johnson is a resource for our customer-owners, an expert voice representing their interests in a variety of arenas and a bridge to groups that share a dedication to the sustainability of U.S. agriculture.

As agricultural producers work to advance their sustainability, it is our job as their financial institution to help enable them in their journey.



INDUSTRY SUSTAINABILITY BY THE NUMBERS

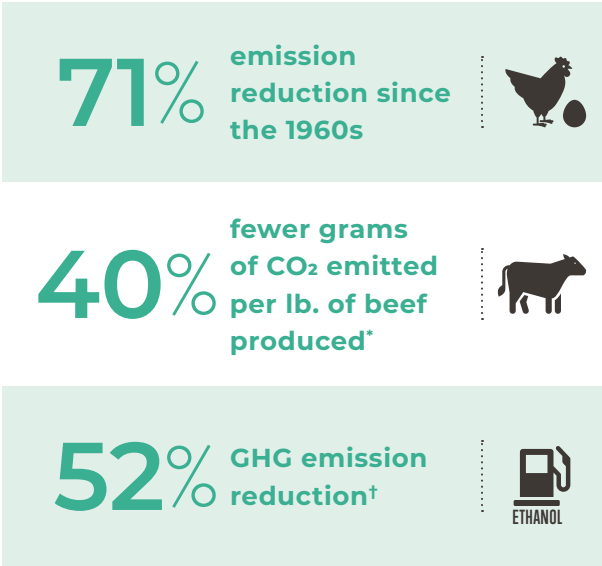
American agriculture has grown to become the largest, **most efficient** and **productive** food system in the **world**, but it is under **increasing pressure** regarding its impact on the environment. However, agriculture has made great strides over time to lessen its impact and is now being considered **part of the solution**.

The average American farmer feeds **155 people**, growing **twice** as much food as the generation before while using **less land, energy** and **water** to do so. Combined improvements in **technology, genetics, breeding, care and handling, precision** and **management practices** have helped achieve these results.

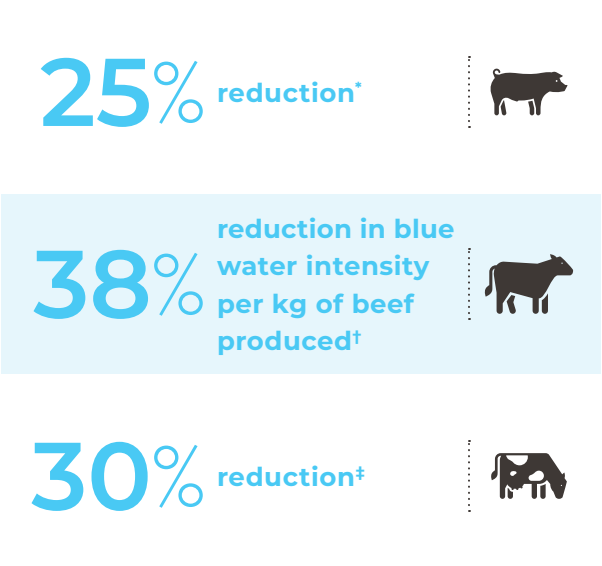
The statistics below highlight just a fraction of the significant environmental sustainability improvements made over time in the U.S. across different agricultural commodities.



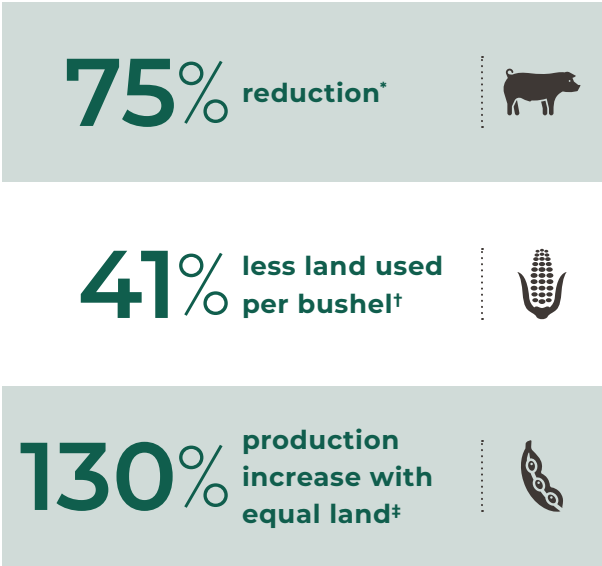
GREENHOUSE GAS (GHG) EMISSIONS



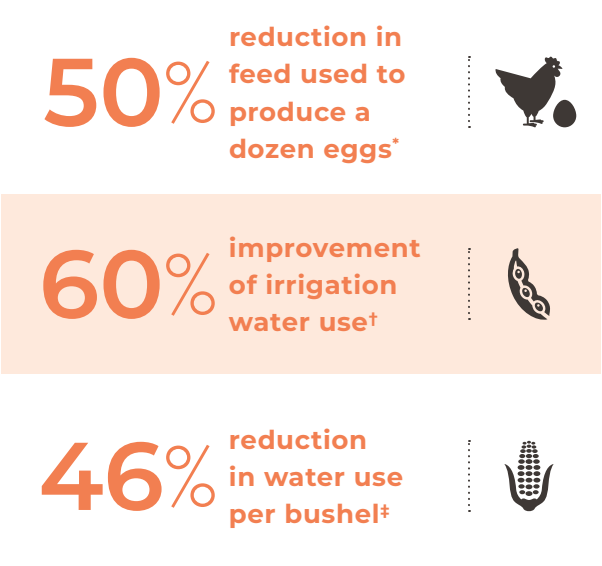
WATER



LAND



EFFICIENCY



* From 1916 to 2019

† Between 2005 and 2019

Sources listed on back cover

* Between 1960 and 2015

† In the past 30 years

‡ From 2007 to 2017

* Between 1960 and 2015

† Between 1980 and 2015

‡ From 1980 to 2020

* Since the 1960s

† From 1980 to 2020

‡ From 1980 to 2015



PRESERVING RESOURCES WHILE POWERING THE FUTURE

HOW CUSTOMERS ARE INCORPORATING SUSTAINABILITY IN THEIR OWN OPERATIONS

Generations of producers have worked to improve their land and operations to pass on something better to their children and grandchildren. Today's farmers and ranchers are the most productive in history. At the same time, agriculture is reducing its use of natural resources.

The customer-owners we feature on the following pages are both on the leading edge of sustainability and the embodiment of the stewardship that has always been part of agriculture. We, in turn, are committed to providing the credit, risk management and financial expertise that enables our customer-owners to adopt the growing practices and technology that sustain their operations.





JOHN, LAURIE, DAVID AND KELLY CURRIE

Grain producers

Odebolt, IA

Customers since 1996

PROTECTING PRECIOUS TOPSOIL

John and Laurie Currie returned to farming in northwest Iowa during the economic crisis of the 1980s. People told the couple they were crazy. While they perhaps didn't know enough at the time to share the sentiment, they did keep their off-farm jobs until they earned enough from agriculture to support their family – he as an engineer, she as a teacher.

It was one of the many decisions driven as much by necessity as the dream to restore the original footprint of his family's farm, established in 1911 when his great-grandfather put money down on ground to be split between his four sons. Only John's grandfather chose to continue farming through the depression years of the 1930s.

To gain his own foothold in the industry, John began his farming career on his father-in-law's ground. A few years later, his father passed away, and John was the only family member interested in farming. He became sole operator and, as opportunity and money allowed, slowly knitted together parcels to restore a portion of the Odebolt-area Cook Ranch bought by his great-grandfather. His youngest son, David, returned to the farm with his family a couple years ago.

"I think the legacy aspect of what Dad has been able to do influenced a lot of my decision to come back," said David. "If (the farm) still looked the way Grandpa had it, then maybe it wouldn't have been as much of a draw. My two daughters are the sixth generation living in the house my ancestors built. That's a pretty cool deal."

Continuing the legacy

Even as John and Laurie expanded the farm, they never aspired to grow beyond what they could manage together. David has come around to a similar mindset.

"Real estate is king. You know, that's how I've always viewed it – own as many acres as you can," David said. "But then I hear wisdom from Dad about, 'Well, if you own as many acres as you can get, you have to farm as many acres as you can, and the purpose of living on a farm loses some of its luster.'"

"We've been able to agree on that balance between what is most effective for our operation and what is best for our families. We're able to do a lot more of the things that make farming fun and do them as a family."

Both agree that sustainability practices adopted over the years by John save time and reduce some of their costs. John said labor and circumstances shaped some of his early decisions.

"I was one of the first no-tillers in our area. A lot of it was just manpower. Laurie and I were the only ones farming at the time, and we had a short 2,000 acres between us. Now, it's more about machinery and fuel costs and just looking at the sustainability of the topsoil we have. That soil is pretty precious."

Adopting reduced tillage practices

The first time John appreciated the potential of no-till was in the spring of 1991. The previous fall had been too wet to work his fields, and a wet spring made planting season very difficult.

"At that point, I stopped disking and planted right into standing stocks. You could see the soil contact because everything was matted down from the snow we had, and the planter would cut right through the residue. That was the first time I think I realized, hey, this works a lot better if you don't even touch the stuff.

"From that point on, the soil has just carried the equipment better. It's got more of a natural structure. You see worm holes all over through the soil. The infiltration when you get a hard rain is so much better."

The Curries had also strip-tilled until switching to 20-inch rows, which allows them to leave more space between seeds in the row for root development while also creating a canopy of plant cover later in the season to help suppress weeds.

"The canopy closing and not allowing sunlight to hit weeds and grow was a big reason for us moving to 20-inch rows," John said. "Some of the late-season management that people do, whether that's doing side dressing with nitrogen passes or other things, we can't do with 20-inch rows. But I think our yield is as good or better than a lot of people regardless."

After harvest, the Curries are left with more biomass than they would see with 30-inch rows. This breaks down into nutrients and, eventually, adds to the soil structure. And while the Curries know their soil is healthier because of no-till, they don't claim it leads to superior yields. "I'm sure there are years where maybe it has cost us a bushel or two (versus conventional tillage). But I look at it in the long term, and I'm convinced we're doing it the right way."

Managing volatility, maintaining consistency

Just as his dad did, David returned to the operation during a challenging period in agriculture. Volatility and rising costs mean the two weigh every expense, especially for fertilizer. What is the most efficient way to grow a bushel with the least amount of nitrogen? How can the biologicals they sell through their seed dealership reduce the amount of nitrogen needed?

As they work through the decisions, David said he appreciates the position his dad has created for him: "Dad has been doing a lot of the front-edge practices when nobody else was. Some of that was because of manpower and efficiency and trying to accomplish the most with the least.

"A lot of family farms, when they get transferred down generation to generation, keep a lot of the same practices. I've walked into a situation where efficiency and sustainability and trying new practices has been hammered out. Now those practices are just part of what we do. And we're not going back."

See page 24 to learn how FCSAmerica and Frontier Farm Credit support environmental sustainability and foster educational opportunities for producers.





CLINT COX
Grain and livestock producer
Long Island, KS
Customer since 2007

REBUILDING SOIL ORGANIC MATTER

Clint Cox bought the first homestead in his area of north central Kansas. It came with the homesteaders' stories of plentiful wildlife, shoulder-high grasses and free-flowing streams.

The day he closed on the farm, he sampled the soil. Much had changed during a century of farming. Organic matter stood at 1%.

As he does with all the ground he farms, Cox began nourishing the soil. For the past 20 years, he has used crop rotations, cover crops, grazing practices and biologicals to push organic matter to more than 3%, a strong gain on which to build additional organic matter.

"We're wanting to get back to a system that is using biology and is not as dependent on synthetic fertilizers and inputs to make the system go," Cox said. "We're cutting back each year from where we were, and the ground is saying thank you. You can see it. You can pick up the soil, and you can smell it. The soil is alive."

Cox and his family use practices that restore and exploit natural systems to integrate their crops, hogs and cattle. Their focus on biodiversity begins below ground in the soil's microbial communities and works its way above ground to support diverse plant populations through cover crops and crop rotation, grazing practices and, ultimately, wildlife that inhabit the area.

Adding biodiversity through cover crops

Much of what Cox has achieved grew out of single objectives that led to broader gains. For example, adding biodiversity above ground and in the soil through cover crops.

But adding cover crops isn't free, so he started exploring ways to cover the cost of seeding. By utilizing a cover crop mix that was good for his soil and good for grazing his cowherd, he could make it pencil out.

And even though he originally grazed the cover crop with the intent of getting the economics to work, this action brought something else – an added layer of biodiversity. The livestock provided a natural fertilizer and their hoof action helped break down vegetation and incorporate nutrients back into the soil.

"It all turns back into biology. If you start from the beginning and move forward, it's all about how that biology is thriving in each one of those environments," Cox said.

Cox credits like-minded producers – friends and acquaintances across multiple states – with giving him the tools and know-how to explore different practices: "All of a sudden, we could start collaborating on the data a little bit and say, 'Hey, you should have done this instead. I tried that and it didn't work.' The community was very important to my education."

Integrating soil biologicals

A few years ago, Cox became a co-founder of Elevate Ag, a producer-owned company dedicated to soil health and biologicals. The founders have drawn on lessons learned on their own farms to help customers understand and integrate biologicals into their operations.

"They say a teaspoon of soil is supposed to have a billion microbes in it – bacteria, fungi, protozoa, all sorts of stuff," Cox said. "Biologicals thrive under conditions that are right for them, so there's always winners and losers within a biological system. When you elevate the populations of all of them, what they call a quorum, your soil starts to behave quite a bit differently ... your plants will actually do things differently because of it."

Cox has seen an increase in the protein level of his wheat and starches in his corn. And while his crop and grazing system make financial sense, he continues to look for markets that will pay a premium for his practices and their outcomes.

So far, the brewing industry has been most interested, he said. Craft brewers want to partner with producers who are working to be more sustainable. It is not a huge market and it requires Cox to share data. But, he said, it's a starting point as he seeks additional opportunities.

BENEFITS BEYOND THE BOTTOM LINE: WILDLIFE IMPACT

After implementing cover crops, wildlife populations near the Cox family farm began to flourish. Deer, pheasants, quail and even turkeys are once again plentiful on the homestead.

“In the spring, my daughters and I like to hunt for deer antler sheds together. Those are the fun things – the impacts you don’t expect.

– Clint Cox, grain & livestock producer





RUSS SUNDSTROM
Beef cattle producer
Moorefield, NE
Customer since 2003

EVOLVING GRAZING MANAGEMENT

Winter calving left an indelible mark on a young Russ Sundstrom. He would wake to calves warming in the bathtub. He arrived home from school to calves in the kitchen.

“Calving was rough. I don’t know if it was a hate or a dislike, but that was part of my search for sustainability, of making things easier,” Sundstrom said. “I just felt that we were working against things instead of with the weather and nature.”

Sundstrom operates Broken Box Ranch in the Loess Canyons of western Nebraska, where wildlife is abundant, the land highly erodible and invasive cedars a constant foe.

Sundstrom, a 2019 Leopold Award winner, has built a career centered on restorative ranching practices, including intensive rotational and mob grazing. He also works with conservation groups and government agencies to support wildlife, protect water and increase plant diversity on his land.

“Some of the different types of stuff we’ve been involved in, we might be the first one, even to the point where they are still writing the script, per se,” Sundstrom said. “Even if something doesn’t work, the information gained from it is very valuable.”

Developing a network of mentors

Sundstrom is always seeking information. His father understood the importance of eliminating cedars in their area, and, while still in high school, Sundstrom started a tree-removal service that he still operates with his younger brother. Each time the brothers stepped onto an operation, they took note of what was working, asked a lot of questions and, over time, developed a network of mentors.

“I had someone tell me a lot of years ago that instead of trying to negatively critique someone’s operation, try to pick the positives or the best things they are doing,” Sundstrom said. “A lot of our thoughts and ideas are things we watched other people do, then just tweaked to fit our operation.”

The tree-clearing business has provided the Sundstroms a unique view into the impact of their work. Many clients clear ground over multiple years, allowing the brothers to observe change over time.

“We could see their stocking rates change from where we left off the year before, or a division fence go in,” Sundstrom said. “I’d get to look at what I did five, four and three years ago and see the process change. That is very rewarding.”

On his own ranch, Sundstrom uses wildlife as one measurement of progress. “Wildlife will tell you how you’re doing. We have watched as our rotational grazing went to mob grazing. The wildlife is ahead for a while, then they graze behind our livestock because that’s where the best grazing is.

“I like seeing that we’re creating an environment where the wildlife not only survive but also thrive. I feel if you’re managing for sustainability, it should all go hand in hand.”

Embracing prescribed burns

This includes embracing fire for land management. About 20 years ago, in the midst of drought, a wildfire broke out in the area. Afterward, as he rebuilt fences, he watched the return of wildlife and, a year later, the grasses.

“It might have set things back a little bit in the short term,” Sundstrom said, “but in the intermediate and long term, I witnessed a lot of benefits and stored those in my memory.”

Today, Sundstrom considers prescribed burns instrumental to the sustainability of his ranch. Like anything, he said, prescribed burns can be overdone. But if practiced and timed correctly, they eliminate cedars, fertilize the ground and support the growth of certain grasses.

Almost every acre of his ranch has been treated with prescribed burns. The result is a holistic approach to grazing and fencing. The family adopted rotational grazing in the mid-2000s, more intense rotational grazing around 2010 and mob grazing about six years later. Sundstrom has reviewed records spanning 20 years, going back to the late 1990s, to calculate the impact of his cross-fencing practices.

“We figured that we increased our stocking rate by approximately 40% from where we started. That is huge.”

But in multiple years, he noted, the area enjoyed above-average rainfall. (“If it’s raining, whatever you do with livestock, you look like a genius.”) Accounting for the inherent benefit of rain, he said, that number likely is inflated. “Take that 40% and maybe scale that down to 25% if we hadn’t had the rain.”

Measuring impact

Sundstrom relies on his record keeping for business decisions. It also has been instrumental to his collaborations. Sundstrom estimates he has worked with 25 to 30 different government agencies and outside organizations. One of those relationships, with the Nebraska Game and Parks Commission, led to tours of his ranch.

“On these tours, I feel like I need to point out that it’s not me educating them,” Sundstrom said. “A lot of times, it’s them educating me. Once we started opening up to questions or maybe even some criticism, that’s when we started to grow the most. You have to have your facts together and know what you are doing and its impact. It’s been quite a journey.”

At the end of a given year, Sundstrom looks at standard measurement to assess how he performed – costs, livestock sales, the amount of livestock he ran. Just as important, he said, is what he observes around him.

“It’s also as I drive out across a piece of property and see gophers going crazy, the water infiltration rate improving and the health of the grass. You just have to see and feel it. When the gophers are pushing up and the cow trails are grassing over, you know healing is taking place.”





NEIMAN
Lumber Mill
Hulett, WY
Customer since 1999

SUPPORTING SUSTAINABLE FOREST PRODUCTS

Many in agriculture anticipate a day when consumers can pick up an item and quickly identify its production history. For the Neiman family, that day is here. Every one of its mills has or is in the process of being certified for its environmental practices.

The Sustainable Forestry Initiative® (SFI) stamp tells consumers the lumber leaving a certified Neiman mill was sourced and harvested according to industry standards for the protection of water quality, biodiversity and wildlife habitat.

“We are one of the most critical tools, probably the number one tool I would say, to being able to manage the forest,” Sonja Merryman said of industries like her family’s company.

Neiman generally acquire logs through timber sales on federal land, including stewardship sales. Each sale specifies which trees are to be removed, as determined by the U.S. Forest Service.

Neiman specializes in ponderosa pine, but they have adapted many of their mills to accommodate the needs of the forest to utilize multiple species. While they make lumber, studs, moulding and heating pellets, they also sell lumber and biomass to local companies and R&D manufacturers for mulch, animal bedding, or to make into windows, cabinets and more.

“There is zero waste,” said Merryman, the company’s community relations director. “We even burn much of our biomass and use that as a renewable source of energy.”

Forging relationships to better utilize waste

The family has long understood the success of its business relies on resilient, well-managed forests. Early in his career, Jim Neiman, the company’s president and Merryman’s father, became interested in production processes that protect and improve watersheds, thinning trees in a way that supports the quality, flow and storage of water.

Concern about limbs left behind by loggers led the company to forge a relationship with tribal members who shared an interest in eliminating and using waste that otherwise would be piled up and burned. In the wake of recent catastrophic wildfires in Oregon and California, the Neimans are involved in efforts to clean up burned and rotting timber, move it to mills across the country and find uses for it.

“My father,” Merryman said, “has put an emphasis from the very beginning on not only creating high-quality renewable timber products but being good stewards of the land. He’s always exploring opportunities to utilize the waste or biomass in the forests. How can we add value and still keep forest health as our core value?”

With their reliance on public forests, the Neimans work with an array of outside groups – the U.S. Forest Service, other industry representatives, community groups and conservationists. Where interests overlap, cooperation follows.

“We’re really connected with the conservation groups. They’re one of our best allies because what’s best for the forest is what’s best for the animals.”

Wild turkeys, for example, need open canopy to fly through; elk, thinned areas for travel across the forest floor. The ponderosa pine that the Neimans specialize in have similar needs – a canopy that lets in some sun and room for growth while still providing protective shade. Good harvest practices support wildlife, habitat and the regeneration of trees, Merryman said.

Where interests conflict, tension can develop. In the Black Hills, where the Neimans operate two of their four mills, recreational users and loggers don’t always agree on how best to accommodate each other. Nobody has ill intent, Merryman said. It’s a matter of listening to and understanding everyone’s needs.

“So much of this is creating a conversation in a safe place,” Merryman said. “Something that I continue to learn is everything starts with relationships.”

Building long-term partnerships

Merryman credits her father’s and the company’s stewardship with giving the company credibility in tough conversations. It also has helped build trust with other stakeholders. Sustainable practices are increasingly part of standard business procedures in the lumber industry, Merryman said. But having been early adopters, Neiman has long-term partnerships that open doors to projects and opportunities, she said.

Employees take pride in working for a company committed to doing right by forests and, in turn, local communities that rely on them, she added. Neiman, for example, supports science education for students in the communities where they operate. In Hulett, Wyoming, where Neiman still operates its original mill, they have invested in a golf course, airport and full-time medical center, all aimed at giving employees and others in the community a higher quality of life.

“We have people who have been working for us for 50 years,” Merryman said. “They have been so committed to the organization and community and helping it succeed.”

That includes a decade-long commitment to earning certification through the SFI. The time and resources required for certification met resistance from some people early on, Merryman said. But today, the SFI stamp is seen as a testament to the company’s values and practices.

“It’s a beautiful thing to be able to brand sustainability onto every piece of fiber that we produce,” Merryman said.

Discover how FCSAmerica and Frontier Farm Credit promote economic sustainability through job creation and aiding generational transitions on page 28.

Fire has always been part of the environment, and, as one of the most important natural agents of change, plays a vital role in maintaining certain ecosystems. However, wildfires have become larger, more severe and more damaging in recent decades. Wildfires can destroy watersheds that lie in their path and have a lasting impact on water quality. Studies have found high-intensity postfire rainstorms typically increase runoff that erodes ash and soil from burned landscapes, elevating turbidity, nutrient, and dissolved organic carbon levels in surface waters and causing short-term challenges for water providers. There also is growing evidence that water quality can be degraded for at least 15 years following high-severity fires. Alternatively, prescribed fire is one of the most effective tools we have in preventing wildfires and managing the intensity and spread of wildfires. Prescribed fires help reduce the catastrophic damage of wildfire on our lands and surrounding communities by:

- Safely reducing excessive amounts of brush, shrubs and trees.
- Encouraging the new growth of native vegetation.
- Maintaining the many plant and animal species whose habitats depend on periodic fire.

Wildfires alter forest watersheds and threaten drinking water quality, U.S. Forest Service Research and Development, usda.gov; Prescribed Fires, <https://smokeybear.com/en/about-wildland-fire/benefits-of-fire/prescribed-fires>.



JORGENSEN LAND AND CATTLE
Beef cattle and grain producer
Ideal, SD
Customer since 2000

ENSURING GENERATIONAL SUSTAINABILITY

Sustainability at Jorgensen Land and Cattle starts with profitability and generational transfer of knowledge, skills and assets. The specific practices and procedures on the operation are natural outgrowths – part of each generation’s commitment to leave something better to the next.

“Everyone defines sustainability a little bit differently,” Nick Jorgensen said. “This business is 113 years old. My definition of sustainability is the fact that it has been here for that long, and that we do everything we can to make sure it’s here 113 years from now.”

His grandfather, Martin Jorgensen Jr., provided a roadmap that still serves the family. In the prime of his career, Nick recounted, he put his sons in decision-making positions: “He told them, ‘I owe it to you because you need the experience to get to where I am today. You also know things that I don’t.’”

Nick’s father, Bryan, and uncle have done the same for their sons, the operation’s fourth generation. Nick is CEO and CFO. His cousin Cody is COO for livestock.

“I’m 30, and I’m in the thick of it,” Nick said. “The sustainability of a business, in my view, depends on letting that next generation learn and gain experience.”

To address financial sustainability, Martin Jr. gifted most of the operations’ assets and established a generational skipping trust. Families will devise succession plans unique to their goals and circumstances, Bryan said, but whatever the plan, it is critical to sustainability.

“We think about generational transfer in economic terms,” he said. “It is important from the environmental side, too, because it keeps good operations operating and good practices in place.”

Improving soil health, advancing livestock genetics

In his day, Martin Jr. earned a name for the operation with performance-based breeding practices that were pioneering at the time. The Jorgensens also have been recognized for their early adoption of no-till and conservation practices.

Bryan became interested in no-till practices for water conservation reasons. The changes he saw in the soil itself led him to further explore no-till practices. By 1991, the operation was 100% no-till.

“My dad found that we’ve got healthier soil when we don’t disturb it. What else can we make better?” Nick said. “We started talking about things like a diverse crop rotation along with no-till. Then we extended that to minimum inputs so we’re not adding any more synthetic chemicals than we need.

“My dad says we’re just leasing the land from the next generation. If he’s leasing the land from me, then I’m leasing the land from my children. So, are we doing the things that make the land better?”

On the livestock side, improvement means building on the genetic legacy left by Martin to continually advance the quality of their animals. The management team, which consists of the four family partners, is structured to focus on growth, with day-to-day responsibilities entrusted to employees. Competitive benefits, regular hours and a shared vision contribute to longevity on the job.

Every aspect of the business is measured and analyzed, Nick said. “You can’t study anything that you don’t measure. One benefit we have on our operation is we’re extremely good record keepers, and the mentality of always improving and studying what we do is so consistent through our family and our business that we’ve accepted that, at a certain point, we have to ground-truth this and make sure it’s the right thing for our business and doesn’t just feel right.”

Generally, this approach provides clarity and consensus. When it doesn’t, Nick said, there is room to tweak practices: “We tried 60-inch corn for three years and every year we looked at it and said, hey, this doesn’t work, let’s tweak this and see if it makes a difference. We tried several iterations and just never got there. There have been other instances where we made modifications and got to a good spot.”

Go to pages 29-30 to learn about some of the ways FCSAmerica and Frontier Farm Credit help strengthen the next generation and give back to rural communities.

ECONOMICS OF SUSTAINABILITY

“Our goal is not to push every ounce of production we can out of the ground. Our goal is to push the most efficient bushel that we can out of the ground. And that might mean raising 100-bushel corn rather than 200-bushel corn. But in turn, we have reduced our inputs so that our fertilizer costs are half of what they are in some other operations. We don’t apply pesticides unless we absolutely have to. There’s another cost reduction, but it comes with an expense. You have bugs. But bugs also are part of nature. You need to be really careful around which ones you mess with.

We’ve probably shaved off \$70 to \$80 per acre, which might not be significant in Iowa, but in our area it’s a lot. We’ve done it while still producing at levels we could expect if we were spending that additional \$70 to \$80.”

– Nick Jorgensen,
beef cattle and grain producer





ROCK RIVER JERSEYS
Dairy producer
Inwood, IA
Customer since 2015

A SUSTAINABILITY CYCLE

It took time, but Brett and Malorie Kirkley found the ideal site on which to build a dairy. Their FCSAmerica lender pointed them to land near Inwood, Iowa. There, they established Rock River Jerseys (RRJ) and a life for their three young daughters.

Since then, they have worked to fulfill their vision of sustainability, both economically and environmentally. Their investment in a digester has moved their efforts forward.

“Like many industries, as time passes and there are improvements and advances, it’s a matter of adapting and being able to implement them,” Brett said. “Digesters have been around for maybe 15 to 20 years. They started with electricity, but from an economic sustainability standpoint, they never really took off until the advent of using the biogas as natural gas, a renewable resource.”

Today, the Kirkleys raise both dairy and beef cattle. Malorie said the two sides of their farm operate much like a “closed loop of sustainability.”

Brett has spent a lot of time researching and making sure the digester is the right approach long term that will benefit the dairy economically and also be positive for the environment and community.

The Kirkleys are proud to be in the dairy industry. Malorie describes milk as “one of nature’s most perfect foods.”

To demonstrate they are meeting the highest consumer standards, the Kirkleys participate in a third-party verification program.

“Having third-party verification says there is accountability behind what we are producing here,” Malorie said. “It ties back to what the consumer wants ... it’s the right thing to do. They have the right to have an accountability trail to where their milk and beef come from.

“We want to be the best that we can be, operate with our core values and provide a great place for our cattle and employees.”



11,000 HEAD

- ➔ In the past few years, the operation has evolved to also focus on the production of high-quality beef. The interaction between milk and beef production creates a two-sided sustainability system.
- ➔ RRJ participates in FARM, a program for dairy producers, cooperatives, processors and industry partners. The program offers certification for those who meet standards in the areas of animal care, the environment, biosecurity, workforce and antibiotic use.

1.5 MILLION BUSHELS OF CORN 20,000 TONS OF ALFALFA 3 MILLION LBS OF FERTILIZER

- ➔ Many of the same growers who provide the operation with corn and alfalfa use manure from RRJ to fertilize their fields and reduce their need for synthetic fertilizers.

2 MILLION LBS OF MANURE PER WEEK

- ➔ A vacuum truck sucks manure from the lanes of the operation’s freestall barns and delivers it to a sand reclamation building. There, sand is separated and cleaned. There is no waste and no need for additional sand.
- ➔ What remains is manure, which is sent to a separator. The lower solid content portion – 87% of manure – is recycled and stays within the system to eliminate the need to tap outside fresh water. As with the recycled sand, the water is self-sustaining.
- ➔ The higher solid content of the manure has a higher level of volatile fatty acids. This is pumped into the digester and generates methane gas, a primary component of natural gas.

3,000 HOMES HEATED

- ➔ RRJ and two other area operations tie into the Central Renewable Gas Station. Often, it takes collaborations like this to make a digester economically viable.
- ➔ The digester produces 600 standard cubic feet per minute of methane, or about 860,000 cubic feet per day. This translates into enough natural gas to heat 3,000 homes for a year.

ABOUT 80 EMPLOYEES

- ➔ Employees at RRJ are trained in the operation’s standard operating procedures focused on the health and welfare of the animals. Every month, employees meet to discuss topics that can include goals, safety and values.

BACKING SUSTAINABILITY EDUCATION

Creating in-person and virtual learning spaces

Our Associations have long offered educational programs to help producers deepen their financial management skills and their understanding of industry trends. Education includes in-person events, virtual meetings and self-paced online content.

In recent years, our customers asked for help in evaluating information about programs in sustainable agriculture. In response, we hosted a panel discussion at our Executive Summit this past year that explored the considerations to weigh when evaluating carbon capture programs. Additionally, the panel featured a customer-owner who shared information about efforts to measure and reduce emissions in his beef feedlot operation. Last fall, we also made carbon capture the focus of a webinar in our popular “Two Economists and a Lender” series, and we will continue to use our educational channels to bring similar content to our customers.

A voice in industry conversations

Education also includes industry participation, specifically on how sustainability relates to the agricultural financial sector. In 2022, our own Myriah Johnson participated in a panel session at the Sustainable Ag Summit focused on innovative finance and has also presented on sustainability at meetings of the Society for Range Management and the Cattlemen’s College of the National Cattlemen’s Beef Association.

10 QUESTIONS TO ASK BEFORE SIGNING A CARBON SEQUESTRATION CONTRACT

- 1 Who is the buyer? (And why are they interested in buying from you?)
- 2 What practices are required?
- 3 Payment structure?
- 4 Contract term?
- 5 Verification process?
- 6 What other uses can you make?
- 7 What penalties can be imposed?
- 8 What is the durability time frame?
- 9 What data must you provide?
- 10 Read the contract. Know the details. (Amendments, transfers, venue, etc.)

10 Questions to Ask Before Signing a Carbon Credit Contract, AgriLife Today, <https://agrilifetoday.tamu.edu/2022/12/06/10-questions-to-ask-before-signing-a-carbon-credit-contract/>.

Partnering for greater knowledge

To catalyze efforts, we have contributed financial support for research at three land grant universities focused on sustainability in production agriculture. We also provided our perspective on a university study exploring the potential correlation between climate change and farm financial outcomes, as well a nongovernmental organization (NGO)-published paper offering a primer on climate risks and opportunities in the ag finance sector.

Our Associations also joined the U.S. Roundtable for Sustainable Beef as well as Field to Market, where the focus is primarily on row crops. Together, these organizations unite more than 100 partners in the food and ag industries to explore opportunities to advance sustainability in agriculture. We will continue our efforts in sustainability at both the local level in supporting our customer-owners as well as throughout the industry.

FCSAmerica and Frontier Farm Credit seek to collaborate with others where our expertise, financial support and industry relationships can help advance and accelerate opportunities that bring value to our customer-owners and to agriculture at large. Additionally, we want to continue bringing our customer-owners’ perspectives to the conversation as we explore new programs and initiatives.



Transparency and teamwork in beef sustainability

Significant improvements in sustainability are rarely made alone or in isolation. In 2022, we participated in a collaborative effort to secure USDA funding for an innovative program focused on sustainable beef in Nebraska. While our proposal did not come out on top of the more than 1,000 submitted, we gained experience working with diverse stakeholders to satisfy consumer expectations.

Beef producers are under constant pressure to cut costs and be more efficient. At the same time, demand for climate-smart practices is growing, even as markets fail to deliver full value for existing sustainability practices.

The Aksarben Foundation convened Nebraska leaders from agriculture, business, government and education in early 2021 to change this equation. The group, which includes FCSAmerica, set out to help Nebraska beef producers profit from their current and future climate-smart practices.

“The Nebraska beef industry is among the most sustainable in the world,” says Abram Babcock, president of Adams Land and Cattle and a member of the initiative led by the Aksarben Foundation. “Markets will catch up to producer practices and reward sustainability,” he predicts.

Nebraska has an opportunity to build on existing practices to put its beef industry in a leading position to capture the full value of their work and investments, he said.

On the next page, in an edited and condensed Q&A, Babcock discusses the group’s work on behalf of the Nebraska cattle industry.

Q: What does sustainability mean to Adams Land and Cattle, and why is it important to you?

A: Sustainability is about continuous improvement, including in areas such as environmental impact, water use and our people. For many, us included, it is less threatening to think about continuous improvement.

To achieve this, we think about how to establish a baseline so we can develop strategies to improve and ways to measure that improvement. To that end, we are working on projects to define and measure our greenhouse gas, or GHG, emissions.

Our opinion is that sustainability is here to stay. Big business, driven by consumer and investor demand, is making decisions based on Environmental, Social and Governance (ESG), and our supply chain partners are affected by ESG. As an industry, we have an opportunity to get ahead of this and demonstrate how we are getting better. That's why we decided to engage.

Q: Can you share more about the greenhouse gas emissions projects you are involved in?

A: The Aksarben Foundation is leading a sustainability initiative for the state of Nebraska. When we began discussing the initiative, GHG emissions were in the forefront of everyone's mind, yet we don't have a way of measuring our emissions and communicating that through our respective supply chains. We wanted to come up with GHG baselines throughout the state for the biggest agriculture industries, which are beef, swine, dairy, corn and soybeans.

We hired life cycle assessment modelers to build the models for these respective industries and estimate our GHG emissions baseline. The researchers then identified the low-hanging fruit that agricultural producers in these industries could start addressing through technology or production practices to reduce emissions. The researchers also have identified work that may not be commercially viable today but that we can focus on in the future.

These types of analyses and results are complicated. And we understood that everything we did to that point was based on models with no verification of the results and no way of knowing if the models reflected what was happening on our operations. So, we want to pressure test that by partnering with Valmont® Industries to use their smart poles to verify actual GHGs being emitted. This will make the models and estimations of GHGs better.

Q: What are the next steps?

A: We wanted to extend this technology (from Valmont) out to about 250 producers through a USDA grant so they could be early adopters and then take advantage of supply chain opportunities as they come.

When we didn't get the grant, Aksarben brought us and Valmont back. They are still interested in pursuing a scaled-down version of the grant.

The grant was broken into several parts. Now what we're saying is, let's just get phase one done – getting the life cycle assessment model into a platform in which producers can make sense of what they are seeing.

At the same time, we would reach back to some of the original partners, FCSAmerica and others, to see if they want to be part of phase two, which is providing outreach and access to producers, as well as education to help producers understand what this is and what the potential opportunities are.

Q: How will the collected data help beef producers access new marketing opportunities?

A: We're doing this because we feel like these are important metrics that we need to collect to make us a sustainable industry economically and continue to drive beef demand. We need to be able to stay ahead of and quantify and communicate to our customers.

I think there is a period of time where the producer can capture value by demonstrating what we're doing and build a brand out of that. I don't know if that is five years or 15 years. I think there also will be a time when the market is going to force us to demonstrate these things.

Q: Can you speak to the value of collaborating on these types of projects?

A: It really does take everyone in the supply chain working together to allow us to get ahead on some of these opportunities. Especially in the beef industry, where we are so horizontally integrated.

We have to figure out how to share data because that is the only way to build a supply chain that will be able to capitalize on the sustainability movement. I don't think any one sector can do it on its own. The cow-calf producer has to trust the stocker, and the feedlot has to trust the packer. Until we can overcome that hurdle, I don't think there is a way to capitalize in this space, let alone set ourselves up to be sustainable for the long term.

Creating and maintaining this trust presents both a hurdle and an opportunity.

As FCSAmerica and Frontier Farm Credit participate in sustainability efforts, we seek to collaborate with others where our resources – our expertise, financial support, relationships – can help advance and accelerate opportunities that bring value to our customer-owners and our industry. Additionally, we want to continue bringing our customer-owners' perspectives to the conversation as we explore new programs and initiatives.



STRENGTHENING RURAL ECONOMIES

Investing in our own

Supporting rural America is more than just offering financing. Since 2014, FCSAmerica and Frontier Farm Credit have collaborated with other associations in a USDA program to invest in businesses that create jobs in rural areas. In that time, our Associations have committed capital to 10 different investment funds which has enabled growth at more than 75 companies that collectively created thousands of jobs, including employment opportunities in agribusiness, ag tech, rural healthcare, indoor crop production and livestock welfare.

We are committed to continually giving back and investing in rural America.

Partnering to aid generational transfer

Generational transfer is a critical element of sustainability, playing a part in not only the social sphere but also economic and environmental areas. By ensuring that successful transitions occur, agricultural lands will remain healthy and productive. Yet, generational transfer is one of the toughest aspects for most operations due to its sensitive and personal nature. To support our customer-owners' transition efforts, we forged partnerships with Nationwide® and New York Life® to help our customers access specialized experts for transition planning. To date, more than 350 families have benefited from our partners' help to ensure generational sustainability of their farms and ranches.



SUSTAINING OUR PEOPLE AND THEIR FUTURE

Cultivating the next generation in agriculture

For students such as Vanessa Gonzalez, who wants a career in sustainability, the future is filled with opportunity.

Jobs in environmental science and other natural resource specialties are projected to grow rapidly over the next decade.

In response, community organizations such as the Latino Center of the Midlands provide on-the-job experience and mentorships to prepare the next generation of food and agricultural leaders.

Gonzalez was one of 20 student interns who participated in the inaugural Latino Center Siembra Raíces (Growing Roots) internship program, made possible by local partners, including FCSAmerica.

The program provides urban and rural internships, paying high school and college students to work for organizations that align with their career interests.

Activating careers in agriculture

During the summer of 2020, Gonzalez worked with The Big Garden, a network of more than 200 community gardens in metro-Omaha and rural and semi-rural communities in Nebraska, Iowa and Kansas.

The experience inspired Gonzalez to apply for the Siembra Raíces internship program for a second year, allowing her to explore both horticulture and environmental science.

"For my second internship, I was placed with Fontenelle Forest, where we learned about land stewardship, including practices like brush piling and prescribed burning," she says. "We also assisted with trail maintenance, brush cutting and treating invasive species."

On a butterfly walk at the forest, Gonzalez learned about different survey techniques conservationists use to collect data and protect butterfly species.

Continued on next page



“It was really cool to get exposure to a different side of conservation, ask questions and learn more about what it takes to get into this kind of work,” she says. “Nothing is set in stone yet, but for my future career, I’m interested in research, consulting and land surveying.”

Gonzalez was also one of four interns invited to participate in a job shadow opportunity with FCSAmerica.

“As part of the experience, we volunteered with Food Bank for the Heartland, alongside FCSAmerica team members. We got to connect with professionals, experience their work culture and learn about different jobs available in environmental science all while supporting a good cause,” she says.

Gonzalez is currently a freshman at the University of Nebraska Omaha (UNO) where she is pursuing her bachelor’s degree in environmental science.

SIEMBRA RAÍCES
2020 OUTCOMES

- ✓ 20 student interns
- ✓ 354 cans of produce preserved
- ✓ 416 food drive participants
- ✓ 10,500 lbs. of produce grown

Giving back to rural communities

Sustainability extends to the communities where we and our customers live and work. Each year, we donate financial resources to volunteer fire departments, food pantries and other essential service providers in rural America. Our teammates volunteer for nonprofit organizations in urban and rural areas to further our support. We detail these efforts each year in our Community Impact Reports, which are available on the FCSAmerica and Frontier Farm Credit websites.

We see this same philanthropic nature in our customer-owners. Rarely do they talk about it, but, for many, it’s an innate part of who they are.

Supporting mental health

Mental health challenges continue to increase nationwide, especially in rural America. Through our partnership with AgriSafe®, communities across FCSAmerica and Frontier Farm Credit’s territories have ample access to specialized mental health professionals. Through AgriSafe’s Total Farmer Health model, clinically trained nurse coaches address the unique factors faced by agricultural producers, families and communities to improve physical and mental health outcomes. As a customer-owned, mission-driven organization, we value and prioritize the health and wellness of those we serve.

THE FUTURE AND FOCUS OF SUSTAINABILITY FOR FCSAMERICA AND FRONTIER FARM CREDIT

Our history is built on helping our customer-owners optimize their economic sustainability. In our efforts, we aim to keep sustainability grounded and holistic with actionable ways our customer-owners can participate.

While our primary focus will continue to be enabling our customer-owners and their operations to thrive, we also know sustainability includes looking at our own business. Currently, FCSAmerica and Frontier Farm Credit operate 49 offices in five states. Our facilities are centrally managed and employ a variety of environmentally conscious features ranging from storm water retention systems and high-efficiency heating and cooling systems to energy-efficient materials such as insulation, exterior glass, paint, lighting and roofing materials. Even our landscape designs are tailored to local climates. We are built on a culture of continual evaluation and will consistently look for more ways to incorporate sustainability in our facilities and operations.

We also have a myriad of ideas on how to educate, enable and engage customer-owners. Over the coming years, we will evaluate and test these ideas and integrate those that are the most effective.

Our Associations have a long history of offering specialized loan products and programs that fill a gap in the marketplace. To that end, we are in the early stages of evaluating where similar new products or programs may help our customers who choose to participate in new climate-smart programs. We are interested in voluntary, incentive-based programs organized by established organizations. Given our footprint in the market, several of those organizations have reached out to explore potential partnerships and opportunities, with ideas for supply chain partnerships to provide new market opportunities for our customer-owners. We are also evaluating our sustainability educational offerings and hope to incorporate peer-to-peer learning. We will seek to be engaged in the agricultural and financial industries, not only sharing our learnings and the efforts of our customer-owners but studying how we can be better as well.

This is a quickly advancing, constantly evolving field. And as things change, so will our efforts. We will adapt to help our customer-owners succeed because the success of our customer-owners is success for FCSAmerica and Frontier Farm Credit – and our purpose is to serve them.



Agriculture
Works
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