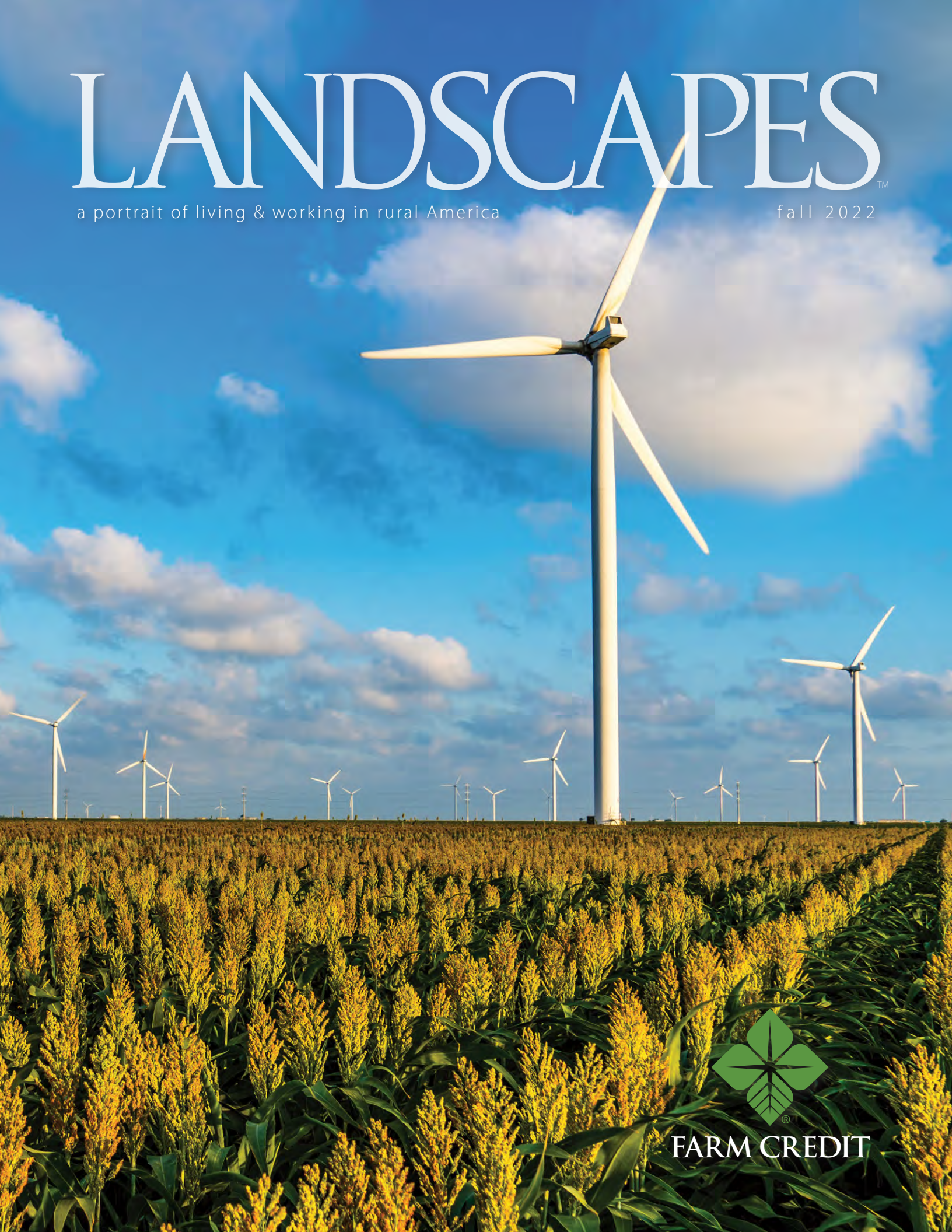


LANDSCAPES™

a portrait of living & working in rural America

fall 2022



FARM CREDIT

LANDSCAPES

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ON THE COVER: Wind turbines stand sentinel over a sunny South Texas field of milo. Photo by Roschetzky/iStockphoto



Thank you for 25 years of Landscapes

For a quarter century, Landscapes magazine has delivered local Farm Credit news, shared financing tips and showcased Farm Credit customers across Alabama, Louisiana, Mississippi, New Mexico and Texas. But just as farming technology is changing, so is Landscapes.

Beginning in 2023, Landscapes will no longer be printed. Please go to [FindFarmCredit.com](https://www.findfarmcredit.com) and your local Farm Credit association website for news, videos, financing advice and customer stories. And be sure to visit your local lender's social media channels, too.

Thank you to all those Farm Credit customers who have been a part of Landscapes over the years. It has been a privilege to share your story with our readers.

See you online!

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Focus on innovation

Farmers and ranchers are often called the original land stewards. With a focus on the future, more and more agricultural producers are adopting sustainable, climate-smart practices, from rotational grazing and cover cropping to precision farming and methane capture. Turn the pages of Landscapes and meet Farm Credit customers who are doing just that — reducing their impact on the environment while increasing their efforts to help feed the world.



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Read these and more Landscapes articles online at FindFarmCredit.com.

NEWS

Farm Credit increases support for young, beginning and small producers

Farm Credit lenders increased their support for young, beginning and small (YBS) farmers and ranchers across the country in 2021, according to a Farm Credit Administration (FCA) report.

The dollar volume of loans made by the Farm Credit System overall increased by 12.7% in 2021. In that year alone, the dollar volume of new Farm Credit loans to young farmers increased by 8.3%, to beginning farmers by 16.7% and to small farmers by 9.3%, compared with the previous year.

In addition, the number of new loans made by the Farm Credit System overall increased by 2.1% in 2021. During the year, the number of new Farm Credit loans to young farmers

increased by 2.8%, to beginning farmers by 3.0% and to small farmers by 0.8%, compared with the previous year.

“Across the country, Farm Credit lenders dedicate significant resources to supporting young and beginning farmers. It’s a critical part of Farm Credit’s mission, and it’s

critical to the future of American agriculture,” said Todd Van Hoose, Farm Credit Council chief executive officer. “In 2021, Farm Credit made more loans to young and beginning farmers for more money than ever before. Across the country, Farm Credit lenders made 97,127 loans to beginning farmers last year, amounting to more than \$26 billion.”

Under the definition set by the FCA:

- A young farmer is age 35 or younger.
- A beginning farmer has 10 years or less of farming experience.
- A small farmer has gross annual farm sales of less than \$250,000.

Farm Credit Loans to Young, Beginning and Small Farmers*

	New loans made in 2021	% of total System loans	Volume (billions)	% of total System loans dollar volume	Average loan size
To young farmers	67,647	17.9	\$14.9	11.0	\$220,941
To beginning farmers	97,127	25.6	\$26.2	19.2	\$270,096
To small farmers	167,729	44.3	\$25.6	18.8	\$152,790

**YBS numbers cannot be combined. FCA counts a single loan to a 25-year-old rancher in her third year of ranching with annual sales of \$100,000 in the young, beginning and small categories. Farm Credit institutions report this way for two reasons: FCA requires it, and it provides the most accurate portrayal of who Farm Credit serves.*



Complete the U.S. Ag Census survey by February 2023

Make sure you’re counted in the upcoming 2022 Census of Agriculture. The USDA National Agricultural Statistics Service (NASS) mailed online ag census survey codes to U.S. farmers and ranchers in November so they could respond securely online. Hard-copy mail-in census questionnaires will follow in December and must be completed by February 2023.

The census, taken once every five years, is the only source of uniform, comprehensive and impartial agriculture data for every county in the nation. It is a complete count of U.S. farms and ranches and the people who operate them. Even small plots of land count — whether rural or urban — if \$1,000 or more of fruit, vegetables or food animals was raised on the land and sold, or normally would have been sold, during 2022.

The census looks at land use and ownership, operator characteristics, production practices, income and expenditures. The results are used by those who serve farmers and rural communities, such as federal, state and local governments; agribusinesses, co-ops and trade associations; legislators; and community planners.

Completed forms are due by Feb. 6, 2023. They can be completed online at www.nass.usda.gov/AgCensus or returned by mail.

NASS will release new Census of Agriculture data in 2024.

Vincent Logan designated FCA board chair and CEO

Vincent G. Logan was designated Oct. 21 by President Joseph Biden as chair and chief executive officer of the Farm Credit Administration, the safety and soundness regulator of the Farm Credit System. A member of the Osage Nation, he is the first Native American to serve on the FCA board.



Logan was sworn in Oct. 13 as a member of the FCA board and the Farm Credit System Insurance Corporation board. As FCA board chair and CEO, he succeeds Glen R. Smith, who had served as chair and CEO since 2019. Smith, whose board term expired in May, remains on the FCA board until a successor is named.

Before joining the FCA board, Logan was chief financial officer and chief investment officer for the Native American Agriculture Fund. Previously, he was named by President Obama as Special Trustee for American Indians at the U.S. Department of the Interior. During his tenure, he was appointed to the Department of the Treasury’s Financial Literacy Education Commission.

Logan also has worked in New York in asset-based financing as a lawyer and in asset management as an investment advisor. He is a governor of the Oklahoma State University Foundation, and a former director of the Federal Reserve Bank of St. Louis, Little Rock branch.

He was educated at Oklahoma State University, the University of Oklahoma College of Law and Columbia University.



the dirt on methane digesters

West Texas dairies turn animal waste into clean energy

Manure from these Del Rio Dairy cows will be recycled into renewable energy when the dairy's anaerobic methane digester goes online in early 2023.

On a dairy, what goes in must come out.

Every day, a milk cow that eats more than 100 pounds of feed produces about the same quantity of manure. That's a byproduct most people would call worthless.

Not dairy farmers.

Now a growing number of farmers are turning cow waste into renewable energy. Using anaerobic methane digesters, they're doing their part to help the environment by trapping methane gas before it goes into the atmosphere. That cow gas is then converted into a clean energy source that's used for heat and electricity, and to power vehicles.

There are other benefits, too. Manure solids are separated and dried to eliminate bacteria and then used in soft animal bedding and rich compost. And separated liquids are applied to crops at appropriate rates, adding nutrients to the soil, reducing the need for commercial fertilizers and optimizing water usage.

Costs

The best digester candidates are dairies that already routinely collect their manure, says Daryl Maas with Maas Energy Works.

Cost estimates for a digester and gas-cleaning equipment range from \$1,500 to \$2,000 per cow. Dairies that build their own digester and share a gas-cleaning facility can lower their costs to \$1,200 to \$1,500 a cow, Maas reports.

Payback on investments can run from four to 10 years.

Carbon credits

Several U.S. programs offer tradable credits as an incentive to lower greenhouse gas emissions or produce renewable fuels. Dairy digesters can participate in two such programs at the same time.

On the federal level, the Environmental Protection Agency runs the Renewable Fuel Standard (RFS) program, which requires oil refineries annually to make and market a set amount of renewable transportation fuels. Under the program, dairies can receive a renewable identification number (RIN) for every gallon of renewable natural gas they inject into distribution lines. RINs may be sold to refineries and fuel importers that meet RFS regulations.

At the state level, California has established a program to reduce carbon emissions in vehicle fuels. Called the Low Carbon Fuel Standard, it awards "carbon credits" to fuels that have lower carbon intensity than standard fuels. Basically, one carbon credit represents 1 ton of carbon dioxide not released into the atmosphere. Dairy digesters across the country can acquire credits through the California program for capturing methane and also producing renewable natural gas for use as transportation fuels. Those credits can be sold to industries as a way to offset their emissions.

Meet two Farm Credit customers who've invested in methane digesters on their dairy farms.

Full Circle Jerseys realizes digester dream

Eighteen years ago, Sieto Mellema and his family planned to recycle cow manure into renewable energy on their future Jersey dairy. But the economic timing wasn't right.

"We'd seen digesters on dairies in California, and the principle made sense," says Mellema, who milks 5,200 cows at Full Circle Jerseys near Dalhart, Texas. "So, we built a lagoon that would become a digester. After we calculated that the gas produced from a digester wouldn't allow us to recoup our costs efficiently, we shelved the idea."

But not for good. Each passing year brought federal regulations that called for reduced emissions. This increased the demand for biogas and paved the way for carbon credits — financial reimbursement in exchange for reduced carbon production.

In 2021, the Mellemas dusted off their digester dream. By late May 2022, Full Circle Jerseys was in the cow gas business.

"The timing was right," Mellema says. "Now there are more markets for renewable

natural gas. The real return, though, will come when we sell carbon credits after we've been online for a year."

Farm Credit financing

To finance the project, the Mellemas turned to AgTexas Farm Credit, their long-time lender. Their digester loan was a first for AgTexas.

"In agriculture, producers haven't always had the opportunity to make large investments in carbon reduction projects without sacrificing returns, but methane digester projects seem to fit the bill for all parties," says Colton Long, AgTexas senior vice president of agribusiness

lending in Amarillo. "For AgTexas, financing these projects is one way we can contribute and still protect our stockholders against undue risk."

To reduce costs, the Mellemas chose to own their digester and gas-cleaning equipment. Their existing manure management helped to save on capital costs. In their case, water flushed across sloped

floors in freestall barns goes through a process that separates liquids and solids for reuse as irrigation water and bedding.

"In all their operations, the Mellemas have found ways to enhance their sustainability, including in their dairy and beef cattle, as well as their farming operations," Long says. "Their decision to own their digester made good business sense and was a step toward bettering the environment."

Construction process

More than 20 companies vied for the contract to build Full Circle's digester. Most wanted to sell a more expensive "plug flow" digester. Ultimately, Maas Energy Works was hired as project manager. The California-based company oversaw the construction

SIETO AND MISTY MELLEMA

Full Circle Jerseys
Dalhart, Texas

AgTexas finances the farm's anaerobic methane digester, as well as land and operating expenses.



When Sieto Mellema designed his Full Circle dairy facilities in 2004, he built a lagoon he could eventually turn into a methane digester. Today the covered lagoon, behind him, is the heart of the digester, which began operating in spring 2022.



Full Circle Jerseys' methane digester near Dalhart, Texas, includes a biogas inlet blower, control room and Roeslein membrane upgrading system.

phase, and it will also manage and maintain the system for 10 years.

“We covered Sieto’s existing manure-storage lagoon, which kept costs down and disruptions minimal at his dairy,” explains Daryl Maas, whose company has built more than 50 digesters across the country since 2009. “The lagoon is less energy-intensive than a tank digester, which uses mechanical mixers. But because it’s so much bigger than a tank, the lagoon will produce more gas at ambient temperatures.”

Tank versus lagoon? Own or partner? As Full Circle dairy manager Brandon Beavers knows, the learning curve can be steep.

“Do your due diligence and research before you sign a contract with anyone,” he cautions. “If you don’t know anything about the cow gas industry, hire someone with experience.”

Del Rio Dairy eyes a greener future

Dairyman Rocky Gingg and his family have weathered the milk market’s ups and downs since 1982. So, when dairy colleagues told them about their methane digester, the Ginggs decided their operation could turn cow manure into revenue. At the same time, they’d be doing their part to ensure a healthier future for both the environment and their grandchildren.

In November 2021, Gingg and his partners — Clean Energy Fuels Corps and TotalEnergies — broke ground on the Del Rio Renewable Biofuels project near Friona in the Texas Panhandle. The multimillion-dollar biomethane plant, which will go online in early 2023, is projected to generate more than 1 million gallons of renewable natural gas annually. It will also qualify the dairy to sell carbon credits.

ROCKY AND LIZ GINGG

Del Rio Dairy
Friona, Texas

AgTexas provides the dairy with real estate and equipment financing and a revolving line of credit for operating expenses.

“Our digester will provide another source of income when the dairy business isn’t doing well,” says Gingg, whose 8,000 milk cows

produce 113,000 gallons of manure daily at his family’s Del Rio Dairy. “It should also make this operation sustainable if our grandchildren choose to get involved in the future.”

As part of the agreement, the Ginggs allocated 13 acres of land to accommodate the biomethane plant. The complex project was brokered on their behalf by Peter Drasher, a developer

and investment banker with Black Bear Environmental Assets, which works as an agent for dairy owners.

Compost, bedding and biogas

Del Rio’s anaerobic digester will use two complete mix digester tanks. From the digesters the wet mixture, called digestate, will go through a screw press

to separate fibers that the dairy will recycle into compost and bedding. Biogas harnessed in a covered lagoon will be upgraded into

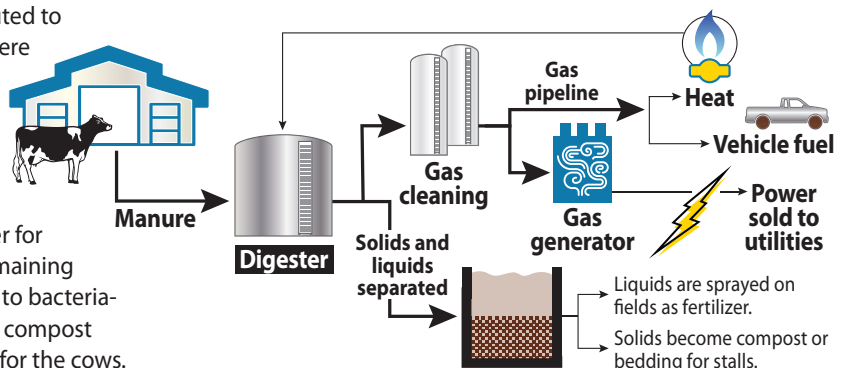
Digesters 101

Anaerobic methane digesters simulate a cow’s digestive system. Organic matter goes into a sealed container — such as a covered lagoon or a large tank — that’s void of oxygen and heated to at least 100 degrees. As bacteria feed on the matter, they release methane, which is captured inside the digester and converted into heat, electricity or renewable natural gas.

Digesters differ in design. Covered lagoons capture methane under an impermeable cover and rely on daytime temperatures for heating. Thus, biogas production may wane in winter months. Complete mix, plug flow and other kinds of mechanical digesters cost more but can be more efficient.

How an anaerobic methane tank digester works

Manure is routed to the tanks, where it’s heated and the gas is collected. The system draws off liquid fertilizer for crops. The remaining solids reduce to bacteria-free, odorless compost and bedding for the cows.



Lynette Alcorn

Ownership models vary, too. For example, producers may accept the risk, own and run their digester, and reap all the profits. Or they may own the digester and hire another party to manage the system. Producers also may enter an agreement to provide manure to another party that owns and operates the digester. ■ SSR

“We’re always looking for ways to support our customers with sustainable innovations. It’s about preserving the land and environment as best we can, and Farm Credit is all about that.”

– Gerrod Salyer, AgTexas Farm Credit

renewable natural gas and injected into a distribution pipeline.

Del Rio’s existing barns and location enhanced its viability to make and sell renewable natural gas.

“Our cows are housed in open lots with Saudi barns that cover the feed lanes,” says Justin Pitsch, farm manager. “That keeps the manure concentrated in one spot so we can vacuum it up. Another plus is that we’re 4,000 feet away from an existing natural gas pipeline. So, fortunately, we didn’t have to pay \$1 million a mile to build a high-pressure line.”

Early on, AgTexas Farm Credit, which provides an operating line of credit to the dairy, gave the project a thumbs-up.

“Economically, it looked to be a great deal for them, and it was also the right thing to do,” explains Gerrod Salyer, AgTexas vice president, lending, and branch manager. “We’re always looking for ways to support our customers with sustainable innovations. It’s about preserving the land and environment as best we can, and Farm Credit is all about that.” ■ SSR

Del Rio Dairy owners Liz and Rocky Gingg take a look inside one of the large effluent tanks before their methane digester begins operations.



Del Rio Dairy will capture most of its methane in two large digester tanks, pictured above during construction. From the tanks, a wet mixture called digestate will go to a press to be separated into liquid fertilizer, compost and bedding. At left is the covered lagoon at Full Circle Jerseys.

NEW PRACTICES REVITALIZE AN OLD RANCH

A young Texas couple focuses on regenerating the soil and grazing goats in a new way.

CARL AND EMILY WHITWORTH

Whitworth Ranch
Doole, Texas

Central Texas Farm Credit worked with the Farm Service Agency to jointly finance the Whitworths' land purchase.

Border collie Bell works a group of Kensing Spanish goats at the Whitworth Ranch in west-central Texas. With several thousand head of sheep and goats, the Whitworths rely on their dogs to help herd the livestock.

When Carl and Emily Whitworth took over his grandfather's ag operation near Doole in west-central Texas, they knew they would have to make some changes.

The sixth-generation producers respect the traditional ways of working the land and raising goats and sheep. But they also want to pass their agricultural legacy on to the next generation.

"In our business, there's too much looking back instead of looking forward," Carl says. "We want to make farming and ranching work in 2022 — and beyond."

To ensure that happens, the young couple has turned to more sustainable farming practices and diversified their operation.

Common goat ranching background

Now in their eighth year of ag production, Carl and Emily raise Kensing Spanish goats, fine-wool club lambs, Angus-Saler crossbred "heifer bulls," cotton and wheat on the century-old Whitworth Ranch and leased acreage. They also graze goats out of state.

Goat ranching is part of their joint heritage. Emily was reared on her family's Earwood Ranch south of Sonora, Texas, where they produced Angora goats and fine mohair. Fifty miles east, Carl grew up helping his father, David Whitworth, to ranch and run Spanish goats near Junction.

They knew each other through 4-H and sports activities and started dating at Texas A&M University. After graduating with animal science degrees in 2012, they married and moved in with Carl's grandfather, the late V.C. Whitworth, on the Whitworth Ranch.

"Papal' was 88 at the time and still running the place," Carl says. "So, we partnered with him and helped him with his sheep, goats, cattle and crops. But we didn't have a lot of say in how things were done."

That changed two years later when V.C. retired and left Carl and Emily to manage the place.

Cover crops and zero tillage

For years, farmland on the Whitworth Ranch was plowed for wheat and cotton and left fallow between crops. To revitalize the soil and reduce farming costs, the couple transitioned to more regenerative practices — cover crops and zero tillage.

By adopting conservation tillage practices, they've cut down on labor, fuel, fertilizers and equipment costs. Less plowing also

"We went from three plows a year to one plow, and then no-till and cover crops. If your soil has been getting fertilizer, you don't just stop. As you build organic matter and healthier soil, you can do away with fertilizers and herbicides." — Carl Whitworth

means less erosion and more nutrients in the soil. But all that didn't happen right away.

"We went from three plows a year to one plow, and then no-till and cover crops," Carl says. "If your soil has been getting fertilizer, you don't just stop. As you build

organic matter and healthier soil, you can do away with fertilizers and herbicides.

"It's a process to move away from plowing," he adds. "I've learned that you have to do something for five or so years. If you're trying for a quick return, then you're headed for trouble."

To further boost their land's productivity, the Whitworths combine no-till with cover crops. As part of their annual rotation, they plant a warm-season mix of sorghum-sudangrass, pearl millet, cowpeas, buckwheat and

sunflowers. The cowpeas are a legume that fixes nitrogen in the soil. The sorghum and other plants build organic matter, which feeds microbes and boosts the soil's water-holding capacity.

"We don't crop anything back-to-back anymore," Carl adds. "We plant wheat,



Carl and Emily Whitworth have implemented sustainable farming and ranching practices to keep their land healthy for future generations, including sons Levin, on the four-wheeler, and Waylon.



Levin Whitworth checks out the warm-season mix of sorghum-sudangrass, pearl millet, cowpeas, buckwheat and sunflowers his parents sow as cover crops.

then harvest it and plant our cover crop. We let that grow up and winter-kill, then graze it all winter and let the animals push the crop residue into the ground to build organic matter. Then we plant cotton in the summer and start the rotation over again.”

Lending partnerships

When 330 acres of nearby farmland came up for sale in 2018, the Whitworths jumped on it. They qualified for a low-interest Farm Service Agency (FSA) loan for producers who are in their first 10 years of operation.

However, the FSA loan wasn’t enough to cover the purchase, so they contacted Jeff Bedwell, Central Texas Farm Credit’s branch manager in Brady. Despite some red tape and a brief government shutdown, Bedwell completed the paperwork in time to close the deal.

“The FSA offers the option of a joint financing partnership,” Bedwell explains. “They do half the loan, and we do the other half. Carl and Emily were perfect candidates for the program, which makes it easier for beginning producers like them to get started.”

Bedwell’s enthusiasm for the Whitworths’ operation still impresses them.

“Jeff has been great to work with,” Emily says. “From the start, he believed in

what we were doing. It’s been a great partnership.”

Spanish goats a priority

The Kensing bloodline of hardy meat goats is named for Carl’s great-uncle, the late Robert Kensing of Menard, Texas. In 1972, Kensing began selectively breeding and culling his purebred Spanish goats. Today David and Carl manage his foundation goat herd.

“Of everything we do on this ranch, Kensing Spanish goats are our biggest focus,” Carl says. “We partner with my father and sell seedstock all over the nation. We also raise mutton for commercial markets.”

Together, David, Carl and Emily have goat partnerships in Texas, Wyoming and Oklahoma, where landowners welcome the goats to help control brush and weeds. One of their goat herds grazes at the Noble Research Institute in Oklahoma. The Whitworths estimated they would breed 4,000 nannies this fall.

To protect their herds from predators, they use more than 40 guard dogs. They also rely on professional herders wherever there’s no goat-proof fencing. Since 2017, they’ve hired Peruvian shepherders on H-2A work visas to look after the goats that they place on leased cattle ranches for weed and brush control.

“Up north, that’s how they herd sheep and goats on thousands of acres with no fences,” Carl says. “The Peruvians have campers and stay with the herds. We’re trying to figure out how to get the ranchers to pay us for brush control, instead of us paying for pasturage.”

That’s the case in Wyoming, where the Whitworths get paid for grazing their goats from spring to fall while the animals remove invasive leafy spurge on cattle ranches.

Family time

With farming and ranching enterprises to manage, employees to coordinate and leased properties to keep up with, the couple is always on the go. They involve their young sons, Levin and Waylon, in their activities whenever possible.

“Every day’s different,” says Carl, who also custom farms and builds fences. “We don’t have a set schedule. This afternoon, I’m selling two bulls. Then I’m going to weld on a plow and unroll some fencing. Whenever I can, I take the boys with me.”

Emily smiles.

“We grew up doing this,” she says. “We love it. It’s a lifestyle more than our work. So we want to have something for our boys to come back to if they want to. That’s really important to us.” ■ SSR



For six generations, the Whitworths have raised goats, sheep and cattle on the western fringe of the Texas Hill Country. Today, they also pasture goats on ranches out of state, where the animals help control brush and weeds.

Hylío makes four AgroDrone models, which can spray liquids and spread seed and granules.

Sky-high efficiency

Texas company Hylío is helping farmers save time, money and inputs with precision drones



There's a business creating plenty of buzz near Richmond, Texas.

Hylío Inc. designs and builds precision crop-spraying drones that reduce costs and inputs, minimize drift and reach areas other equipment can't. The action happens in a warehouse on a family ranch outside the city limits.

"This whole thing is by farmers for farmers," say Mike Oda, Hylío's chief financial officer, whose family owns a diversified Wagyu beef operation at the site. Capital Farm Credit finances the Odas' pastureland and some of Hylío's business expenses.

Rounding out the Hylío team are fellow co-founders Arthur Erickson, Nikhil Dixit and Nick Nawratil, who have been building drones since attending the University of Texas together. Everybody brings something to the table, whether it's an entrepreneurial spirit or expertise in engineering, hardware or software. But it's their ag focus that makes customers feel comfortable with the technology.

"When people visit us for training or a sales demo, they see the cattle and know we're not just a bunch of technology guys," Oda says. "We understand farming and are trying to make it easier."

Delivering the goods

Hylío has built hundreds of drones since 2015. Its early unmanned aircraft systems (UAS) were custom

HYLÍO INC.

Richmond, Texas

Capital Farm Credit financed startup costs for the agricultural drone company co-founded by Arthur Erickson, Nikhil Dixit, Nick Nawratil and Mike Oda. It also finances the Oda family's rural land.



“When people visit us for training or a sales demo, they see the cattle and know we’re not just a bunch of technology guys. I think that’s important. We understand farming and are trying to make it easier.”

– Mike Oda, Hylio

Mark Matson

The AgroDrones fold up for easier transport to destinations like this cotton field near Hylio’s headquarters. From left are co-founders Nick Nawratil, chief operating officer; Nikhil Dixit, chief technology officer; Mike Oda, chief financial officer; and Arthur Erickson, chief executive officer.

drones for agriculture, research, industrial surveying and other sectors. The team later refined its technology by delivering fast food and retail products in Costa Rica, then by spraying crops in El Salvador.

“It’s punishing terrain — mountainous with very small fields,” Oda says. “But we realized we had a really good product and spraying performance. Drones get into nooks and crannies you can’t reach with a ground rig or plane, and don’t compact the soil.”

Hylio was spreading the word at trade shows when it was invited to demonstrate a spray drone at the 2019 Becknology Days. More than 10,000 people attend the Indiana farm show, and one purchased a drone on the spot.

“Back then one sale had everyone cheering,” Oda says. “Then COVID happened, and things really started getting wild.”

Catching on with farmers

Faced with a labor shortage in 2020, more farmers decided to give spray drones a try.

“You don’t need to worry about a drone waking up early,” Oda says. “It requires little training to use, and with the pandemic, everybody was OK with training over Zoom. That had a tremendous effect on sales.”

Sales have risen ever since, prompting Hylio to double its workforce and manufacturing space this year.

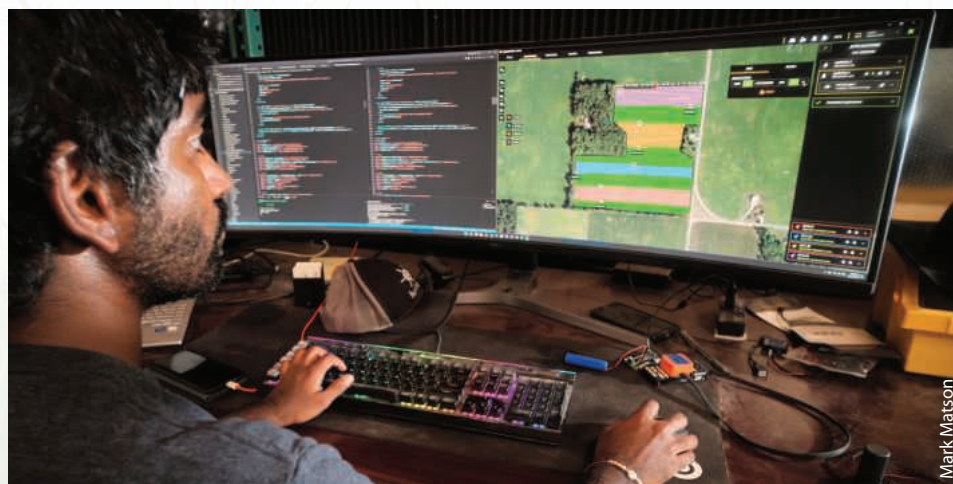
“People are waking up to the power of drones,” Oda says. “Drought and high prices this year made people more open to new technologies that can decrease their energy and input costs. Drones are a precise, economical and safe solution.”

Reducing waste and saving money

One new customer is Sammy Simon, a rice farmer and fellow Capital Farm Credit customer in Winnie, Texas.

In a video on Hylio’s homepage, Simon says he saved up to \$12 an acre on aerial application this year by spraying rice fields and hay pastures himself. Tests showed he achieved better coverage with the drone than a plane — a benefit of the propellers, which mitigate drift and help droplets penetrate the crop canopy. He can avoid obstacles like power lines and spot-spray an area as small as 5 square feet, reducing waste. And he only needs enough fuel for a generator to charge the drone’s batteries.

“Right now we farm thousands of acres of rice,” Simon says. “If I could take in as



Dixit developed AgroSol, Hylio’s ground control software, which enables users to plan crop treatments, command a fleet of up to four drones, analyze application data and more. The American-made drones and software are secure and authorized for federal government use.

Mark Matson

much of that spraying as I could, it would save us a lot of money.”

He plans to purchase enough drones to cover 1,000 acres a day.

“A lot of our customers will be able to pay the drone off in one season,” Oda says.

Financing for drones

Simon was Hylío’s first customer to finance a purchase with an equipment loan.

“No bank had wanted to touch the drones because they don’t understand them,” Oda says. “I immediately called Capital Farm Credit and said, ‘Hey, how did you do this?’”

Clyde Mordica, Capital’s regional vice president of sales for the upper Gulf Coast, remembers it well.

“I think Mike was as excited as Sammy about the loan,” says Mordica, who has financed Simon and his family since 2010.

Simon spent a couple of months getting a Part 107 UAS pilot license and a Part 137 agricultural aircraft operations certificate from the Federal Aviation Administration. Spray drone operators also need a pesticide applicator license.

“We go out of our way to help customers operate legally,” says Nawratil, Hylío’s chief operating officer. “Licensing information is on our website, and there’s paperwork we file on all our customers’ behalf.”

Hylío also helped Simon find insurance, a requirement for financing.

“Planes and spray rigs have their place, but the cost to purchase and operate a drone is significantly lower, including the insurance and interest cost,” Mordica says. “You could buy three drones for \$100,000 or less, versus a quarter-million dollars for a spray rig.”

“After doing more research and touring Hylío’s facility with Mike, I wouldn’t have any trouble financing drones for other farmers or ag businesses.”

Working with an ag lender

Oda’s relationship with Capital Farm Credit goes back six years, to when his family needed a dedicated ag lender. In addition to their beef operation, called Wodagy, the Odas own a restaurant, RV park and art supply business.

“The bank that financed the land was bought by another company that didn’t want any ag assets,” Oda says. “They

started making things difficult for us and told us to go refinance.”

The family found Capital Farm Credit and started working with Claire Williams in the Rosenberg office.

“Two weeks before the loan was going to close, my father passed away,” Oda says. “I always tell Claire how amazing she is because the financing helped us get back on our feet and jump-start the next phase of our ranch and other businesses. We wouldn’t be here without it.”

Later, tapping the equity in some farm equipment provided seed money for Hylío

to build more drones. To fund growth, Hylío raised over \$1 million in a crowdfunding campaign in 2021 — just in time for this year’s sales boom.

“I think it’s the coolest thing that Mike and his colleagues took this idea and ran with it,” Williams says. “And it wasn’t just an idea. Their drones are helping farmers do things more efficiently — which with the price of inputs right now is what we need to reduce costs.”

“I love their whole story from the bottom up.” ■ CF

Visit www.hyl.io for more information.



Mark Matson

Hylío doubled its workforce and manufacturing space this year to meet the demand for its drones. It now has 25 employees.

About Hylío’s AgroDrones

Hylío Inc. makes four AgroDrone models — from compact to Texas-sized — that spray liquids and spread seed and granules.

AgroDrones can spray 15 to 100 acres an hour at a rate of 1 gallon per acre, depending on the model. Operators can also fly up to four at once from a single ground station. Hylío’s customers include farmers, custom applicators, equipment dealers, university researchers, mosquito control districts, vegetation management companies and the USDA.

While you can fly the AgroDrones manually, they are fully autonomous and use radar to avoid obstacles. AgroSol, Hylío’s ground control software, lets users draw or import an area’s boundaries and choose treatment parameters — such as lawnmower patterns, perimeters, variable-rate

application or spot-spraying — and the drones do the rest. They return home when tanks or batteries are low.

“The AgroSol 2.0 software we just released also produces reports,” Mike Oda says. “You’ll know what you applied at what rate at an exact GPS location, and learn from that for next year.”

Drone prices range from \$18,040 to \$69,500. Hylío also offers kits with accessories and extra batteries.

The company continually refines its product lineup and launched two new models in 2022. The latest, the AG-172, is 14 feet across and has an 18-gallon tank.

“The bigger the capacity, the more acres you’ll cover and the less labor-intensive it is,” Oda says. “There’s nothing else like it on the market. The closest alternative would be a helicopter.”

GETTING STARTED

Young Louisiana couple partners with veteran farmer

Candice Head

KODY BEAVERS AND MELANIE NETTERVILLE

Boeuf Prairie Farm
Extension, Louisiana

With help from Louisiana Land Bank and an experienced mentor, these young farmers get the resources and knowledge they need to be successful.

Kody Beavers and Melanie Netterville are building a farming operation in northeastern Louisiana with help from Louisiana Land Bank and an experienced mentor.

Just east of Duck Creek in Franklin Parish, Louisiana, husband and wife Kody Beavers and Melanie Netterville are busy planting corn, soybeans, cotton and a future together in agriculture.

Armed with graduate educations, these 27-year-olds could be pursuing full-time agribusiness careers. Instead, they've chosen to join the next generation of farmers.

"I knew from a very young age that farming was a very big passion of mine," says Beavers, who earned both his agricultural business degree and his MBA at Louisiana Tech University. "I was fortunate to start

working on a farm at 14 years old, and the love for it just grew from there."

Netterville is equally passionate about agriculture. Reared on a farm in neighboring Tensas Parish, she, too, knew early on that agriculture was her calling. She earned her bachelor's degree in agribusiness from Louisiana State University and decided she wanted to be close to the land. Really close. So, in 2020 she started a master's degree in agronomy.

"I love being outdoors, and I wanted to get right into the heart of understanding how plants and water and soil and sun all work together," she says.

But loving agriculture is one thing; building a full-time farming operation is another — especially for Beavers, who grew up around relatives' family farms, but not on a farm.

Partnering with a veteran farmer

For this young couple, the solution lies in a partnership with longtime friend and farmer Jack Dailey. Together, they farm on Dailey's Boeuf Prairie Farm near Extension, Louisiana. Both as a mentor and a business partner, Dailey has stood by their side.

Beavers previously worked as Dailey's farm manager, an excellent proving ground for

young prospective farmers. Now that they work together, Dailey can help the couple overcome one of the biggest challenges any new farmer faces: equipment costs.

“These machines are incredibly expensive,” Dailey says, while walking through the farm’s machine shed. “Combines, tractors, sprayers. It’s a huge hurdle.”

Trying new technology

While Dailey provides experience, Beavers and Netterville contribute technology skills and perspective on new practices.

“You get a young person involved in your operation, and the energy level goes up. And the technology we need on the farm is so natural to them,” Dailey says. “It’s been a great opportunity for our farm, and it’s been a lot of fun.”

The operation has doubled in size in the past year to about 3,000 acres. That includes land in both Franklin and Tensas parishes, of which about 800 acres was acquired from Netterville’s family. In addition to row crops, the couple keeps about 150 head of Angus cattle in partnership with Beavers’ father, Michael Beavers.

Growing with Farm Credit support

Farm Credit has a long history of supporting young and beginning farmers like Beavers and Netterville. In fact, Farm Credit lenders significantly increased support for young, beginning and small (YBS) farmers and ranchers in 2021 (see story and chart on page 3 for details).

From equipment and production loans to a home mortgage, Louisiana Land Bank and Winnsboro Branch Manager Jonathan Wright have delivered that local support to Beavers and Netterville.

“I describe them both as good, hard-working people who take care of the details. They’re people you want to do business with,” Wright says.

Stepping up as farm leaders

“When people hear that we are young farmers, the response we get is ‘wow, that’s amazing,’” says Netterville. “There is a need for young farmers, and it’s more than just doing the farming. We also must get involved in leadership roles and try to

make sure farming is a sustainable industry in the long term.”

In 2019, Beavers won the Louisiana Farm Bureau’s Young Farmers and Ranchers Discussion Meet, a statewide leadership debate contest for young producers. That leadership theme pops up whenever he talks about agriculture.

“If you don’t tell your story, someone else will do it for you, and it may not be the true story,” Beavers says. “There’s a lot of other interests out there that can dictate our lives for us if we don’t step up and

“I love being outdoors, and I wanted to get right into the heart of understanding how plants and water and soil and sun all work together.”

– Melanie Netterville

speak for ourselves. It’s so important for young farmers to step up, continue the rural legacy and be leaders themselves.”

“Kody is a natural leader,” says Dailey, who serves on the Farm Credit Bank of Texas board of directors. “He and Melanie are interested in everything agriculture, because that’s their calling.”

Improving soil health

With Beavers’ business training and practical farm experience and Netterville’s agronomy skills, they also play a leadership

role by sharing their farming practices with fellow farmers.

Earlier this year, the couple hosted a soil conservation tour for ag producers to check out cover-crop approaches.

“The field looks kind of funny at first because it’s covered with knee-high cover crops. But after we knock it down and plant, we get the most beautiful cotton,” says Netterville.

Instead of tilling the soil, they drag the top of the row and plant the seed directly into the ground.

“We’re using cover crops to replenish nutrients that are removed by the crops, meaning the soil is richer. With the cover, it’s less likely to erode, and by leaving the dead cover in place, it retains moisture better,” says Netterville, who aims to become a licensed crop consultant after she receives her master’s degree.

The sandy soil in this part of northeastern Louisiana doesn’t hold water for long. So, while Beavers is grateful for the drenching rains that fell the past two days, he also is looking ahead.

“Likely the next 10 days are going to be dry,” he says, glancing at an impossibly blue sky swept clear by a welcome cold front. “I love waking up every morning and being happy to go to work. People sometimes say I need a hobby, and I tell them I don’t like to do anything but work here. You could say farming is my hobby.” ■ MB



Louisiana Land Bank’s Winnsboro Branch Manager Jonathan Wright, right, has delivered the local support needed by Kody Beavers, left, and Melanie Netterville.

a test-and-learn attitude

From testing new cottonseed to trying a hybrid bermudagrass for his Herefords, Cody Hughes keeps curious.

From the cab of his truck, Cody Hughes glances at an app on his phone to check the status of one of his irrigation pivots.

Drawing water from about 325 feet below this field in West Texas just south of his hometown of Roscoe, Hughes is as grateful for the water as he is vigilant with how it's used.

With the U.S. Drought Monitor reporting 98% of the state experiencing abnormally dry conditions as of early July — and 61% seeing extreme or exceptional drought

conditions — center pivot irrigation brings life to his fields of cotton, wheat, hay grazer and specialty grasses.

“No two years are the same here,” says Hughes, a fifth-generation farmer, who not only farms individually but also partners with his father in CWH Farms. “We’re always looking for ways to be better managers of the land, so we can be prepared when years like this come along.”

Farming has continued to evolve, but Hughes credits his ability to try new things to the help of great employees.

Growing with Lone Star

With Lone Star Ag Credit as his lender, his operation has continued to grow since he financed his first 160 acres through Lone Star in 2003. It now stands at about 7,700 acres of owned and leased land, and includes a new home financed through the association.

Hughes is not only a Farm Credit customer, he was elected to the Lone Star board of directors in 2018 and reelected in 2021.

“Cody and his family are doing great things,” says Jason Jones, credit office president of Lone Star’s Abilene and Sweetwater

CODY HUGHES

Roscoe, Texas

Since 2003, Hughes has relied on Lone Star Ag Credit for farmland and rural home financing.

“We’re helping test the future right here in Nolan County, and that’s pretty exciting.”

– Cody Hughes

branch offices. Jones has been serving Hughes since that first loan. “Cody monitors his operations closely and is always on the lookout for new ideas.”

That’s how he became interested in center pivot irrigation.

Installing center pivot irrigation

Hughes began farming cotton during his senior year in high school in 1997. He helped install underground irrigation for a local farmer and was intrigued by the farmer’s ability to grow great crops in lean

years. Most local operations were dryland farms with little to no irrigation, so he wanted to learn more about this option.

Starting small, he installed his first pivot in 2004, and over the years built up to 34 pivots as his knowledge grew. And he’s kept on learning.

Recently he transitioned to using a smartphone application to control some of the pivots and monitor water delivery. The text alerts sent through this application help him manage breakdowns, pressure loss and power outages.

With design changes to pressure regulators and nozzles, pivots today can water more efficiently than those of the past, thereby saving time, labor and money.

“Modern systems include probes that can monitor soil moisture several feet into the ground, and those systems can adjust how much water to deliver based on that information. It removes the guesswork,” Hughes says.

Testing and learning

A Tarleton State University graduate with a degree in agriculture services and

Cody Hughes, in cap, talks with Jason Jones of Lone Star Ag Credit about the difference pivot irrigation and crop rotation make for his cotton crop. Hughes left wheat stubble intact after harvest to stabilize and replenish the soil in half of this field while he grew a new cotton crop in the other half.

development, Hughes applies a test-and-learn approach to his farming practices. He continued to farm during his college days, then served as county executive director for the USDA Farm Service Agency (FSA) for eight years after college. This exposed him to a variety of farming operations across the state of Texas.

For instance, his planting practices reflect a deep appreciation for the quality of soil and ways to maintain valuable soil moisture. He rotates wheat and cotton crops, planting the wheat as the cotton comes off in the fall and harvesting it the following June. The wheat stubble remains intact to hold the soil and to act as a weed barrier. It also helps the soil retain moisture for the following cotton crop he plants directly into the stubble after it's had a chance to decompose.

"Those old wheat roots and the stubble help rebuild the soil and help us be more efficient, meaning we can deliver more cotton bales to the gin per acre using less water," Hughes says. "In our part of Texas, more often than not, it's pretty dry. This practice helps us make the best of the moisture that we get."

Growing Tifton 85

Hughes has brought another new practice to the area.

"When I was with the FSA, I saw ranchers using Tifton 85 grass to feed their herds, so I thought I'd try it out," he says.

Tifton 85 is a cross between a grass from South Africa and a bermudagrass developed in the 1980s, and Hughes finds the results impressive. He says each acre of irrigated Tifton 85 can feed one head of cattle, compared with his old ratio — 25 acres of native grass to one head.



Cody Hughes with his wife, Amy, a teacher at nearby Highland Independent School District, and children Carley and Caletan.

The Tifton grass and surrounding pasture supports commercial Angus cows and a herd of Herefords, the same breed he showed in high school. That hobby from a few years ago has since grown into a side business — raising show steers through his family-owned Box H Cattle company.

In the fall, Hughes uses his commercial cows as recipients, meaning he implants them with embryos from his Hereford donor cows. The result is multiple siblings from the same mating. The calves are born in August and September and weaned in February. Hughes retains the bull calves to sell as show steers for 4-H and FFA student projects across the state.

Hughes also participates in a new product evaluator program, growing seed blocks with a cottonseed company. It's extra work — he needs to ensure the test seed is planted in fields that are perfectly cleared of previous cotton plant residue. In addition, the test production must be kept separate at harvest and during the ginning process. But Hughes says the results are well worth the effort.

"It's fun to see what's on the horizon for our cotton industry a couple years in advance," he says. "We're helping test the future right here in Nolan County, and that's pretty exciting." ■ MB



Scan the QR Code to learn more about Cody Hughes on video.



From the cab of his truck, Hughes, left, with Lone Star Ag Credit's Jason Jones, can instantly monitor the status of many of his irrigation pivots.



Janet Hunter

On a late June afternoon, Emry Birdwell listens as Deborah Clark explains to visitors why their pastures are lush during a prolonged drought. The native grass they're standing in has not been grazed for several months.

regeneration on the range

A North Texas couple is regenerating the land by grazing more, not fewer, cattle.

When Deborah Clark and Emry Birdwell started dating 30-some years ago, he took her out to his ranch one evening to introduce her to his pride and joy — his cattle herd.

Former classmates, she'd built a career in her family's telecommunications business; he was a third-generation North Texas rancher.

"I didn't know a thing about cattle," Clark says, "but when Emry began talking about holistic ranching, that got my attention.

"He had me at 'holistic.'"

Herd impact works

Today, the wife-and-husband team operates an 11,800-acre ranch near Henrietta, Texas, where they raise about 5,000 stockers on native pasture. Since buying the Clay County ranch in 2004, they've proved it's possible to regenerate the land through holistic management practices.

The couple's approach centers on adaptive rotational grazing and herd impact. By pasturing all 5,000 head of cattle together

BIRDWELL AND CLARK RANCH

Henrietta, Texas

Emry Birdwell and Deborah Clark have relied on Capital Farm Credit as their mortgage lending partner since purchasing the ranch in 2004.

at the same time in the same field — an impressive sight for their frequent visitors — they're rebuilding their soil and improving their forage diversity.

The ranch is divided into 350 paddocks, ranging from 45 to 145 acres in size. Depending on forage growth, they move the herd three to six times a day to fresh pasture. After a paddock is grazed, it rests

for at least 75 days. No paddock is grazed more than twice a year.

“We manage grass before we manage cattle,” Birdwell says. “And we manage soil before we grow grass.”

Soil comes first

The science behind the strategy is simple, Birdwell and Clark explain. To profitably produce healthy cattle, it takes a variety of nutrient-dense grasses and forbs. To produce the forages abundantly, the soil needs deep, rich organic matter that holds moisture. And the best way to increase organic matter is through intensive livestock

grazing. The animals’ hoof action works manure and grass residue into the soil and loosens deeply buried native grass seed. It’s a process that mimics the action of bison herds centuries ago.

“It’s not about the grass they eat, it’s how much they knock down to form the plant litter, which becomes organic matter,” Birdwell says. “That organic matter stops water from running off. The litter holds water, protects the ground from evaporation and keeps the ground cool – and that’s good for nesting birds.

“It’s all holistic; it all connects.”

Native grasses return

The couple has witnessed the rebirth of their tallgrass prairie rangeland.

“We haven’t planted one seed here, but we have all the native grasses represented, and there’s almost no bare ground,” Birdwell says proudly.

More than 60 species of grasses, forbs and legumes have replaced what was a monoculture of little bluestem nearly 19 years ago. Now the cattle enjoy a smorgasbord of buffalograss, Indiangrass, sedges, gramas, tridens, switchgrass, vetch, clovers and other perennials — including east-

ern gamagrass, a warm-season bunch grass that’s generally disappeared over the years.

One of the couple’s most significant accomplishments is the reduction of bare ground from 25% to just 5%.

“The fact we’ve covered up that bare ground is proof that what we’re doing is right,” Birdwell says.

Beef per acre increases

There are other achievements, too. The ranch typically produces 100 to 120 pounds of beef per acre, more than double the county average of 40 to 50 pounds, Clark reports.

Additionally, habitat improvement has helped boost wildlife populations, including white-tailed deer, Rio Grande turkey,

bobcats, eagles, bobwhite quail and the Texas horned toad.

That’s not all.

Thanks to the ability of the deep-rooted native grasses to capture carbon dioxide from the atmosphere and sequester it in the soil, Birdwell and Clark recently started selling carbon credits.

A lifelong rancher, Birdwell became interested in holistic managed grazing in the 1980s through the teachings of Allan Savory, an internationally renowned advocate of holistic resource management. Ranching on leased and family-owned land at the time, Birdwell couldn’t fully implement a rotational grazing plan.

So, when he and Clark purchased their current ranch with Capital Farm Credit as their financing partner, he could finally apply the lessons he’d learned from Savory.

Drought teaches useful lessons

Initially, Birdwell and Clark managed their herd in three groups of 1,500 to 1,800 stockers, rotating them through multiple paddocks. Then the drought of 2011 hit, and most of the pastures ran out of water.

“The drought forced us to do two things right,” Birdwell says. “It forced us to go to

“We manage grass before we manage cattle. And we manage soil before we grow grass.” – Emry Birdwell

More than 60 species of native grasses, forbs and legumes thrive on the Birdwell and Clark Ranch.



Wyman Meinzer/courtesy of Texas Agricultural Land Trust



Deborah Clark and Emry Birdwell discuss their rotational grazing system with local FFA members. Rural youth groups are among the many organizations that visit the ranch each year.

one herd, and it forced us to improve our water.”

With technical assistance from the Natural Resources Conservation Service, the couple installed 25 miles of polyethylene pipe to deliver water to pastures across the ranch. Birdwell designed a mobile water trough made from a propane tank cut in half lengthwise that connects to water valves in the paddocks. The system has allowed them to fence off riparian water sources where the cattle once drank.

Next, they consolidated the cattle into one herd to increase the impact of dense grazing. At the same time, they expanded the number of pastures but made them smaller.

“We remembered what Emry’s teacher Allan Savory advised: ‘When you’re in a drought, group your cattle together,’” Clark says.

Restocking starts over

The couple starts to assemble a new herd every September, buying stockers according to weather, markets and how well their pastures are regenerating. In November, they place about 2,000 stockers on leased wheat pasture, then combine the entire herd of more than 6,000 head to graze on their own ranch during winter and early spring. Come May, some are shipped to pastures in Kansas, and in July all of the cattle go to feedlots for finishing.

Key to Birdwell and Clark’s rotational system are 140 paddocks, which are divided into 350 paddocks during the fast-growing seasons and separated by electric polywire. The wire is easily raised at T-posts to allow the cattle to mosey through to the next paddock at their own pace.

“It takes the stress off moving the cattle,” Clark says. Plus, one person can move the entire herd alone, and just three or four people are able to handle all the day-to-day chores.

The exception is at shipping time. Even then, it’s a calm operation. Cowboys on horseback quietly nudge the cattle toward the ranch’s own scales, where the animals are weighed and quickly loaded onto trucks, about 1,000 head an hour. This minimizes stress, which can cause 1% shrinkage for every hour the cattle are penned.

“We practice low-stress cattle handling,” Birdwell says. “We don’t want a bunch of cowboys whooping and hollering.”

Ranch earns national recognition

For its efforts to regenerate prairie rangeland, restore riparian waterways and improve wildlife habitat, the Birdwell and Clark Ranch has received numerous awards. These include the Lone Star Land Steward Award from Texas Parks and Wildlife and the Environmental Stewardship Award, Texas Division, from the National Cattlemen’s Beef Association.

Birdwell and Clark also are recognized nationally and internationally as leaders in holistic ranching. As a certified trainer with Holistic Management International, Clark frequently speaks at workshops and conferences, and every year they host scores of visitors, from college students to ranching organizations.

But some of their favorite activities involve youth education and wildlife. These include the Texas Youth Hunting Program, high school and college classes and the Dove Salute, an annual hunt they host for Sheppard Air Force Base personnel.

“Emry and Deborah are outstanding leaders in the community and extremely generous about sharing their knowledge with others,” says Will Myers, relationship manager in Capital Farm Credit’s Wichita Falls branch. “Capital Farm Credit is honored to support their work to restore this land for future generations. It’s been a joy to watch the grasslands come alive under their management. They truly exemplify the term ‘land steward.’”

But caring for the land is more than a passion for the couple.

“This land is a gift we’ve been given,” Clark says. “It’s our responsibility to take care of it — not just to sustain it, but to improve and regenerate it.” ■ JH

Visit birdwellandclarkranch.com for more information.



Emry Birdwell raises an electric fence wire to rest on a PVC T-post, allowing cattle to cross from one paddock to the next. The system eliminates the need for gates between his 350 paddocks.



Conservation easement brings peace of mind

Emry Birdwell woke up one morning last year and told his wife, Deborah Clark, he'd had his best sleep in 18 years.

The day before, the couple had made the critical decision to place their 11,800-acre North Texas ranch in a conservation easement.

"Both of us have a strong and intense goal to leave this ranch intact," Clark says. "We were concerned about succession planning and making sure that our three children won't have to sell the place to pay estate taxes."

They had another goal, too. After devoting nearly two decades to regenerating their soils and native prairie grasses, they wanted to ensure their stewardship work continues.

Under a conservation easement, that can happen.

Preserving the ranch

In September 2022, the couple signed an agreement with the Texas Agricultural Land Trust that reflects their desire for the land to continue to be operated in a

regenerative manner — whether it stays in the family or is eventually sold.

A conservation easement is a voluntary legal agreement between a landowner and the "holder" of the easement, permanently restricting certain uses of the land in order to protect its conservation value.

Birdwell and Clark chose to partner with the Texas Agricultural Land Trust (TALT), a private nonprofit organization formed in 2007 by the Texas Farm Bureau, the Texas Wildlife Association and the Texas

and Southwestern Cattle Raisers Association. One of more than 30 conservation easement managers in the state,

TALT aims to preserve the Texas heritage of agricultural lands, wildlife habitats and natural resources.

"What made TALT work for us is their mission to keep working agricultural land in private hands," Clark says. In other words, she explains, the land doesn't have to become a park or greenspace — it can remain a working ranch.

The couple found a conservation easement attractive for other reasons, as well. It would protect the land from being sold for

development without restricting how their children could use the ranch.

Creating a living legacy

For Birdwell, peace of mind comes from knowing his work to holistically manage the rangeland can continue.

"Right now, this ranch is only a fraction of what it can be," he says. "But if the next generation on the ranch keeps progressing, it will be better than any monument to us could ever be. A living legacy is what we're looking at, and not only for Deborah and me but for her parents and my parents and the cowboys who came before us."

A primer on conservation easements

Purposes

- Protect open land or habitat from development
- Preserve traditional land use by allowing farming, ranching or timber harvesting activities to continue
- Conserve land that has scenic, biodiversity or other value for recreation or education
- Safeguard a culturally or historically significant structure or area



Stocker cattle gather near the mobile water trough Emry Birdwell designed. After grazing in this paddock most of the day, they are ready to move to a fresh pasture. The water trough will be moved with them.

Tax benefits

- Reduce estate taxes. A conservation easement removes the land's development potential, which reduces the property's market value. As a result, heirs will pay lower estate taxes, which may make it easier to keep the land in the family.
- Reduce property and income taxes. Lowering the land value lowers the property taxes. If the conservation easement is permanent, was donated to a land trust for conservation purposes, and meets certain IRS conditions, it can qualify as a tax-deductible charitable donation. This, in turn, can reduce the landowner's income taxes. The value of the donation is the difference between the property's market value before it's put into the easement and the value after the development restrictions are put in place. ■ JH

For more information, read *Texas Land Trends: Conservation Easements in Texas*, published by the Texas A&M Natural Resources Institute. It is available at <https://nri.tamu.edu/media/2305/conservationeasementsintexas.pdf>.

Healthy soil earns carbon credits

Emry Birdwell and Deborah Clark's efforts to improve their soil and rangeland isn't just paying off in more beef per acre — now it's paying off in carbon credits, too.

In December 2021, the couple received their first "carbon check" from Grassroots Carbon, a San Antonio, Texas-based carbon broker. Under a 15-year commitment, they'll receive annual payments until 2035.

Carbon credits are a medium of exchange used to "offset" carbon dioxide emissions under cap and trade guidelines set by the 2015 Paris Agreement on climate change. Companies that strive to reduce their carbon footprint may opt to pay others, such as farmers and ranchers, for removing carbon from the atmosphere.

How it works

"For us, it's been a painless process," Clark says, recounting the steps involved in selling their new cash crop.

In the spring of 2021, Grassroots Carbon visited the North Texas ranch and took more than 80 soil samples, each a meter deep, as well as forage samples. The soil was analyzed for existing carbon content. Then the ranch was verified and certified in the carbon sequestration program — steps required annually.

After five years, the soil will be resampled to measure increase in carbon content. Future credits will be determined by the increase. Meanwhile, Birdwell and Clark received their initial prepayment based on a forward-looking assessment of their soil type, climate and management practices.

Carbon brokers like Grassroots Carbon coordinate and manage deals between landowners who sequester carbon and large carbon-emitting corporations that want to purchase carbon offsets.

The fluctuating carbon credit market is driven by supply and demand. A study by Purdue University's Center for Commercial Agriculture, published in 2021, found prices offered to farmers ranged from \$10 to \$20 per metric ton of carbon sequestered.

Grazing and pasture lands sequester from less than 0.3 metric tons (MT) to nearly 3.0 MT of carbon per acre, depending on agricultural activities and management practices, according to a 2022 report by S&P Global. Cropland generally sequesters much less. Sustainable practices such as rotational grazing, regeneration of native perennial grasses, cover cropping and zero tillage help increase carbon sequestration in the soil.

While Clark says they hope their carbon storage payments will help pay off their land loan with Capital Farm Credit, she stresses that sequestering carbon is not about the money.

"Carbon credits are an incentive for the landowner to want to continue to practice in a regenerative way," she says.

Research before signing

Before signing a contract to sell carbon credits, one should exercise caution and do their research, warns Tiffany Dowell Lashmet, agricultural law specialist with Texas A&M AgriLife Extension Service.

"No two carbon contracts are the same. Contracts offered by brokers differ drastically, and landowners should carefully read the contract and ensure they understand all of the terms prior to signing," Dowell Lashmet says. "I also always recommend enlisting an attorney licensed in your jurisdiction before signing on that contract's dotted line." ■ JH

MAKING HAY IN A DROUGHT

By pursuing reliable water and hydrating his hay, a Texas farmer harvests up to nine cuttings, helping meet livestock producers' feed needs.

DENVER AND DARCI COLLINS

Full Throttle Farm
Portales, N.M., and Balmorhea, Texas

Collins relies on Ag New Mexico for land financing and a line of operating credit for his farming business.



Photos by Ruth Lattimore

Denver Collins takes a break from baling hay on his farm near Balmorhea, Texas. In 2021 he harvested hay from April through late December, thanks to the region's warmer climate and a more reliable water source than his previous Texas Panhandle farm offered.

If there was ever a year for Denver Collins to be in the alfalfa hay business, 2022 was it.

Drought took a toll on forages across the Southwest, drying up pastures and drastically cutting hay yields.

The grass shortage caused many ranchers to market their cattle early. Texas Panhandle farmers who normally would have harvested three or four cuttings of hay were lucky to get two.

Fortunately, Collins was positioned to help meet the need.

Two years earlier, he had moved his Texas farming operations nearly 300 miles south to secure a more reliable water source for irrigation. The move took him from the Panhandle community of Farwell, Texas — on the state line near Clovis, New Mexico — to Balmorhea in Far West Texas.

"We're able to do so much more with the water here at Balmorhea. At Farwell, we got six cuttings of hay," he says. "At

Balmorhea, we have a longer growing season, and we get eight to nine cuttings."

Looking for water

The decision to relocate wasn't easy. For seven years, Collins grew corn and hay grazer near Farwell on land he and his wife, Darci, had purchased from her family. It was just a half-hour drive from their home in Portales, New Mexico. Plus, the soil was productive, and the farm had seven irrigation circles. However, there was only enough water to farm on two of them.

After a neighbor moved to Balmorhea and reported plentiful water, Collins followed. In 2020 he and Darci purchased 860 irrigated acres in the Balmorhea area with financing from Ag New Mexico, their lender for both real estate and operating expenses since 2018.

The move brought new farming opportunities, including the option to focus on alfalfa.

Collins now grows about 500 acres of alfalfa, along with cotton, wheat and hay grazer. He includes millet in the crop rotation to help rejuvenate the soil. The land came with water rights primarily from the Pecos Valley Aquifer. And — the critical part — he now has five circles for center-pivot irrigation, and all five are usable.

“The water’s a bit saltier here,” Collins says, “but we get over 1,000 gallons of water per minute on every pivot.” It means he can budget for about 8 tons of alfalfa per acre, although his 2022 yield was closer to 12 tons per acre.

Working through the night

In the dry Trans-Pecos climate, low humidity is one of the biggest challenges facing hay producers at certain times of the year.

“We aim for 15% to 18% moisture in the hay,” Collins says. “So, most of the time we bale at night until just about sunup, when the humidity is highest.”

“We bought the steamer so we’d be able to work through the night. That way, if we don’t have enough humidity, we can still get the hay out.”

— Denver Collins

This past summer, he added a steamer to his equipment lineup, which includes three balers — two for small bales and one for large — plus a loader, all operated by a four-man crew. The steamer attaches to a baler and hydrates the hay as it is picked up in the windrow.

“We bought the steamer so we’d be able to work through the night,” Collins says. “That way, if we don’t have enough humidity, we can still get the hay out.”

Lowering expenses

The move south has paid off in several ways.

“Down here our electricity cost is a little lower,” Collins says. “We can buy power off the grid and lock in the price for five years.”

He’s also within an easy drive of the eastern New Mexico dairy market. With up to nine hay cuttings a year, he can consistently supply hay to dairies in the Hobbs-Lovington region and back-haul dairy compost for his own farm. The practice not only offsets his trucking costs, but also reduces his commercial fertilizer bill — one of his most expensive inputs — and even helps the environment.

His other markets include livestock and horse operations and feed stores across the South and Southwest, from the local Reeves County Feed & Supply to Central Texas retailers near Stephenville and Waco.

Collins primarily produces large square bales. He doesn’t make any round bales.

“I don’t have a market for large round bales,” Collins says. “I’m used to the dairy market, and large square bales are what dairies want, because they’re easier to handle. But there’s more profit in small bales.”

Building barns and raising cattle

Hay farming isn’t Collins’ only business. Growing up in Portales, where his family grew peanuts and sweet potatoes, he learned the construction trade and started his own company specializing in dairy barns. Today he continues to run High Plains Building Solutions in Portales, with a focus on dairy and hay barns in both New Mexico and Texas.

In addition, he partners with his father in a cattle operation near Portales. Darci manages the office, and sons Dravin, 13, and Dayne, 10, often help with the hay and cattle work. Adult daughters Morgan and Tori occasionally help, too.

“Full Throttle Farm, the name of the ag operation, is appropriate,” says his Ag New Mexico loan officer, Ryan Bone. “Denver doesn’t know how to take a break.”

But he’s not only an energetic entrepreneur.

“Denver’s a fantastic operator and manager. He’s always on top of his books — he makes my job easy,” Bone says. ■ JH



The dry West Texas climate makes it challenging to harvest hay, which requires 15% to 18% moisture. But with a steamer, Collins can bale hay when humidity is low. The steamer hitches to the tractor and pulls the baler, parked in front of a hay barn built by Collins’ own construction company.



working with the land, NATURALLY

Organic cotton farmer Carl Pepper applies a healthy dose of creativity to his operation.

CARL PEPPER

Borden County, Texas

AgTexas Farm Credit Services finances Pepper's organic cotton farming operation and equipment.

It's July and the South Plains of Texas are seared by drought, the boundless fields toasted and parched.

Carl Pepper has seen it before. In 1995, 1998 and 2011, he and other area dryland cotton producers were forced to abandon cotton production and shift their priorities to soil protection.

"Things have a way of balancing out," says Pepper. "In 2021 we had lots of moisture, great harvest. You get in the habit of thinking ahead out here."

While there's no crop to harvest on his 4,000 drought-stricken acres about 40 miles south of Lubbock, Pepper and his team are just as busy. That's because he grows organic cotton, which demands

that he cares for his fields with vigorous intensity.

Mechanical weed control

On this early July morning, members of his crew are taking their GPS-guided tractors and modified cultivators to plow the fields. Their goal: Uproot those extra-hardy weeds that have sprouted following a rare rain the night before. Eradicating them now means reducing the weed seed load for the next growing season.

"I look at chemicals like prescription medicine," Pepper says. "There's a time and place for everything. For us, we've figured out how to use mechanical means to control weeds."

AgTexas Farm Credit

Services has been with Pepper since the beginning in 1992, when he received his first equipment and operating loans from the co-op.

"Carl knows his fields so well," says AgTexas Vice President and Branch Manager Travis Ferguson. "It's rare to see a producer with his weed-control knowledge. If he knows rain is coming, he knows exactly what his next few days will be like and so does his crew. They get out there with mechanical rotary hoes and cultivators getting after the weeds. They have only a couple of days to cover the farm to prevent those weeds from going to seed. It's amazing."



His organic cotton crop decimated by drought, Carl Pepper sees opportunity to get his ground ready for the 2023 growing season with help from his family and AgTexas Farm Credit Services.

Photos by Michael Bares

The uses for that organic cotton are unique. Some major manufacturers use the fiber to produce niche lines of clothing, primarily for infants. Other uses are focused on the medical industry, such as surgical gauze or feminine hygiene products.

While he's happy to share his knowledge, Pepper cautions prospective growers that organic cotton isn't for everyone.

"It depends on the field, it depends on the farmer," he says.

His part of Texas, for instance, is well-suited to the production of organic cotton. Winter temperatures are cold enough to limit insect pressure and provide a hard freeze to defoliate the cotton plants before harvest. In addition, a sunny climate and quick-drying soils help with timely weed control.

As for the farmer, Pepper recommends that producers designate one member of their field team or a family member to focus solely on the organic portion of the operation.

"Your product has to be certified by the United States Department of Agriculture National Organic Program, and that takes effort," he says. "You also need someone who will apply these different approaches to field management at the right times using the right tools. It's very different from conventional production."

Modified equipment

One of Pepper's greatest attributes is creativity. At his shop in the middle of his fields, he tinkers and tests.

"I modify nearly every piece of equipment I buy," he says. For example, stacked around the shop are piles of rotary hoe wheels, which he alters to meet his specialty needs.

His other smart farming practices include:

- Contour terracing to preserve precious rainfall.
- Avoiding deep tillage to keep the root zone intact. He tries to till no more than 2 inches deep.
- Dedicated paths for his tractors to minimize soil compaction.

His crew includes his daughter, Kayla, and son-in-law, Andrew, along with three full-time employees. He brings on extra workers as needed, too.

"You have about 60 heat units or three days after a rain to kill the sprouting weeds in the crust, and every day past that you are buying trouble," he says. The team knows when it's time to move quickly.

"We strive to be efficient from both an ecological and financial perspective," Pepper says. "We're highly motivated to be good stewards." ■ MB

Pepper calls it situational management.

"When you drive by the barn, our equipment looks different than it would for a conventional grower. That's because the management side of organic farming is more intense," he says.

Unconventional practices

A founding member of the Texas Organic Cotton Marketing Cooperative, Pepper and other organic cotton growers follow practices that are different than conventional growers use. For instance, Pepper will plant rye and turnips in his fields later this year. The rye adds organic material and holds the soil, while the turnips loosen it.



Carl Pepper, right, on his farm near O'Donnell, Texas, speaks with AgTexas' Travis Ferguson. AgTexas has been with Pepper since 1992.



thriving by adapting

Mississippi's Oliver Farms keeps up with technology and practices that save money and soil.

The Oliver family uses conservation practices to improve and hold the soil. Variable-rate application and other technologies minimize inputs and expenses.

OLIVER FARMS

Winona, Mississippi

Southern AgCredit finances the Oliver family's land, home, farming operation and some equipment.

Walt Oliver's great-grandfather would hardly recognize the technology on the farm he purchased in 1914.

GPS systems guide machinery with pinpoint precision. Yields and soil fertility are mapped on satellite imagery. Fields are planted without tilling. And planters and sprayers apply inputs at variable rates.

"I've always been a firm believer that if you're not growing or moving forward, you'll get left behind," says Oliver, who now farms 3,500 acres near Winona, Mississippi.

The practices are paying off in higher yields, lower costs, better soil and less erosion. And it's satisfying to see the fourth-generation farm get

better with age — especially with a fifth generation standing by to keep it strong.

Continuing a family tradition

Oliver Farms grows cotton, corn and other row crops in the Hills region just east of the Mississippi Delta.

Oliver says he learned everything he knows about farming from his dad, Bobby, who retired in 2008. Now he's passing his knowledge on to sons Rhett, 21, and Reece, 19. Christy, his wife, manages the books, and daughter Lucy, 16, helps on the farm when she isn't busy with high school and sports.



Walt Oliver

There's something else Oliver inherited from his dad — an appreciation for Southern AgCredit. Bobby has been a member of the lending cooperative since 1976, and Walt switched from a commercial bank to the co-op when he

took over the family operation in 2009.

Elliott Fancher, Southern AgCredit's Greenwood branch manager, has been their loan officer for about a decade.

"Elliott grew up on a farm himself," Oliver says. "It's so much easier dealing with an ag lender than a traditional bank. They understand what we're doing and what we're going through."

Protecting the soil

The family farm has thrived by adapting to the challenges of dryland farming in the region's rolling terrain and small fields.

"The soil quality where Walt farms is as good as anything in the Delta," Fancher says. "It's just hard to irrigate in the Hills. He keeps the ground as undisturbed as possible to prevent moisture loss and erosion."

“There’s an old saying that if you cut a trench in the Hills, it’ll turn into a creek if you’re not careful.”

Conservation tillage, cover crops and crop rotation hold and improve the soil, reduce the need for fertilizer and break the cycle of weeds and pests. Minimum tillage saves money on fuel and labor, too.

“With conventional tillage, we lose too much ground moisture,” Oliver explains. “We do as much no-till as possible, especially on high areas that might erode.

“Once we harvest, we either plant a cover crop or let the natural vegetation come up, then plant right into the residue the next spring. The more organic matter, the more moisture you keep.”

In addition to financing their land, home, ag operation and some equipment with Southern AgCredit, the Olivers participate in the USDA Conservation Stewardship Program (CSP), which provides technical and financial assistance.

“It helps farmers afford to do more of these practices that are good for the land,” Oliver says.

Applying only what you need

Typically the Olivers rotate cotton with corn or peanuts. In 2022 they planted nitrogen-fixing soybeans to take some of the sting out of record-high fertilizer prices.

“The main thing that made a difference was applying fertilizer at a variable rate using yield maps and soil maps,” Oliver



Walt Oliver, left, gives Elliott Fancher a warm welcome at the farm. “They have always been really easy to deal with,” Oliver says of Southern AgCredit. “I really like Elliott. We have a good relationship.”

says. “Used to be, we applied a solid rate across everything whether it needed it or not. Now we apply only what we need, exactly where it needs to be, and use less.”

The family has used variable-rate application for about a decade.

“It helps our yields in poorer spots equal those in the better spots,” Oliver says. “And we don’t overspray or double-plant anymore. We only spray the crop, and each unit on our variable-rate planters shuts off in places where we’ve already planted.”

Staying open to innovation

The farm is more productive than ever, but it wouldn’t have been possible without innovative practices and equipment.

“Daddy was at the shop today talking about how much farming has changed just

since he retired,” Oliver says. “We were working on one of our sprayers and he said, ‘There’s probably more technology in one sensor than in the whole first sprayer I had.’ And he’s probably right.”

What excites him now is precision planters that adjust seed depth and population based on soil moisture and temperature. Using drones to monitor crop health and insect pressure could be in the family’s future, too.

“Walt stays up to date,” Fancher says. “He’s always been open to new technology, products and innovations that make things easier or more cost-efficient.” ■ CF



Scan the QR code to watch video of Walt Oliver describing how Farm Credit has made a difference in good times and tough times.

“Elliott grew up on a farm himself. It’s so much easier dealing with an ag lender than a traditional bank. They understand what we’re doing and what we’re going through.” — Walt Oliver

The Olivers’ home has a view of the sunrise over their cotton fields. They farm 3,500 acres of owned and leased land.

Seven tips for online security

Help protect your business, data and devices with these steps.



In an ever-changing online world, technology can help you become more productive and profitable, but it can also leave you vulnerable to cyberattacks. The good news is there are some essential steps you can take to help keep your farm or agribusiness safe. Here are some tips to get you started.

1 BACK UP YOUR BUSINESS DATA

Always make backups of the data your business or farm needs to function. This might include emails, invoices, contacts and customer orders. Backing up your files ensures you always have a copy on hand.

It's considered a best practice to back up your data two different ways. Here are two options:

- Copy your data onto a USB flash drive or external hard drive and store it somewhere safe.
- Back up your data to a secure cloud service that can perform scheduled backups remotely and automatically.

2 TURN ON AUTOMATIC UPDATES

Ensure your computer, mobile phone and other devices are regularly updated. You can change your settings so updates are handled automatically once an update is found. Each operating system is slightly different, so if you're unsure, check your system's main website for information.

3 THINK BEFORE YOU CLICK

Attackers often masquerade as a reputable source to steal information or money. Known as phishing, this is the practice of sending fraudulent emails or texts in order to persuade you to share your personal information, click a link or open an attachment. For example, a message that includes what appears to be an invoice from a legitimate supplier could carry malicious software such as ransomware. Always check the sender's email address, ensure the request looks valid and consider whether the message is expected before responding. Or take the extra precaution of contacting the business directly (but not by return email or return text) to ensure the message's authenticity.

4 CREATE TOUGH-TO-CRACK PASSWORDS

Most devices and services you use in your business require a password. Hackers prey on those who use simple, easy-to-guess passwords, especially if you use that same password for multiple accounts. Create a strong password for each account that contains a mix of numbers, letters and symbols. Experts recommend using passwords of at least 13 to 20 characters and changing passwords regularly.

5 TURN ON TWO-FACTOR AUTHENTICATION

Even if you have a strong password, hackers can still test billions of password combinations in seconds. Add an extra layer of security to your accounts by turning on two-factor, or two-step, authentication.

Multifactor authentication means that in addition to your password, you must provide another piece of information, such as a code sent by text message or email or sent to an authentication app, to access your accounts. This can prevent unauthorized access, even if someone has obtained your password.

6 SEPARATE WORK AND PLAY

For best security practices, designate one computer for general personal use and another strictly for business. Using your work computer for social media, playing games, and streaming videos or music makes it more vulnerable to security issues. That's because non-work use increases the risk of accidentally clicking on a suspicious link that installs malicious software to spy on you or your computer.

7 KEEP YOUR DEVICES SAFE

Defend your devices from attempts to steal your personal and work information. Enable a lockscreen PIN, password or biometrics (fingerprint or face recognition) on your phone or laptop to add an extra layer of security.

In addition, the "find my device" service is generally available on both computers and mobile devices. With this free service, you can locate a lost or stolen device, lock it remotely, erase data remotely and retrieve backup data. ■ MH

PUTTING DOWN ROOTS

Twin Lakes Nursery carves a niche providing large box-grown trees for commercial landscapers.

THE DEKKERS FAMILY

Twin Lakes Nursery Ltd.
Canton, Texas

The Dekkers family turned to Texas Farm Credit to finance their property expansion.

Imagine buying a 25-foot-tall tree in an 8-by-8-foot square box.

Sound crazy?

To Gideon “Deon” Dekkers Sr., founder of one of the largest commercial tree nurseries in Northeast Texas, it’s the only way to buy a large tree.

Dekkers and his sons, Andre and Deon Jr., own and operate Twin Lakes Nursery near Canton, where they specialize in growing large, mature trees for the commercial landscaping industry.

From 13-foot hollies to 30-foot oaks — some up to 25 years old — Twin Lakes provides contractors with towering trees that look like they’ve always been a part of the landscape. They’ve even sold trees to New York City’s Rockefeller Center.

But what sets Twin Lakes apart from other nurseries is the way the family grows its trees — in gigantic wooden boxes and large plastic containers.

“Our trees are container-grown — not field-grown and not balled and burlapped

— because containers are healthier for them. It’s better for the root system, and the tree gets a better start when it’s installed,” Dekkers says.

South African roots

Container culture is a practice Dekkers was familiar with in his native South Africa. For over 15 years, he farmed and operated construction and landscaping businesses. Then in 1985, he emigrated to Texas, jobless but full of ambition.

“I had no idea how I’d support my family,” he says. “I didn’t even have a credit card.”

What he possessed, though, was a strong work ethic and good business instincts. Soon he was winning construction and landscaping contracts in the Houston and Dallas areas. That’s when he saw an opportunity to provide mature trees for commercial landscapers and landscape architects.

“There was nobody in Texas providing that kind of tree,” he says. That’s not all. “When I came here from South Africa and saw nurseries digging trees out of the ground, it just didn’t make sense to me.”



Deon Dekkers Sr., center, oversees Twin Lakes Nursery. Son Andre, left, handles sales, while younger son Deon Jr. manages production. The lake behind them collects runoff used for irrigation.

Divine intervention

Dekkers and his wife, Lorraine, began searching for land where they literally could put down roots. Research and meetings with Texas A&M University arborists pointed them to East Texas.

One day in 1991, en route to look at a property, they noticed a man opening a gate along the highway.

“To this day, I can’t explain why, but I felt I had to stop and talk to him,” says Deon, calling it a “godly” inspiration. “It turned out the man had 55 acres for sale. That land was the start of this farm.”

Dekkers and his sons planted trees on the property, which he and Lorraine named AM&D Tree Farm — the initials of their three children. While the trees grew, construction and landscaping work paid the bills. But his first love was farming.

“I worked for nine years in construction and made a lot of money, but I didn’t enjoy it. It was a means to an end,” he says.

Golf course and cattle

As neighboring properties were offered for sale, Dekkers added them to the tree farm, self-financing each one. Then, in 2001, the family established Twin Lakes Golf Course, which became a top-rated course in the region.

“I always loved to run on golf courses when I was young, but that was never allowed,” says Dekkers, who was the 1969

cross-country champion in South Africa and later won several U.S. Masters titles. With his own golf course, he could run where he wanted. So could daughter Michelle, who was an NCAA cross-country champion.

The golf course complemented the nursery. Scenic man-made lakes, which capture the farm’s runoff, provided irrigation for fairways and are still the primary water source for the tree operation.

However, after a tornado tore through the Canton area in 2017, damaging parts of the course, the Dekkers family returned the golf course to agricultural operations the following year. Today, half of the

2,006-acre Twin Lakes property is in tree production. The other half is devoted to coastal Bermuda hay production and a commercial Brangus cattle herd.

Steps to reduce risk

While the area is prone to tornadoes and freezes, Twin Lakes minimizes its risk by spreading its 28 varieties of trees across the 2-mile-wide farm.

“We don’t put our eggs in one basket,” Dekkers says. “Our most expensive trees are on opposite sides of the farm.”

Twin Lakes contracts with other East Texas growers to start seedlings for them. At 2 to 3 years of age, the trees are brought to the Canton nursery, where they receive special care until they’re ready for sale to commercial customers across Texas and the southern U.S.

Benefits of container-grown trees

That special treatment starts with the right container — a large wooden box built by the nursery’s own staff, or a slotted plastic pot that’s vertically corrugated to guide the root tips to air-pruning slots. Both types of containers discourage root circling and encourage denser rooting than burlap wraps, Dekkers explains. Wooden boxes are cooler and offer better temperature control than plastic pots.

But the secret ingredient in their formula is their planting mix, according to Deon Jr. A heavier organic material than traditional mulch, it provides better moisture retention than porous bark mulch and is compatible with most soils.



Magnolia trees get their start in containers that are ridged to guide root growth.



Twin Lakes Nursery grows large trees, like this Shumard oak, in slatted wooden boxes constructed by the nursery's own employees. The company delivers the trees in the boxes to customers, so the tree roots remain intact.

Just as important is watering. Workers probe the root balls every day, and spot sprayers connected to the containers maintain ideal moisture levels.

Skilled foreign workers

It takes 80 employees to run the operation. Most are hired through the federal H-2A temporary agricultural worker program. Many of these employees return to Twin Lakes every year, where they live in houses that were on the parcels of land the Dekkers family purchased over the years.

"Some of our employees have been with us for 30 years," says Dekkers. "We train them based on their individual skills, and they are excellent workers. We couldn't operate this business without them."

Also supporting the nursery is their lender, Texas Farm Credit, which they discovered when they were looking for an agricultural banker that understood the nursery business.

"We've never had such a simple banking experience as we have with Texas Farm Credit," Dekkers says. "With commercial banks, we had to justify everything. Texas Farm Credit understands our growth and infrastructure needs."

Good for the environment

Not only that, but Farm Credit also recognizes the family's role as stewards of the land, their loan officer points out. The operation uses the latest and most efficient irrigation practices, while also using the

farm's renewable resources for compost and dry earth potting matter, which is native topsoil mixed with aged pine bark.

"The Dekkers are responsible for adding hundreds of trees to our urban landscapes every year, which in turn are good for wildlife, soil and air," says Dustin McClendon, with Texas Farm Credit. "They've contributed so much to the Canton community, and we're pleased to support their goals."

As for the future, it's too early to know if any of Deon and Lorraine's 10 grandchildren will want to get involved in the business. But for now, Dekkers says, the family's goal is simply "to be the best large-tree supplier in the South."

"It's really unbelievable how blessed we are to have this place and this business," he says. "We couldn't have accomplished this anywhere but Texas." ■ JH

Visit twinlakesnurseryltd.com for more information.

Tips for tree planting

When it comes to planting trees, nursery operator Deon Dekkers Jr. offers this advice: Watch your water.

"There are so many people who don't know how to water and how to install trees. Watering is the biggest education challenge," he says. The challenge extends to drainage, too.

Twin Lakes Nursery offers these tips to start your tree right:

- When planting, place the top of the root ball at least 2 to 4 inches above the natural soil grade.
- Water the tree slowly, so the water can soak into the soil. (Underwatering and overwatering are the biggest obstacles.)
- Ensure proper drainage, which is critical.
- Fertilize the tree annually.
- Choose trees grown in wooden boxes or ridged containers. If nurtured properly, Dekkers says they're usually superior to field-grown trees that are balled and burlapped.



Matt Lee, right, discusses his farm's solar collection system with Chuck Roberts, Alabama Farm Credit's Cullman branch manager. The Lee family sells electricity to a local power company to offset their power costs.

Lewis Communications

Brides & BILLY GOATS

Running a diversified operation has opened new options and revenue streams for a northern Alabama family.

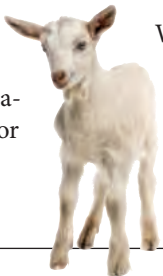
Late last winter, a nanny goat struggled to give birth on Matt and Penelope Lee's 5L Farms in northern Alabama. Seeing the animal in distress, Penelope and the couple's teenaged daughter Catie hurried to her side.

"Catie said *she* wanted to pull the baby," Penelope recalls. "She told me to watch and make sure she was doing everything right. And she did! Saving that kid led Catie to decide that she wants to be a nurse and save more lives."

Their daughter's newfound ambition reaffirmed Matt and Penelope's decision in 2017 to purchase a farm. They had wanted not only to raise their children — Lilly, 17, Catie, 14, and Kane, 6 — in the country but also to set their own hours.

Professionally, Penelope was employed in the hospital field, and Matt worked on heating, ventilation and air conditioning systems for a nearby school district.

After searching for a year, the Lees found their dream property — one that could generate enough income to allow them both to quit their jobs and work on the farm. Located in Cullman County, the 56 acres had an existing event venue, six broiler houses, a pecan orchard and a private residence.



GlobalIP/ Getty Images

MATT AND PENELOPE LEE

5L Farms/Chapel Valley Farms
Vinemont, Alabama

Alabama Farm Credit financed the Lees' first farm, plus additional land and farm equipment.

What's more, a solar array already stood in place next to the poultry houses. The solar panels produce electricity that's sold to a local power company, which offsets power costs for the poultry houses.

FARM CREDIT SUPPORT

To finance the farm, the Lees first tried to work through a bank.

"But they were a little difficult with us," Matt says. "Then the loan officer recommended Alabama

Farm Credit. So we talked to them, and they were willing to work with us. They

figured out a plan for what we needed to do. They've helped us a lot."

"Chuck Roberts, Amanda Stanton and everybody in the Cullman branch office worked on our loan together," Penelope adds. "Whenever we had questions, no one pushed us off onto somebody else. We always worked with everybody. They were great."

More recently, the Lees partnered with Alabama Farm Credit to purchase a new tractor and 300 acres of land that's 15 minutes from their home place. They run their beef cattle, another part of their diversified operation, on the second farm.

"We've always raised cattle," Matt says. "At first we were out of our comfort zone with chickens and pecans. But we just decided to leap out and go full-fledged with all three to try and make a living."

YEAR-ROUND EVENTS

"Winter's a hard time of year for us," Penelope says. "But having the different avenues of income and a wedding-and-event venue has really helped us to succeed."

Two rustic barns and picture-perfect settings draw brides to Chapel Valley Farms, the Lees' wedding venue. Couples may marry inside a barn or in an outdoor courtyard. In the case of inclement weather, ceremonies can be moved inside.

"The bride and groom may have their photos taken by a large pond with weeping willows around it," Penelope says. "They may also choose to take pictures in our pecan orchard. We keep the grass cut, and it's really pretty."



Lewis Communications

The Lees' 650-tree pecan orchard produces about 4,000 pounds of nuts annually. It doubles as a photo setting for their Chapel Valley Farms wedding venue.

PECANS AND POULTRY

This fall, the family expected to harvest at least 4,000 pounds of pecans — mostly Lakota and Cape Fear varieties — from more than 650 young trees. To streamline

Year-round, they operate six 40-by-400-foot broiler houses under contract with Ingram Farms. Annually, they average about seven flocks of approximately 135,000 birds each.

“... WE’RE ABLE TO SET OUR OWN PACE AND BE WITH OUR KIDS – WHICH IS EXACTLY WHY WE BOUGHT THIS FARM.”

- Matt Lee

"Chickens are pretty easy," Matt says. "When we have chickens, we have a set schedule and know what's going on. When we don't have chickens, we have to pull out the litter, clean the houses and set back up for new chickens."

picking, they use a pecan tree shaker and mechanical nut harvester. The Lees also use a cleaning machine to sort out bad nuts and debris. Then the pecans are bagged and sold locally.

"But we're able to set our own pace and be with our kids — which is exactly why we bought this farm." ■ SSR



Lewis Communications

In six chicken houses on their Cullman County farm, Matt and Penelope Lee raise about 945,000 broilers annually under contract with Ingram Farms.

NATURE'S SHOW

As autumn advances toward winter, Mother Nature warms the landscape with hues of orange, red and gold. Enjoy these seasonal images from across the Texas Farm Credit District.

Farm Credit Bank of Texas

Jennifer Turner, Texas Farm Credit

The rising sun lights the sky and casts a joyful glow on a Central Texas farm on Christmas Day 2020.





Golden maple leaves brighten the Texas Hill Country in early December.



Cypress needles create a floating carpet on an East Texas stream at Thanksgiving time.



A rural pumpkin patch delights a young visitor on a warm autumn day in South Texas.



Come late November, the greenhouses explode in crimson at Dixie Green in Centre, Alabama. The Alabama Farm Credit customer ships 250,000 poinsettias annually.



Cinnamon- and mustard-colored trees line a river gorge through a valley near New Mexico's Lincoln National Forest.

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Three ducks are shown in flight against a blurred background. The top duck is a male mallard with a green head and orange beak. The middle duck is also a male mallard, slightly behind the first. The bottom duck is a female mallard with mottled brown and tan feathers and an orange beak. All three ducks have their wings spread, showing detailed feather patterns.

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