

Birdwell and Clark Ranch

Texas Section Society for Range Management

Outstanding Rangeland Stewardship Award - 2017

Emry Birdwell and his wife Deborah Clark, have many things in common, one of them being they both followed their fathers in the family business. Emry is a third generation rancher. His on-the-land training took place in the rough and rocky cedar break country of North Texas and the shallow short grass country of New Mexico. Deborah Clark followed her father in his growing telecommunications business. As Deborah said, "I came home to be my Dad's son". She became a successful business woman in the nation-wide industry.

Although fully invested in their individual careers, in 2004, Emry and Deborah decided it was time in their lives for them to work together as a family, to focus together on a common goal. Emry had never known a life outside of ranching. He knew how to manage cattle and land and he was good at it. So their together project became the thrill of a lifetime, to buy a ranch to call their own. This brought them to Clay County, Texas, where a friend introduced them to 14,200 acres of some of the best ranching country in the state.

The Ranch

The ranch is situated in North Texas, just a stone's throw from Oklahoma. This corner of Texas has gently rolling hills and lots of good grasses, including many acres of open tall grass prairie. Average rainfall is about 32 inches per year.

And this ranch has something else that Emry had never had at home, acres and acres of deep and productive soils. "This was a real blessing to a guy like me that had lived his whole life sliding from rock to rock in the cedar and mesquites in North Texas and New Mexico," Emry said.



1This ranch had deep soils and rolling grass lands.

"At this point, I knew we were looking for a ranch, but I didn't know exactly what to look for", Deborah said. "But when we found this beautiful land, I saw the look in Emry's eyes and heard the excitement in his voice. I knew this is where we needed to be."

They pooled their resources, committed everything they had, including themselves, and managed to purchase the land. They have been managing their piece of Texas together for 13 years

Their Plan

By the time Emry Birdwell and Deborah Clark established the Birdwell and Clark Ranch, Emry had years of ranching experience in using the basic holistic principles of time managed grazing. These principles formed the core for his management decisions. “I learned a lot from my Dad, and I went to college, but my real education, what I use day to day, was from Allan Savory and other holistic educators,” Emry said. “When I started taking holistic management training, it all just made a lot of sense to me. I knew right away that it would be my way of life.”

Although their North Texas ranch had been known for years as a well-managed ranch by area ranching standards at the time, in Emry’s eyes, the land needed a new direction to meet his and Deborah’s ranching goals.

Emry knew immediately that the livestock watering system would need to be upgraded in order to support their grazing plans. Also, there were acres of bare ground where livestock had congregated and loafed for many years. These acres desperately needed healing.

Although good grass species covered most of the prairies, much of the grass cover had become stale instead of being vibrant and fresh. Species diversity, an important component of healthy grazing land, was stifled or beginning to decline.

In some of the tall grass areas, the interspaces, or areas between large grass plants, were bare ground or partially covered with low quality plants. The inherent power of these prairies to be dynamic, growing and to cover and protect the land was being suppressed.

Based on Emry’s experience with time managed grazing, they made an important and far-reaching business decision. “We chose to run this ranch totally as a stocker operation, primarily because we knew it was the best way for us to improve our rangeland health,” he said. “By using stockers, we could achieve the stock density and animal impact that the land needed, but have the flexibility to keep it all balanced”.

“Our commitment to solving these issues, making the land better, and making this ranch successful forced an increased commitment to each other”, Deborah said. “We knew this would require all of both of us”.

Principles of Time Managed Grazing

The goal of time managed grazing is to allow natural influences to work together to improve and maintain grazing land resources. The primary tools in this effort are animal impact on the land through increased stock density and extended rest from grazing.

When stock density is increased and managed correctly, several influences begin to work in concert on the land. Hoof action breaks up the soil surface and incorporates plant litter and feces which increase organic matter in the soil. Water infiltration is increased and moisture is stored in the soil profile. Old decadent plants are knocked down by the livestock. Plant litter and new live plants begin to cover bare areas and protect the soil. Species diversity and plant health increase and over all soil health improves.

Fencing pastures into smaller areas is the most efficient way to put a denser stocking rate on the land. But fences can't be utilized without adequate livestock water, so a dependable watering system must be utilized.

And once the infrastructure is in place, proper management of the whole process is critical to success. Rotation of the grazing animals must be planned so as to provide maximum rest from grazing as the herd is moved through the ranch. This management requires constant observation of the land and livestock along with a knowledge of how all the processes work together.

Emry welcomed the challenge of bringing all these factors together for the benefit of the land. Although he had used these principles for years on family land and leased land, he never felt he had complete control. "So when we got this ranch, he had the freedom, the wings, to truly practice what he believes to be land stewardship", Deborah said.

Livestock Water

The initial watering system plan for Birdwell and Clark involved fencing off the large ponds and installing radiating fences from these locations. Steers could be moved through the radiating pastures around the ponds while using the ponds for a water source. In addition, new ponds were constructed where additional fencing was planned.

In 2011, an extreme drought caused a drastic change in the livestock watering system. Ponds serving as livestock water got dangerously low and what water remained declined in quality. The decision was made to construct a system of livestock pipelines to transfer water to depleted areas of the ranch and large watering troughs were constructed for storage and to allow cattle access to the water.

As the drought continued, construction costs soared and installation of troughs and pipelines could not keep pace with water needs.

As an answer to this crisis, a mobile watering trough that could be hooked to pipelines was constructed so that the water source could follow the livestock where permanent water was not available. This mobile trough proved very successful and is now an integral part of the rotation grazing system. A huge benefit of this watering design has been that most livestock watering does not take place in the ponds. Vegetation near the ponds that was formally grazed is now protected



Figure 2 Steers learn to take turns watering at this mobile trough.

and growing all the way to the water's edge. This has the effect of protecting the ponds from further siltation and keeps the water quality much better than before.

Another benefit of the mobile watering system is that the water source can be placed in pastures so as to create better grazing distribution.

Fencing

Almost all fencing for controlling cattle within the ranch is one-wire electric powered by 110 volt energizers.



3Cattle move easily under the electric wire when the wire is raised.

Approximately 140 paddocks were established across the ranch using this one-wire electric design along with leaving some of the existing fences.

As part of the current rotation system, electric poly wire is now temporarily stretched across part of one of the permanent pastures to hold the cattle for a few hours, then the poly wire is manually moved further along so the cattle will move to the next grazing area.

This method has created a system of approximately 360 grazing areas for the cattle. When grazed in one herd through these pastures, adequate stock density, animal impact, and rest from grazing are achieved to help heal the land.

These benefits come at a cost. Labor and time are required to monitor the cattle, monitor the land, and move the temporary poly wire to the next location. Emry, Deborah and one hand are the source of most of this labor

Livestock

Buying and processing adequate numbers of cattle to stock the ranch each year is a lengthy process. Stocking normally begins in September and October, and it takes several months to locate and purchase the total herd which runs from 4000 to 6000 head of steers. A portion of steers received early in the stocking process are later shipped to wheat pasture at another location, while 4500 to 5000 are retained for rotation on the ranch.

The steers are vaccinated upon arrival and are put in holding traps for two weeks and observed twice a day before being turned out. As they are grazed through the multiple pastures, the steers are supplied a protein supplement for added weight gain. "Although the markets were

terrible in 2016, the cattle did what they were supposed to do,” Emry said. “That set of calves gained between 100 and 120 lbs. per acre”.

“When we first started grazing stockers here, we grazed cattle year round. Now we ship them after nine or ten months so the land can have a full rest from grazing in the fall. But we are showing almost as much gain as we did grazing all year with the earlier herds”, Emry said. “I believe we are getting more daily gain because we have been able to cover bare areas with grass and the grass cover is healthier and more nutritious”.

The Grazing System

When stockers were first run at the Birdwell and Clark Ranch, they were grazed in three herds. During the drought, it was necessary to sell one herd to prevent over use of the grass. The other two herds were combined into one large herd so as to provide maximum rest from grazing as the cattle moved through the many grazing areas.



Figure 4 Steers are grazed in one herd as they move through the paddocks.

“I thought if it works to use one large herd during drought, why wouldn’t it work all the time”, said Emry. “So now we always leave them in one herd the whole time”.

“The most important aspects of time managed grazing are animal impact and rest from grazing. Keeping these steers in one herd greatly magnifies both of these principles”, Emry continued.

are benefitting the land more using the one herd system. We are always trying to improve gain, but improving the land must be a part of the process”.

“We may have gained a few more pounds per acre grazing three herds”, Emry said, “But we



Figure 5 Grazing is light to moderate as the steers move through the many grazing paddocks.

The rest period for a pasture after it is grazed using one herd during the spring growing season when grass is growing fast is from 50-70 days. After July, when forage growth slows down, the rest period increases to approximately 120 days.

The cattle only stay a short time at each location, sometimes just a few hours, so the grazing pressure on the plants is light to moderate. “Our goal is that each plant only be grazed one time during a grazing period.

This allows the grass plants to keep growing during the entire growing season and maintain a deep and healthy root system”, Emry said.

These long rest periods between grazing events and a complete rest for the ranch in the fall have produced some very important benefits to the land.

Due to the overall animal impact on the land, old dead and stale grass has been replaced with growing new plants and the level of nutrition is greatly increased. Plant diversity is thriving as new grasses and forbs establish themselves. Many bare areas that existed on the ranch now have a cover of perennial grass. This not only increases grazing available but also protects the land and reduces erosion.



Figure 6 This area was mostly bare ground but now has a cover of grass as a result of time managed grazing.



Figure 7 Eastern gama grass is now thriving on many acres.

Eastern Gama grass is a highly palatable native perennial grass that has been totally grazed out of most Texas ranches. Time managed grazing on the Birdwell and Clark ranch has revealed many acres of this grass across the ranch and it is increasing. No one knew it was there until adequate rest from grazing was provided for these plants to thrive. The high-producing grass is now contributing to the grazing value of the land.

In the spring of 2017, the NRCS and other groups launched a task force to review soil health on several North Texas ranches. Nathan Haile, Texas NRCS Soil Health Specialists, said, “The Birdwell and Clark Ranch implements all five of the soil health principles in their operation. Most notably is the increase in diversity in their range and keeping adequate cover to maintain organic matter levels and control erosion. Recent observations showed all four plant types, summer and winter grasses and broadleaves including legumes, are present providing food and habitat for livestock, wildlife, and most importantly the soil microbes. This diversity keeps living roots throughout the year allowing the soil biology to stay active and cycling nutrients. The large herd of stockers serves as the managed disturbance they need to incorporate manure and

dead residue back in the soil profile. The Birdwell and Clark is to be commended for improving the soil health on their operation”.

Another benefit of rapid movement of the cattle is that the steers eat a large portion of the weeds growing in the pastures. Especially during the rapid movement carried out in spring months, the forbs are preferred by the steers. Traditional weed control by herbicides is not carried out on Birdwell and Clark.

However, it’s not an easy task to manage 5000 heavy steers in one herd. Fencing and livestock water must be functioning daily, and the weather does not always cooperate. It can become a high stress situation in a hurry, but Emry and Deborah normally handle it all with the help of one hand.

Wildlife

Although not a large economic factor for Birdwell and Clark Ranch, wildlife does play an important role. “Deborah and I observe wildlife every day, and to me it’s like feeling the pulse of our grazing land. We are seeing a constant improvement in our wildlife populations and I believe that means healthier grazing lands,” Emry said. “And besides that, there is nothing I enjoy more than hunting behind my dogs”, he continued.

Added deferred grazing on the riparian areas has created safe zones for birds, and additional portions of the ranch are treated as a “corridor” to encourage flow and sustainability of quail and deer populations.

“Wildlife is a huge enjoyment factor for our family and friends”, Deborah said. “And I love to do quail counts and to work with our friends like UNT Quail to keep track of our populations”. Deborah has taken on leadership roles across the state to encourage wildlife management practices in the ranching industry.

Giving Back

Feeling truly blessed with the opportunity to work with the land, Emry and Deborah have dedicated a big part of themselves to giving back to their community of friends and to the ranching industry.

“We have an open door policy here”, Deborah said. The ranch has hosted visitors, from individuals to University classes to large tour groups, from Texas and many other states, who want to see such a grazing management program in action and want to hear from the people who make the decisions.

A popular soil health workshop was organized recently in a neighboring county, and Deborah posted in an email, “I’m signed up! The third person to do so! If anyone needs a place to stay, please know you are welcome at the Birdwell and Clark”.

“We use the ranch to give back to the community”, Deborah said, “It was the gateway that got us here and helped us establish friendships. We felt welcome from the beginning”.



Figure 9 Airmen from Sheppard Air Force Base enjoy an afternoon of dove hunting and a steak dinner at Birdwell and Clark Ranch as a thank-you for their service.

For 12 years, the ranch has hosted the now famous Dove Salute. Airmen from nearby Sheppard Air Force Base are invited to a dove hunt where they are furnished shotguns and ammo for an afternoon of hunting. They are then hosted at the ranch headquarters for a steak dinner, and all of this is free to the airmen. Average attendance is about 175 airmen. Other area ranches have now offered additional land for hunting and the volunteer list continues to expand.

Emry and Deborah were founding sponsors of Turkey Fest, a weekend of turkey hunting and fun at Clay County, Texas. The event has enjoyed 11 years of growing successful celebration and brings fun and enjoyment for locals and many visitors as well as exposure on national wildlife television. Deborah served as co-chairman for 10 years.

The Birdwell and Clark Ranch was the first ranch in Clay County to be a sponsor of the Texas Youth Hunting Program. Several other local ranches have followed their leadership and now participate by hosting youth hunting opportunities.

Deborah is active in her local Church, serving on several committees, teaching a Sunday school class, and has filled in with a message from the pulpit. She has served in various leadership capacities including the Board of Directors of Hospice of Wichita Falls, and currently serves on the boards of the Clay County Memorial Hospital and the Clay County Memorial Hospital Foundation.

She has also served on the Clay County Historical Society and the Henrietta Chamber of Commerce, and has facilitated fund raising efforts for the Henrietta Volunteer Fire Department.

The ranch works to support local youth by participating in a buyer's pool at the local stock show. Deborah also volunteers to talk to local 4th and 5th grade students about conservation ranching.

Emry and Deborah are both Directors in the Texas and Southwestern Cattle Raisers Association where Deborah is one of very few women Directors in the Association. She is also a Director in the Texas Wildlife Association and a member of the Texas Upland Game Bird Council for Texas Parks and Wildlife. Deborah has been a Covey Leader for Texas Bobwhite Brigades youth workshop and served on the advisory board for UNT Land Scholars Program.

The Birdwell and Clark Ranch has participated in the Riparian Buffer program through the Natural Resources Conservation Service in an effort to stabilize riparian areas. The ranch is also available to the University of North Texas UNT Quail Research Program.

Deborah has become a Certified Educator for Holistic Management International and is hosting holistic training classes at Birdwell and Clark Ranch. Emry and Deborah participate with Holistic Management International, the Savory Institute, and Ranching for Profit. Emry is a member of the Texas Section Society for Range Management.

Emry served as President of the Palo Pinto school board and currently is a member of the National Livestock Marketing Board. He has judged the Ranch Horse competition at the Fort Worth Stock Show four times and has judged ranch rodeo competition at Fort Worth and Wichita Falls.

In looking back on all these activities, Deborah said, "This ranch has allowed me to broaden into areas I have never experienced before. Due to Emry's leadership, we have many opportunities to serve and have a responsibility to make this ranch successful".

Recognition

The Birdwell and Clark Ranch has been recognized by UNT Quail with the Keystone Award for efforts to improve habitat for upland game and for cooperation in quail research projects. In recognition for all the years of Dove Salute, the Airforce recognized the ranch for Outstanding Service.

The ranch has been recognized by Holistic Management International for leadership in grazing management. Birdwell and Clark Ranch was selected to participate in the Conservation Stewardship Program through the Natural Resources Conservation Service.

Deborah recently became one of four women to receive the prestigious 2016 Terry Hershey Award from the Audubon's Texas Women in Conservation Program. The award stated that she was recognized for her efforts to use and promote holistic ranch management techniques which have enabled the Birdwell and Clark ranch to be an example of land stewardship that supports a healthy cattle operation and healthy wildlife habitat.

The award went on to say that in 2014, the ranch saw a 452 percent increase in bobwhite quail populations. This remarkable accomplishment can be attributed to continued improvement in habitat by rotating cattle grazing around the needs of quail, which was bolstered by timely rainfall.

During the 2017 Texas Ranch Roundup in Wichita Falls, Emry is scheduled to be awarded the Texas Trailblazer Award. The award winners, who are selected by the ranches participating in the Ranch Roundup, must represent what a cattleman should be, and must have made a lasting and beneficial impact on the livestock industry.

We Are Here to Stay



Figure 10 Deborah Clark and Emry Birdwell

“It is important to us that we take care of our grazing land, even if some people don’t understand what we do”, Deborah said. “I want our ranch to be an example of regenerative agriculture, of retaining more moisture, of increasing plant and wildlife diversity, of improving soil health, of thinking long term of what we do every day”.

“When I talk with people who care about the land, I find there are lots of people out there with a new attitude, people who desperately want to improve rangeland health”, Deborah continued, “I think there is a change in the air and we are going to be a part of it”.

“Ranching can be enjoyable at times”, Emry said, “but you can also be in the bottom of the valley. The thing I enjoy most about ranching is seeing the difference we are making in the land. It helps me get through the hard times”.

“Taking care of the land is important to me. I think about it every day”, Emry said. “The Indians and the buffalo did a good job of taking care of these prairies before we came along, and if Quanah Parker rode across our ranch tomorrow, I’d want him to look at the land and say, “This is the way it was”.

