



In Practice

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HMI 2020 Annual Report

Dear HMI Community,

2020 will be remembered as the COVID year. It was a challenging year for many, including HMI, but it will also be remembered as a year of pivoting, realizing new opportunities, and adapting. The practice of Holistic Management has helped us make the most of the challenges.

To be successful in our regenerative practices, we have learned that it is critical to also focus attention on the human aspects of management. The way each person approaches the challenges that face us personally, and the earth's environment, will determine humanity's future. Humanity's success or failure will come down to the quality of decisions we make individually and collectively. HMI can impact many more peoples' abilities to make better decisions.

That is why during 2020, our Board of Directors revised HMI's mission to define our focus as: "To envision and realize healthy, resilient lands and thriving communities by serving people in the practice of Holistic Decision Making & Management."

To achieve our mission, a key priority will be to make Holistic Management easier for more people to learn and practice. We will accomplish this by broadening our reach through online training, while supporting depth of practice through programs such as Workshops, Field days, One-on-One producer training, and through our Regenerative Agriculture Mentor Program (RAMP).

Our Certified Educator community is a cornerstone of HMI's success. These dedicated and passionate individuals extend HMI's reach. They also continue to influence our curriculum content and training methodology. Together with our Certified Educator community HMI's 2020 reach and impact included training 10,418 people as well as influencing 7,414,467 acres in a challenging year.

Thank you to all our supporters, our staff, Certified Educators, board, funders, advisory council, and collaborators for sustaining this remarkable organization, HMI.

A special word of thanks to Ann Adams who has led HMI as Executive Director through thick and thin since 2013. Ann is incredibly capable, and her courage, energy and passion have shaped this wonderful organization. We are so grateful that Ann will continue to work with us at HMI as Director of Education as we navigate the future.

We look forward to working with our entire community as we refine our materials, inspire and support our network and achieve the healthy land, produce the healthy food and foster the healthy lives we all want and need.

With gratitude,

Wayne Knight

Wayne Knight
Executive Director



Walter Lynn

Walter Lynn
Board Chair



2020 Annual Report

INSIDE THIS ISSUE

Learn about HMI's 2020 Impact by reading our annual report in this issue and view our 2020 Impact graphic on page 24. Thanks to all our funders, supporters, and collaborators for helping us reach our strategic goals!





In Practice

a publication of Holistic Management International

HMI's mission is to envision and realize healthy, resilient lands and thriving communities by serving people in the practice of Holistic Decision Making & Management.

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Annual Report Financials

2020 Financials

Summarized Statement of Activities	2020	2019
REVENUES:		
Educational Programs	63,250	75,324
Publications	13,015	19,982
Partnership & Trust	33,272	54,044
Mineral Interests	58,466	168,109
Investment Income	22,952	26,312
Unrealized gain (loss) on Investments	228,657	313,467
Realized Gain (loss) on Investments	66,082	(19,379)
Unrealized gain (loss) on closely held stock	40,564	77,961
Miscellaneous Income	42,850	1,075
Grants	359,000	286,500
Contributions	50,266	49,851
In-kind	34,366	36,610
Consulting	6,650	36,793
Total Revenues	<u>\$1,019,390</u>	<u>\$1,126,649</u>
EXPENSES:		
Program	464,574	464,311
General & Administrative	210,894	162,131
Fundraising	12,649	2,800
Total Expenses	<u>\$688,117</u>	<u>\$629,242</u>
Change in Net Assets	331,273	497,407
Net Assets at Beginning of Year	4,631,218	4,133,811
Net Assets at End of Year	<u>\$4,962,491</u>	<u>\$4,631,218</u>
Summarized Statement of Financial Position		
CURRENT ASSETS:		
Cash and cash equivalents	821,610	691,970
Investments – Mutual Funds	2,777,397	2,533,754
Program Receivables	55,910	21,456
Prepaid Expenses	6,916	9,216
Inventory	4,782	6,486
Total Current Assets	<u>\$3,666,615</u>	<u>\$3,262,882</u>
Property & Equipment	75,738	75,738
Less: Accumulated Depreciation	75,738	75,668
Net Property & Equipment	<u>\$0</u>	<u>\$70</u>
Other Assets		
Stock in closely held companies	756,915	716,351
Mineral interests	2,022,236	2,022,236
Less: Accumulated Depletion	1,415,453	1,314,341
Net Mineral Interests	606,783	707,895
Total Other Assets	<u>\$1,363,698</u>	<u>\$4,687,198</u>
Total Assets	<u>\$5,030,313</u>	<u>\$4,687,198</u>
CURRENT LIABILITIES:		
Accounts payable	30,039	4,400
Accrued Benefits & Tax Liability	36,199	29,249
Deferred Revenue	1,584	1,755
Due to Merrill Lynch	0	20,576
Total Current Liabilities	<u>\$67,822</u>	<u>\$55,980</u>
Net Assets		
Without Donor Restrictions	4,873,314	4,512,599
With Donor Restrictions	89,177	118,619
Total Net Assets	<u>\$4,962,491</u>	<u>\$4,631,218</u>
Total Liabilities and Net Assets	<u>\$5,030,313</u>	<u>\$4,687,198</u>

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2020 GRANTS, SPONSORSHIPS, & DONATIONS

HMI would like to thank all of our donors whose generous contributions help make our work possible.

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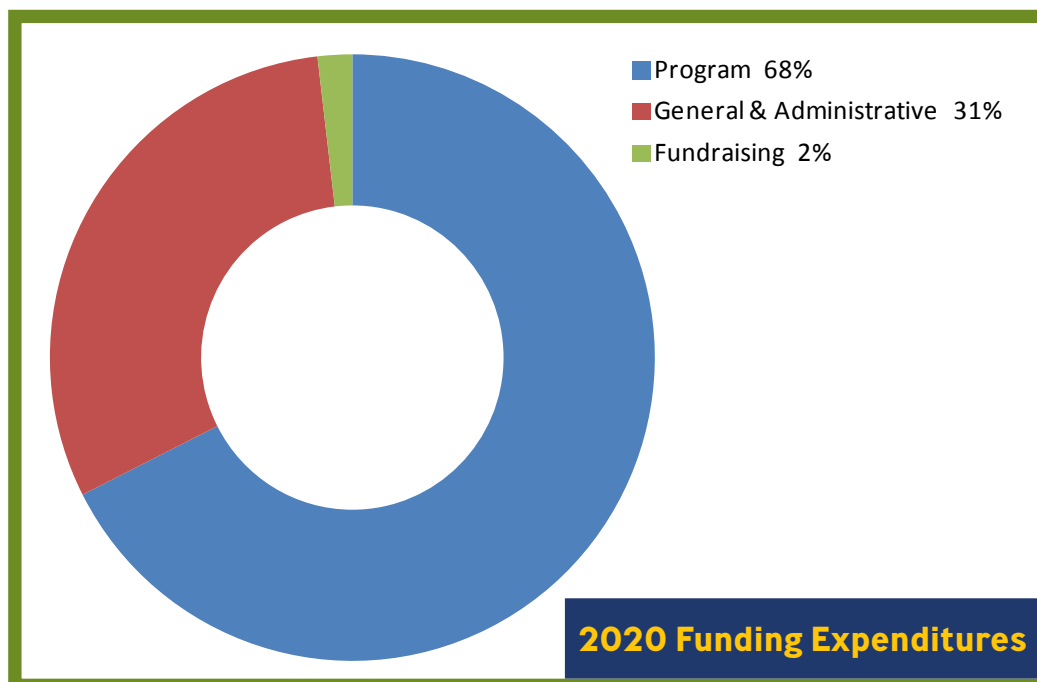
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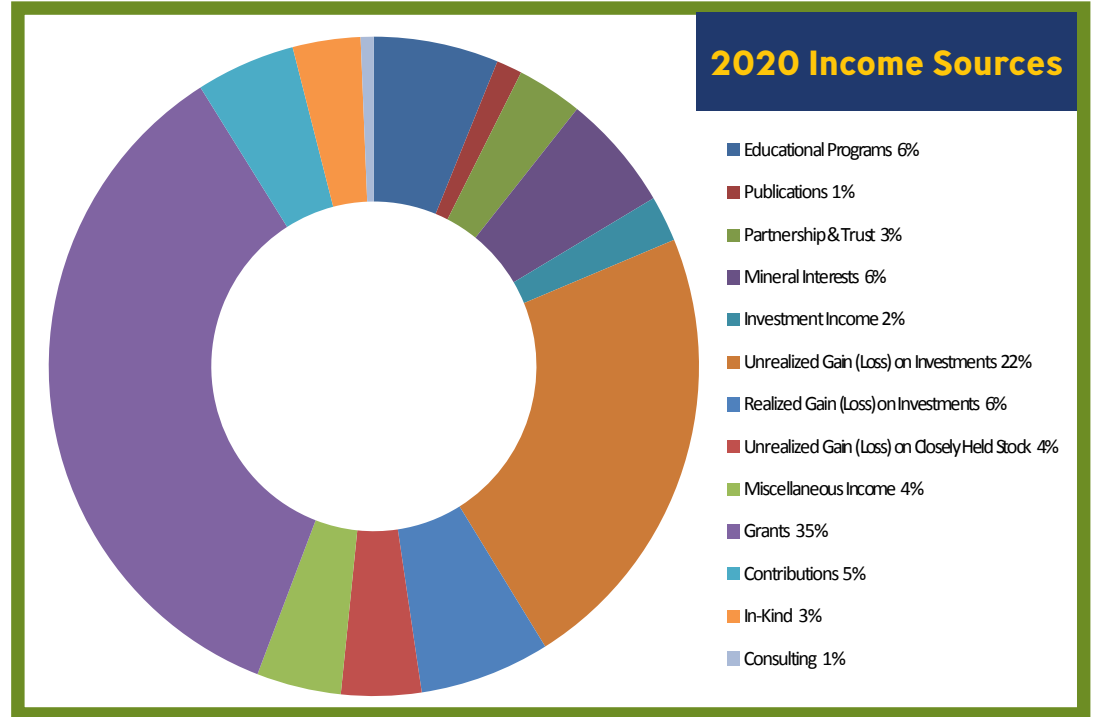
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The CS Cattle Company— 21st Century Ranching Requires Diversification

BY ANN ADAMS

Innovating to succeed is a trademark of the 130,000-acre C.S. Ranch in Cimarron, New Mexico run by the Davis family since 1873. The CS Ranch is comprised of three main sections of land: Headquarters at 29,000, the Clayton Place over near Springer at 40,000 acres, and the Crow Creek which is 60,000 acres.

The ranch has continued to evolve over the years as family members have been involved in varying degrees with a variety of enterprises and projects including quarter horses, cow-calf and beef finishing, farming, camping, hunting, and

decision was made to stop farming because of high input costs.

The CS Ranch is now run by five of the six children and matriarch Linda Davis with help from six employees. "I am most proud of the fact that all my children are interested in the ranch," says Linda. And with that foundation of pride in the ranching heritage and new opportunities



Kim Barmann, Linda Davis, and Julia Stafford at CS Ranch Headquarters

for enterprises, the transfer of ranch in time to Les and Linda Daves' grandchildren (the fifth generation) is well positioned as a successful transfer.

Kim believes that because she and Bruce took their first Holistic Management course in 1984, the family didn't have to sell off a lot of land to keep going during those tough times in the '80s. Because of the financial planning they learned, they

Association (AQHA), including having been named Best Remuda in 2013, the family no longer engages in a quarter horse enterprise. They have continued to look at ways to improve the gross profit on enterprises as well as increase land productivity to keep the ranch viable.

As a result of the planned grazing they embraced (including improving water and fence infrastructure to move paddock numbers from 40 to 80), they have moved the predominant plant community they once had of alkali sacaton in the river bottoms and the rangeland dominated by 99% blue grama to having more than 18 species of grasses and lots of forbs and brush, like winterfat, that can be utilized by the cattle.

Kim first learned about Holistic Management when she went up to see Alice Moore's place when Alice first started Holistic Planned



The Cimarron Mercantile is a coffee shop and mercantile selling local food and merchandise.

(more recently) a mercantile store.

Adaptation for Success

Les Davis, the patriarch of the family, embraced Holistic Management as one necessary innovation in the mid '80s, a hard time for ranchers given the depressed cattle prices. Linda, Les' wife, and their children, Warren, Bruce, Kim (Barmann), Julia (Stafford), Randy, and Kirk, were all involved in the operation at that time. Warren ran one grazing cell of the ranch, while Kim ran another grazing cell. Julia came back in the late '80s and as an attorney has handled the CS Ranch's legal work. Randy was interested in the horses and started the hunting enterprise. Bruce at one point was running 2,200 head of yearlings at the Headquarters. After Les' death in 2001, Kirk became president of CS Cattle and was in charge of the farming operations until the

changed enterprises and increased carrying capacity, while letting go of \$180,000 of leased land costs that significantly improved the Ranch's bottom line.

Kim also said the course helped them learn how to communicate better as a family and set family goals. In fact, the Daves used their holistic goal from the '80s to help them in developing the succession plan that evolved after Les' death.

Kim said the Daves knew they had to change what they were doing given the changing ranching climate. For example, while all the family loved horses and the Daves had a long history with the American Quarter Horse



The CS Cattle Company has moved from a blue grama dominated rangeland to a forage stand that includes five to six cool season grasses plus valuable forbs and brush like winterfat.

Grazing. Alice was grazing 100 mother cows where originally she had only been able to run

CONTINUED ON PAGE 6

20 heifers. Kim saw the fence line contrast on Alice's place and asked how she had done that. Alice told her to get to a Holistic Resource Management school. So Kim went to a course taught by Allan Savory, Kirk Gadzia and Ken Williams.

"Holistic Management helped us look at the whole ecosystem of our ranch," says Kim. "At one point there was 20–30 active beaver dams along the Cimarron River. We are working to create an environment that will bring them back." But the first step in that process was to get the finances supporting the ranch and determining key infrastructure investments.

In the late '80s they increased their pastures



This pivot had been planted in perennial grasses which will also have annuals drilled in to it to increase soil fertility and productivity for finishing yearlings.



Kim Barmann shows how the river bottoms have recovered after planned grazing with a variety of plants and trees where once there was mostly alkali sacaton.

and had improved the stocking rate to 15 acres/yearling or 26 acres/cows. However, during the drought of the late '90s they had to reduce their stocking rate to 40 acres/cow. However, in calculating various stocking factors, Kim estimates that they doubled their stocking rate during the period prior to the drought.

Currently the CS Cattle Company is

understocked as they work out water infrastructure needs on 40 miles of pipeline that serves both the Clayton Place and Headquarters. They have 600 owned cows and 770 yearlings that are paid on contract. They also have the grazing pressure of 1,000 head of elk to contend with.

Each fall the CS Cattle Company evaluates the amount of forage they have. The goal during the dormant season is to graze each pasture several times. Their focus on grazing has helped them move from a warm-season dominated rangeland to one that has five to six cool-season grasses in the mix. That grazing practice helped them

have a longer growing season which typically had been from May to the end of August. Now it extends from April to October for an increase of 60–90 days of grazing.

Their hunting enterprise consists of eight elk hunts and 25–30 antelope hunts each year, making sure they have a healthy population of both species before determining the number of hunts to sell. In addition to the beef and hunting enterprises they also have timber and gravel sales and are exploring AirBnB options. When Kim came back to the ranch in 1982 75–80% of the ranch income was from the cow/calf enterprises. By 2001 that had shifted to 50% of the income as the family diversified their income streams.

In addition to the ranch enterprises, Linda, Julia, and Kim have also purchased the Cimarron Mercantile which they opened in 2020 as a community and educational venue as well as a coffee shop/café and place to market their grassfed beef.

The other experiment currently happening at the CS Headquarters is the effort to shift their three old alfalfa pivots (covering approximately 1,000 acres) to cover crops that they can use to finish their yearlings on. Julia is taking the lead and working with Gabe Brown and Ray Archuleta of Understanding Ag. The cover mix includes buckwheat, pearl barley, German millet, sorghum sudan, and some brassicas



Cover crops include buckwheat, pearl barley, German millet, sorghum sudan, rye, and some brassicas and sunflowers.

and sunflowers.

When these pivots were used to grow brome and alfalfa, they had historically been low production. So, in transitioning these field, they summer seeded sunflowers, turnips, daikon, and legumes. Then in the fall, they seed rye which has grown well. Ideally the cover crops and river bottom will be finish areas with some sheep integrated into these areas in the future for multi-species grazing.

Kim believes that Holistic Management gave the family the structure to set the ranch goals while their father was alive that has continued to help them through their succession planning after Les' death. As Les noted before he died, "It wasn't some pie-shaped grazing pattern Allan Savory taught us that made Holistic Management so important to us. It was how to communicate among ourselves."

With that focus, the Davises developed the CS Legacy Ranch which is the land company portion of the ranch held as an. The CS Cattle Company then leases the land from the ranch for cattle operations. While Kirk is the president of the Cattle Company, each family member is in charge of the various divisions of the ranch. In another effort to protect the ranch land from development, in 2018 the Davises placed 8,435 acres in a conservation easement with the NM Land Conservancy on the Crow Creek allotment. Funding from the NRCS and the tax benefits of the easement helped the Davises to consolidate shareholder holdings and reduce debt, thus keeping the ranch whole.

Given the passion for the land and for ranching, the Davis family is invested in not only supporting the succession of the ranch to the next generation of Davises, but also supporting the community by developing a business in Cimarron that they hope will bring more traffic to the town and the other businesses there. Each year brings different challenges, but also different opportunities to evolve, learn, and continue to develop the CS legacy. 🌱

Goatapelli Foundation

BY CELIA HOFFMAN

Fire prevention has risen in importance over the past few years. In April 2021, TomKat Ranch partnered with Lani Malmberg, founder, and owner of Goatapelli Foundation, a goat grazing service that uses managed goat herds as an effective, ecologically beneficial wildfire prevention tool.

On April 6, approximately 850 goats arrived and immediately started grazing up the brush-filled hill behind the main barn and around the ranch buildings to create a fire break. Lani explains her job here is “Fire mitigation in an educational adventure with TomKat Ranch.” Neighbors came to see the goats and learn from Lani about how goats can decrease fire risk while promoting soil health.

At 33 years old, Lani enrolled in Colorado State University to study botany and plant biology as a single mother with no money. For a soil class project, Lani focused on Russian Knapweed, inspired by a summer experience where the weed took over a local cornfield. Her research connected her with an expert professor who offered her a research position with a stipend as part of a master's degree in weed science. Although she had no idea what a master's in weed science meant or would entail, Lani jumped at the chance, needing the stipend to take care of her two sons.

During graduate school, Lani worked on an ongoing research project studying ewe sheep. A rancher by background, Lani was shocked by her classmates' lack of understanding of livestock management and found the project in a state of disarray. Determined to fix the project, Lani went to the dean and asked to take it over. He gladly agreed and allowed Lani to hire her two sons as college employees.

While studying the sheep's eating patterns, Lani thought somebody ought to use animals to target the plant they want to get rid of. When Lani saw a goat for the first time, she knew that was the animal she needed to start a managed grazing company. In 1996, she bought 100 goats and started grazing in many western states. Traveling the country for grazing contracts ever since, Lani explains, “I'm the one that never quit.”

Goats and Fire Prevention

Goats decrease the amount of fuel for wildfires by eating excess brush. They stand

on their hind legs, reaching vegetation from the ground to 9 feet high, minimizing the fire's ability to catch on low-hanging tree branches. Goats are browsers—they will eat almost any plant and tend to avoid eating grass, in contrast to cows and horses, which are grazers that prefer grass. Lani explains she has yet to find a plant that her goats will not consume as long as you know what time of year the goats will like the target plant. For example, goats avoid stinging nettle when it's green, but later in the season, the goats eat the nettle happily.

Each day, goats eat three times their body weight and drink an average of 1 pint of water a day. Lani calculates her goats graze “about three tons a day on the forage fuel ladder.” The goats eat massive amounts of potential fuel and can travel where machines cannot. The goats run up steep hills, climb trees, and reach in narrow crevices, all while respecting the



Lani Malmberg



Goats browsing up to 9 feet high.

natural world around them. Lani explains, “If there was a bird's nest [on the ground] the goat would step over it instead of into it.”

“The goats are doing fifteen things at the same time,” Lani explains. Beyond clearing the fire fuel ladder, they aerate the soil with their hooves, preventing erosion and building soil structure. Simultaneously, the vegetation the goats eat moves through their digestive tract and delivers accessible nutrients to the soil microbes. When goats lay down together, to sleep or chew their cud, their body heat warms the soil, helping seeds germinate.

Goats also work as an alternative to pesticides. Their teeth crush the seeds, preventing further spread of the targeted plant. Lani manages her goats to remove plants such as thistle and hemlock and to create space for

native plants. Unlike a machine, Lani notes, the “goats bring a living energy into a landscape”. As they move across the land, they spread their joyful energy, eat shrubs, spread (natural) fertilizer, and aerate the ground. The goats are a part of “a living functioning system”.

Lani's goats are twenty-sixth-generation grazers. They are experienced and trained in eating weeds and brush and can be contained by the electric fencing she sets up for them. Though the goats could jump over the fence any

time, they trust Lani to move them to new vegetation when they are hungry.

Maintaining healthy soils is critical for plant growth and increasing fire, flood and drought resistance. As the herd moves across the ranch, 3,400 hooves trample and aerate the soil, stabilizing the ground and building soil structure. Goats also build soil organic matter through their digestive system as they eat vegetation, Lani explains,

“all of that plant material is recycled through their belly and put back in place as pure organic fertilizer and trampled into the soil”.

Lani strategically plans when and where her goats will graze to decrease the fire fuel ladder while distributing nutrients, avoiding over browsing. Working alongside the active animals, and understanding which plants her goats will eat, Lani explains, “The soils and the plants and the plant families, that's science. The art is handling the animals. And the spiritual overlay is getting along with the mountain lions and the energy of where I am. It's all balanced.”

Since coming to TomKat, five goats have passed away, three to a mountain lion and two to other natural causes. While sad to lose goats, Lani explains she and her herd entered an environment that is home to other animals. As a response to the mountain lion attack, Lani keeps the goats moving to stay out of the lion's territory.

TomKat Ranch is excited to be working with Lani to work on fire mitigation and soil restoration. We can now easily walk through a hill that previously presented a high fire danger due to the density of brush close to buildings. Goatapelli's ability to achieve this goal while benefiting our ecosystem and nourishing hundreds of hungry goats is a win/win for us all. 🌱

To read the full article go to: <https://tomkatranch.org/2021/04/30/an-interview-with-goatapelli-foundations-lani-malmberg/>

I Sell Sunlight

BY JACK VARIAN

You what! You heard me I sell sunlight. It's taken me 83 years to discover what I have in abundance that I can turn into solar dollars to spend. But I need some "how to" guidelines when I use photosynthesis to pay the bills. It's imperative for my survival and come to think of it, yours also.

So let's see what happens when we arm ourselves with a wide variety of ways and means to harvest sunlight that will satisfy our cravings for stuff for the short term, but certainly is not wise for our long term health. I think we need to question the direction that our research and development in America is going. Are we trying to harness the powers of photosynthesis for our betterment or is it outweighed by the lure of creature comforts and convenience?

I want to get off on the right foot with most people by changing this 14-letter tongue twister by the name of photosynthesis that leaves my tongue worn to a frazzle every time I try to say it. Sooooo, I'm giving our tongue twister word a nickname that everybody can agree on: "Goodness." My goodness, that's it. I believe it perfectly

describes what happens when we discover its powers. So let the magic show begin. A truly awe inspiring Woodstock type happening will now take center stage. The curtain rises to a crowd that stretches as far as the eye can see. All are standing, the air is permeated with wonder that something of great importance was about to happen. Go ahead, Goodness", "CHANGE SUNLIGHT INTO LIFE".

Having spent most of my years in the 20th century I feel more comfortable getting out my Encyclopedia Britannica for a definition of "Goodness." This very weighty book says "It's the process by which green plants harness the

energy of sunlight absorbed by chlorophyll to build carbohydrates from carbon dioxide and water." This process also gives off oxygen so we get to breathe.

Well, I'd think we would all want heaping portions of "Goodness." The problem is that goodness operates best when sunlight has plenty of green growing things chock full of chlorophyll to work with. And when does "Goodness" not work so good? It's when we till the soil leaving it bare. It's when through chemistry we change the soil and all the critters that live there, so we can grow monocultures. It's when we cover the land with cement and asphalt.

starters, Jack, quit assuming that traditional decision making on your ranch is okay because it's not. Goals, goals, goals. I know they are more important than New Year's resolutions. I just hope I'm up to the task of keeping them. Let's see, I guess I will start with real big brush strokes to start with. Remember past blunders, question the present reality, and plan for a future that is doable. Sounds reasonable.

So I need to identify what requirements are compatible with "Goodness." Unequivocally, the best way to "advance to higher ground" will be to slow the rain that falls on the ranch. This is unarguably goal number one. It has been Nature's way of making soil since life waded



Jack and John Varian moving cattle up the mountain to Twin Lakes.

I don't know when we will be forced to change our ways that insist that we must satisfy our every whim that tickles our fancy and expect no consequences. That we consider other forms of life, when they gain nuisance status by getting in our way too many times, to be expendable. Misery and war, it is said, can accelerate invention, and I hold that to be true. But, my problem is when the battle is over we never go back to repair the damage. I think our brain power has to spend more time preventing messes so we don't have to spend so much time cleaning them up like our Pacific Ocean.

So what am I supposed to do about it? For

ashore a few billion years ago. Slow works wonders and fast will be a train wreck that can range from regrettable to catastrophic.

So I work to slow the velocity of rainfall when it arrives. Then it's my job to keep all those raindrops on the V6 Ranch for as long as possible knowing that the drops that do escape to the Pacific Ocean I might see them again. Next, I want to copy Nature's ways of putting obstacles in the path of water so that it has to stop for a while or pause and then to meander so it has time to enter our Earth's soil carbon sponge.

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LAND & LIVESTOCK



Cedar Mesa Ranch— Creating Products from Passion

BY HEATHER SMITH THOMAS

Andrew Schafer didn't grow up on a ranch but he's had livestock for 20 years as a first generation rancher. His passion has always been livestock. "When I was 10 years old, my dad was sick with cancer and some changes were happening in our family, and he asked me what sort of things were interesting to me. I said sheep, though I don't know why I chose sheep," says Andrew.

"My dad had a friend who had a sheep ranch, and he helped me get a bottle lamb. One sheep by itself is not a good idea, so I ended up with another. Fortunately for me, one was a ram and the other was a ewe lamb, which helped get me started in the sheep business!

"I've had sheep ever since, and it's now been 20 years—which is really cool to be as young as I am and to be able to say that I've had them for that long. The evolution of my thought process regarding livestock has been interesting. As a young kid, I knew absolutely nothing about sheep, so everything was a learning opportunity.



Kendra and Andrew Schafer

"I was fortunate that my parents wanted to hop in the pickup with me, and we went to shows across the country. That was really exciting, and looking back on it now, it was a lot of quality time we spent as a family. At that time, I was raising registered Rambouillet sheep, and the national show moves around to a different place every year. I got to see places that I might not have gotten to see otherwise."

Those early days learning about sheep husbandry has served Andrew

well as he and his wife, Kendra, have developed Cedar Mesa Ranch. The ranch sits at about 6,200 elevation near Dolores, Colorado on 52 acres of mixed irrigated pasture where they run 30 Navajo Churro sheep and 30 Spanish nannies, while leasing their 20 mother cows cattle to a neighboring ranch. They have leased various places across the county but were finally able to settle down on 52 acres in 2021 that they have been leasing for about 10 years

Taking the Leap

Andrew received his Bachelors in Agricultural Business from Fort Lewis College in 2014 and Master's degree in Integrated Resource Management from Colorado State University in 2015. "I had a very conventional training in agriculture and still had a lot of questions. I've always had questions about why we do things or do them a certain way," he says.

"I didn't get my questions answered in college and I challenged geneticists. I asked them why they thought that doing a DNA profile gives us more information and was it even relevant information? Just because we can do it, does that mean we need to do it? I never got those questions answered. I was thinking about that stuff and was kind of perplexed.

"When I got out of college I made an effort to change the genetics of the cow herd and moved more to a low-input type of genetics, a little more of the older traditional bloodlines. The last bull we used had some traditional Angus blood from Scotland, and this was really exciting. So far the results have been pretty good," he says.

March of 2015 was a milestone because that's when he traded the Rambouillet sheep for Navajo Churro sheep. "This was a big step away from a conventional type animal to one that for a very long time proved to be the pastoralist's dream for a sheep. These are very easy to take care of and have been living with people in the Southwest for a very long time." Andrew says he'd become bored with just black cows and white sheep. Now with the Churro sheep there's one of every color.

In 2015, Kendra joined the operation and together they shifted direction to raising grass-fed meat. Since that time, they have raised cattle, sheep, goats, and chickens. They currently have Navajo Churro sheep, Spanish goats and Aberdeen Angus.

Kendra grew up with a farm background and showed animals in 4-H. Her brother showed sheep. "I was never interested in sheep as a youngster; I showed hogs. My family has raised cows and sheep for several generations, but it skipped my parents. They were involved in another family business, but not the farm," she says.

She and Andrew grew up in towns that were only about 20 miles apart. "I grew up in Mancos, Colorado. My family—on both sides—has lived in this valley for six generations so I have strong roots here. My great-grandparents had thousands of sheep that pastured on the mountains, but the sheep-raising ended with them. My uncles both run cows but my

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personal exposure to livestock was just through 4-H,” says Kendra.

She and Andrew met in 4-H, but it was her brother who knew Andrew better. They stayed in touch, however, and it was after they both graduated from college that they actually got together. Kendra received her Bachelors at West Texas A&M University in Canyon, Texas in Agricultural Business, graduating with high honors in 2015.

“My brother always teases me, and says I was never interested in his sheep and then became interested in sheep because of Andrew! But I really love these Navajo Churro sheep because they and their history are so interesting. I do a lot with the wool; that’s my passion, along with raising and grazing the sheep. Working with animals is the highlight in our lives,” she says.

“Andrew and I both had very conventional agricultural educations. That’s probably what brought us together; neither one of us really felt prepared to start in agriculture the way we wanted to, with the background we had. This led us to HMI, in our search for what we really wanted,” says Kendra.

“We knew a lady who raised Navajo Churro sheep and she was an educator. Cindy Dvergsten is the one who introduced us to HMI; she was teaching classes that summer and we took our first HMI training that year.”

They ended up taking both HMI’s Whole Farm/Ranch Land Management and Business Planning courses for a total of 12 days of training. “The decision-making process was very helpful, especially as we tried to address the ‘why’ questions,” Andrew says. “I’ve always questioned the reasons for things. People would tell us we had to buy cattle pour-on to treat pests (worms, lice, etc.) but never told us why or whether we really needed to, and most of those products don’t really work very well. It’s like people spraying herbicide; if it worked, they wouldn’t have to keep doing it every year or multiple times a year.

“I perceive selective breeding as an opportunity to find the resistant animals that didn’t need to be wormed or treated for flies, or resilient animals that could tolerate these pests.”

Having a low-stress system is important to Kendra who prefers being with the animals out in the pasture. “Any time we have to bring them in to work them it’s a stress for the animals and seems like extra unnecessary work; they belong in the pasture,” she says.

“When we were still doing things the ‘old’ way, I was still thinking that we need to AI these cows, and they need to be preg-checked and vaccinated,” says Andrew. “Before we started leasing the cows out, we quit weaning, quit preg-checking, vaccinating and AI. It became a lot more fun.

“I view us now as hunter-gatherers. We act as the predators that move the flocks around the field, but are able to do it in a way that is low stress and enjoyable. When we have an animal ready for harvest, we go get it and bring it in. There are not all these other steps and processes that really don’t bring value to the overall picture.”

Kendra also says this hands-off, pasture approach is better for the sheep as well. “Their behavior is a lot different towards us and I really enjoy watching that,” she says. “They are more at ease with people and more trusting than when they were being brought into corrals.”

Direct Marketing Approach

Kendra and Andrew have the same ideals, goals and dedication to the land. Their management philosophies are based on understanding and acting with the cycles and relationships found in Nature. They believe that with the right mindset and tools, people can make decisions to restore their soils and create a thriving landscape.

They want to do their part to keep the land prosperous and abundant

for generations to come. A love of nature and healthy nourishing food make them passionate about focusing on healthy land and livestock, even though raising meat with integrity is not always easy. They started Cedar Mesa Ranch with the belief that everyone deserves to know where their food comes from and that it is being raised in a way that promotes life, diversity, and health for the animals, land and people eating it.

“We love raising meat that we feel good about eating. We know there are people around us who want something similar,” Kendra says. Most people want food that is wholesome and healthy and want to know that the animals were raised with care and compassion.

“When I joined the farm operation in 2015 and we shifted gears, we

started focusing on doing grass-finished meat. We started with beef and lamb and recently added goats to our operation. We leased our cow herd to another rancher that we work with and we get a share of our calves back—which we finish. That rancher keeps the cows and gets his share of the calves.

“This works well for us because we feel we are utilizing our resources a lot better. It doesn’t always work out, however. We tried a similar thing with some goats we were leasing, but it takes finding the right people and the right setup. It doesn’t work every time, but it is a good way for anybody who wants to get started in ranching if they don’t have the financial means to do it. There is a lot of opportunity out there, if you can find someone to work with you.

“I was lucky that Andrew already had these sheep. He’d just switched to Navajo Churro about the time I joined the farm. He just happened to pick the sheep that I fell in love with!

“We view ourselves as mostly self-taught in ranching. We don’t use much of our formal education and the degrees we earned. We mainly just try to find people with similar thinking. We both read all the time, especially Andrew.

“You can buy meat at the grocery store that you think is good, but this



The Navajo Churro flock at Cedar Mesa Ranch means that the Schafers can run a low-input system.

past year really opened people's eyes to what happens when there are no options at the grocery store.

"Having a relationship with a farmer or rancher is very important, being able to get your food directly from them. We are focused on continuing to grow relationships with people who value where their food comes from. We are focused on soil health in our pastures, and animals that perform well with no inputs. We just need these basic things and to continually work on the genetics of our animals. This is a very exciting part of it, for both of us.

"We have gone away from doing any kind of digital marketing other than just our website. We are now off of most social media, for our meat, but I do have a page that's focused on my wool; we sell most of that online. Selling the meat, however, has been to local people and by word of mouth."

Andrew says it seems like when they were doing more digital marketing and trying to reach people, in several cases they reached the wrong kind of people. "Their values and expectations were different and did not really fit what we were doing. We realized that having more customers isn't always better, if they are not the right kind. So right now we are more interested in people finding out about us by word of mouth, because whoever they talk to is a satisfied customer who understands the process."

One thing Andrew and Kendra try to do is sell halves and whole carcasses rather than retail cuts of meat. "When that animal is harvested, we want it to be already sold; we want it to have a freezer to go to, and have somebody ready to take it—so it will be cooked and eaten over the next several months," says Andrew. "If it is sitting in our freezer as inventory, waiting to be retailed, we don't really know how soon it will be going out."

Kendra says one of the biggest lessons they learned in the first few years was how to properly scale their operation. "I think we tried to get too big too fast and ran into some problems that we didn't even identify right away. As we've been doing this more, we realize we want to do it at a scale where we can still enjoy it and have the customers ready for the meat," she says. "We don't want to be holding meat we think we can sell. We want to be raising just the amount that we know we can sell. I think we are now finding the proper scale."

Andrew and Kendra say they were close to quitting a few times on certain things that they tried that didn't work, or made changes that weren't quite where they wanted to go.

"Now, going forward at this point, I really think we will make it work. We've talked about adding some other enterprises, but if we are going to do that, I want to start with just one or two or a few of whatever it is—and not have to depend on it for income until we know more about it and know we enjoy doing it," Andrew says.

At some point they'd like to add pigs, since Kendra has a background with these animals. "We're not going to suddenly get 10 pigs, however, and then try to figure out how to raise them. We'd just start with one or two, and if we can figure out how to make it work with those, we could

have an opportunity to grow," Andrew says.

Working with Nature

Ever since Andrew and Kendra took the Holistic Management courses in 2015, they've been implementing these practices in all of their business and land ventures as well as sharing what they have learned with others. They believe in very low inputs and finding root causes to problems, and feel it is a waste of resources to continually treat symptoms rather than address the underlying problems.

Andrew read the Holistic Management textbook which helped him understand how the process was developed first by Allan Savory. "I am the kind of person who really needs to understand the process," says Andrew. "If someone sends me a spreadsheet, I think it's great that they have a nice spreadsheet, but I want to know how they built it, and why did it matter to build it this way. I always want some of that context from the very beginning, because it really helps me—and I think it would help a lot of other people, too. I think many people are skeptical, especially the general public or people who come from a conventional farming background. I try to convince them that there are other ways to graze livestock.

"Some of my close friends have said they don't understand why we'd want to have to move our animals every day. They view it as a lot of work—thinking they'd need to saddle up a bunch of horses and ride to move cattle. But working with our animals is actually the highlight of the day for both myself and Kendra. All we have to do is call the sheep. They already know what's up when we are out there moving fence. As soon as we call them, they are right there and all I have to do is open the pen and they are going into the next pen. It's never been a big job. "Some of the folks we tell about it won't even come over to see what we are doing, and even some of our neighbors who don't have much grass on their property look over the fence and say they can't understand why we keep the

animals in such a small paddock."

Kendra adds: "They also wonder why we have so much grass that's ready to go to. They don't tie the two together—the fact that we move the sheep often, use small pastures, and have more grass." The Schafers have also moved away from feeding so much hay. They still use it in the hard winter months, but really work up a



You can see the pre- and post-graze heights on these irrigated pastures on Cedar Mesa Ranch as well as the temporary water and fence infrastructure they use.

good winter stockpile to go to once the growing season has ended. During the growing season, they move the sheep in approximate 1/3 acre electric fence paddocks once or twice a day depending on forage. Right now they don't have enough animals to keep up with their grass, but plan to allow the flock to grow in an organic way until they get to a stocking rate that matches their carrying capacity, or whatever feels right in between. Right now they focus on high animal impact using high animal density and quick paddock moves. The recovery period is anywhere from 30 days on some

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of the irrigated pasture to 60 or more days in others.

Holistic Management has helped them better understand the relationship of their management to the health of the ecosystem they are managing and the benefits to managing it well—particularly the social benefits. “It helps us understand what we want out of life,” says Andrew. “This is a huge factor. When I was growing up, hiking around in the woods and seeing Nature, I always loved to see a healthy ecosystem. When we look at some of our neighbors and people who won’t even come look at what we are doing, you go by their place and it looks less ecologically happy than a golf course. They have hundreds of acres that could be a thriving ecosystem that would offer more than just the one product they are getting off it but they are not willing to do that or think about that.

“To me, Holistic Management brings so much value to my life—to be able to go outside and walk through the field and see wild animals. There are also many plant species. Everything is moving, all working together. Coming at it from a holistic view, you learn quickly that there is nothing out there that is good or bad. I see a tie to Taoism (a belief in perfect equilibrium and harmony) and non-duality. So often, people say the parasites on an animal are bad. People start assigning titles to things like that and get stuck in that kind of thinking. I think it’s tragic, because it’s hard for people to overcome that type of mindset.”

Kendra says they’ve been working through various things and having to change their mindset. “It is hard to change, hard to recognize some of this stuff, but once you do, and once you see it, everything starts to flow for you better. It takes time to get there and I think many people are not willing

to put in the time,” she explains.

“It’s partly a mental state; they think it is going to take a lot of time and so they are reluctant to try it. But when they actually get out there they realize it’s enjoyable. They actually get to be really personal with their animals and really personal with their fields and pastures. It’s just a matter of walking through the fields and putting in electric fence posts, or whatever, which gives them a chance to look at the grass close up and find that they like doing this. Some people never let themselves get to that stage, however, and it is tragic that they have this separation just because of a mindset and preconceived notion about something.”

Doing What You Love

Andrew says Holistic Management got them to asking the question of what do we want, and identifying that holistic goal, and doing the things to work toward that goal. “For us, one of those things was the fact that I really hated sitting on a tractor all summer making hay. Then it was a matter of figuring out what steps to take to eliminate this, and it really changed things,” he says.

“Thinking about some of our friends who are not open to change or haven’t considered it, they say they can’t take the time to move their animals but they end up buying a cartload of fertilizer and are out there spreading fertilizer. It makes me realize that they are not assessing their values because they also complain about not making any money. If you are taking your money to town to buy fertilizer you are not making money. I’d rather be paid to move my animals and let them fertilize the pastures.”

Many of the farms in that area are irrigated and the farmers have no qualms about going out to move their sprinkler pipes every day. “For as long as I have been around irrigation equipment, it has never really

Creating a Wool Market

Kendra didn’t know anything about wool before she started on the farm with Andrew. “He taught me a lot about wool because he has dealt with many different kinds of sheep and does all the shearing. He was my introduction to wool and I became very interested and started doing my own research. We decided we wanted to start processing our wool so I could start weaving,” she says.

She has taken some weaving classes and is doing some natural dyeing of the yarn they process. “From there, I decided to sell some of my woven products and our yarn. We started with different farmer’s markets around the area, then found it was too much of a commitment to go to a farmer’s market every week. We decided to do an online shop to market the wool and that has been very successful,” says Kendra.

This past year, 2020, was their first full year with the on-line Etsy shop for the wool. “I’ve sold my wool products all over the country—New York, California, Oregon, Texas, Indiana, Florida, etc. It is very rewarding to know that the fiber from our flock of sheep that we raise is going to so many different artists who do many kinds of fiber art all around the U.S.”

Andrew says that just when they think they’ve heard of the latest and greatest new technique, someone comes along and blows their mind with a different technique or skill. “I had no idea how varied this is. People who work with wool are some of the most creative folks out there,” he says.

“There are so many things you can do with wool,” Kendra says. “The Churro wool makes a great weaving yarn because it is so strong and durable. It is also great for felting—both needle felting or wet felting projects. There are so many things you can do with it. I am learning how to knit, as well, and I think you can reach a lot more people than you think, with wool. The natural colors you can get from these sheep make it very interesting because they have such a beautiful variety of natural colors to work with, rather than it just being white,” she says.

When Andrew looked into the history of raising livestock and why sheep became white, he found that it was because of people’s desire to be able to dye the wool any color they wanted—blue, red, green, whatever—rather than take advantage of natural colors. “We enjoy the fact that every lamb crop, depending on which direction we want to go with the genetics, is different in color. I think this is nice, and feel that this sheep has given me the gift of a certain color. Dyeing is fine, but it is such a gift to be able to have multiple natural colors,” he says.



Navajo Churro fiber produces a variety of natural colors for wool products

brought me joy in the sense of interacting with it, compared to an animal. If we are moving our animals every day (and creating better pastures) then all of a sudden our irrigation isn't such a priority because we have knee-deep grass that shades the ground and there is less moisture loss," says Andrew.

Kendra really enjoys spending a little time every day with the flock. "I'd rather be outside every day with them in the pasture rather than applying pesticides twice a year, etc. It clicked for me when I realized that 'Wow! There is another way!' Our background in agriculture was so conventional that I never really knew of anything else. We got excited about Holistic Management and just dove into it," she says.

"It's been a learning process all the way. There have been many things that haven't worked and it took a bit of training ourselves to react better to different signals and testing—that we didn't do as well in the beginning. With the feedback from that, however, we've come around and are better at recognizing those signs early on. We are better at saying things like 'That sheep keeps getting through the fence and maybe it's time to cull that one' after the first or second time, rather than going through the whole summer having to deal with it.

"This kind of decision-making is applicable to many things. You get better at making those decisions, and apply this process to your everyday routine. This has really helped us in our personal lives as well. This is what I like so much about Holistic Management; it's not just something you apply to grazing. I apply it to so many things in my daily routine—outside of anything related to agriculture. I believe that it really works in everyday life and takes holistic thinking to a whole different level. It's not just about animals and grazing."

Andrew says he'd like to see more people (who are not in agriculture)

become more familiar with Holistic Management. "Any business can benefit from this kind of thinking. Of course we live in an area where a lot of outdoor adventure takes place, and many people here are anti-oil and gas, etc. Yet their backpack is made of plastic, their mountain bike is made of synthetic materials, etc. Basically everything we have on earth that we use is either mined or grown, and we have to accept that," he says.

"I always lean toward the growing side because to have something like wool we are simply converting sunlight (and the plants it supports, and the animals that eat the plants) into very strong, comfortable material. When you think about this it is mind-boggling and makes me giddy. Any person who says they like outdoor recreation should be a proponent of things that are grown. Any time I've been around something that has been holistically managed, it enhances the natural landscape.

"Ranches that are holistically managed can often offer world-class fly-fishing or hunting or birdwatching. The Audubon Society has caught on to this, realizing that birds are happier on farms and ranches where nature is in balance."

Kendra says people are willing to buy into something when they realize it works, and that it works in their area. "If they can see that it works, this starts to catch their attention. We've shown that this kind of management works in our very arid climate, and we hope to get more people talking about it and paying attention to it, here." 🌱

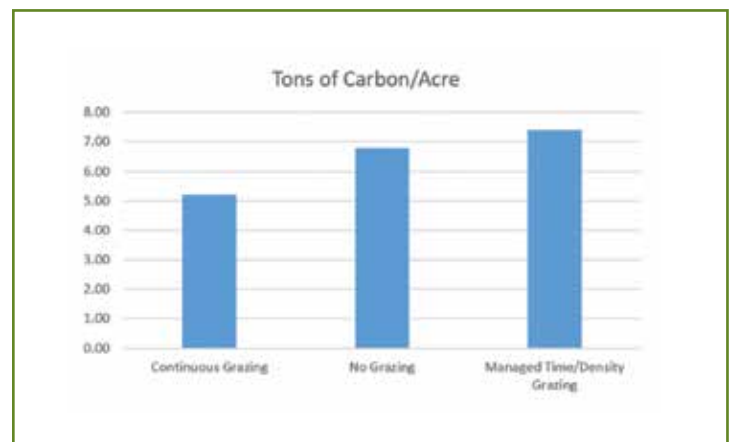
To learn more about Cedar Mesa ranch visit: Instagram @cedarmesaranch (animals and pasture) and @cedarmesaweavings (sheep and wool). Etsy: <https://www.etsy.com/shop/CedarMesaWeavings> and <https://cedarmesaranch.com/>
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Doubling Cow-Calf Gross Revenue Per Acre in New Mexico—Greater Profitability Through Soil Health

BY ANN ADAMS

Editor's Note: The following information is part of a presentation by Gregg Simonds of Open Range Consulting for the NM State Land Board and the NM Healthy Soil Working Group. The presentation can be viewed at: <https://www.youtube.com/watch?v=AXpDBJlUvRg&feature=youtu.be>. To learn more about the NM Range Productivity Study go to: <https://holisticmanagement.org/featured-blog-posts/nm-ranch-study-shows-improved-grazing-strategy-increases-forage-production/>.

There is a common misconception that it is expensive to improve soil health and land productivity, particularly in areas that don't receive much rainfall. But a presentation by Gregg Simonds shows how a small investment in infrastructure can help improve grazing management which in turn increases soil cover through more plants establishing. Likewise, with a greater variety and productivity of species, grazing seasons lengthen and plants are more productive resulting in increased stocking rates, better conception rates, more pounds per calf, which result in an almost a doubling of gross revenues per acre



for New Mexico ranchers.

The data Gregg was reporting on was from continued study of the JX Ranch in eastern New Mexico. Gregg is a long time rancher, consultant, and researcher, and for the last three years he has been doing soil sampling and a unique monitoring process called Earth Sense Technology as part of a continuation of a study that looked at the difference in plant productivity, ground cover, and soil carbon on ranches who have been practicing Holistic Management for 10 years or more versus those who are doing conventional grazing versus areas where there is no grazing.

This study showed that there was an average of 27% increase in productivity on the ranches that had been using types of managed grazing

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focusing on time and density of animals. As you can see from the chart below, the result of that management practice is a stocking rate of 27 acres/cow (different ranches using these practices varied from 25–32 acres/cow) while the area average is 50 acres/cow. This means the JX Ranch has an 85% increase in stocking rate over the area average stocking rate.

Likewise, the New Mexico (NM) average of calving rate is 88%, but with improved management, JX Ranch has experienced 97% calving. Moreover, the average pound of calf to cow in NM is 440 pounds, while the JX Ranch averages 485 pounds. Assuming a calf price of \$1.40/pound, then the average NM gross revenue per cow would be \$616 while on the JX Ranch it would be \$670. With an increased stocking rate for JX, their gross revenue per acre is \$25.15 while the average gross revenue per acre in NM is \$12.32.

In order to improve grazing management there was necessary infrastructure development of water tanks, troughs, fencing, etc. that averaged \$35/acre. With an assumed 30-year life span for those assets that means they cost \$1.07/acre. So when that is removed from the gross revenue of \$25.15 that takes the gross revenue to \$24.08 or a 95% increase in gross revenue from the NM average.

In addition, soil testing showed a difference in tons of soil carbon per acre depending on the type of grazing practices or land treatments. A continuously grazed land measured 5.2 tons of carbon per acre, while a non-grazed/rested area had 6.8 tons, and planned grazing area had 7.4 tons.

Moreover, water infiltration rates on the JX Ranch are four times that of the continuously grazed land. By using the

increase of 2.2 tons of carbon per acre as noted in the table, that carbon acts as a sponge in the soil and increases the storage capacity of the soil to hold an additional 7,000 gallons per acre says Gregg.

Given that water security is the greatest issue facing NM agriculture, it is critical that NM producers develop their grazing management to improve soil carbon. Increased soil carbon improves water infiltration and storage which leads to more plants, plant diversity, and soil cover. Bare ground creates a downward trend in soil health and ecosystem so it is the leverage point that you must control through grazing management. In turn reduced bare ground leads to improved profitability. 🌱

	Continuous Grazing	No Grazing	Managed Time/Density Grazing
Acres/Cow/Year	50	1.64	27
Pound of Calf	500	1.88	500
% of calves/cow	88%	1.03	97%
Pound of calf to cow	440	1.02	485
Calf price/pound	\$1.40	0.38	\$1.40
\$/cow	\$616	0.41	\$679
Gross revenue/acre	\$12.32		\$25.15
Development cost/acre/year			\$1.07
Tons of carbon/acre	5.2	6.8	7.4
Carbon Difference		1.6	2.2

Financial Comparison of Grazing Treatments

I Sell Sunlight

The result will be a planet with a green growing coat of “Goodness,” and dirt will transform itself back into soil. This reestablishing of green growing trees, grass, and plants of every conceivable kind is our only hope for getting our global health back. If we do this, then a chain of positive events commences. Normal rainfall patterns return instead of the kind we are starting to witness today of deluge or drought.

The three types of nuclei needed to make a raindrop are ice crystals, salt crystals, and, the most important one, a bacteria made in the stomata of a leaf in all green things. It is expelled up into the troposphere where our rain clouds dwell and becomes the nuclei for water vapor to attach to, to form a raindrop. This aerobacter governs more than half of the planet’s rainfall dynamics and temperatures are lowered. With more green growing things on the planet and more carbon sequestered, our outlook on life becomes brighter.

There are many more benefits but you get the picture. We need to stop what we’re doing before we tip Nature’s balance beam into a very scary descent to uncharted territory.

As I see it this is a team event. There are the guys and gals who have dirt under their fingernails and then there’s the cheering section that spurs them on. Let’s all work to minimize the amount of bare ground by planting cover crops. We must become a recycling society not a throwaway society.

Grazing livestock are a proven tool to keep our grasslands healthy when used wisely. Technological and chemical solutions need to explore new directions that “do no harm.” I think recreation in forms that help sustain open space can be good for the landowner and the guest. Hey, “we’re all in this together,” so any other good ideas that come from the land of common sense are welcome.

Caring for “Goodness” will take a lot of effort to stay the course. I’m sorry that it’s like watching “paint dry.” Progress will be slow and it will require flexibility and creativity. But the alternatives for not making the effort, I think, are all downhill. There’s nothing that’s going to be easy about this is there? But, what if we can’t change our ways? Will we go the way of the lemming, that furry little mouse that lives in the Arctic? When their population becomes unsustainable they migrate to a cliff overlooking the Arctic Ocean and then with a quizzical look painted on their faces they all proceed to dive in and swim frantically, but in vain, to a promised land that’s just out of their reach. Will that be our destiny.? It need not be!

Participate in your community to keep our institutions strong for the battles to come. Then practice the Golden Rule and believe that “the times they will get better.” 🌱

Jack Varian and his family own and operate V6 Ranch near Parkfield, CA. This article was an excerpt from his blog. To read more of Jack’s writing go to: <https://www.v6ranch.com/blog>. He can be reached at Jovv6ranch@gmail.com.

Jordan Angus

BY HEATHER SMITH THOMAS

Emmett Jordan and his wife Carrie moved to their ranch near Briggsdale, Colorado about 20 years ago. Then 10 years ago they were able to significantly expand the land that they manage. This additional acreage gave them the opportunity to increase their level of grazing management.

The ranch is mostly privately owned leased land with a state lease and some deeded land—all rangeland, with no crop production. “Nearly all the acres we run cattle on were farmed at one time—dryland farmed—but were transitioned back to pasture long before we got the ranch,” Emmett says. The impacts of cropping had deteriorated the health of the land and the Jordans’ goal is to bring the land back to better health and productivity.

Land & Herd Resilience

The Jordans live in northeast Colorado so their area wasn’t the heart of the Dust Bowl, but these farms were still devastated by it. “A lot of land in this region was abandoned during the Depression,” says Emmett. “Some of it was eventually seeded back to grass and some of it just gradually went back to grass. We have tried to increase the intentionality of how we graze, and improve the acres under our management in terms of plant diversity and ability to capture and hold water. Those have been our goals.

“We felt that we could improve the land resource with managed grazing. Our ecosystem is short-grass prairie, with about a 12-inch

The cows start calving in May to align their nutritional needs with the peak in anticipated forage quantity and quality. “The 60-day calving interval from mid-May to early July is also generally easier on calves and



The dog is laying in dormant western wheatgrass, a key cool season species in our region to extend the quality of grazing early and late in the growing season. The water point in the background is used to water four or more paddocks in the pasture.



The Jordans try to calve on green grass to match forage production to cattle need. This allows them to reduce feed costs, calve anywhere on the ranch they need to have cattle to manage grazing goals, and be less labor-intensive. Calving season for heifers is 45 days and 60 for cows. Cows and heifers are all AI’d one time on a fixed-time basis before the bulls are turned in.

average for annual precipitation. We have been drier than that, however, in the past two years. When you look at any 10-year cycle, we are usually about four years above and six years below the average. Where we live we not only have large variability in annual precipitation but also the timing of that precipitation.

“We are a first generation operation and still pretty small, but I have been making my way in registered Angus for about 25 years. Most Angus cattle have gotten too large and require too many inputs to thrive in a low-cost production system. So, we select AI sires for traits that fit our environment,” Emmett says.

people than earlier calving in January-March,” he explains.

The cattle are marketed in three main ways. The registered bulls are sold by private treaty, and the commercial calves are sold as feeder calves. The feeder calves and some of the extra replacement heifers are sold in late winter. The Angus bulls, which are forage developed, are sold through most of the year. These bulls are coming 2-year-olds, raised on grass. “We also take in some commercial cattle and graze them for most of the year. So we run two herds—one that we are taking care of with custom grazing, and one that we own. The extra cattle are cows with calves,” he says.

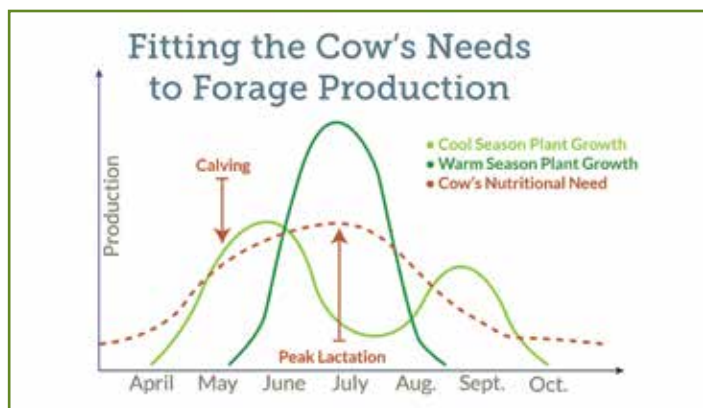
“We develop our bulls on grass. It takes longer and they won’t be as fat as grain-developed bulls, but they are not going to melt when you turn them out with cows. We used to raise bulls like most purebred outfits—calve in January and February, develop the bull calves on grain to reach 1,200 pounds at about a year of age and push for more growth.

“For a variety of reasons, we changed our program, even though developing bulls on range pastures isn’t nearly as flexible, financially, as just running yearlings. Maybe someday we can add that aspect (running yearlings), to make our business model more resilient. We’d like our business to be as resilient and diverse as the pastures, which is much harder!

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"We think it's possible to make ranching more enjoyable and profitable by focusing on what cattle do best—grazing. Continued selection for maximum growth makes for large cows that require large amounts of feed. But good moderate cows will net better returns. The math is pretty straightforward."

To improve the cattle and the rangeland, the main focus has been on working with nature. "We try to graze year-round with minimal supplementation. To do this, we calve in May and June; and move the cattle through a grazing plan designed to improve plant diversity and soil health, plus, I don't like getting up in the middle of the night in February to check calving cows just because it's below zero outside," he explains.



This chart shows the generalizations for forage production and cow nutritional need that Emmett uses for planning purposes, even though each year is different for growth periods depending on growing conditions.

Data-Informed vs. Data-Driven

Emmett was a photographer and photography editor before he began ranching. "During that period of my life I was doing a lot of documentary photography," says Emmett. "I am still involved with graphic design and photography, along with the ranching, but in my photography days I met Mel Coleman and family, who were ranching in Saguache, Colorado. Mel was an industry pioneer starting Coleman Natural Meats when there was no such thing as 'natural meat' in the grocery store. Mel had earlier worked with Allan Savory. I didn't know anything about cattle when I met Mel, but he provided my first exposure to some of the ideas about Holistic Management. Later, I had a chance to meet Savory."

"I had an affinity for this way of thinking all along, so as we learned more and as our ranch grew in scale, we became more able to utilize some of these ideas, and more opportunities to engage in this process. As we've gone through our journey we've had the chance to meet different people who are involved with this kind of thinking and planning."

"One of the pillars of holistic thinking is to be a lifelong learner. This is incredibly important—not only formal learning but also peer-to-peer learning. I don't think there is any way for a person to be able to take it all in at once. There is way too much complexity and nuance, way too much information to absorb. I think you have to take it in chunks and bits."

"The way I see the holistic approach is that you have to allow yourself to fail and you have to try different things. It creates a lot of opportunity. In a way, the combination of that and trying to keep a positive focus are two of the most valuable lessons that anyone can learn. Don't get caught up in distractions. Stay positive and find a way to make things work, and learn

from your mistakes.

"I think there is an important distinction between data-informed decision-making and data-driven decisions. It's easier to let the numbers dictate the decisions, but I think we need to step back and make sure we've examined the numbers in a proper context. Sometimes we collect the wrong data points or have an incomplete data set."

An example might be the use of EPDs in seedstock selection. "In the Angus breed, we've had EPDs since the 1990s to help predict the genetic characteristics of the progeny of bulls and cows. An argument could be made that an analysis of those numbers should drive our decision-making when selecting bulls." But the EPDs don't address some very important issues and characteristics.

"For instance, up until 2019, the data didn't say anything about hoof structure. A great 'numbers' bull with bad feet isn't worth much on a range cow outfit," he points out. We can't base all of our cattle-selection criteria on EPDs.

"We can find similar scenarios in ranch economics and ecosystem management where asking the wrong question, or having an incomplete model, or abstract numbers leads to the wrong action. With help from groups like HMI, we can try to develop the right set of questions to test our ideas to see if they satisfy our holistic (economic, ecosystem, and people) goals—avoiding misguided, reductionist thinking," he says.

"I think what attracted me to HMI was the idea that there can be triple bottom line (land, animals and people) success and that zero-sum relationships don't define how we see ourselves or our world."



The Jordans' black Baldy herd on the move during summer grazing.

"When I first started, I was trying to be engaged in grazing management and was very focused on that. As we went along, however, maybe the part that I least liked was the most important—developing a business plan—or at least thinking about ranching as a business. We need that aspect of our thinking to be as strong and as flexible as possible in our management."

"In any ten-year period, our fluctuation in production driven by rainfall is probably plus or minus 50% from the mean. Not only do we need to be responsive to this fluctuation with our grazing, but we also need a business model that allows us to be able to work through the valleys."

"I don't think I was ever very keen on the business part, but I do think that as an aspect of Holistic Management it is critically important. We really can't neglect the business or people part, and HMI does a great job of providing opportunity not only to learn, but also in providing the tools and software to do cash-flow planning and economic planning."

"One of the things we experienced on our journey is what some have called the J Curve of Change. The idea is that you have some sort of complex system that is operating at a certain level, but you feel like management could improve the performance. When we make management changes, what we all want is a straight line progression

from level “A” to level “B”, but what I’ve found is that sometimes things get worse before they get better, and we need the discipline to stick to the goal.

“Two examples come to mind. Most people I’ve spoken with who significantly change their calving season (but still use the same set of cows) experience a high number of open cows that first breeding season, and this is not what anybody wants.” It may take a different type of cow, with different genetics, to do what you want them to do.

“Or, when pastures that have been historically set-stock grazed are transitioned into a more highly-managed program, not all of the increase in early plant diversity is in desirable species—making it difficult to monetize the early changes,” he says. The changes that occur are not always exactly what you want, and the improvements you desire will take time and effort, and sometimes mistakes along the way.

Improving Land Health & Productivity

Emmett notes that their biggest challenge for range production is managing moisture. “With an average of 12 inches of annual precipitation, the volume and timing are highly variable,” says Emmett. “To increase water infiltration rates and retention, we use grazing management to foster improvements in plant diversity and root structure, with a focus on increasing cool season species. The cool season plants help improve the



Pronghorn visiting one of the Jordans’ watering locations. Robust wildlife and bird populations are an indicator of ecosystem health.

quality of early and late season grazing and create more diversity in the root zone.

“We’re also trying to increase plant density and litter to minimize bare soil. To manage grazing duration and density, and more importantly plant regrowth, we use a combination of about 15 miles of permanent electric interior fence plus some temporary electric fence to create 50 to 60 paddocks over the course of the year.”

In addition to the fencing, Emmett has put in one new water well and about 3.5 miles of water pipeline to augment the benefits of existing water wells to create additional watering facilities. Virtually all livestock water in this area is groundwater.

For the water developments he worked with the land owners and with the NRCS and this was very helpful. It takes time and sometimes a lot of good cooperative effort. “On the land under our control, we now have about 60 paddocks and try to manage those as best we can to improve plant diversity and put litter on the soil. It is hard for us to achieve much litter on this landscape, however, because it’s shortgrass prairie,” he says.

Facing Expansion Challenges

Emmett would like to expand his business but high land prices and competing uses make it difficult. “We really haven’t created a large enough scale yet to generate a consistent living,” says Emmett. “So if we get a chance to expand, I feel pretty good about what we’ve learned to date and I think we could apply it to a larger scale, but it is difficult to expand in our area.



The Jordans’ winter grazing bred heifers receive a protein supplement during the third trimester of pregnancy. The goal is to balance forage production and demand to graze as close to year around as possible without using baled forages.

“There are many people who would like to be in the cattle business, and there is a high demand for the acres. In a 12-inch rainfall zone, it takes a lot of acres per cow. We are always trying to improve our grazing management to get more benefit from the land that we do have, and we are still experimenting.

“I feel we have hit a little bit of a plateau. We have made some infrastructure improvements to facilitate the progress we’ve made, but whether we are able to do more will be the challenge. Water is our big



Here are the Jordans’ cattle using one of their tire tanks, which have a 12-foot deep, vertical tube underneath the center to convey heat from the ground to improve four-season function.

issue—to have enough water in enough locations for the cattle.”

He would also like to have a more flexible operation that could maybe

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be more layered, with some yearlings (calves held over winter for next year's grazing) as a risk-management tool. On a drought year with less grass, the calves could be sold at weaning age, but on a good year they could be held over, to take advantage of the grass and the gain as yearlings.

"Ten years ago when we expanded, we didn't have enough cattle of our own to stock the ranch, and we took in more of other people's cattle during that time," says Emmett. "I didn't want to borrow money to get more cattle of our own. We were more dependent on bringing in other cattle, using them as a risk management tool, but now that we are down to just the two groups of cow-calf pairs it's a little less flexible than it was then."

"Since we calve in May and June, this means that by the next March our later calves would be appropriate to run as yearlings. I would like to run my own, and then sell those early if we have a dry year, and preserve the genetic base of the cow herd—and not have to sell many



Ranch visitors during a Colorado Section of the Society for Range Management field day on some of the Jordans' leased ground.

bred cows or pairs. We are trying to get the cow herd more tuned into the natural production cycle, where the peak of grass production is in May and June."

In this region most people calve earlier and sell their calves in the fall, so there is an abundance of feeder calves in the fall. "From a marketing standpoint, there are not very many six-weight steers available in March and the price is better. So we try to be counter-cyclical in terms of the market and also fit what Nature is providing us in terms of the cow production cycle," Emmett says.

"I came to ranching a bit late in the game, and didn't have the financial resources that would enable me to just bite it all off at once. We've had to grow it gradually, over time. I was slow out of the gate, but hopefully still have some time left to keep improving on it."

"In my region the average age of cow-calf producers is pushing 70, and this shapes the conversation. I think it is also important to give some of our time back to our community. We try to help the people who will be next in line. Who is going to figure out how to make it work? The challenges here are certainly increased when faced with only 12 inches of rainfall, compared to pastures in a place like Missouri." Ultimately, a ranch has to work on all three levels. "It has to work financially, ecologically and you need to enjoy it. If you are not having fun, what's the point?" says Emmett.

Giving Back

The Colorado Section of the Society for Range Management is active with education, and this is a group that Emmett has been involved with for several years. This year he is President of the Section and gives some of his time to this group, as a way to be involved in his community in a broader sense.

He also serves on the Colorado State Conservation Board. "This is another way that I try to give back to the larger community. I feel that I have benefited from people who have been willing to volunteer and put on educational events. Even though we are trying to find our own way, just like everybody else, I think we should play a role in helping other people. Those are two organizations I believe in, and I also serve on our county livestock association board," he says.

"It's hard for people to make time to volunteer for things, and usually the thank you's are few and far between, but I think it is important. One of the things I like about Holistic Management, when thinking about the people aspect, is that there should be a level of concern for everybody. It's not just about what I want; it's how can I be a part of my community. When you are assessing the whole, and looking at the people portion, it doesn't just end at the ranch gate."

"One of the things I've noticed about the regenerative agriculture movement at the moment is that it seems like it's really popular to throw rocks at other people who do things the traditional way, but I don't like to go down that path. There is a reason why those people are doing things the way they do."



Carrie, Walter and Emmett Jordan on the evening Walter was named president of his FFA chapter.

"They are entitled to their own 'wholes' and unless you really understand where they are (walking in their shoes, their path) you can't really be a good neighbor. That's why I don't like to see people differentiating themselves by putting down 'big ag.'"

"HMI can help with navigating change, and I think most people come to HMI either wanting to change or maybe having to change for one reason or another. Or, they need help getting started in agriculture."

"Another thing about HMI is its mission. How cool is it to work with an organization that genuinely exists to help other people reach their goals? That's an amazing thing. I am thankful for having been exposed to some of the training and ideas, and I also have a lot of admiration for the people who have developed the organization and are spending their time seeing how they can help other people be better at what they want to do." 🌱



PROGRAM ROUND UP

Grow the Growers Report

In July the trainees and incubators from the Grow the Growers Farm Training and Business Incubator Program in Albuquerque, New Mexico participated in a Holistic Management training that HMI has delivered for the past four years in collaboration with the Agricultura Network, Bernalillo County Open Space, and the New Mexico State University Cooperative Extension, with funding from the Thornburg Foundation. Two of the trainees, Becca Marshall a first-year trainee and Sergio Schwartz a second-year incubator, manage their land together. They shared their experience creating their shared Holistic Goal and how it has helped them with their project.

Tell us about your project.

Our community farm, Del Cielo, is in its first year of growth. We have one acre of land in the South Valley of Albuquerque. Three quarters of the acre is at our main farm space and a quarter of the acre is being farmed on county land. The primary focus of our farm is on community building and strengthening the South Valley food system. Using regenerative practices, we are working to grow culturally- and locally-appropriate foods that feed the community and land; this year we grew mixed vegetables and flowers and hope to continue to expand our native and locally-adapted plant species.

What motivated you two to complete your Holistic Goal for your land project?

Sergio: I think it is really easy to become paralyzed when you realize that many of your values seem to struggle lining up with popular practices and notions around what it means to farm or to steward land. It can even create a sense of imposter syndrome making me feel like a poser if I'm not working a certain way. I feel like the Holistic Goal gave us the framework on which we could begin to build a community vision on the foundation of our shared core values.

Becca: Another part of why we wanted to create a Holistic Goal was to clarify our vision and mission as a community farm, which will help us build a supporting structure that can guide us as we continue to grow and make decisions.

What was the most important thing you learned while drafting your goal?

Sergio: How things are not always black and white. And a Holistic Goal can be an organic and evolving document that grows and changes with our understanding and practice of stewardship. We realized that as we developed our goal some of our actions were not aligning with our beliefs and it helped reorient us to proceed with more insight and thoughtfulness.



Becca Marshall

Becca: I agree with Sergio, creating the Holistic Goal helped us reassess the decisions we've made so far and change those decisions where appropriate so that we stay in-line with our goal. For example, one of our goals is to strengthen the food system in our local community, however, we had been selling at the downtown Grower's Market in Albuquerque, which is not a market in the community we grow in. So, we decided to withdraw from that

market and will now be selling at a local market in the South Valley instead to better support that goal.

How did you feel after completing your Holistic Goal (or reviewing it)?

Sergio: That feeling you get when you start to build something and the pieces come together in a way where you actually begin to see your plans taking shape. Excited in anticipation!

Becca: We had written a lot of the pieces of our Holistic Goal for a grant prior to this, but it was great to revisit and reshape our goals. It definitely makes me feel more focused and direction-full moving forward as a farm. 🌱



Sergio Schwartz

Excerpt from Del Cielo Holistic Goal

Del Cielo is a vibrant, community-focused farm hub supporting and expanding food sovereignty in the South Valley.

Del Cielo's primary focus is cultivating and strengthening community agency and sovereignty by recognizing it as a dynamic whole and working closely with the South Valley community.

Del Cielo is an educational & resource-center for community members as well as an agricultural-liaison—weaving together the resources and interests of other small farms, food & educational organizers, and established community organizations. At Del Cielo our efforts focus on creating a safe space, listening to, advocating for, and providing opportunities within marginalized communities, specifically those around the South Valley.



HMI Staff Changes

Kathy Frisch

It is with great sadness that HMI announces that Kathy Frisch (Harris) has left HMI. Kathy has served on our staff since 2015, most recently as HMI's Program Director. She has been a long-time Holistic Management practitioner and became an HMI Professional Certified Educator in 2015 after serving as a mentor in HMI's Beginning Women Farmer Program. She also focused her attention on the development of a mentoring program to support local area peer-to-peer groups of agricultural producers in adopting and implementing regenerative agricultural practices; engaging in a multi-year collaboration with NCAT's Soil for Water Initiative to engage producers in monitoring and managing land health for better water infiltration; and supporting a multi-year collaboration with The Nature Conservancy's Sustainable Grazing Lands Initiative to support ranchers in adopting regenerative practices.

HMI's Executive Director Wayne Knight noted, "We want to express our gratitude and appreciation for all her committed work, effort and support of this organization and of the regenerative agriculture movement in general. Her passion, integrity and wonderful human touch have meant so much to so many. On behalf of our board, our staff and our Certified Educator community we want to extend our best wishes in whatever role Kathy finds herself going forward." Thank you for all your contributions, Kathy!



Kathy Frisch

Dana McDaniel Bonham

Dana McDaniel Bonham has now joined HMI as the Program and Grants Manager. Dana was first introduced to Holistic Management in the 1990s while working in the Texas Hill Country. She strongly believes that Holistic Management can positively impact families that are on the land, the

communities they are a part of, and larger landscape resource regeneration efforts.

With 7+ generations of farmers and ranchers on both sides of her family, Dana appreciates the joys of living with the land, while understanding those complexities can be challenging.

Having spent time in Texas, Colorado, and Wyoming, Dana currently lives in Tishomingo, Oklahoma where she and her family run a small cow/calf operation with horses and pecans. Her husband, Marc, comes from a Colorado/Wyoming ranching background. In fact, they met and married when he was managing one of the last large ranches in Jackson Hole. Their son, Rio, has carried on the tradition with a strong career in FFA and ranching. He now conducts agriculture and natural resource research as part of his studies in Biosystems and Agriculture Engineering at Oklahoma State University.

Dana feels blessed that her time growing up on the family outfit connected her with deep roots to the land. Her father, Joe, led the family in seasonal harvests based on his traditional ecological knowledge and native ways of knowing all aspects of nature.

"Anyone who spent time with my Dad experienced his stories and the passion he had for hard work and being outdoors," Dana said. "Whether it was working cattle, harvesting pecans, or fishing, he made it an adventure that you never forgot. We all owe so much to him and the legacy he created."

Taking his lessons to heart, Dana has worked for conservation organizations on the local and national level and with the Teton Conservation District in Jackson, Wyoming where she provided education and collaboration activities for landowners and nature-lovers. She has



Dana McDaniel
Bonham

over 35 years' experience developing programs and writing grants and will assist HMI with those activities.

"From bees, to quail, to fish, to people, my Dad taught me that good stewardship is key to a healthy, happy life for all," Dana states. "I look forward to working with others who are striving to realize that holistic balance ~ with health and revitalization for the land, water, nature, families, and community." 🌱

PictureThis: Identify Plant, Flower, Weed, and More App Review

BY ANN ADAMS

I had heard about the app, PictureThis, about a year ago as a tool for plant identification. In June I finally downloaded and tried it out. A friend had shown me the app on her phone and I was ready to pay the \$19.99/year annual fee given how it performed out in the field.

This app works on both IOS and Android platform. It averages a 4.5 review rating out of 5. The biggest complaint appears to be that PictureThis doesn't make it clear how the free trial really locks you into subscribing because it's hard to turn the subscription feature off. There are over 30 million users at the time of this review. You can improve the app by sending in pictures and correcting the response of the app.

While it is not fool proof, the app notes it has identified over 27 million plants with a 99% accuracy. Certainly the primary audience for this app is backyard gardeners and people interested in ornamental plants. But it actually does a pretty good job with native plants and trees from my testing. I have used it on my land to identify various forbs. It does okay with grasses as long as there is a seed head. It will at least get you close in the

family of the grass. It lets you know if it is a perennial or not and season of growth as well as genus, family, order, class, and phylum. It also gives you a little warning if it sees a brown spot on the leaf with information about what might be causing it or other concerns about disease and pests.

I also liked that you could "collect" the plant by taking a picture even if you don't have cell coverage. Once you are back in cell coverage you can go back and identify the plant and add it to your "garden" if you want to. I use the garden feature to keep all the plants I've identified in my area so I can run back through them and get better at remembering which one is which.

The app also gives you a couple of choices when it identifies the plant so you can override the first choice if you have clarity it is really one of the other choices or you have an alternate to suggest. I've been surprised by the accuracy of the app and think it is well worth the annual fee. The app interface is user-friendly and intuitive.

If you or a family member is in charge of monitoring for your farm or ranch or is a budding botanist, I highly recommend PictureThis as a plant identification app. 🌱

Certified Educators

The following Certified Educators listed have been trained to teach and coach individuals in Holistic Management. On a yearly basis, Certified Educators renew their agreement to be affiliated with HMI. This agreement requires their commitment to practice Holistic Management in their own lives and to seek out opportunities for staying current with the latest developments in Holistic Management.



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