

WAY TO GROW

ENVIRONMENTAL CONCERNS LEAD FARMERS AND RANCHERS TO NEW APPROACHES

Words by Mike McKibbin | Photos by Cat Meyer

Drought, climate change, and soil health are just some of the issues facing farmers and ranchers on Colorado's Western Slope as they seek the best methods to make a living on the land. As a result, some are turning to organic farming, solar power, and holistic management to grow crops and raise animals.

Environmental considerations include groundwater quality, the use of pesticides, fertilization methods, and carbon dioxide emissions. Here are a couple of examples of how some farmers and ranchers try to address these types of issues.

MYRIAD METHODS FOR SMARTER FARMING

Jenn Mueller and her husband, Brian Murray, own and manage the off-grid, solar-powered Yurtstead Farm, located about halfway between Olathe and Montrose. They produce vegetables, meat and eggs, and flowers that are sold at local farmers markets.

It would have cost around \$15,000 to bring electric power lines to the small farm, so Mueller and Murray turned to the sun. "The electric grid is so coal-driven, and that's a major contributor to climate change," Mueller notes. "I didn't want to contribute to that."

Yurtstead Farm gets water from the Tri-County Water Conservancy District. The farm sits on a flat plain and uses drip irrigation and straw mulches to help keep the soil moist and use water

efficiently. "We try to trick the plants into thinking they live somewhere else, so we can grow things like broccoli year-round," Mueller says.

Cover crops also help in the hot and dry climate, she adds. These crops, which include plants such as winter rye and clover, are planted after the harvest of cash crops; they can prevent soil erosion and add organic material when tilled into the soil. In 2016, their use was recognized by the White House as a climate-smart agriculture practice.

It took Mueller and Murray three years to get their soil healthy enough to grow a big enough harvest for market. They have now been market farmers for five years. Murray tends to the hogs, turkeys, and other animals on the farm. They rotate crops and animals over seven of their 10 acres, but the vegetables and animals are not certified organic. "It's more of a natural product," Mueller says. "We have some practices that can lead to organic, but not all of them. It's a tough standard to meet."

Organic farming can have a lower impact on the environment. However, it usually results in lower yields, so more land is likely to be cleared and more water extracted to produce as much as conventional agriculture. It can take about three years to obtain organic certification, and meeting the regulations add extra costs.

At Yurtstead Farm, chickens eat pest insects in a small kitchen garden, flowers help aid pollination, and pig manure fertilizes the

vegetables. “We try to treat our 10 acres the way we think the rest of the world should treat their land,” Mueller says.

HOLISTIC MANAGEMENT BRINGS SUCCESS

For more than 15 years, Bill and Kelli Parker have used holistic management of their livestock in the Gunnison Basin. Bill Parker says the method is focused on quality of life, ensuring a future resource base is protected and production is attainable. “We use it as a guiding light for all our decisions,” he adds. “In financial planning, we set a profit target first. In grazing, we get the animals to the right place at the right time.”

The Parkers oversee the City of Gunnison’s Van Tuyt Ranch, which the city bought to help protect its groundwater. “They originally wanted to see us grow hay and put a trail around the edge of the property,” Parker says. “But we convinced them having animals — and the way we handle them — is better for the land and the aquifer.”

With a focus on regenerative grazing to produce grass-fed beef, the Parkers have doubled production. Parker notes his summer livestock herd usually numbers in the thousands.

“I think holistic management is growing in popularity” Parker says of U.S. farmers and ranchers. “The success stories are just amazing.”

Converting from a more conventional ranching approach is not difficult, Parker notes. “If you do this right, it costs less and you gain more,” he adds. “You just have to stay flexible.”

AGENCIES PLAN RESEARCH, OFFER HELP

The Rogers Mesa Research Center, located approximately four miles west of Hotchkiss in Delta County, reopened in 2017. Part of the Western Colorado Research Center operated by the Colorado State University (CSU) College of Agricultural Science, it was closed in 2011 due to state budget cuts. The site has 65 cultivatable acres, most of which are planned to be certified organic.

Research scientist Frank Stonaker is one of two full-time staff members. Because the 5,800-

foot elevation center was closed for so many years, he says, orchards and vineyards need to be replanted. A nationwide shortage of organic fruit saplings means it will be at least a few years before research studies can begin.

The research will focus on organic agriculture with an emphasis on tree fruits, table and wine grapes, seed production, and greenhouse studies. Stonaker says since Delta County has the highest concentration of organic farmers in Colorado, research into that approach makes sense.

“It’s an approach that really works hand-in-hand with climate change and can significantly lower emissions and improve carbon sequestration,” Stonaker adds. Carbon sequestration occurs when carbon dioxide is absorbed by trees, grasses, and other plants through photosynthesis and stored as carbon in trunks, branches, foliage, roots, and soils. According to the U.S. Forest Service, interest is growing in carbon sequestration as a means of climate protection.

An organic fruit grower himself, Stonaker says he and his wife have noticed earlier flower dates on their trees, which pushes up production time. “Then with drought, we have had higher temperatures and more water evaporation, so you need to figure out how to live with that,” he adds. “But as you increase the soil’s organic matter, you will have greater resilience to drought.”

In the meantime, the center will begin studying seeds for cover crop species. Native seeds are important due to the local climate, Stonaker notes. Plans also call for the center to operate a business incubator program for new, first-time farmers. “We want to have some greenhouses, so they can conduct their own research and we can be a real community-use facility,” Stonaker says.

The Tri River Area CSU Extension provides information and education, and encourages research-based knowledge for farmers and ranchers in Delta, Mesa, Montrose, and Ouray counties.

Extension Agent Seth Urbanowitz, an agronomist, says area farmers and ranchers have

asked about carbon offsetting and sequestration to help address climate change. Another subject of interest is no-till crop management, a practice common in the Midwest but not widely practiced on the Western Slope. Urbanowitz has found no-till farming can be more profitable (if performed correctly), due to reduced labor, fuel, irrigation, and machinery costs.

Urbanowitz has also noticed a sharp increase in the use of cover crops in the last decade, which can help with soil health and water-holding capacity. Salinity is a big problem in our area,” he adds. “It’s hard to keep [selenium] levels down, so they have to use more water than other areas like the Midwest.”

A study on area soil health is planned to begin this year to help develop best management practices for farmers and ranchers and help address these types of issues, Urbanowitz adds.

DIVERSITY, CONSISTENCY CAN LEAD TO SUCCESS

Farm Runners is a regional food distributor of custom-harvested farm products. It serves the Roaring Fork, Gunnison, and Grand valleys year-round. Based in Hotchkiss since 2012, the company helps new and established family farms find a western Colorado market for their products.

Emma Stopher-Grissin with Farm Runners says if a farmer picks one or two crops to focus on and does those well and consistently, “they have a huge potential to be profitable.”

“If farmers focus on diverse crops, I think

there is large opportunity to grow and produce local products,” Stopher-Grissin notes. “Not just produce, but things like local jams and jellies, freeze-dried food.”

Farmers should be aware of practices such as planting new vegetable crops every one or two weeks so they can harvest a crop weekly. Using drought-tolerant seeds is another key, she adds.

Having enough water — or too much — can often make or break a crop, Stopher-Grissin says. “In our climate especially, water is a key,” she explains. “Last year from about mid-July through November we saw what happens with drought, because there were really no fall crops.”

While Stopher-Grissin estimates 60 percent of the produce they handle is grown organically, she notes, “We would not be able to be in business without our conventional clients. They can produce more, and they have more land to do it over.”

Stopher-Grissin says when a farmer asks about growing organic or conventional produce, she tells them if they can obtain certified organic status, they can charge higher prices and potentially make a higher profit. But that choice means meeting tough standards.

In a state with approximately 10.6 million acres of cropland and 33,800 farms and ranches, it’s essential to make choices that are both ecologically and economically sustainable. Fortunately for growers — and for Colorado’s \$40 billion agricultural sector — it’s becoming clear that *eco agriculture* can mean both. ♣

Grazing: A Cleaner Way to Clear Fields

By Melanie Wiseman

Last spring, from the comfort of their back patio, landowners Susan and Scott Hall watched as 150 Shetland Sheep nibbled through weeds, willows, and dormant alfalfa. The wooly weed eaters efficiently cleared fields, irrigation canals, and wastewater ditches. Meanwhile, they aerated the ground and left behind manure that built organic matter in the soil and fed organisms that broke down minerals for easy plant access.

The sheep belonged to Jared Lloyd, who brought them down from Collbran to feed on valley fields. He says grass-finished meats from healthy, grazed soil are best, both nutritionally and ecologically. High-intensity, short-duration grazing is key. Lloyd used portable electric fences, moving his flocks into a new rotation when forage was grazed to the ideal level.

Shetland Sheep clear, aerate and fertilize a field on the right, across from a field that was burned, left.

For their part, the Halls appreciated that the sheep cleared crop residue and unwanted plants from their land. Grazing is less dangerous and impactful than burning, and grazed fields retain and capture more moisture for improved soil and visibly healthier vegetation. For Lloyd, the Halls, and the flock — it was a win-win arrangement all around.

