

LET THE COWS SAVE YOU MONEY



Producers define, share benchmarks for low-input cattle production.

by Troy Smith, field editor

Out there on the fringe of the beef cattle industry, there are a few cow-calf producers who don't worry much about profitability. When necessary, they can get an infusion of money made through some other endeavor — one that is profitable. However, most cow-calf folk want their business enterprises to be profitable, and they realize that controlling input costs is an important factor in maintaining and growing profitability.

Some of those same people would cringe at being called low-input producers. They wouldn't want to be accused of cutting corners or trying to starve a profit out of their cows. They wouldn't want to look like poor stewards or the kind of operator who raises sorry stock.

It seems that among a segment of beef cattle producers, a perception still lingers that links “low-input” production systems

with lackadaisical management and poor product quality.

So what does it really mean to be a low-input producer? What say the academics — the educators who advocate for low-input production systems? What say cattlemen unashamed to be known as low-input producers?

Defining low-input

Those we solicited for comment generally agreed that being a

low-input producer is about applying careful scrutiny to the purchases of components of production. It's about minimizing money spent for off-farm or off-ranch inputs, while optimizing the use of on-farm or on-ranch feed resources. It typically requires a high level of management, particularly with regard to use of grazed vs. fed forages and the kind of cattle that fit a truly forage-based production environment.

All contributors agreed that low-input production and consistent production of a high-quality, premium-worthy product are not mutually exclusive.

“Low-input production is a style of management that attempts to bring cattle production into alignment with the resource base,”

says Eric Bailey, University of Missouri beef specialist, noting that many producers do just the opposite. They spend a lot of money trying to make the production environment fit their preferred kind of cattle.

Bailey fears these producers are focused narrowly on cattle-centric performance metrics (genetics, average daily gain, quality grade, etc.) and have lost sight of the bigger picture. They worry a lot about cattle performance, and too little about pasture performance.

Bailey has seen many operations using stocking rates beyond the carrying capacity of the land, so cattle are fed supplemental hay throughout much of the year. He



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suggests these producers may be forgetting that carrying capacity is a function not only of the land, but how it is managed. Actual grazing management is sorely needed.

Instead of commonly practiced continuous grazing, which harvests only one-quarter to one-third of the forage produced in a year, a simple, managed rotational grazing system could increase harvest efficiency by 25%-40%. Better-managed grazing allows cows to harvest more forage themselves and reduces dependence on harvested forages and other supplemental feed.

Emphasizing that mature cow size also matters to low-input production, Bailey urges producers to think about how genetic selection for growth traits may have affected their cow herds. They

need to know just how big their own cows are and realize that, in many production systems, bigger cows are less productive.

In a given environment, a 1,400-pound (lb.) cow requires more nutrients during the course of a year than does a 1,200-lb. cow. Does the bigger cow wean a calf that is big enough to pay for her higher cost?

“A lot of people think that if they try to moderate mature cow weight, they will end up with small-framed, Number 3 feeder cattle, but there’s no need to go

from one extreme to the other. Just get rid of the really big, unproductive cows,” Bailey explains. “Phase 2 is to incorporate different genetics. But be smart with selection for moderation. Don’t select from the bottom 1% for yearling weight; select for just below breed average.”

Strategic inputs

Travis Mulliniks, University of Nebraska animal scientist, says low-input producers understand that not every additional input results in an equal or greater output. However, they also understand where they can capture or create value through strategic addition of inputs. Supplementing cow nutrition is a good example.

“Within low-input systems, you have time periods when additional supplementation may increase cow weight or body condition score (BCS), but those changes may not result in an economic benefit or output change. But inadequate nutrition during key physiological time periods can result in negative outcomes. Such

periods include late gestation and early lactation,” offers Mulliniks.

“I think about using a supplement (increasing input) when it will critically change animal performance, such as with resumption of estrus after calving and pregnancy rate,” he adds.

In Mulliniks’s opinion, low-input producers don’t chase genetic trends. That’s because low-input production requires a certain type of cow — moderate for frame, growth and milk production.

Selection pressure for milk production can have negative

consequences for reproduction, since heavy-milking cows may be at greater risk of decreased pregnancy rate and, ultimately, early culling. Heavier-milking cows also have higher nutritional demands, he says. To meet them, producers may need to reduce stocking rates or provide more harvested feed.

Mulliniks says continued selection for increased calf growth and increased milk production really ought to yield higher weaning weights.

However, industry data suggest that average weaning weights have not increased accordingly. Could it be that genetic expression of those traits is being limited by the environment?

“In forage-based systems, balancing the environment (forage quality and quantity) and cow requirements is a driver of production efficiency,” explains Mulliniks. “Selection of production traits that exceed the capacity of the production environment may not increase output (weaning weight), but it will increase production costs of the cow herd.”

Environmental test

Controlling feed costs is important to Cole Gardner, whose family operates Manzano Angus Ranches at Estancia and Yeso, New Mexico. They have both registered and commercial cattle, grazing 12 months of the year. Supplemental protein is provided when native forages can’t meet animal requirements, and some hay is fed during periods when winter weather hinders grazing. Management knocks the rough edges off, but cattle still must fit the environment.

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so we let the environment test our genetics and cull what doesn’t work here,” states Gardner, explaining that what does work is an early-maturing heifer that breeds easily the first time and every time without coddling. She matures into a 1,200- to 1,250-lb. cow that gives a moderate amount of milk. Still, she should consistently wean about 50% of her own body weight. Discounted by some people, Gardner still thinks that’s a good rule of thumb.

Genetic selection is on optimum, rather than maximum, performance. For the Manzano low-input model, average growth trait expected progeny differences (EPDs) are optimum. For

birth weight, milk and mature weight, Gardner prefers numbers that are a bit below average.

“I don’t know if many people focus much attention on mature weight EPD, but we do, and I think it has helped us keep cow size in check,” explains Gardner. “But we don’t neglect selection for adequate growth and carcass merit. You can keep cows moderate and still raise calves that grow and produce high-quality product.”

Every mouthful has a cost

It is often said that producers should match cow type (and size) to the environment, but Hennepin, Okla., rancher Dillon Sparks wonders if some people use that as an excuse to run big cows in more bountiful environments. Even

Continued on page 56

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when forage is abundant, every mouthful has a cost.

“I’d argue that the moderate cow fits everywhere, because you can run more of them. It’s a function of stocking rate,” states Sparks.

He explains how, in his mixed-grass-prairie region, a land resource capable of grazing 100 head of 1,200-lb. cows at moderate stocking rates, would graze only 85 cows averaging 1,400 lb. in weight. Even if their calves wean lighter, the smaller cows will yield more pounds of calf per acre, typically selling at a higher price per pound.

“What made me appreciate moderate size and milk was a set of registered Angus cows my dad bought and added to his commercial herd,” says Sparks. “They were very moderate and fit a system based on year-round grazing and minimal supplementation. Most of those cows stayed in the herd a long time. When we chased down their EPDs, we discovered those cows had fairly high \$EN (cow energy value) index values, so I don’t think you can ignore \$EN if you’re selecting for cattle to fit a low-input system.”

Maternal cows, terminal bulls

Lon Reukauf ranches near Terry, Mont., where most of his commercial cows are mated with large-framed bulls, because he has a market for relatively big females. But part of Reukauf’s cows are bred with the goal of producing the ranch’s own replacements. Here, genetic selection focuses on females that can thrive on grazed forages — females that won’t get too big or milk too heavily. It’s about optimization.

“We use the \$EN index and set parameters for acceptability when looking at EPDs. We don’t want a yearling weight EPD over 100. The 60-to-80 range is better, but certainly not below 50. Thirty to 40 is the acceptable range for weaning weight EPD,” says Reukauf, who also pays attention to carcass traits.

Again, it’s about optimization, he says. It’s not selecting for the biggest ribeye area, but trying to eliminate those that are too small.

Replacement heifers aren’t babied and must pass the challenge of breeding within a 40-day period. Breeding back while nursing their first calf may be the most important challenge, and Reukauf’s best estimator of fitness for the system and longevity in the herd. Here again, the environment makes the final sort.

“We do weigh them once in a while, so in midsummer, during early gestation and with a calf at side, most of our cows weigh 1,250 to 1,300 pounds. Not small, but it’s big enough. I think it’s the kind of cow that could work in a lot of low-input operations,” offers Reukauf. “And I think there is opportunity for people that are good at marketing to merchandise bred females that will fit a low-input system. We’re going to start doing that.”

Kris Ringwall, former North Dakota State University beef specialist and current director of the University of Saskatchewan Livestock and Forage Center of Excellence, says managing big, heavy-milking cows can be profitable if per-acre costs for feed resources are low enough. Putting machines between the mouth of a cow and her feed

source might pay, sometimes.

“If your costs really are low enough to run big cows, then do it,” Ringwall says, “but many people can’t. Going west, it just gets harder.”

Changing your calendar

Low-input production typically requires successful integration of cattle and forage resources. It typically requires emphasis on grazed forages rather than harvested forages, and the cattle production cycle may need adjustment to match nutritional requirements of animals with nutrient availability of grazed forages. Many low-input systems involve calving on green grass.

“Calving date is a driving factor in controlling inputs for feed and for labor,” states Ringwall, noting that changing one part of the system affects other parts. “Change calving date, and it likely changes marketing — when you sell the calves.”

Ringwall says the cow-calf yearling model seems to work for many forage-focused low-input producers. In many cases, calves are born in late-spring and retained after weaning. They are wintered at low cost, and may achieve only modest gain. But compensatory gain kicks in when calves are back on green grass, from spring through part or all of the summer.

“And with a yearling calf, every month is a marketing opportunity,” offers Ringwall, noting that yearlings also may help the industry escape the “antibiotic loop.” He suggests taking older calves to the feedyard likely is part of the answer, since later-born calves grown on grass arrive at the

feedyard as yearlings with more mature immune systems.

Ringwall says low-input producers are profitable when they successfully integrate management of cattle and forage resources to produce more pounds of calf per acre, recognizing the importance of cow size. Calves must be properly designed, and they have to be properly marketed. To be readily marketable, cattle must

meet or exceed standards of industry acceptability. Ringwall says the genetic tools are available to accomplish that.

“I think some low-input producers probably stop at birth weight and weaning

weight, when they still ought to be looking at yearling weight and carcass traits,” says Ringwall.

“Don’t throw out the other technologies,” he advises. “Recognize the importance of good bull selection using technological advancements that improve accuracy. Generally, keep EPDs above the 50th percentile within the desired traits and breed. As a matter of practicality, become comfortable with bulls that are above the 50th percentile but may not exceed the upper 30th percentile for commercial production.

“Finally, recognize the value of breeding systems, maximizing the traits of interest in the terminal sire program while balancing appropriate traits on the maternal side. Let the cow save you money, and the bull make you money.”

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Editor’s note: Troy Smith is a freelance writer and cattleman from Sargent, Neb.