



# HEREFORD HETEROSIS

## MORE CALVES AND LESS COST





“Mother cows are probably worth more now, historically, than they’ve ever been worth. So, having a really solid mother cow herd that lasts a long time is as good as money in the bank,” says Joseph Merritt of Merritt Ranch, Porterville, Calif.

Merritt and his family were aiming for tougher, more productive mother cows when they reintroduced Hereford bulls to their program about five years ago. Merritt’s grandfather had a Hereford herd when he began the family’s ranch in the early 1970s. However, like many commercial producers, the Merritts followed industry trends toward heavier, leaner carcasses, using a lot of Simmental, and then making the herd black in the name of carcass quality and marketability.

As the herd became more straightbred black, Merritt says fertility declined and cow costs increased. Keep in mind, the Merritt Ranch covers some sprawling, unforgiving geography with cows running from about 500 feet in elevation to nearly 6,000 feet, with the associated variation in topography and moisture.

“We needed more hybrid vigor in our mother cow herd,” Merritt says. “We just needed tougher cows.”

*Learn more about Merritt Ranch here.*



#### **MORE FERTILITY AND LONGEVITY**

Merritt explains their Hereford-sired F1 black baldy females are accomplishing numerous goals with improved fertility, mothering ability, breeding back on time and consistently weaning a calf.

“Just how long they last,” Merritt says. “We put a number iron on our mother cows to know when they’re giving us their first calf and those black baldy cows just seem to really last a long, long time. So that’s why we want to retain as many of those heifers as we can.”

Merritt emphasizes all of these things with the seedstock producers who supply him Hereford bulls. As well, he explains, “The three major traits that I look for and ask for are polled, eye pigment and low birth weight.”

Merritt explains his Hereford-sired black baldy heifers retain their body condition and breed back easier than their straightbred black counterparts.

“In the past, we’ve had lots of heifers that have kind of gone the other direction but these Hereford-influenced crossbred female seems to just hold up better, staying in the right body condition for a better breed back while still producing a very strong, healthy calf,” Merritt explains.

“We’ve got a lot of replacement heifers that are now black baldies that just have amazing udder structure. They’re great milkers,” Merritt says. “I think Herefords typically used to be thought as not having enough milk. You can definitely tell these cows are great moderate milkers, not too heavy, not too light; the proof is in the calves they wean.”

Plus, Merritt explains the Hereford-influenced cattle are gentler and easier to manage.

“In the past, we’ve had a herd of cows that you wouldn’t dare bring the kids out to come help gather, and that has changed a lot in the past few years, especially with the influence of the Hereford genetics,” Merritt says. “Now it’s fairly safe for the family to be able to come out and for the kids to be able to enjoy gathering and working the cattle. We’ve definitely seen the docility change with the Hereford influence, as well as in implementing different handling techniques.”

#### **RANGE-TOUGH BULLS**

Hereford bulls themselves are an added benefit on the cost side of the ledger at Merritt Ranch.

“The Hereford bulls have done really well. They stay sound and have plenty of libido. They’re out really covering country and chasing cows. They do a good job. They’ve held up well in terms of structure, fertility and everything,” Merritt says. “We use our bulls four to five years just to keep away from any venereal diseases. Even if they’re still a 100% sound, we usually sell them and try to keep bringing in some new genetics.”



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– JOSEPH MERRITT, MERRITT RANCH

“You absolutely have a feed efficiency advantage when you put Hereford-influenced cattle on feed. With feed costs the way they’ve been the last two or three years, there’s absolutely no doubt in my mind that the most profitable cattle have been the cattle that have gained and converted as cheaply and as efficiently as possible.”

— LEE MAYO, HRC FEED YARDS LLC



#### HEREFORD-INFLUENCED CATTLE MAKE THE GRADE

Merritt Ranch added the advantages of heterosis to its black herd with Hereford bulls without sacrificing feedlot and carcass performance.

“Ultimately, we’re still able to go back to a black calf crop for marketing purposes but getting our F1 cross on our mother cows,” says Joseph Merritt, Merritt Ranch.

The Merritts retain ownership in all of their calves through the feedlot. Today that means everything but the replacements. Feedlot performance is impressive.

“In the last few years, 98% of our cattle have graded Choice, and in a number of batches of cattle we’ve been 20%-plus grading Prime,” Merritt says. He notes carcass performance is also a priority in his bull selection, both Angus and Hereford.

“You absolutely have a feed efficiency advantage when you put Hereford-influenced cattle on feed,” says Lee Mayo, general manager of HRC Feed Yards LLC, Scott City, Kan. “With feed costs the way they’ve been the last two or three years, there’s absolutely no doubt in my mind that the most profitable cattle have been the cattle that have gained and converted as cheaply and as efficiently as possible.”

HRC Feed Yards is a custom-feeding operation with a one-time capacity of 60,000 head. Mayo estimates 25-35% of the cattle fed at HRC come from the Western states.

“If you just gain a half a pound a day better, your cost of gain goes down about 20 cents per pound when corn costs \$6 per bushel, and that’s a multiple. It multiplies over the 700 pounds that we put on them, and that ends up being real serious dollars by the time we’re done,” Mayo says.

While he says Herefords are the most feed efficient breed, Mayo also notes the hybrid vigor that comes with crossbreds always offers added production and economic advantages.

At the same time, Mayo explains, “There are darned sure some Hereford genetics out there that’ll make the upper two-thirds of Choice and qualify for Certified Hereford Beef®. We appreciate those, and we’re trying to identify more through the programs that we’re using. But especially if you crossbred them, with the advantages of heterosis, the Hereford-influenced cattle will qualify. We sell a lot of sell Hereford-based steers through Certified Hereford Beef, Certified Angus Beef® as well as Black Canyon® Angus Beef and a lot of the premium programs.”



## RELOAD WITH HEREFORD HETEROSIS

Although input costs remain elevated, current cattle price forecasts suggest there will be economic incentive for producers to build back more than 2 million cows; cows liquidated the last several years due mostly to drought. Building back with more heterosis comes with less production risk. Building back with Hereford heterosis leverages the breed’s inherent strengths.

Scan the QR code to sign up for free:

- Market Tracks — monthly email of year-over-year market summary and trends.
- Bald Faced Bottom Line — monthly email of Hereford news pertaining to commercial producers.
- Baldy Advantage — Sign up to receive a free issue in the mail with the opportunity to receive a free subscription.

To source Hereford bulls:

- Emilee Holt, AHA Western Region Field Representative  
208-965-3130, [eholt@hereford.org](mailto:eholt@hereford.org)

To learn more about marketing options for Hereford-influenced cattle:

- Trey Befort, AHA Director of Commercial Programs  
816-218-2277, [tbefort@herefordbeef.org](mailto:tbefort@herefordbeef.org)
- Jake Drost, Feeder Cattle Marketing Representative  
806-884-5426, [jdrost@hereford.org](mailto:jdrost@hereford.org)



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# HETEROISIS PAYS

Economic and production benefits associated with heterosis are documented by decades of industry-wide research in commercial crossbreeding systems.



## DIRECT HETEROISIS

Increased performance of the crossbred calf relative to the average of the straightbred parental breeds.

- + 1.9% Survival to weaning
- + 3.9% Weaning weight
- + 2.6% Post weaning gain
- + 3.8% Yearling weight
- + 2.2% Feed conversion

## MATERNAL HETEROISIS

Increased performance of the crossbred cow relative to the average of straightbred females of the parental breeds.

- + 3.7% Calving rate
- + 3.8% Weaning weight
- + 38.0% Longevity
- + 17.0% Number of calves
- + 25.3% Cumulative weaning weight

Primary crossbreeding advantages are improvement of lowly heritable traits, such as those associated with reproduction, which are difficult to impact through direct selection pressure. Small, net-positive effects in multiple traits affecting commercial cow-calf profitability — pregnancy rate, calf livability, calf health, etc. — yield significant returns that are difficult to measure. Crossbreeding value is most visible in the increased number of calves (lifetime), cow longevity and cumulative weaning weight (lifetime).

### HEREFORD HETEROISIS PAYS MORE

Hereford genetics offer more crossbreeding power because they are the least related to other Bos Taurus breeds, as documented by the U.S. Meat Animal Research Center (USMARC) 2000 Bull Project. Plus, Hereford's unique, inherent genetic advantages compared to other breeds offer added breed complementarity, especially when crossed with Angus. Hereford advantages include: docility, fertility, feed efficiency in the pasture and feedlot, longevity and production efficiency.

### HEREFORD-SIRED BLACK BALDY FEMALE ADVANTAGES:

- 7% higher pregnancy rate
- More calves weaned per cow exposed



- \$51 more per cow per year in net present value (2009 calculation)
- 3.5% more average rate of return on assets
- 2 pounds less pasture forage per day while maintaining more body condition<sup>1</sup>

Black baldy cows require 1 acre less of moderate-quality forage per year compared to straightbred black Angus peers, according to Oklahoma State University research.<sup>1</sup>

### HEREFORD-SIRED BLACK BALDY STEER ADVANTAGES:

- Heavier weaning weights
- Increased feed efficiency
- Lower cost of gain
- Lower feedlot breakeven
- \$28 per head less feed cost across finishing period

Based on feed efficiency alone — breed differences documented by the USMARC — Hereford has a \$51 per head advantage over the finishing period, when compared to Angus.<sup>2</sup> Hereford's economic advantage increases as feed costs rise.

<sup>1</sup>On average, Oklahoma State University researchers measured about 2 pounds per day less moderate-quality forage (Oklahoma pasture) intake in the black baldy cows. On an annual basis the black baldy cows would be expected to consume about 725 pounds less forage.

<sup>2</sup>Calculation based on breed differences for feed efficiency documented by the U.S. Meat Animal Research Center, using current feed costs (Oct. 2022).