

Forced Opportunity



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Build back from the drought with more heterosis.

It's never how you hard you get hit, it's always how you respond.

There's truth, even a bit of inspiration in such a maxim, but it typically takes some surviving afterward. Drought comes to mind.

Through August, beef cow slaughter was running about 14% higher year over year, due in part to high costs and economics, but likely stemming mostly from too many days with too little feed and no chance to make any. Culling was significantly more in some parts of the country.

David Anderson, Extension livestock economist with Texas A&M AgriLife Extension Service looked at federally inspected beef and dairy cow slaughter for region 6, which includes Texas, Oklahoma, Louisiana, Arkansas and New Mexico. He compared cow slaughter in the region this year to levels during the last major drought (2011-12) in Texas and parts of other states.

"Cow packing plants in region 6 have processed 668,000 beef cows this year, up 31% (or 157,000 head) from last year. They have processed 217,000 dairy cows this year, just slightly below last year," Anderson explains, in the early-September issue of *In the Cattle Markets* from the Livestock Marketing Information Center.

"The states in region 6 reported 8.4 million beef cows on Jan. 1, 2022. Those states had 8.8 million beef cows on Jan. 1, 2011. While cows may come into the region for slaughter, it's likely that a larger proportion of the herd has been culled this year than in the last major drought," according to Anderson. So far this year, he says 8,000 more beef cows in region 6 have been slaughtered than in 2011; 164,900 head more than in 2012.

That is a mouthful, given the widespread, market-moving dry spell a decade ago.

The beef cow inventory at the beginning of the year was 2.3% less year over year at 30.12 million head, the smallest since 2015 (see *Locked and Loaded*, Page 38). Beef heifers held for replacement of 5.61 million head Jan. 1 were 3.3% less.

Mashing lemons

True to form, cattle producers who endured and built back from the last major drought did more than add stock. They came back with a younger herd capable of producing lots more carcass quality.

The trend toward increasing percentages of carcasses grading Choice — especially those grading in the upper two thirds of Choice or Prime — is impressive nationwide. Strides in the Southern Plains were that and then some, in part because there was more ground to make up on average.

Producers found opportunity in the challenge.

It's hard to argue against improved carcass merit being a primary contributor to much of the current robust domestic and international demand for U.S. beef. It's also hard to argue against the fact that, for some at least, the quest for carcass merit has come at the cost of positive trends in things like reproductive efficiency, feed efficiency and longevity that matter even more to an operation's bottom line.

Historic chances

Producers will find opportunity on the other side of the current drought. What will be telling is the genetics chosen to rear. Both economics and dogeared science suggest embracing more heterosis — building cows engineered to do more with less — should be considered.

Research from the U.S. Meat Animal Research Center (US-MARC) indicates that heterosis yields 25% more lifetime cow productivity and 38% more cow longevity. All told, crossbred females are estimated to be 30% more productive over their lifetimes, due to increased fertility, calf survivability, increased weaning weights and cow longevity. Specific gains revolve around the genetic diversity between the parents involved.

In their seminal work at US-MARC, researchers Larry Cundiff and Keith Gregory explained heterosis can be used to increase the weight of calf weaned per cow exposed to breeding by 20%. Crossbred cows remain in the herd 1.3 years longer and have a 30% greater lifetime production than straightbred cows.

Consider a three-year crossbreeding research study conducted by the American Hereford Association, in partnership with Lacey Livestock, Harris Ranch Feeding Co. and Harris Ranch Beef Co. in California.

- Pregnancy rates for Hereford-sired females (black baldies) averaged 7% higher than Angus-sired peers.
- Feed conversion (as fed and dry matter) was consistently and significantly superior for Hereford-sired calves compared to the predominantly straightbred Angus.
- Cost of gain was consistently and significantly superior for Hereford-sired calves compared to the predominantly straightbred Angus.
- Overall net return for the Hereford-sired calves was approximately \$30 per head in a vertically coordinated beef marketing system. That does not include the maternal advantages of the baldy female.

Some already enjoy the benefits of heterosis but a lot more could. **HW**

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Using EPDs for Comparison

You can see the 17 traits and three profit indices published by the AHA in Table 1 (on Page 8). It includes four percentile bands that show the average EPD for more than 270,000 animals born in the 2020 and 2021 calf crop years.

The most common question I receive is along the lines of: "What does a 54-pound weaning weight EPD equate to?"

EPDs are not intended to equate to actual weights/measures because of the dilemma discussed earlier when it comes to environmental and management differences. The sole purpose of an EPD is to enable comparison between animals and ranking of animals for specific traits — determine which one is going to pass on more or less performance for a particular trait.

Look at the WW EPD in Table 1. WW EPD is 63 pounds for the 15% band and 54 pounds for the 50% band. The difference is 9 pounds. On average, bulls with a WW EPD in the 15% band should sire calves that weigh 9 pounds more at weaning than those sired by bulls with a WW EPD in the 50% band — breed average.

The four specific percentile bands represent standard deviations from breed average. So, 50% is the breed average and should be the baseline for comparison. The 15% band represents 1 standard deviation to increase and the 85% band represents 1 standard deviation to decrease. If that seems confusing, remember what my good friend Jack Smith said: "Cull the big and little end and keep what's left in the middle."

Essentially from the 15% to the 85% band represents the middle end or, in statistical terms, 68.6% of the population. Consequently, of the 270,000 animals born from 2020-2021 in the AHA database, more than 185,000 fall in this range. This distribution is what we would expect, given any population. However, the spread in the values does vary some for specific traits, and that has to do with how much variation exists from the mean or 50% band.

If you want to make genetic progress in an area where you are deficient, I recommend selecting genetics that are one standard deviation above the mean (15% band). If you want to apply more pressure to a trait, then select genetics that are two standard deviations above the mean (2% band). The animals that fall in these respective bands are the ones in the Hereford population that can move your herd forward at a greater pace. While doing this, it's important to keep the other traits in a bull's EPD profile closer to the 50% band and for sure out of the bottom 85%.

How I miss the days of working cattle with Jack Smith; I'm sure glad for his wisdom. Good cowboy wisdom combined with the best tools available are tough to beat. Best wishes finding your next Hereford bull. **HW**