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Docility Delivers

A calmer disposition in cattle production proves more practical.

by **Haley Stark**

Branded as efficient, adaptable and hardy, the Hereford breed complements its strengths with a calmer, more desirable disposition — a trait cattlemen and researchers alike are finding to not only be convenient, but profitable.

For Paul and Bette Slayton, owners of Slayton's Beardance in Bedford, Pa., Herefords are the foundation of their operation. "I love the Hereford breed and their docility," Bette says. "It's so enjoyable to walk through a cow herd and be able to scratch their back, watch them nurse their calves and graze on a beautiful green pasture. I have a natural trust of my Hereford cows."

Both Paul and Bette have extensive cattle backgrounds. Bette grew up on a Hereford farm in Wisconsin, and Paul came from a commercial operation in Illinois. Today, they raise Herefords and black baldie females, calving out approximately 50 head a year.

The Slaytons note many of the breed's traits contribute to their successful cattle operation, and temperament is an added bonus. "We didn't give up or sacrifice anything for calm disposition cattle. It's just the nature of the breed," Paul explains. In fact, docility goes hand-in-hand with productivity and profitability. Docility is transitioning from a convenience trait to a necessary selection tool that offers cattlemen more efficient management.

Performance and practicality

Temperament can determine the safety and efficiency of working cattle. Selecting for calmer cattle makes day-to-day tasks run smoother.

The Slaytons say because of their calm cattle, a veterinarian is always willing to visit their farm to work on their cattle. When the couple works a chute, their Herefords meander up to the head gate, which Bette points out makes working cattle substantially less stressful. The breed's disposition also provides the Slayton's ease of mind when they're out of town.

"Sometimes we're both gone off the farm at the same time, and we need someone to do chores," Paul explains. "It's comforting knowing no one is going to get hurt with calmer cattle. I have no concern with my Herefords."

Outside of immediate safety, calmer temperaments also cause less wear and tear on facilities and equipment.

Owner of Thompson Cattle Co., Will Thompson, connects docility to better performance in his operation. Located in Lawndale, N.C., Thompson manages a small herd of purebred Hereford cows along with 170 commercial cows. Thompson brings all his commercial calves in to acquire weaning weights, to tag and to vaccinate. Gathering these weights allows him to track average daily gains on his cattle after they're backgrounded.

He notes the temperament of his Hereford-influenced commercial calves at feeding. "We hand feed, we don't feed out of a wagon because we feel it's important to get in amongst the cattle to help with disposition," Thompson says. "The Hereford-influence cattle come into

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continued on page 24...



the lot to eat immediately, we kind of have to push them out of the way to get to the bunks.” He says a great percentage of the baldie cattle are more eager to get up to the feed bunk to eat.

For Thompson, he didn’t realize the value of calmer cattle until he brought the calves back up for a second round of vaccinations. Although his Hereford-influenced cattle were not initially leaders in weaning weight as compared to continental-influenced calves, the breed’s docility showed an apparent advantage when weights started to fluctuate. The Hereford-influenced calves that were coming up to eat every day and were calmer passed their contemporaries on average daily gain. More skittish groups showed flat gains or even negative gains over the feeding period.

“There’s definite value in disposition when you calculate things like feed efficiency,” Thompson says. “I’m not doubting other breeds performance in different scenarios or management styles, but for our operation, calmer cattle prove to gain efficiently.”

Sustainability and docility are also proving to correlate with calmer cows staying in the herd longer.

Thompson has been utilizing Hereford cattle genetics since 2009, when he bought his first horned Hereford bull and purebred females. In 2010 he had his first Hereford-sired calf crop. Since then, docility has played a major role in Thompson Cattle Co.’s replacement heifer selection.

“Eight to nine years ago we probably didn’t have more than seven F1 baldie females in the herd, now there’s substantially more in the cow herd because those baldie females sure rise to the top in the replacement pen,” Thompson says. “They’re calmer cattle.”

When it comes to the operation’s bred heifer sale, Thompson points out the baldie heifers are in demand and are some of the first to be purchased by his customers. Docility has played an important role in the operation’s breeding goals. Thompson recalls the standout calm temperaments of his Hereford bulls. “We’ve had two or



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three Hereford bulls that you can, honest-to-goodness, take a feed bucket and walk the bull onto a trailer in the middle of a pasture,” Thompson shares.

Kari White, American Gelbvieh Association (AGA) genetic programs coordinator, who has extensive education in genetics and breeding, agrees docile cattle earn their place within a herd. “In my experience, even producers tend to prefer those animals that are more docile, and those animals that are more docile tend to stay in the herd longer because they’re not getting culled for poor temperament,” she explains.

The scientific link

Several studies have been conducted to link docility to other profitable traits with quantitative data. These research studies have discovered connections between stress and its effect on traits like fertility, feed efficiency and carcass merit.

Jennifer Bormann, associate professor of animal breeding and genetics at Kansas State University, participated in the data analysis of a multi-university research study performed in Colorado in 2014 which analyzed temperament as a possible indicator of feedlot performance and carcass merit in beef cattle. Several previous studies showed positive correlations were discovered between temperament traits and cortisol concentration in the blood, suggesting cattle with more excitable temperaments were easily stressed.

Temperament and docility can be measured in multiple ways. These include chute scores, exit velocity and blood cortisol or fecal

cortisol samples. Chute scoring is a subjective measurement taken on a 1-6 scale while the animal is confined but not restrained in a scale. Exit velocity is an objective measurement taken as the animal exits the chute. Cortisol is a measurable stress hormone found in cattle. A blood sample shows the stress at the time the sample is taken whereas a fecal sample displays metabolized cortisol, which shows stress experienced over the last several days.

The multi-university feedlot study took numerous measurements on carcass traits and temperament scores through chute scores and exit velocity. The growth measures as derived from data collected throughout the study encompassing both weights and gain showed a weak but negative correlation with temperament traits. Bormann explains that these small negative effects of stress on weight gain add up, especially over hundreds or thousands of cattle.

“There are some measurable effects,” she says. “But there’s a need for larger studies and bigger contemporary groups.”

White, with the AGA, is a Kansas State University graduate who also worked with Bormann in 2014 on a two-part research study examining the relationships between docility and reproduction in Angus heifers with the goal of connecting docility to heifer pregnancy estimates. The study consisted of three cooperator herds in three separate locations.

White notes pregnancy, especially fertility, is a difficult trait to evaluate scientifically because numerous factors affect it. “It is a challenging trait to get enough power for because we treat it like it’s a threshold trait at zero or one, but it most likely lies on an underlying range,” White explains.

This study investigated the relationship between temperament and fertility, indicated by first-service artificial insemination conception rate by taking chute scores, exit velocity, fecal samples and blood samples. Body weight and age were also recorded. The heifers in the study had an ultrasound at 30 days to determine pregnancy status.

The data combined from all three ranches did not show any significant predictors for 30-day pregnancy; however, once the data was separated by ranch, chute score

and body weight were significant predictors of heifer pregnancy at the one ranch.

According to White a one-unit increase in average chute score (1 denoting docile, 5 denoting bad temperament) would reduce the probability of pregnancy at that ranch by 48%. Body weight showed a negative effect on pregnancy. White speculates this outcome is the result of those animals maturing later and not becoming pregnant within the study’s time frame.

Although it was a relatively small sample size, Bormann says the more excitable cattle showed a lower pregnancy rate. She makes the connection between docility and profitability, even if it’s small scale. “The extra time it takes to handle and work higher strung cattle could be spent doing something else productive,” Bormann says. “And even if prioritizing docility only contributes a small amount toward heifer pregnancy rates, calves are expensive, if you get an extra calf a year – that’s real money.”

Several other small-scale studies have been conducted across the country exploring the effect of stress and temperament on cattle productivity. Bormann and White are hopeful more data collection and research will potentially link docility to fertility in a more concrete way.

“People consider temperament, like udder scores, a convenience trait,” Bormann says. “Some of these studies are showing that docility isn’t just convenient, but that there are some dollars tied to it beyond safety, facilities and time.”

Environmental factors

Docility falls within the lowly to moderately heritable range, meaning that the expressed temperament in animals can also be influenced by environmental factors like proper cattle handling. Although the Hereford breed is recognized for generally calmer cattle, it’s imperative to provide an environment where cattle can learn to be calmer.

Bormann points to a trend of stockmanship within the cattle industry, stressing that calmer cattle will ultimately decrease the risk to those that work and handle them. “If you take a pen of heifers, you can train them to be herded and to move calmly from pasture to pasture at a walk,” she explains. “You develop habituation with how you handle your cattle.” This creates a lower stress environment for all breeds.

White believes producers have a responsibility to give their livestock a good environment where they have the chance to be docile.

Docility continues to hold value within cattle operations, and White is confident the trait will continue to gain importance in cattle production.

“Docility is definitely not just a trend in the industry, but a trait that’s here to stay,” she says. “I think more and more producers are realizing that temperament is one of the many factors that can inhibit performance.” **HW**



Will Thompson of Thompson Cattle Co., says his Hereford-influenced calves surpass his continental-influenced calves in average daily gain due in part to their docility.