

Temper Has Its Price

Recent research has demonstrated the value of cattle with calm temperaments and the price producers pay for keeping wilder animals in their herds.

by

JUSTIN AMMON,

Mississippi Agricultural and Forestry Experiment Station

A five-year Mississippi Agricultural and Forestry Experiment Station (MAFES) study found that cows with poor temperaments can affect the entire herd and reduce producers' bottom lines.

Rhonda Vann, MAFES associate research professor in Mississippi State University's (MSU) Department of Animal and Dairy Sciences, led the study in Raymond at the Brown Loam Branch Experiment Station.

"We suggest that producers evaluate their herds and the cattle they buy," Vann says. "You don't want a cow or steer that's unreceptive, but one that's a bit more docile. They are going to have less sickness, gain weight better, do better in

pastures and be more productive for the producer throughout their entire life span."

Vann says the most applicable findings in her research is to cull cows with poor temperaments out of the herd.

Researchers measured how a trio of cows behaved while in a 12-foot (ft.) by 12-ft. pen and how a single cow behaved while in a chute similar to what contains bulls before being released at a rodeo.

In both cases, the cows' behavior was measured after they were approached by humans. The research also used laser technology to gauge how fast a cow traveled 6 ft. after being released from a chute.

For each part of the experiment, the cows were given a score on a 5-point scale. The scale ranged from 1 (describing cows as not aggressive, docile, walks slowly, easily approachable and not excited by

(Continued on page 111)

Using the Association's docility EPD

Heritability estimates for temperament in beef and dairy cattle tend to be moderate to high, indicating that selection for improved temperament would be effective.

During the past few years, Angus breeders have been submitting yearling cattle temperament scores on a 1-6 scale as described in Fig. 1. With heritability within the database established at 0.37, a four-generation pedigree was

Fig. 1: Six-point scoring system for yearling cattle, age 320-440 days

Code	Description
1	Docile
2	Restless
3	Nervous
4	Flighty
5	Aggressive
6	Very Aggressive

Source: Beef Improvement Federation Guidelines.

used to calculate expected progeny difference (EPD) values for docility. Four categories were used — scores 1, 2, 3 and the combined category of scores 4, 5 and 6.

The *Spring 2011 Sire Evaluation Report* indicated 289,022 individuals had been assigned a docility EPD based on 102,039 individual records. The average docility EPD was 8, with a minimum of -34 and a maximum of +43.

The docility EPD is presented as a percentage, where a higher value is considered more favorable in terms of docile temperament. A bull with a +8 docility EPD, as compared to a bull with a -2 docility EPD, would be expected to sire 10 more calves out of 100 that would have a temperament score in the most docile category if the bulls were mated to comparable females in a herd that had some temperament issues. Since docility is a threshold trait, herds that exhibit no problems in temperament will realize no improvement in selecting for favorable docility EPDs.

While docility EPDs have been available as a research genetic evaluation on www.angus.org since the Spring 2008 National Cattle Evaluation, they are now available on a weekly basis through the website and AAA Login (www.angusonline.org).

Temper Has Its Price *(from page 109)*

humans) to 5 (describing cows as very aggressive, excitable and out of control).

The pen scores and chute scores were nearly identical, and the higher-scoring cows almost always exited the chutes at accelerated speeds.

“The pen score measures aggressiveness, and the exit velocity measures their flight response — how quickly they want to get away from the situation,” Vann explains. “Basically, the more aggressive they are, the quicker they want to get away from the situation.”

Temper problems

Vann says anxious, aggressive cows, or those with a pen score of 4 or 5, present a host of problems.

“They become sick more often, have more difficulty gaining weight and damage farm equipment. Their rowdy behavior rubs off on cows that would otherwise be perfectly calm,” Vann says. “Cow behavior even affects meat tenderness, as certain hormones, such as cortisol, and enzymes remain at higher levels in stressed-out cattle, possibly toughening the muscle. All of these problems directly affect a cattle producer’s profit margins.”

Vann says the primary factor relating to cow behavior is genetics. If a high-strung bull and a wild female mate, the result will be a high-tempered calf.

But genes do not tell the whole story. Vann says a calf’s mother usually influences its behavior more than the bull, since the mother raises the animal and provides a constant presence. However, Vann says that all cattle are susceptible to learned behavior.

“I’d say how humans treat the animal is 25% of it, followed by 10% being the environment,” she says. “The rest would be genetics; however, we are still investigating what makes some animals more aggressive than others.”

Danny Martin, the 2009 Mississippi Cattleman of the Year, owns a ranch in Raymond and can attest to these findings from experiences with his own herd.

“Ill-tempered cows have to get antibiotics more often, and they don’t come up to eat with the rest of the cows and get the proper nutrition,” he says.

Martin says he once sent several cows to a feedlot experiment at MSU, including one that was irritable.

“When I sent the cattle, there was no more than a 50-pound difference between each of them,” Martin says. “However, when the animals returned, the ill-behaved steer weighed 966 pounds, while all the others weighed over 1,200 pounds each.”

According to the study, which was published in the *Professional Animal Scientist*, cattle with high pen scores typically incurred higher medical expenses than lower-scoring cattle.

In addition, ill-tempered cattle typically bring in \$5 or \$6 less per hundred pounds of body weight than do calmer animals, Vann says. An aggressive cow weighing 800 pounds may net \$480

less than its non-aggressive counterpart. However, high scorers usually won’t even reach that weight since they have trouble gaining bulk.

— *Release by MSU Extension.*



“They become sick more often, have more difficulty gaining weight and damage farm equipment. Their rowdy behavior rubs off on cows that would otherwise be perfectly calm.”

— *Rhonda Vann*
