

The Udder Issue



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Scoring for culling decisions and selection.

by **Troy Smith**

Congratulations to those cow-calf producers who have never grappled with udder issues. You may be in the minority, though, for plenty of cow persons do have experience with mandatory mammary manipulation. They might

tell you stories, usually set on a dark night, during miserable weather and involving faulty facilities. With only minor embellishments, such recollections can be funny. In

reality, milking out a cow's tight, feverish, balloon-teated bag isn't much fun. It's never convenient. Just thinking about it makes Partisover Ranch's Randy Daniel shake his head and shiver a little.

"I can't make myself like a cow with a bad udder," says the seedstock breeder from Colbert, Ga. "I think most of the commercial producers we deal with are the same way. They see udder quality as very important, especially if they run a fairly large number of cows with a limited labor force. They don't have time to fool with problem udders."

Daniel realizes there are people who seem willing to overlook the inconvenience.

Their story may involve a cow with powerful performance potential in her genes. She represents a significant investment. Her bag doesn't look so bad, after a day or two, and her calf is nursing by itself. It's a nice calf, and she really is a pretty good cow.

"I don't know what a 'perfect' udder is, but we should be able to recognize a bad one."

— David Buchanan

Health threat

"It might be a tough call, in certain cases," Daniel admits, "but a bad udder poses a risk to the calf and can reduce the cow's productive life. It's best to remember what her udder looked like at its worst."

Covington, La., breeder and veterinarian Gary Greene agrees, saying poor udder and teat conformation can potentially lead to increased calf sickness. While selection and culling pressure based on udder quality may be considered convenience-trait selection, it can affect profit potential by reducing calf sickness and helping protect calf performance.

"A pendulous udder dragging through the mud can transfer disease-causing organisms to the nursing calf," explains Greene, also noting how oversize teats are difficult for a newborn calf to nurse. That may result in delayed or inadequate consumption of colostrum and poor transmission of passive

immunity. And that can result in poor performance throughout the calf's life.

"Bad udders are at risk to injury and a higher incidence of mastitis. One or more infected quarters means milk production is less. That's probably going to hurt her calf's weaning weight and is likely to shorten the cow's productive life in the herd," Greene adds.

Genetic component

California State University-Fresno animal scientist Randy Perry says cows don't have to be "pretty-uddered" to be functional in a commercial beef herd. However, anecdotal evidence suggests udder quality, on an industry-wide basis, may have deteriorated. Certainly, there is considerable variation among and within herds.

Breed differences show there is a genetic component to udder quality. It is considered at least moderately heritable and geneticists estimate its heritability is somewhere between 0.16 and 0.22.

"Historically, buying and using bulls out of good-uddered mothers has been considered a sensible practice," Perry says. "Of course, it hasn't always happened. Sometimes, emphasis on selection for increased performance or improved

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carcass merit may have overshadowed convenience traits, including udder quality. Maybe a producer is willing to look past the inconvenience. Or, maybe the people making breeding decisions aren't the same people who calve the cows and end up milking out problem udders."

Perry thinks adoption of a scoring system or some method of evaluating udder quality is a good practice.

North Dakota State University's David Buchanan agrees, advising evaluation of both udder suspension and teats.

The udder should be snugly attached, symmetrical and quarters should be balanced. Weakness in the ligaments supporting the udder causes it to hang low and the condition generally worsens over time.

Teats should be evaluated for size, shape and uniformity, he recommends.

"A producer has to decide what the threshold for acceptability is," Buchanan says. "If a cow's udder is acceptable, fine. If it isn't, get rid of her and don't look back," Buchanan advises. "I don't know what a 'perfect' udder is, but we should be able to recognize a bad one. We can identify cows with bad udders and eliminate them."

That will ease management issues related to problem udders, and since those bad-bagged cows won't contribute any more daughters as replacements, the genetic merit of the herd is improved.

That said, Buchanan thinks udder evaluation or scoring is best applied as a tool for culling cows, but not as an aid to selection of replacement heifers. In other words, Buchanan ranks udder quality of the dam well down the list of heifer selection criteria. Consideration of growth rate, calving ease, mature size, heifer pregnancy rate, stayability and probably some other traits would rank higher.

Breeder Brian McCulloh, of Woodhill

Scoring tips

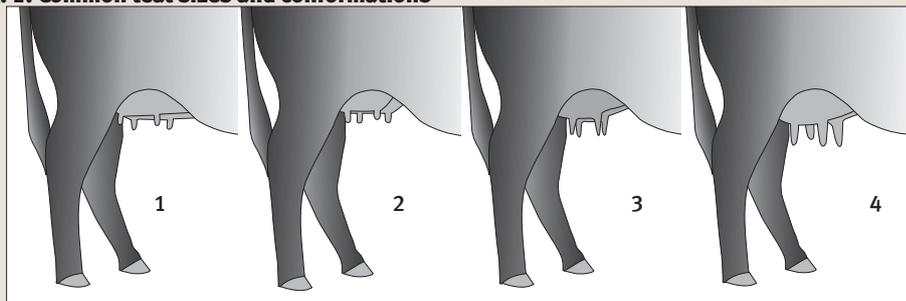
The Beef Improvement Federation recommends evaluating bovine mammary systems, using separate numerical scores (1 through 9) for udder suspension and size and shape. In addition to aiding culling decisions, diligent scoring over time may also be useful as a selection tool. Producers are advised to consider the following guidelines:

- ▶ Assign scores within 24 hours after the cow calves. If the cow has been nursed out, teats, in particular, cannot be scored accurately.
- ▶ Scoring is subjective. Greater consistency is achieved when all scoring of all cows in the herd is done by the same person.
- ▶ When evaluating udder suspension, a score of 1 would be assigned to a very pendulous udder with broken floor. An udder carried high and tight would be assigned a score of 9.
- ▶ When evaluating teats, circumference is generally of greater importance than

length. Teats of moderate circumference and medium length are most favorable. Large, balloon-shaped teats would receive a score of 9; small, well-shaped

teats are assigned a score of 1. When teat size and shape vary, assign a score based on the weakest quarter. ▶ Scores should be assigned without

Fig. 1: Common teat sizes and conformations

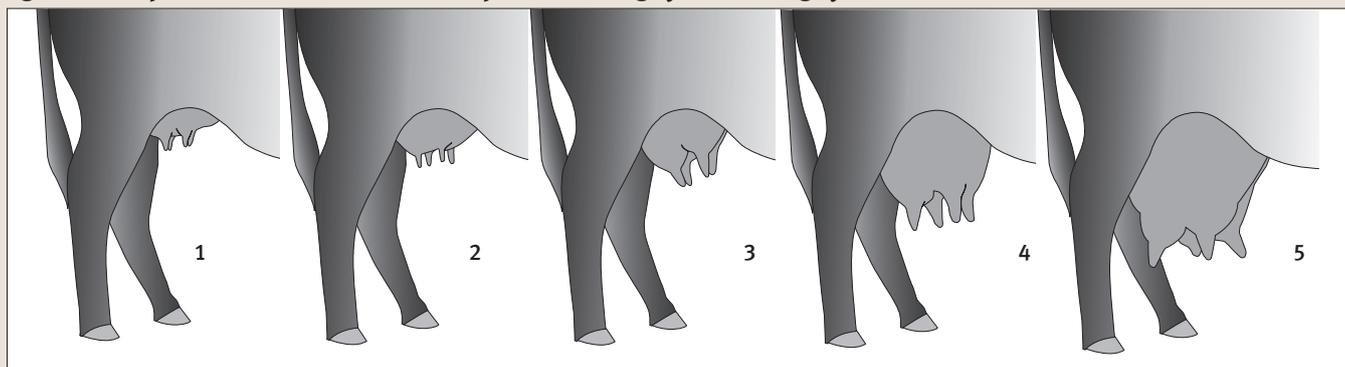


The teats should be placed in the middle of each quarter and point perpendicular to the ground. The ideal teat is medium in length, cylindrical in appearance with rounded ends

(drawings 1, 2, 3 and 4). The diameter of the teat should be consistent from top to bottom. Less-than-ideal teats are less symmetrical and of different sizes and thicknesses

Source: Rick Rasby, "A Guide to Udder and Teat Scoring Beef Cows," August 2011 *Angus Journal*.

Fig. 2: Beef Improvement Federation udder suspension scoring system



- Drawing 1:** Very tight, very pronounced median suspensory ligament. Udder suspension score = 9.
- Drawing 2:** Tight attachment, pronounced median suspensory ligament. Udder suspension score = 7.
- Drawing 3:** Intermediate attachment. Udder suspension score = 5.
- Drawing 4:** Loose attachment, weak median suspensory ligament. Udder suspension score = 3.
- Drawing 5:** Very loose and pendulous attachment, very weak median suspensory ligament. Udder suspension score = 1.

Source: Rick Rasby, "A Guide to Udder and Teat Scoring Beef Cows," August 2011 *Angus Journal*.

Farms, Viroqua, Wis., suspects many commercial producers sort heifers into the “keeper” pen without considering what their mothers’ udders were like. He says seedstock breeders must give due diligence to udder quality when choosing sires and when selecting females, adding that the industry would benefit if more producers scored udders and applied the results to selection as well as culling decisions.

“You have to identify poor udders, cull hard, and be careful of the daughters you keep and the bulls you use. If you do it year after year, and if you don’t let up, you can solve problems,” McCulloh says. “I think it’s a seedstock breeder’s duty to remain

diligent. If we use the tools available to us, and if we’re really honest with ourselves when evaluating udders, we can make progress.”

McCulloh advises commercial producers to ask their seedstock suppliers about the kind of scrutiny applied to udder quality. It’s for the commercial customer’s own benefit, and it’s a way to hold seedstock suppliers’ feet to the fire.

Illif, Colo., breeder Ken Amen says that’s what many of his customers do. They provide plenty of feedback, including a clear message that udder quality is more than a convenience trait. Many consider it essential to cow longevity. Consequently, Amen

considers udder quality when choosing sires and selecting females. He says it’s necessary to work hard on the cow side, in case a mistake is made on the sire side.

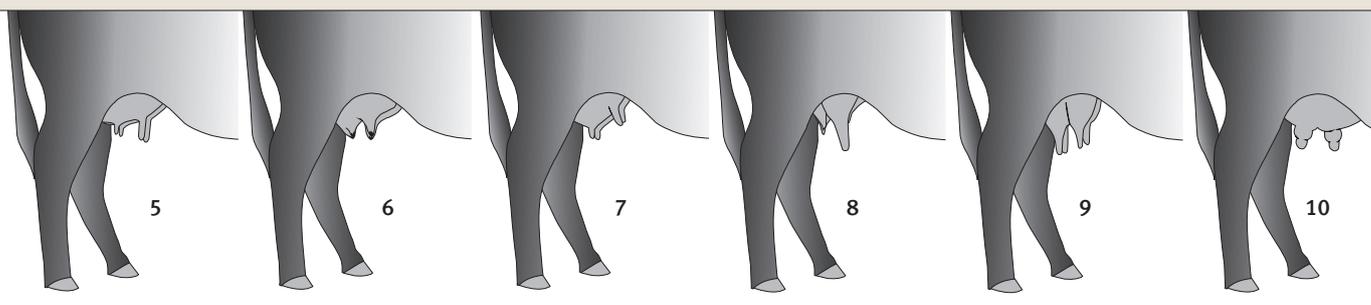
“It can happen, because there’s just not much data available to help evaluate sires for udder quality,” Amen says. “Evaluating udders at calving time and recording it in the calving book helps us make culling and selection decisions. Yes, it’s subjective. You have to try to be consistent and persistent to make progress. It takes time, but breeders have a responsibility to keep trying. They have to raise the bar and keep it high.”



regard for cow age or milk production. In the August 2011 *Angus Journal* (see “A Guide to Udder and Teat Scoring Beef Cows,” beginning on page 112), University

of Nebraska Extension Beef Specialist Rick Rasby presented a description an udder-scoring system recommended by the Beef Improvement Federation (BIF). Three of the

illustrations in that article are presented again here, but for a more detailed description of the scoring system, refer to the August article.

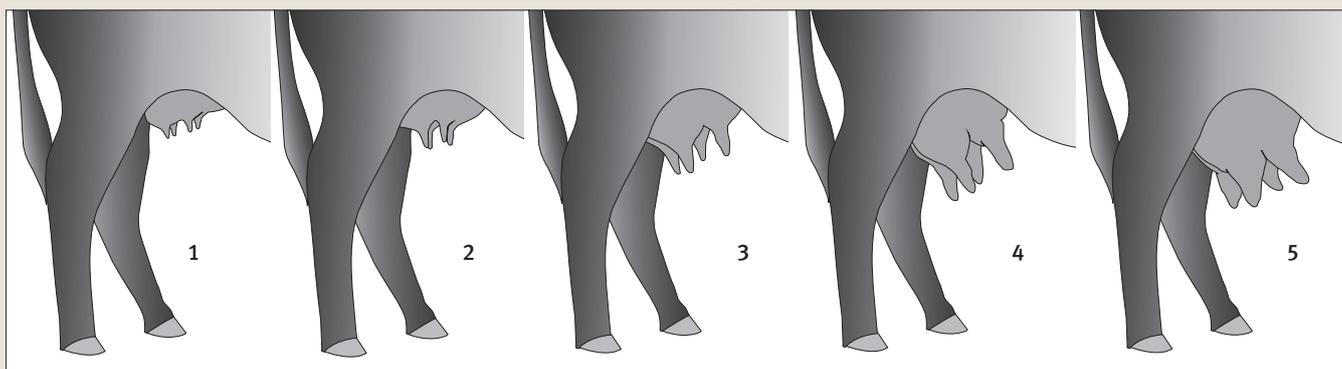


(drawings 5, 6 and 7); are long, pointed and different sizes (drawing 8); are thick and funnel-shaped (Drawing 9); or are a combination of thick funnel to thick pear

shape (Drawing 10). As teat length increases and udder suspension becomes weaker, teats are positioned closer to the ground, making

it more difficult for the newborn calf to suckle and increasing the chance for teat contamination from mud and debris.

Fig. 3: Beef Improvement Federation teat size and conformation scoring system



Drawing 1: Teat size is very small and symmetrical. Teat size score = 9.

Drawing 2: Teat size is small and symmetrical. Teat size score = 7.

Drawing 3: Teat size is intermediate in length; still have symmetry. Teat size score = 5.

Drawing 4: Teat size is large, variable in length and symmetry. Teat size score = 3.

Drawing 5: Teat size is very large, variable in length and symmetry. Teats appear to be thick. Teat size score = 1.

Source: Rick Rasby, “A Guide to Udder and Teat Scoring Beef Cows,” August 2011 *Angus Journal*.