

UDDER PERFECTION



PHOTO BY FREDDY FREY, NAA/A/ANGUS JOURNAL PHOTOGRAPHY CONTEST

Udder scoring enhances a functional herd; two scoring systems discussed.

by Kasey Brown, associate editor

The wonder of new life is a joyous thing. Getting a new calf to nurse a balloon teat, however, is not. Your back aches. Your fingers are frozen and chapped. That enthusiastic but semi-intelligent calf knows what it should be doing, but can't seem to get the giant, turgid teat to stay in its mouth. You serve as nature's lactation consultant because what some deem as a convenience trait sure isn't convenient now.

In an industry where labor can be scarce or aging, a poor udder has plenty of ramifications.

Steve and Penny Radakovich, Radakovich Cattle Co. (RCC), Earlham, Iowa, say a cow is no

good at their operation if she can't nurse a calf. Their operation has sold bulls for the last 50 years, and they know the commercial industry can't tolerate unfunctional females. Their

customers want long-lived functional females. They sell bulls to hardy environments, and those customers need daughters to perform without issue.

RCC concentrates on a balanced approach, which includes those "fitness" or convenience traits like longevity, udder conformation and disposition. A female with a poor udder gets culled.

"Any reason to cull a cow has a real economic impact on our industry," Steve says.

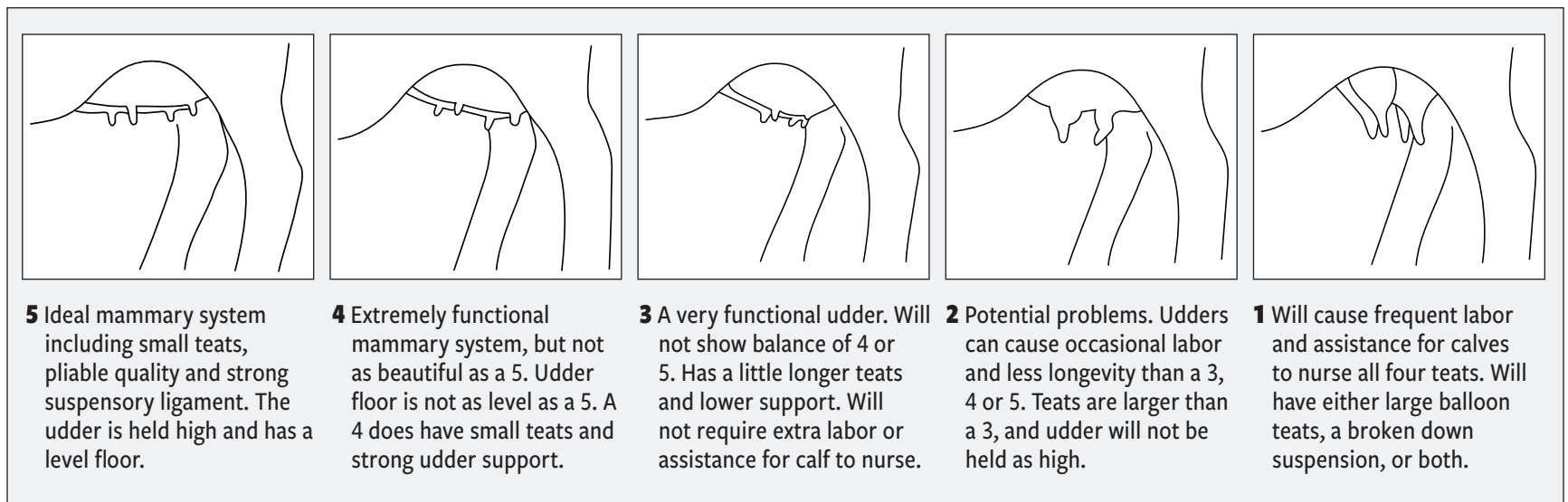
It's costly to cull cows. The former Beef Improvement

Federation (BIF) president explains it takes about seven years for a cow to fully recoup her development and maintenance costs. Being able to reduce an operation's replacement rate, even by 5%, because those cows stay functional for a long time can result in a lot of savings.

An operation's profitability is restrained by the operation's most limiting factor, he says, so a balanced approach lends itself to the highest net profit. Convenience traits fit into that, so monitoring them is important.

TOOLS TO
UDDER SCORES
SUCCEED

Fig. 1: Integrated RCC udder scoring system



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Penny says they started scoring udders in February 1983, ahead of the curve of breed associations collecting the data. They created their own scoring system on a 1-5 scale — 5 being most desirable and 1 being least desirable.

They give more emphasis to teat size, saying that generally causes the most problems. However, it's an integrated scale that also includes attachment and size. Each of their 600 females, half being Angus and half being composite, is scored.

The Radakoviches have included each bull's dam's age and udder score in their sale books since 1984. When their udder-scoring system was still in its infancy, they had a client, rancher Barb Wheeling, create illustrations (see Fig. 1) to include in the sale book. They say customers pay attention to these numbers because they care about longevity.

Steve Ory, partner in RCC for 13 years along with his wife, Julie, admits they used to have quite the variation in udder scores, but scores have tightened considerably with continued selection pressure. They haven't had to assist nursing in years.

"With normal profit margins, it's no fun torturing yourself getting a calf to nurse," Steve Radakovich laughs. "So, we let genetics work for us, and they do."

Genetics

Udder conformation is

moderately heritable, so selection pressure does create change. A few breed associations have udder expected progeny differences (EPDs), and others have them in the works.

Paying attention to the bull's genetics for udder conformation is important, in addition to culling current problems. The patterns are there.

Joe Elliott, Robert Elliott & Sons Angus, Adams, Tenn., says he's

noticed about 20% of daughters from a particular bull always have one teat on the front left quarter that's longer than the others.

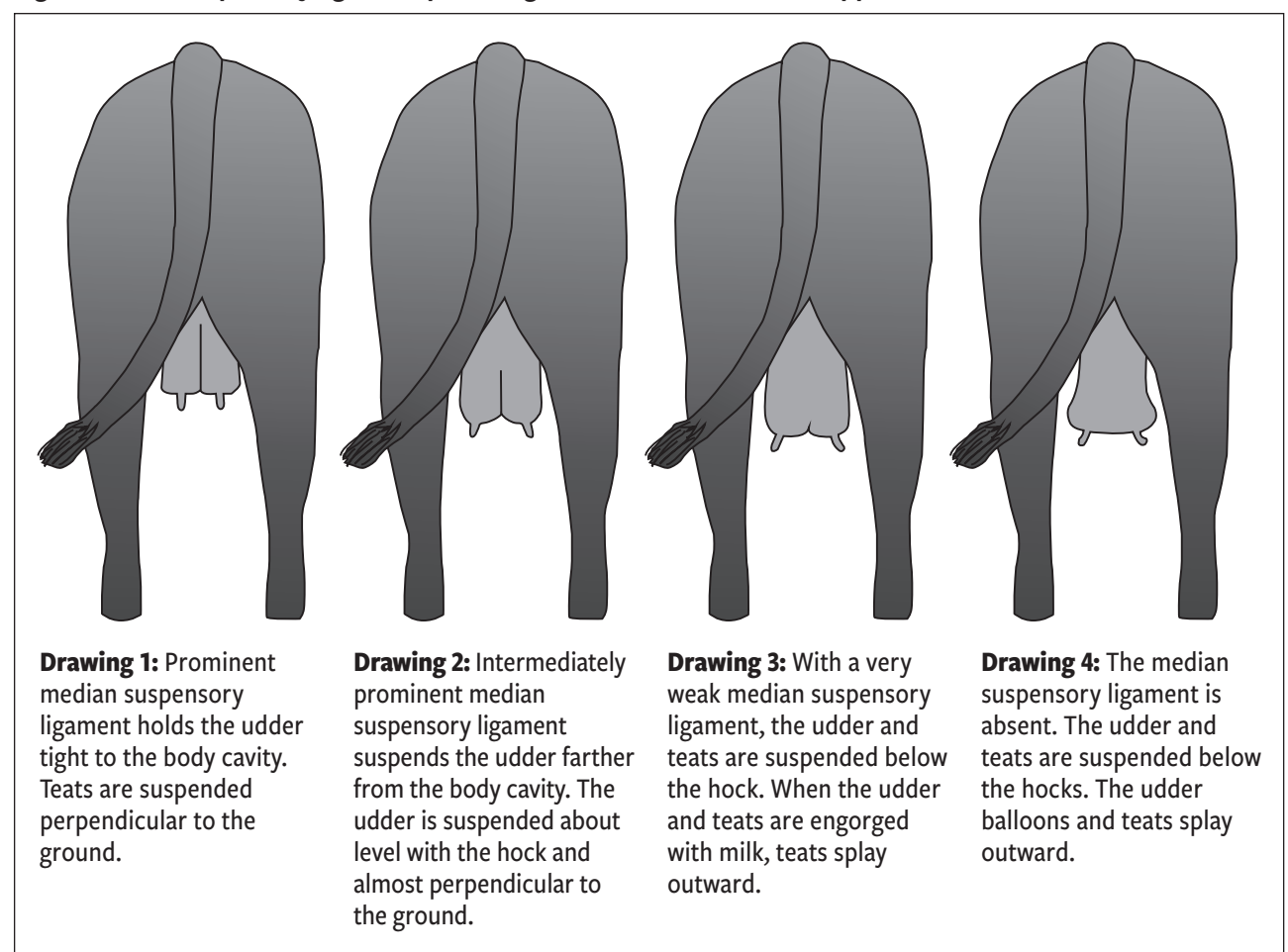
While he's always paid attention to udder conformation, he started writing down those records when Angus Information Management System (AIMS) started asking for them many years ago. The American Angus Association is still collecting udder score data, but is transitioning to a system

incorporating the BIF 1-9 scoring system.

BIF adopted a 9-point system for both udder suspension and teat size in 2008 (see Figs. 2, 3, 4). The BIF system's specificity helps make genetic decisions. Simply put, more numbers in the scoring system gives more variation. More variation gives more comparisons with which to make genetic predictions.

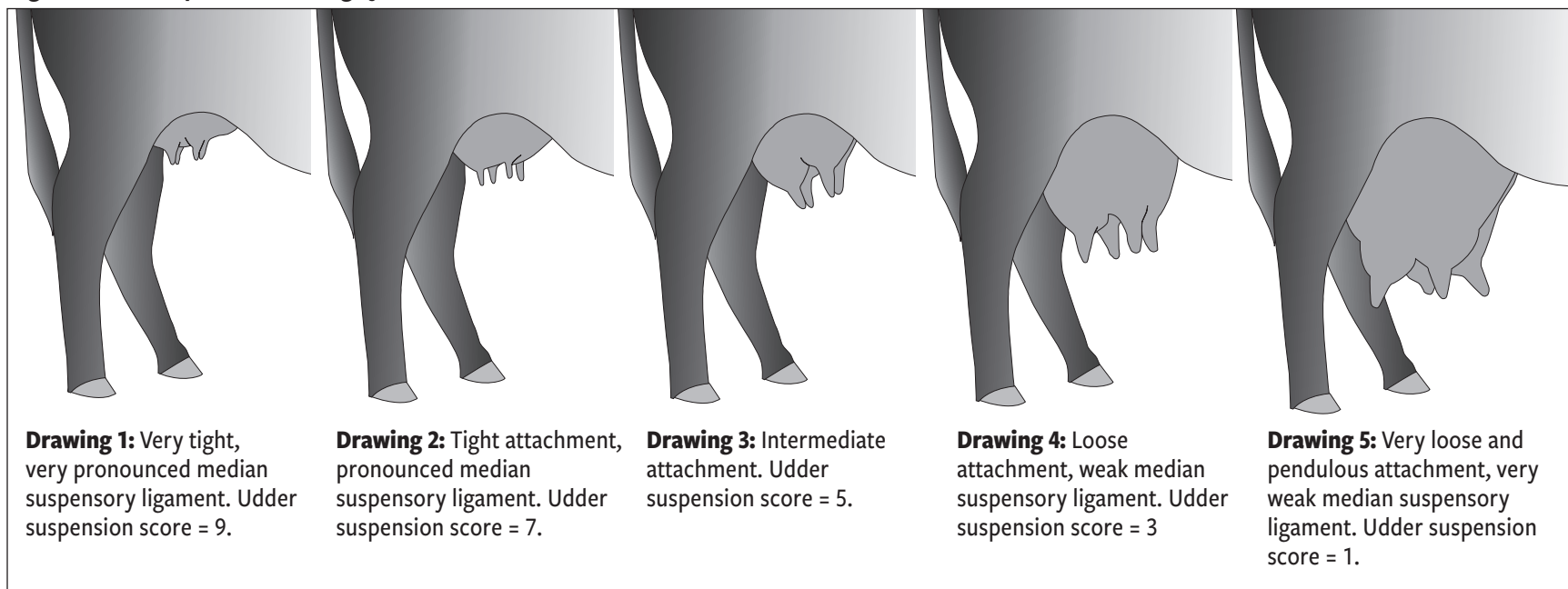
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Fig. 2: Median suspensory ligament providing various levels of udder support



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Fig. 3: 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.

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Kelli Retallick, director of genetic and genomic programs for the American Angus Association, adds that BIF uses the dual scoring system because udder suspension and teat scores are not the same trait. You can have poor udder suspension and good teat size and shape, she says, and vice versa.

Elliott stresses his operation's goal is to pay the bills. He does that by selling genetics through bulls, and his customers

need sound udders on cows with longevity to help them pay their bills. Udder-conformation genetics are economically important for all of them.

Radakovich adds that a cow sold for her udder means there are fewer daughters with issues she leaves behind.

How to score

It's best to score within 24 hours of calving, and the sooner after birth the better. Radakovich says they

score when they tag the calves. If possible, he prefers to score before the udder gets nursed.

Elliott says he looks for small teats and a forward attachment of the udder that blends into the belly as opposed to the flank. He wants the udder to form smoothly from the belly, instead of a "goat udder" that falls straight down.

"We don't want Dolly Parton cows," Elliott jokes, but seriously references his collegiate research proving the biggest udders do not translate to the most milk given.

Remember that scoring is subjective, so the RCC team suggests getting everyone on the

same page before doing so. BIF recommends scoring based on the worst quarter or teat.

Scoring can change as the cow gets older. Ory notes many of their older cows still have great udder conformation, but her score may go down the older she gets.

Radakovich says it's fun to see some of their 12-year-old cows still have a 4 udder score.

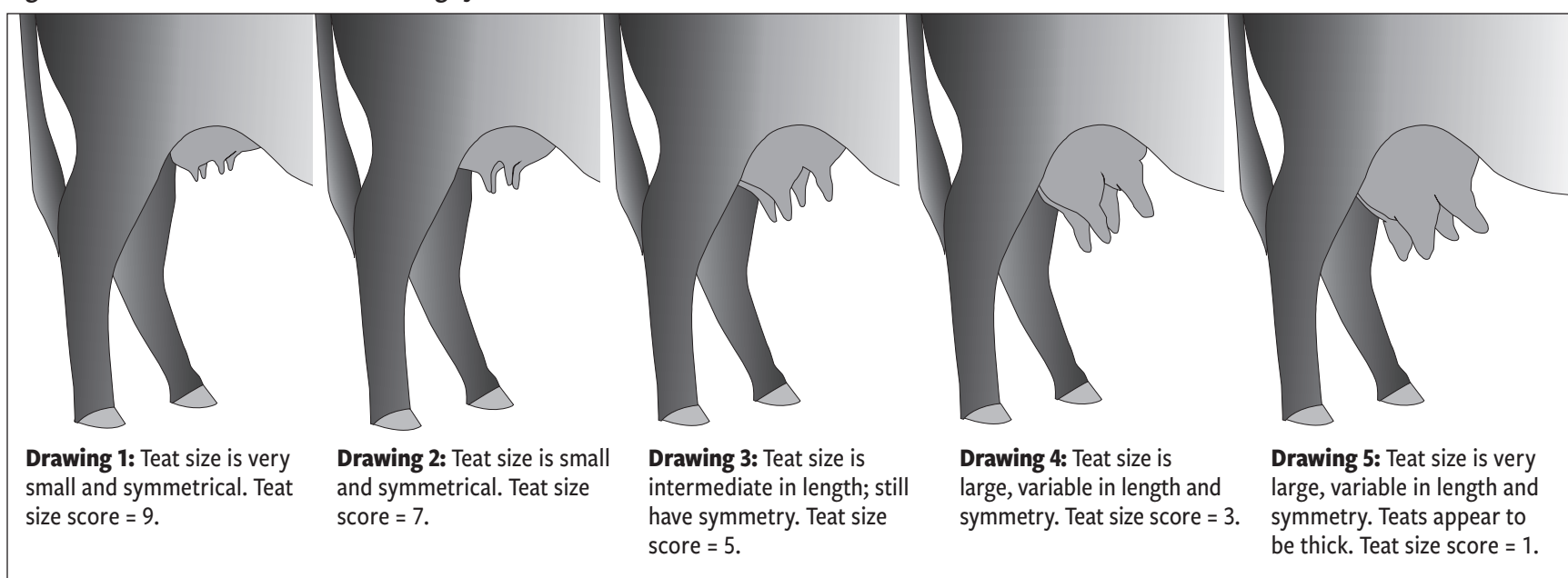
Calf performance

Does udder conformation affect the calf's performance? Travis Mulliniks, assistant professor and range cow production system

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Being able to reduce an operation's replacement rate, even by 5%, can result in a lot of savings.

Fig. 4: 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.

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PHOTO BY FORREST THOMPSON, NJA, ANGLUS JOURNAL PHOTOGRAPHY CONTEST

The commercial cattle industry needs functional females that can nurse a calf without intervention. Scoring udders can ensure the whole herd can feed their calves easily.

specialist at the University of Nebraska–Lincoln (UNL), says this question comes up often. He was part of a research project looking to answer just that.

In a five-year study, they compared calf performance from calves of low-udder-score (LUS) cows and high-udder-score (HUS) cows, using the integrated 1-5 system. While there was no difference in calf weaning weight and other factors between the two groups, Mulliniks

explains, calves out of HUS cows had increased hot carcass weight and back-fat thickness.

He admits some of the data may have been affected by difference in sampling sizes, as there were more than 1,700 calves in the HUS group and 223 in the LUS group. However, it is good to know that poor udder conformation has more to do with management and labor than necessarily calf performance preweaning.

Mulliniks says another udder issue comes up for commercial operations in his area. This one isn't genetic, but nutritional. Many

operations in Western states are moving their calving seasons from March to May to quit calving during blizzards.

A new issue comes with better forage condition at calving time and lactation. Increased potassium

intake from lush pastures can create potassium edema. This edema, whether chronic or acute, can create “rock-hard” udders, he says.

However, from the UNL summer-calving herd, he's noticed up to 30

pounds of increased weaning weight for those calves, despite some cows having potassium edema. There isn't much that can be done to prevent this edema. According to dairy research, management really only entails massage of the affected quarter — which just isn't possible in range conditions. So, it's something to be aware of, and he recommends also scoring udders at weaning time because of it.

No matter which udder-scoring system you choose, your cow herd can benefit. Your back will thank you. |

Calves out of high-udder-score cows had increased hot carcass weight and back-fat thickness.