

Sorting Gate

Angus creating good-uddered females.

by Kelli Retallick-Riley, Angus Genetics Inc.



Excitement is reaching an all-time high as calving season is upon us. Something about fresh,

fuzzy baby calves gives us a sense of new beginnings and the first look at results of bull or mating decisions a year prior. What happens in the first days of a calf's life will affect that individual throughout the rest of its lifetime.

Teat and udder structure affect calf survival and growth. Nothing is more frustrating than a calf that cannot nurse because the teat or udder structure does not allow it to. Extremely short,

narrow teats may inhibit milk flow; while longer, thicker teats inhibit calf suckling.

In most cases, oversized teats cause the most problems, providing difficulty for newborn calves to nurse and receive adequate nutrition. Decreased colostrum intake could lead to higher incidence of scours or decreased immunity levels among newborns.

Udders suspended too low could lead to injury. On the other hand, udders too tight may be associated with low milk yield.

Proper ingestion of colostrum and ample nutrition throughout the growing phase are necessary for a healthy start, and teat and udder conformation play a part.

Scoring udders

Angus producers have been collecting teat and udder scores on individual animals for years. The recommended method for collecting teat size and udder suspension scores is described by the Beef Improvement Federation (BIF; see Fig. 1).

Teat size and udder suspension score are measured on a scale from 1 to 9, with a score of 1 describing very pendulous udders and very large, bulbous teats (sometimes referred to as “bottle teats”). A score of 9 is the opposite, describing udders with very tight suspension and very small teats. The ideal udder and teat structure falls in between these two extremes.

Teat and udder structure are assessed independently in the pasture within 24 hours of a calf's birth.

Breed-wide

Currently, the Association has received 57,688 teat size scores and 57,647 udder structure scores. Records have been submitted by breeders since 2001, with 10,000 records submitted by 2012. Since 2012, the influx of records has remained steady at approximately 2,000 additional records submitted per year.

Both traits were found to have an average score in the recorded population of 7.1. The distribution leans heavily toward higher scores describing smaller teats and tighter udder suspension. Only about 6% of scores for both teat size and udder suspension land in categories 1-4, while the rest of

the data is fairly equally dispersed among scores 6-9 (see Fig. 2, page 60).

While the full range of scores are present in the Angus breed, these data support the fact Angus genetics do a good job of creating good-uddered females.

Heritabilities for teat size and for udder suspension were estimated at 0.34 and 0.31, which are slightly higher heritabilities than we see with a trait like weaning weight.

The rest of the story

While the characteristics described above are heritable, it is important to note about 70% of the score variation is due to something other than genetics. Structural traits are known to degrade with age; teat and udder suspension are no different.

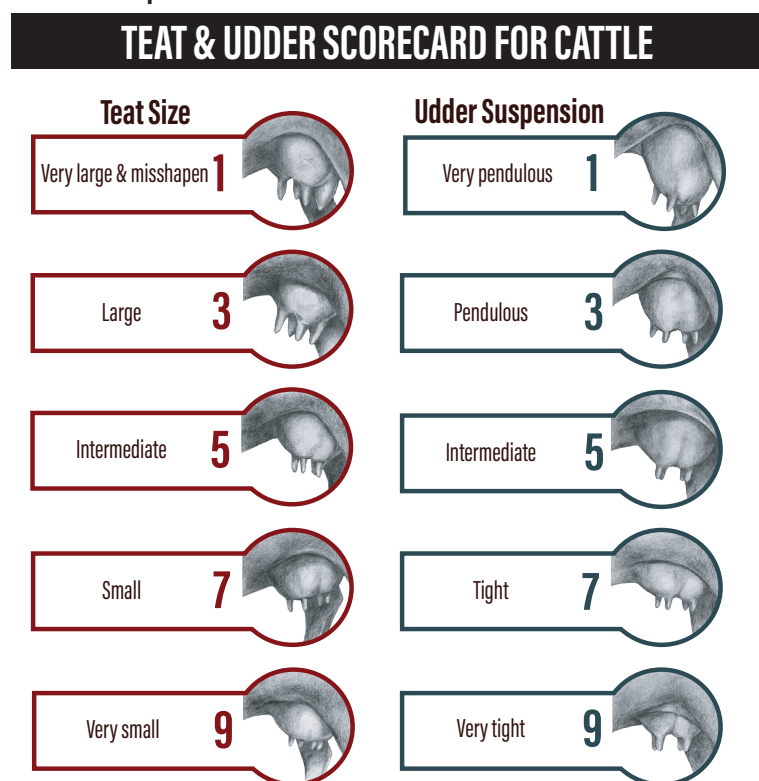
With the use of our data, Angus Genetics Inc. (AGI) predicted a cow can be expected to decrease by half a teat score and approximately a full udder score after 5 years of age. While this is less of a concern for cows with higher scores, for cows with poorer udder conformation, this change may be enough to lead to early culling from the herd. Other factors could include teat and udder injuries or disease events like mastitis.

Continued effort

Nonetheless, the American Angus Association and its members will work to continue to find ways to select animals for well-structured udders. This preliminary data set has given a good insight into what a potential

Continued on page 60

Fig. 1: Teat size and udder suspension scores as described by the Beef Improvement Federation

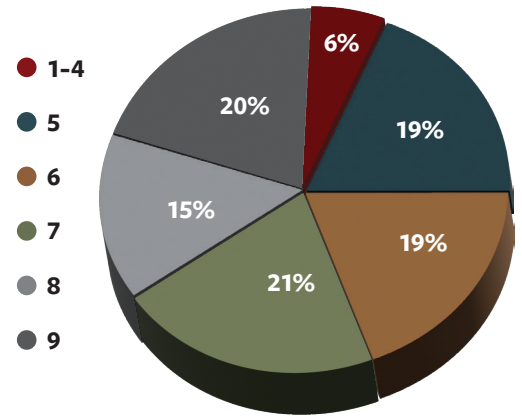


genetic tool for teats and udders could look like for users of Angus genetics.

We will work to continue to refine this tool and collect more records to fully understand the variation in the Angus population. Stay tuned for more on that topic.

For now, as commercial producers, the one thing you can do is start marking down which females you have issues with while calving. Not only will this information assist you in making culling decisions, the added information can guide you during the replacement female selection process by avoiding keeping

Fig. 2: Distribution of teat and udder scores in the American Angus Association database



replacements out of problem dams in your own herd. *ABB*

Editor's note: "Sorting Gate" features herd improvement topics for commercial producers using Angus genetics. Kelli Retallick-Riley is president of AGI. For additional information on performance programs, visit www.angus.org and select topics under the "Management" tab.