

Farm Update:

We had the wettest, coldest spring on record. The complete opposite of last year. With the added rain and mild temperatures the pastures have been great, but all the muddy conditions created other difficulties. Many of the cows are now bred back for next year and we have also put in a few embryos. We are hoping for an eclectic, exciting group of calves again next year as we pursue our goal of adding quality animals that increase the genetic diversity of Heritage Shorthorns.

Historical Perspective Of Calving Ease

The most important tenet of breeding cattle is to have cows that produce a live, healthy calf every year. Calving Ease (CE) can be defined as the ability of a cow to have a calf without assistance. Most of the difficulty seen in calving occurs in first calf heifers because of their lack of maturity/size which makes them vulnerable to the vagaries of calf size and shape. The issue of calving ease came to the forefront of the cattle industry with the introduction of the continental breeds, such as Simmental, Limousine, Maine Anjou, and Charolais, in the late 60's and early 70's. They were used to increase cattle size subsequent to the "baby beef/ belt buckle" era. Shorthorns were affected by this trend because the Herd Book was opened and other breeds, primarily Maine Anjou, were used to add frame to Shorthorns

Sources Of Calving Problems

There is a long list of reasons cows may have dystocia. The causes of calving problems can be broken down into four broad categories: Management, environment, the cow, and the bull. Each category plays a pivotal role in producing a positive calving outcome and each can be manipulated to increase the chances of a positive outcome.

Management

Ultimately the cattle breeder selects which cows are mated to which bull be it natural breeding or artificial insemination. Selecting matings that complement each other so the calf is both the right size and shape for the cow can have a significant impact. Deciding when to have calves born and properly maintaining body condition for the cow can also have a huge impact in preventing calving difficulties.

Environment

It has been known that cows in colder environments will have larger calves because of increased blood flow to the uterus & calf in colder conditions bringing more nutrition to the

developing calf, subsequently increasing calf size. For instance calves born in North Dakota on average may be 6-8 pounds heavier than calves born in South Texas. Cows that have a much higher plane of nutrition in their last trimester of pregnancy will always have bigger calves on a relative basis since increased nutrition for the cow means excess nutrition for the developing calf and larger birth weights.

Cow

Most breeders put their emphasis in preventing calving problems on the bull when in actuality the cow is probably more important. Selecting for proper pelvic shape and a larger pelvic diameter can compensate for a lot of breeding “mistakes”. Cows that are more mature and larger can certainly accommodate larger calves while the opposite is true especially with first calf heifers. Abnormal presentations creating calving problems can be linked to certain genetic lines as well as cow age. Both first calf heifer and aged cows may experience uterine exhaustion whereby they simply do not have the strength to expel the calf. This can also be associated with poor nutritional status in the cow.

Bull

Bull size is obviously a major factor in calving problems along with body shape. Smaller bulls that have wide, deep front ends can exacerbate calving difficulties in contrast to a larger bull that may be narrow fronted and not as deep. When evaluating the phenotype of a bull it is very useful to consider the phenotype of the bull's dam if possible. Most bull buyers never even ask about a bull's dam even though that information can be a strong indicator of possible calving issues. If the bull's dam is an older cow that has never had any calving problems that alone is a strong indicator of decreased calving issues in the bull's offspring.

The Role Of EPDs

Most breed associations, and many cattle breeders, believe lower CE EPDs are the answer to calving problems. They are wedded to the belief that CE EPDs are the magic elixir that will eliminate their calving problems. The most important question is how these lower CE EPDs are obtained. It has been noted that over the last 20 years much of the decrease in CE EPDs has been primarily achieved through decreasing gestation length. The implications of that statement are huge. In late gestation a calf's birth weight can increase approximately a pound/day. A calf that is born at 283 days that has a BW of 75# may be 65# at 273 days or 85# at 293 days of gestation. What is not accounted for when low CE EPDs are the result of shortened gestation lengths is the health status of the calf when it is born and its ability to quickly adjust to its “new environment”. There is no question that, on average, shorter gestation calves tend to be weaker, have more health problems, create more management problems, and have slower growth rates all of which can mean less profit for the cattle producer. Even more important is that continually using low calving EPDs for heifer retention will only intensify and ingrain a “new” type of calving problem—early, weak, unhealthy calves. Unfortunately the long term implications of this selection process are becoming more and more obvious as calf resilience decreases and shortened gestation length becomes a dominant trait in many cattle breeds.

Conclusions:

Despite the mantra (low CE EPDs solve calving problems) put forth by breed associations the truth is that they can actually lead to other problems that affect the genetic value of that breed. The best example is seen in Angus where producers and Veterinarians are raising the caution flag as gestation length continues to shorten resulting in smaller, weaker calves that never catch up with other calves of normal birth weight and gestation length. More importantly this trend toward shorter gestations to solve calving issues is never specified in the EPD data so a calving ease bull is more likely to be just a short gestation bull. In the process additional productive traits are sacrificed or permanently lost. Within herd EPDs have value but the new trend toward enhanced genomic EPDs that supposedly make the bull/cow selection process just another data point may prove to be an Achilles heel.

Like so many genetic traits in cattle there is a happy medium. Extremes produce problems at either end of the spectrum. By selecting bulls and cows that are in the middle frame wise, have smooth muscling patterns, have a normal 283 days gestation, and exhibit a moderate wedge shape front to back the chances of dystocia or weak calves will be greatly reduced and profits maximized.

Future Topic: Can AMSS Put Humpty Dumpty Back Together?