BeefTalk: Lowline Influenced, Sized Right and Grass Ready

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Starting in 1995, the Dickinson Research Extension Center noted the need to evaluate production costs and herd performance for late-spring (early May) calving in contrast to the traditional spring (late-March, early April) calving in southwestern North Dakota.

Although the process has been slow, a review of the accomplishments certainly is in order. Although the two topics of calving later and cow size are unrelated, they often are discussed at the same time.

The general principle is that decreased cow size lowers gross nutritional inputs, which allows for sustained beef production in lower energy-based systems such as grass. The center, like many, started to take a more detailed look at the average weight of the cows. Although very reflective of the industry, the center cows were large.

The first question asked at the center was how to decrease cow size in anticipation of producing cattle for a grass-based operation. The effort to decrease cow size failed because the decreased size sucked the muscle right out of the cattle. Scratch two years of breeding efforts in 1997 and 1998.

However, the center regrouped and tried again. This time the center went with smaller cattle but took the time to select for increased muscle. The unwritten guideline was no smaller-framed sires would be purchased without 1.3 square inches of rib eye per 100 pounds of live body weight. Through the years, that guideline still stands, even if the threshold was not reached in all purchased sires.

A common phenomenon is that not enough money to obtain one's desires still drives many outcomes. A gradual approach was used to reducing cow size by breeding the center's heifers to Lowline bulls. For those who are not familiar with Lowline cattle, the cattle were selected from within a population of Australian Angus cattle for quality of beef and smaller size. Selection has been ongoing for several decades and the cattle have developed into a distinct line or breed of cattle.

Initially, two questions were being answered. First, would the cattle work to decrease calving issues with the heifers? Second, would there be value in the market for cattle produced from the mating? The answer was "yes" to both questions.

The center bred heifers to calf in 2004, 2005, 2006 and 2007 and eliminated calving problems. Birth weights dropped to just less than 70 pounds and dystocia was just more than 2 percent. The male calves were sent to a custom feed yard as yearlings and finished at just less than 1,250 pounds. They had a frame score of 4.8, an 83 percent choice grade or higher, 84 percent yield grade 3 or lower and a feedlot average daily gain of 3.1 pounds per day.

However, even after having established value and purpose, some concerns still existed. One of the concerns was the fact that the heifers were small. As yearlings, the Lowline breed sired heifers with a frame score of 3, while the traditional breed-type heifers were closer to a frame score of 6.

Time went on and the half-blood Lowline heifers became cows and took their place in the herd. Likewise, the traditional breed-type heifers did as well. Historically, the traditional cattle utilized on the range program have weighed just less than 1,300 pounds at spring turn-out, according to Lee Manske, center range scientist. These cows routinely have produced just less than 600 pounds of calf and weaning just more than 46 percent of their body weight in calf weight.

As the early data came in, these smaller-framed cows weighed in at more than 1,000 pounds at spring turn-out and produced almost 550 pounds of calf. In terms of their body weight, they produced just less than 52 percent of their body weight in calf weight, so these cows produce a very acceptable beef package. Actually, once the stocking rate is adjusted to account for the smaller-sized cow, they outproduce the traditional cattle in terms of gain per acre.

In other words, the center had more cows per acre that produced more beef per pound of grazing cow. These are very positive indications that, after 15 years of transition, there really is something to the concept of lowering cow size.

Interestingly, the same trends were seen with this year's replacement heifers. The heifers were developed on grass- or forage-based diets. As noted in the earlier replacement heifers, the frame score dropped 2 units. The Lowline breed sired heifers with a frame score of 3.6, while the traditionally bred heifers at the center had an average frame score of 5.5. However, the rib eye per hundredweight of live weight actually is greater on the smaller-framed heifers.

Again, the data is early and more time is needed to confirm the results. However, grass and cows seem to go together, which seems to be especially true when using appropriately sized cows. At least at the center, Lowline genetics certainly can realign size in a very positive manner.

Stay tuned because the grass cattle are just beginning.

May you find all your ear tags.