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BeefTalk: The Challenge of Cow Size

The solution is finding moderately sized cows that produce steers to meet current market desires and specifications.

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NDSU Extension Service

Size has been the common denominator in revenue generation for cow-calf, backgrounding and feedlot operators.

The process of raising cattle has been quite steady, with a general acknowledgment that growth is key to success.

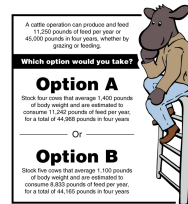
That is a true statement because calf weight, the product of the cow-calf producer, and carcass weight, the product of the feedlot, drive total dollars. What also is true is that bigger cows produce bigger calves, but the discussion becomes clouded when factoring mature cow size into the discussion.

Often, cow size discussions open debate rather than offer further understanding of the issue. Dollars generated as take-home pay depend on net return above expenses, labor and management and, ultimately, offer a return on assets, which are not totally driven by the physical growth of the calf. The challenge is realizing that this issue has three distinct players: the cow, the bull and the calf, which have grown in physical size.

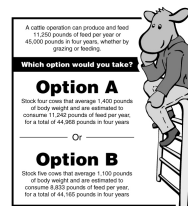
The impact on the maternal and paternal animals and progeny is simply larger cattle. Calf growth, at least among those harvested, is a function of time. Bulls are selected to produce progeny that fit market specifications, so mission accomplished. The same is true for



Images



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the cows, except herds have more cows and they must be maintained year-around.

The cow is the progenitor and the caregiver for the progeny, which means she carries the bulk of the expenses. As a result, cost control and production efficiency must come from the cow. Heifers (future cows) are a byproduct of a very fine-tuned steer production system. Thus the dilemma: How are the cows replaced and appropriately sized if they are simply the counterpart of fast-growing steers?

Producers need to be cognizant as expenses creep upward while trying to maintain an ever-increasing size of the maternal unit, the cow. The solution is finding moderately sized cows that produce steers that meet current market desires and specifications.

Simply put, cattle are not near their maximum capacity for growth and mature size. Cattle simply will keep getting bigger. Somewhere, producers must implement breeding systems that will develop cattle that moderate maternal growth.

Let's focus on 300 pounds of cow rather than the actual size of the cow. So regardless of the size of a cow, the issue for the day is 300 pounds of cow weight.

What does that mean, and how does 300 pounds of additional cow weight impact beef production? The Dickinson Research Extension Center has focused on two cow herds that differ in mature weight by 300 pounds. The numbers are not exact, but the principle is there. Let's just say, as a beef producer, one can decide to add or subtract 300 pounds to the mature weight of the cow herd.

What's the impact? For the past three years, the center has been feeding heifers individually to get a handle on the difference between the calves from large-framed cows and smaller-framed cows. The heifers' daily diets have been the same.

Essentially, the heifers have been eating approximately 2.2 percent of their body weight, so let's assume these heifers will continue to eat 2.2 percent of their body weight for their productive lives. Feed consumption will change through time, but again, let's not get lost in the decimal places; the point is 300 pounds of mature weight.

So the extra 300 pounds times 2.2 percent is 6.6 pounds of feed per day. In a year, 6.6 pounds times 365 days means 2,409 pounds of feed may be consumed to sustain the extra 300 pounds of mature cow weight.

Let's review the two cow sizes at the center. Based on total cow weight, a 1,400-pound cow would consume 30.8 pounds a day, or 11,242 pounds per year. In four years, the cow would have consumed 44,968 pounds of feed.

The 1,100-pound cow would have consumed 24.2 pounds per day, or 8,833 pounds per year. In four years, the cow would have consumed 35,332 pounds of feed, or 9,636 pounds less than the 1,400-pound cow.

That 9,636 pounds of feed directly relates to the 9,636 pounds of extra feed needed to add 300 pounds of mature weight to a cow. In simple terms, reducing cow size 300 pounds saves enough feed to support one additional cow for four years.

Let me repeat: If the center has 44,968 pounds of feed, the producer could feed four 1,400-pound cows or five 1,100-pound cows. By lowering cow size 300 pounds, a producer can support an extra cow with roughly the same amount of feed every four years.

Yes, cattle growth is important, but controlling expenses is as well. The actual size of cow is not as critical as the concept of simply lowering cow weight to lower expenses. At the same time, those 20 percent more cows will offer 20 percent more calves, the real benefit of trying to lower cow size within a herd.

What is the right cow size? The answer will vary, but think about it. The impact is real.

May you find all your ear tags.

For more information, contact your local NDSU Extension Service agent (<https://www.ag.ndsu.edu/extension/directory>) or Ringwall at the Dickinson Research Extension Center, 1041 State Ave., Dickinson, ND 58601; 701-456-1103; or kris.ringwall@ndsu.edu.

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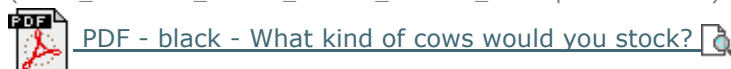
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