



## BeefTalk 615: 4, 3 or 2 pounds of Gain, So What?

### SUPPORTING MATERIALS

#### The Gross Value of Weight Gain

If end product value is set at \$1.20 per pound of live weight:

- Then a steer that gains 4 pounds per day generates \$4.80 per day gross value
- Then a steer that gains 3 pounds per day generates \$3.60 per day gross value
- Then a steer that gains 2 pounds per day generates \$2.40 per day gross value
- If the end point is 1,200 pounds, all steers, regardless of weight gain, generate \$960 in additional gross value to contribute to the owners' costs.

**But, what is the bottom line?**

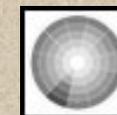
*Maximum gain, which is the maximum amount of beef produced on any given day by an individual steer, is no longer critical.*

Cattle always are on the cutting edge, at least commercial cattle are. That means the average cow can be called upon to fit many niches.

This is not true of cattle that are focused on their genetics to produce specific products. Again, for the most part, commercial cattle fit and meet the broad expectations of their owners. Given that, adding more muscling, increasing quality grade or simply hanging smaller or larger carcasses can be accomplished by tweaking management and shifting genetic



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inputs.

Cattle respond to change quite well, and producers rely on those short-term changes to keep up with the markets. In terms of meeting the increased pressure to lessen grain inputs and increase forage-based inputs, the same concept is true.

What is interesting in this discussion, particularly as the Dickinson Research Extension Center shifts from a grain-based beef production model to a grass-based beef production model, is the persistent insistence that more is better. However, that does not work.

Maximum gain, which is the maximum amount of beef produced on any given day by an individual steer, is no longer critical. If a 400-pound calf can gain 4 pounds per day, the calf would reach 1,200 pounds in 200 days or 1,500 pounds in 275 days. That same calf could be asked to reach 1,200 pounds at 3 pounds per day gain in 267 days or 1,500 pounds in 367 days.

Whether the calf gains 3 or 4 pounds or somewhere in between, as long as the producer provides enough energy within a balanced ration and the calf has the genes to achieve the desired growth, the calf will hang on the rail and more than likely meets the demands of a consuming public.

That is all considered good, but the key is and always has been the need to supply grain-based rations to allow those

rapid-gaining genes to express their capacity to produce beef. If we decide that same calf needs to gain 2 pounds per day, then 400 additional days are needed to reach 1,200 pounds or 550 days are needed to reach 1,500.

Perhaps, in this scenario, 1,500 pounds is too heavy, but 1,200 pounds is not and there still would be an expectation that some of these steers will reach heavier weights.

It may seem mind-boggling, but many commercial cows today can be managed and bred to meet any of the previously mentioned production systems. Keep in mind that we are talking about starting with a 400-pound calf and not putting any demands in this discussion as to how the calf got to 400 pounds.

We would anticipate that the 400-pound calf that gains 4 pounds per day to reach a marketable weight is probably at a different age than the 400-pound calf that gains 2 pounds per day to reach a marketable weight. That may or may not be true. For now, let's continue our discussion of only the weight gain between 400 pounds and the market.

If end product value is set at \$1.20 per pound of live weight, then a steer that gains 4 pounds per day generates \$4.80 per day gross value and a steer that gains 3 pounds per day generates \$3.60 per day gross value. The steer that is gaining 2 pounds per day generates \$2.40 per day gross value.

If the end point is 1,200 pounds, then all the steers, regardless of weight gain, generate \$960 in additional gross value to contribute to the owners' costs. All the calves probably are acceptable for producing beef for the consumer.

The amount of energy that needs to be fed into the system certainly decreases as gain goes down. However, the proportion of that energy that is required just to maintain a steer on any given day goes up. Perhaps it is only those at the center or only me, but that does become a very serious point of pondering.

At what point does the beef industry pass the baton from the grain producer to the grass producer? The answer is not hidden in long philosophical discussions but in quick math. When the price of daily grain intake tips the scales and consumes too much of the potential \$4.80 per day increase in gross value, other alternatives will be sought.

At least for me, it is nice to know that the projections for beef systems that do not rely on grain are doable. The end product would be acceptable, but the reverse question needs to be pondered and calculated. If these lower-gaining cattle are generating only a \$2.40 per day increase in value, then at what point does the cost of forage make grass beef impractical?

As the production of grass beef continues within the daily discussion at the center, the search needs to be widened as various forages are evaluated for the ability to put gain on steers. Simultaneously, proper cattle genetics needs to be screened more aggressively for the ability to add gain on total forage systems. Neither appears to have been done extensively in the world of research.

However, there are some great leads and good starts. More on that later.

May you find all your ear tags.

Your comments are always welcome at <http://www.BeefTalk.com>. For more information, contact the NDBCIA Office, 1041 State Ave., Dickinson, ND 58601, or go to <http://www.CHAPS2000.com> on the Internet.

