

THE DIGESTIVE TRACT

Key to profitability

by Dan Shike, University of Illinois



Managing the nutrition of your cow herd is one of the important keys to a profitable cow-calf

operation. Nutrition (feed costs) represents the largest input in the operation, and proper nutrition is key to reproductive success — which greatly impacts revenue potential.

Oftentimes cow-calf producers focus on weaning weights and calf prices. I am not going to tell you that weaning weight isn't important, and I certainly realize we make more money when calf prices are high. However, I would like to challenge you to really think about the nutritional management of your herd.

Nutrition is one of the most studied disciplines in beef cattle, and for good reason. However, before we dive off into specifics about cow-calf nutrition, it is important to review some nutritional basics and fundamental concepts. There is really no reason to make it more complicated. We can simplify it down to understanding animal requirements and developing nutritional strategies (grazing, grazing/supplementation or feeding) to meet these requirements.

The base

Let's start with requirements. Beef cows have their greatest requirements from calving to breeding. Not only is this the time with the greatest requirement, but it is also the time when the consequences of not meeting

requirements will likely be the most detrimental, resulting in open cows.

Requirements remain relatively high, but gradually decline from breeding until weaning. The cow's lowest requirement of the year is from weaning until about 60 days precalving. The majority of fetal growth occurs in the final weeks of gestation; thus, requirements start to increase again as the cow approaches calving.

Cow size and milk production both have tremendous impact on requirements, and there is no question that both of these (especially milk) have continued



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to rise. What does this mean? It means that many of the nation's cow herds have greater nutritional requirements today than they did 20 years or even 10 years ago. It may seem simple, but it is critical to know what your cows weigh and what kind of milk production your herd has if you are going to determine their requirements.

Managing groups

One of the challenges of practical beef cow nutrition is that we do not manage individuals; we manage groups. The larger your operation is, the more feasible it is to have multiple management groups. It should be obvious that if you had all ages of cows and

all stages of production in one management group, it would be impossible to perfectly meet each cow's requirement. Instead, you would likely have cows that would have their requirements exceeded (wasting money), and you would have cows that were being underfed (increased risk of reproductive failure).

One of the most basic approaches to minimizing the number of management groups required by an operation is to reduce the length of the breeding season, and thus the calving season. Herds that have a tight calving window are able to more effectively manage and meet the nutritional requirements of the majority of the animals in the group.

There are many good resources available to help you determine the requirements of your cows. One thing that is true of all of the resources available is that the accuracy of the requirements will only be as good as the accuracy of the inputs you provide — the stage of production, cow weight, milk production, etc.

Strategy

Once we have a good handle on the cow's requirements, we need to develop a strategy to meet those requirements. For the majority of the cow-calf operations, these needs are going to be met by grazing for a significant part of the year. That is why most cow-calf operations choose to calve in the spring so that the time of greatest requirement aligns with the time of greatest forage availability and quality. When the cows can't graze, we rely on stored forages like hay,

corn silage and crop residue.

When necessary, forages need to be supplemented to meet energy or protein requirements. Many options exist, ranging from commercial supplements to a variety of

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coproducts depending on your region of the country.

If you ask an extension agent or nutritionist to help you devise a supplementation strategy or develop a drylot ration, I can just about guarantee the first step is going to be to analyze your forages and feedstuffs. It is impossible to know what you need to supplement if you don't know what your base forage is providing. This is true for grazing or drylot situations.

It is pretty simple. Know the cow's requirements and develop a plan to meet the cow's needs. How do we know if it is working? This is where a little cowboy common sense comes in. It is impossible to match requirements of every cow every day. Even if it were possible, it certainly wouldn't be practical. Cows can handle short periods of slight overfeeding and underfeeding. They simply gain body condition or mobilize body condition when intake doesn't match requirements.

We should always be monitoring the body condition score (BCS) of our cows. If our cows are maintaining a consistent BCS, we have achieved our goal of providing the proper nutrition to meet the cows' nutritional requirements. ■

Editor's note: "The Digestive Tract" is a regular column in the *Angus Beef Bulletin* focused on nutrition for the beef cattle life cycle. Dan Shike is associate professor in animal sciences at the University of Illinois.