



## Cow Nutrition Affects Calf Health And Herd Productivity For Years

Proper cow nutrition affects calf performance, health and survivability more than any other factor. Problems are magnified in heifers if they are not properly supplemented. Here are some of the problems that can be encountered if cow nutrition is lacking during gestation of the calf.

### Problems In This Year's Calf Crop

#### *Increased Dystocia*

Underfeeding late-gestation cows can lead to more weak calves and stillbirths, mostly due to prolonged labor. Weak calves are more likely to get sick and die, and they have decreased performance.

#### *Weak Calves*

Birth weights of calves will decrease, as will brown fat storage (important for generating warmth). Both are important for calf vigor and survivability in the short term and reducing sickness and death rates in the long term.

#### *Sick Calves*

A decrease in calf birth weight and vigor increases the chances of calves not getting colostrum in time. To compound this, cows that are nutritionally deprived cannot produce good colostrum. Both of these problems lead to failure of passive transfer (FPT) in calves. Calves with FPT are more likely to get sick and die. Even if calves survive an illness, they do not grow as well as healthy calves.

#### *Vaccine Responses*

Having a scours problem and decided to vaccinate the cows prepartum to protect the calves? Cows can only respond to a vaccine if they have

proper energy, protein and mineral levels in the diet. If a cow isn't taking in enough protein to maintain her body condition, she can't make antibodies, which are protein, and put them in her colostrum for her calf. Therefore, vaccinating cows to protect calves through colostrum will only work with proper cow nutrition. Calf vaccine response is also poor in calves that don't get adequate colostrum. So even if vaccines are administered, calves will still get sick and possibly die. The outcome means fewer and lighter calves at weaning.

### Problems In Subsequent Years

#### *Infertility*

We've known for years that females in poor body condition don't breed back readily. Letting cows drop to body condition score of 4 instead of maintaining them at 5 can drop conception rates by 15%. Dystocia rates also increase as body condition drops. Increased dystocia leads to poor conception rates and delayed conceptions.

#### *Replacement Heifers*

Calves that have FPT, whether or not they get sick, do not grow as well as calves that get good levels of immunity from colostrum. This difference in growth carries through the feeding period in feeder calves. This translates to increased time to breeding and time to mature weight in replacement heifers. Recent research also has focused on the influence of cow nutrition during gestation and its impact on subsequent growth and fertility in their female offspring. In one study, heifers born to cows that were deprived of protein supplementation during late gestation had lower average daily gains, delayed onset

to puberty and lower conception rates compared to heifers born to protein-supplemented cows. For herds that are retaining replacement heifers, cow nutrition this year can have long-term effects on the reproductive health of your herd. Improper supplementation of heifers has a direct effect on their own future performance, not just that of their calves. It leads to decreased pelvic size, which can affect their dystocia rate for life.

## **Bottom Line**

Winter feeding costs are a major expense in cow-calf herds. So, selecting a winter feeding program that is cost-efficient is imperative. However, making sure nutrient requirements are met during this time is critical to future profitability. An investment now can pay dividends for years to come.

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