

Microbial farming: Increase dry matter intake and Performance with probiotics

Dairy basics - Calf and Heifer Raising

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Over the years that I have worked with farmers on their dairy cow, calf and heifer diets, I have come to realize that I was not feeding the cow as much as I was feeding the microbial population in the animal.

The good microbes would increase dry matter intake and digestibility of the ration, resulting in an increased performance of the animal and reduced metabolic problems.

With an increase of the bad microbes, I would see higher amounts of sickness and mortality in the animals. This usually would occur during a change in diet, forage, weather, grouping or vaccinations. As a result, we needed to overcompensate for the bad microbes by adding good microbes through the use of probiotics, also known as direct fed microbials (DFMs).

Probiotics, by their definition, are the good bacteria that the animal uses to overcome the bad bacteria in their digestive tract, and probiotics also enhance the digestion of feed. Antibiotics are the complete opposite of probiotics, so they kill all of the bacteria in the digestive system, both good and bad. As a result, when the farmer is feeding antibiotics, they should have a probiotic in their protocol so that they can get the good microbes back up to speed. Probiotics can also reduce the dependence on antibiotics that have become increasingly regulated over the last few years.

As a nutritionist for dairies, I have noted the relationship between dry matter intake and the health of the cow. When there is a higher dry matter intake during the transition period, the cow has less metabolic problems. I would strongly recommend probiotics in the diet to overcome dry matter intake challenges. Producers using probiotics saw higher peaks and more profit potential per cow. When there are fewer metabolic problems, the farmer also spends less on treatment for clinical problems.

The trials on enhanced calf nutrition from the University of Wisconsin – Madison have shown an increased performance per cow of 1,500 pounds per lactation. With improved nutrition from increased protein and energy intake as calves, the animals become much more productive. The use of probiotics helps increase the calf's nutrition by increasing dry matter intake and decreasing the bad bacteria that the calf is susceptible to during the early stages of life. Along with the extra milk production, if a farmer can keep a calf alive with the current prices, it is about \$350 in their pocket.

Probiotics will also help with reducing feet and leg issues in cows. This is accomplished by having a more consistent pH, which reduces the amount of acidosis that a cow experiences during her lactation. The leveling of the pH is due to better balance and a higher number of beneficial microbes in the rumen. The good microbes help maintain a healthy rumen environment and pH.

In conclusion, farmers need to understand that they are not feeding a cow or a calf, but actually are feeding the microbial population in their gastrointestinal tract. Feed the good microbes in an animal's digestive tract and the operation will be much more profitable. This can easily and inexpensively be done by incorporating probiotics at the stressful times during an animal's life. It is like buying an insurance policy that will always pay its claim once the cow is producing milk. **PD**

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