

5 Reasons to Feed Colostrum Beyond Day 1

Feeding colostrum in the first 24 hours of life – and ideally in the first 4 hours -- is not optional. Rather, it's a requirement to ensure that calves receive the immunity provided by immunoglobulin G (IgG). Without it, both morbidity and mortality in calves can be high. In fact, many industry experts regard colostrum delivery as not just a performance issue, but an animal welfare issue as well.

But what about life after that first day? A growing body of evidence is suggesting that there may be value in including colostrum in calf diets for the second day of life and beyond. Here are 5 reasons why:

1. **Digestive system development** – In addition to IgG, colostrum contains maternal developmental compounds, including hormones and growth factors, which can enhance cell development in the digestive tract. They promote the growth of intestinal villi, which are essential for nutrient absorption throughout an animal's lifetime. Swiss researchers comparing calves fed colostrum for 6 feedings, 1 feeding, or no feedings, found that the calves fed colostrum for 6 feedings had improved absorptive capacity in their digestive tracts at 8 days of age. Their intestinal villi were greater in circumference, surface area and height.
2. **Optimal immunity** – Although the window for IgG absorption closes significantly after 24 hours of life, researchers have found that maternal antibodies remaining in the digestive tract after colostrum feeding also provide some local protection against enteric viral infections and diarrhea-causing bacteria. Antimicrobial molecules such as lactoferrin, lysozyme and lactoperoxidase that are in colostrum employ different mechanisms to kill harmful bacteria like *E. coli*. Colostrum also contains enzyme inhibitors that allow antibodies to escape digestion and be absorbed by the calf.
3. **Health challenges addressed**– A study involving three California calf ranches compared the health of calves fed a supplemental colostrum powder with IgG for the first 14 days of life; calves that received the supplement without IgG; and those that received no supplement. The IgG-supplemented calves had significantly less diarrhea and required fewer antibiotic treatments.
4. **Optimal growth** – Also in the California study, the IgG-supplemented calves had significantly higher grain consumption and weight gain over the first 28 days of life.
5. **Less antibiotic use** – Lower disease incidence can mean less need for antibiotics to treat sick animals. This may not only be a cost and labor savings, but may be an important factor in the quest to curb antibiotic use in food-animal production. Researchers are exploring long-term colostrum-supplement feeding as a means of reducing the use of antibiotics for treating sick calves, as well as for receiving treatment protocols.