

Good colostrum management = more milk as adults

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First things first, colostrum! There is a lot of recent research on colostrum and how it impacts adult health and production. Let's review the latest recommendations and effects of colostrum feeding in calves.

The current recommendation from the Dairy Calf and Heifer Association (DCHA) is to feed colostrum equal to **10% of the calf's bodyweight within the first 2 hours of life**. This is approximately 4 quarts of colostrum for every 90 lbs of bodyweight. For Jersey calves, it is appropriate to feed 3 quarts because their bodyweight is so much less than an average Holstein. In addition, the colostrum fed should be 22% or more on the Brix refractometer. Using this measurement cutoff for colostrum helps ensure that we are delivering the appropriate amount of antibodies, or IgG, to the calf. If it is necessary to use a colostrum replacer, select a product that will deliver 150 grams of IgG and is made from bovine dried colostrum. If you have colostrum that is less than 22%, consider adding a colostrum supplement or using it for a second feeding. For delivering colostrum to the calf, it is acceptable to feed by nipple bottles or esophageal tube feeder. Both techniques are safe when done correctly and achieve equivalent absorptions. The key is to deliver clean, high quality colostrum to the calf in the first 2 hours of life.

Furthermore, the bacteria count in colostrum is important because too much bacteria can interfere with antibody absorption. DCHA recommends targets of less than 50,000 cfu/ml for a standard plate count and less than 5,000 cfu/ml for coliform counts.

For a long time, we focused on colostrum to ensure a strong immune system for the calf, but recent research suggests that there are other benefits as well. Several studies have found the following benefits when 4 quarts or more of colostrum is fed cleanly:

- Increased feed efficiency in calves fed higher levels of colostrum – both in dairy heifers and in feedlots animals.
- Decreased morbidity and mortality (less likely to get sick or die) as a calf.
- Increased milk production as cows (18.7 lb increase in mature equivalent milk for every unit of serum IgG above 12 mg/mL)
- One study followed Brown Swiss calves through 2 lactations and found that calves fed 2 quarts of colostrum produced 2,263 lbs less milk and were 16% less likely to survive to the end of lactation 2 than those that received 4 quarts of colostrum.

Curious how your colostrum program is performing? It is quite easy to evaluate this question. Testing the serum total protein of blood samples from calves 2-7 days old can give you a good idea if passive transfer, or the transfer of antibodies, is adequate. Your veterinarian can perform this for you, or help you get set up to do this on farm. In addition, colostrum cultures to check bacteria counts, much like your bulk tank cultures, can provide feedback about how clean colostrum is on your farm. I would suggest testing these things quarterly to monitor your colostrum program.