

CALVING EASE

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Will 3X Milk Feeding Make a Difference?

- **Colostrum management can make or break a milk feeding program**
- **Feed enough to allow calves to express their genetic ability to grow.**
- **Feed the calves at intervals sufficient to allow for digestion.**
- **Think about taking advantage of spreading out feedings to increase volume per feeding.**

Colostrum management can make or break a milk feeding program

Including the five best management practices for colostrum usually will predict very good passive transfer of immunity. If you don't recall these they are: (1) Quickly: feed ASAP after birth, (2) Quantity: feed 4 quarts in first 4 hours, (3) Quality: feed colostrum with at least 50g/L concentration of antibodies (green on Colostrometer, >22 on Brix refractometer, (4) sQueaky clean: bacteria counts of <5,000cfu/ml coliforms and <50,000cfu total plate count, and (5) Quantify: blood serum total protein values >5.0 for 90% of calves and >5.5 for 75% of calves.

Feed enough to allow calves to express their genetic ability to grow.

Two recently reported research trials found quite different results when comparing twice (2X) to three time (3X) feeding programs. One trial limited milk replacer intake to just over a pound of powder daily (1.5% of birth weight). The other trial brought calves up to nearly 2.5 pounds of powder daily (2.8% of birth weight). In both trials all the calves in each trial received the same amount of feed – the only difference within the trial was the 2X vs. 3X feeding routine.

The first trial with limited feeding found no difference in rate of gain and size of calf between 2X and 3X feeding. The second trial with liberal feeding found that 3X calves had 19% higher body weight gain, 20% hip height gain and 17% better feed efficiency.

Feed the calves at intervals sufficient to allow for digestion.

The limited milk trial fed 2X at 6 AM and 5 PM; the 3X calves were fed at 6 AM, Noon and 5 PM (11 hour total interval). The liberal milk trial fed 2X at 8 AM and 9 PM; the 3X calves were fed at 8 AM, 2:30 PM and 9 PM (13 hour total interval).

The trial with limited milk feeding with all three feedings between 6 AM and 5 PM found no difference in rate of gain and size of calf between 2X and 3X feeding. The second trial with more liberal milk feeding spread out over 13 hours found that their calves did better on 3X feeding by gaining more weight, growing taller and having better feed efficiency compared to the trial with all three feedings limited to 11 hours.

Take advantage of spreading out feedings to increase volume per feeding

When we increase the amount of milk/milk replacer fed we usually increase the chances of calves scouring. After several frustrated years of having folks tell me, “But Doc, every time I try to feed more my calves have scours,” I put together a list of best management practices that predict success when farms try to increase their milk feeding rates. If you are online, click [HERE](#) to find this list. Otherwise, go to www.calffacts.com and click on “Feeding more milk without scours.” One item not on that list is to spread out the amount fed over more feedings.

At one time I tried feeding my calves 2X with one gallon of milk replacer mix containing 1.5 pounds of powder. I found that I had to be quite careful with equipment cleaning – I used a clean pail at every milk feeding. I had to be fussy about making sure calves had plenty of water to drink. And, if I recall correctly, I had about one calf out of twenty that never quite got up to full feed without excessively loose manure – I’m guessing she was a passive transfer failure from colostrum although I did not think to check that fact at the time.

We can feed calves so as to more than double their weight in the first 60 days of life. Should we consider feeding more than twice a day?

References: D.C. Sockett and T. Earleywine, “Advantages of 3X Milk Replacer Feeding,” Proceedings of Dairy Calf and Heifer Conference, April 4-5, 2013, pp38-39. M. Thomas and Others, “Effects of milk replacer feeding frequency on growth and performance of neonatal Holstein calves,” Journal of Dairy Science, 97 E-Suppl 1, #1183, p. 586.

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Remember to Google “Calves with Sam” blog for profit tips for calf rearing.