

Calf Notes.com

Calf Note #28 – Can I Feed Calves Once a Day?

Introduction. Feeding liquid to calves - whether milk, transition milk, or milk replacer is usually time consuming and labor intensive. This can become a significant expense for some dairy producers, particularly if labor is at a premium on the farm. In addition, feeding calves requires the work of obtaining milk or milk replacer twice daily, storage of milk and/or mixing of milk replacer.

One method for improving labor efficiency in the calf rearing enterprise is to reduce the number of daily feedings from two to one. In most cases, the amount of milk fed to calves fed once daily is simply the amount normally fed twice daily combined into one feeding. For example, many Holstein calves in the U.S. are usually fed 2 quarts (1.9 liters) of reconstituted milk replacer twice daily, with each feeding containing approximately 8 ounces (225 grams) of milk replacer powder. When fed once daily, the amount fed becomes 4 quarts (3.8 liters) of reconstituted milk replacer, containing approximately 16 ounces (450 grams) of powder. Others have suggested that the amount of solids is doubled (16 ounces or 450 grams) but the amount of liquid is not quite doubled (3.5 quarts or 3.3 liters).

Typically, one feeding of milk or milk replacer is offered at the morning feeding. If calves have been fed twice daily for any length of time, you should expect to hear significant "complaining" when calves are moved to feeding once daily. Many producers don't feed once daily simply because the calves complain too much!

What effect does once daily feeding of liquid have on the calf? From the standpoint of digestibility, metabolizability, and growth rates, it appears that there is no significant effect of feeding liquid once vs. twice daily. Researchers in the U.K. found no effect of feeding frequency (1, 2, 4 or 6 times daily) on growth rates or energy balance when calves were < 28 days of age. In addition, Dr. Brinton Hopkins reported that rates of body weight gain were excellent when calves were fed 3.8 L of whole milk once daily to weaning at 28 days (Journal of Dairy Science, 1997; 80:2200-2203). It is important to note, however, that the researchers in these studies fed whole milk or a milk replacer that contained casein and clotted in the abomasum. Clotted casein is released slowly and provides a more continuous source of nutrients over the day. It is not clear whether using modern milk replacers based on whey proteins (that don't clot in the rumen) will provide the same nutrient flow during the day when those replacers are fed once daily. A lack of abomasal clotting may result in a period of nutrient deprivation during the evening. However, using whole or waste milk in a once-daily feeding system should work satisfactorily.

Feeding liquid to calves once daily, when done properly, can reduce labor costs associated with the replacement enterprise. One final caution - calves are especially sensitive to overall level of management. Research has shown time and again that calves are healthier when they are monitored frequently. While feeding milk to calves once daily may not markedly affect digestibility of nutrients, the reduced intensity of observation can lead to increased health problems. While reducing the

number of feedings may save labor, increased morbidity and mortality resulting from decreased observation may actually increase costs.

**Written by Dr. Jim Quigley (27 October 1997).
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