

**Risk Factors for Disease from Poor Colostrum Management**  
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One problem frequently encountered during calving season that results in calf diseases is poor colostrum management. We know that the earlier a calf gets good quality colostrum the less likely that calf will get a disease. It is often late a night and we have a newborn calf that will not get up to nurse. The calf may be chilled or had a difficult birth. The cow may not be easy to hand and the facilities may not be conducive to milking a beef cow.

The options in a case like this are to 1) milk the cow and supplement the calf, 2) give the calf milk from the refrigerator, 3) purchase colostrum from a dairy to give the calf, 4) purchase one of the commercial powdered colostrum products to give the calf, 5) use frozen colostrum from a 5 to 8 year old cow from your farm, and 6) let the calf go and see what it looks like in the morning.

Milking the cow and feeding the calf colostrum may be the best option for the calf. The cow has been in the bacterial and virus environment that the calf will be exposed to. The colostrum from the calf's dam is likely to have immunity to most of the diseases the calf will encounter in the next few weeks. This also gives you a chance to examine the udder and teats of the cow to check for large teats, sealed teats or mastitis. Facilities, cow temperament, available help, time of night, and your temperament will dictate if this is possible. In my experience, it is not worth a broken arm to accomplish getting colostrum into the calf.

Milk from the refrigerator, powdered milk, coffee, and whiskey do not contain any antibodies and will not protect the calf from infection. At birth, the calf has large pores in its stomach that allow direct absorption of large molecules such as antibodies in the colostrum (immunity). During the first hours of birth, these openings begin to close and by 24 hours, they will not allow absorption of antibodies. Anything other than colostrum we place in the calf's gut will speed up the closure of these pores and reduce the effect of any colostrum the calf may drink later. Feeding milk that is not colostrum will give the calf some nutrition but will reduce its ability to fight off infection.

Purchasing milk or colostrum from another beef or dairy producer is very risky. Colostrum from a dairy cow has about ½ of the antibodies of colostrum from a beef cow so the product is inferior. Colostrum and non-pasteurized milk from another farm can spread disease. Bovine Virus Diarrhea (BVD), Johne's Disease and Bovine Leukosis virus are just a few of the diseases commonly spread by purchased colostrum. In my opinion, purchasing colostrum from another farm is the worst of the possible solution to the calf that has not nursed colostrum from its dam.

There are currently several good commercial powdered colostrum products on the market. None of these products will give the level of protection of fresh colostrum. The level of antibodies in all of them is lower than colostrum. They are very convenient to use and relatively inexpensive.

If you have a relatively docile five to eight year old cow freshen, you could milk her and save colostrum in one-quart containers. This colostrum will have the antibodies that are specific to your farm and any contamination of bacteria or virus will be

pathogens currently on your farm. This colostrum can be frozen and saved for one to two years. When you thaw this colostrum do not use a microwave, it should be slowly heated in a water-bath until it is about body temperature (98 degrees). A calf should receive two quarts during the first three hours since birth. If you do not get to the calf until it is twelve hours old, you may need to increase this to four quarts because it will absorb only 50% of the antibodies.

The last option is to wait until morning and see how the calf is doing. This may result in a calf that has poor colostrum absorption and at risk for calf scours or pneumonia.

From the calf's stand point the best solution is to get it to nurse the cow, the second best is for you to milk the cow and feed the calf, third give frozen colostrum from a cow on your farm, and fourth give a commercial powdered colostrum product. Purchasing colostrum from a dairy or another beef producer is risky and not recommended because of the risk of bringing disease into your operation.