

# CALVING EASE

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## Monitoring for Profitability

It is amazing that in just a couple of months a calf can mature from a wet, dazed newborn to a sturdy rapidly-developing ruminant. That assumes that all the calf rearing processes work well. Stuff like calving management, colostrum management, feeding, housing, and health care.

One way we find out that one or more the processes are not working the way they should is sick calves. Or, worse, dead calves. Perhaps those outcomes could be called monitoring. When morbidity or mortality rates go up lots of folks use the terms, “train wreck,” or “the wheels fell off the wagon” to describe the situation. At that point the priority is to “fix” the problem rather than figuring out how to keep it from happening again.

Another way to find out if our calf rearing processes are working well is to have regular monitoring procedures in place. When these procedures are selected properly they provide early indicators that calf rearing processes are not fully on track. Usually just making one or two corrections will bring an indicator back in line with the performance threshold we have set for ourselves.

### An Example using Colostrum Management

Let's work through an example that will show how monitoring works. Monitoring the effectiveness of the colostrum management program is a good example because the procedures are easy to describe. First, we want to find out if colostrum-based antibodies are actually ending up in the blood of our calves. Draw blood to get blood serum total protein levels. We want to see how well the passive transfer of antibodies is working. [See [www.atticacows.com](http://www.atticacows.com) in the Calf Facts section scroll to the resource entitled “Testing for Passive Transfer of Immunity” for more on how to do this.] For this example let's assume that we do this once a month. We do this regardless of whether or not we have a “problem.” In contrast to previous months, this month our outcome is not good. Too many calves with too low blood antibody levels. We conclude that something upstream is not working the way it should be. Fortunately, in this case we chose to monitor our colostrum management procedures.

We chose to monitor colostrum quality. After it is collected each cow's colostrum is checked for quality. Lots having high antibody concentration are bottled and marked with an “H.” The other lots are marked with a “B.”

Every person, after feeding colostrum to a newborn heifer calf, writes down his/her name, when the calf was born, when the colostrum was fed, how much was fed and the quality of colostrum fed.

These records can be summarized:

- Time between birth and first colostrum feeding – average hours, number of calves more than 4 hours [each farm can choose its own thresholds here such as average not greater than 2, no more than one calf per week over 4 hours]
- Amount of colostrum consumed – average quarts, number of calves with less than 4 quarts [each farm can choose its own thresholds such as no more than one calf a week less than 4 quarts.]
- Quality fed – number of heifer calves per week fed “B” quality colostrum.
- In this case there is no need to summarize colostrum feeding temperature. A rapid-read thermometer is inserted through the nursing bottle nipple vent hole making it easy to see when the goal of 105 degrees is reached – a simple direct monitoring technique.

The first three monitoring steps (timing, quantity, quality) represent the most important factors that determine how well antibodies are transferred from colostrum into a calf’s blood. Temperature at feeding can be significant when the feeding temperature is too low.

For our example let’s also assume that every Monday we take a sample from each batch of colostrum that is fed. We get it from the nipple of a bottle ready to feed or from the end of a tube feeder. When we need to check bacterial levels we raid the freezer for the most recent samples. Once these have been through a lab we know how many of each species of bacteria are present (speciation and quantification). We chose thresholds for our example farm of not over 5,000 cfu/ml coliforms and not over 50,000 cfu/ml total bacteria. [Each farm can choose its own thresholds based on its morbidity experience – consult with your veterinarian when doing this.]

The bacterial analysis monitors several processes at once. They begin with the preparation of the fresh cow for her first milking and continue through sanitation of equipment, handling times, prechilling colostrum before refrigeration or freezing, and warming for feeding. [See [www.atticacows.com](http://www.atticacows.com) in Calf Facts scroll to the resource “Colostrum: Reducing Coliform Counts Checklist”]

So, what did we find out? One calf a week is fed colostrum later than our goal. One calf a week is fed less than our goal. One calf a week is fed “B” quality colostrum. The thermometer that is supposed to be used to check feeding temperature has been lost. The lab report comes back with one out of five samples with bacteria numbers well above our thresholds.

Right now we have been fortunate. The departures from our goals are small. If the deficiencies are spread around among calves they probably will not get infections that require treatment. But, NOW is the time to fix these “small” lapses in using correct procedures. Buy a couple new thermometers. Go over the checklist, “Colostrum: Reducing Coliform Counts Checklist,” with the appropriate employees. Using the feeding records we can talk with the persons having difficulty meeting the farm goals to see what can be done to change this. Because we do not have enough “H” or heifer-quality colostrum we may decide to start checking all the colostrum from fresh heifers to see if we can increase our supply.

By using monitoring procedures we can prevent problems rather than waiting for sickness or death.

If you know of someone that doesn’t currently receive **Calving Ease** but would like to, tell them to **WRITE** to Calving Ease, 11047 River Road, Pavilion, NY 14525 or to **CALL** 585-591-2660 (Attica Vet Assoc. office) or **FAX** (585-591-2898) or **e-mail** [calvingease@rochester.rr.com](mailto:calvingease@rochester.rr.com) with Subscribe as the subject. Back issues may be accessed on the Internet at [www.atticacows.com](http://www.atticacows.com), click on the Resources menu and select Calf Management Newsletter.

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