

Calving Ease

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Calf Health: The Futile Search for the “Silver Bullet”

- Calf health goals
- The futile search for **THE** cause of illness
- Observing the “critical control points” for immunity
- Observing the “critical control points” for pathogen exposure
- “Ducks in a Row” management vs. the “silver bullet” to solve health problems

Farm-specific calf health goals

On one hand, one set of calf health goals is in the Dairy Calf and Heifer Association’s “Gold Standards” publication. They suggest a 60-day survival rate of 97 percent (3% mortality). In addition, for pneumonia treatment rate preweaning they recommend less than 10 percent. For scours treatment rates preweaning the rate is less than 15 percent.

On the other hand, farm-specific goals may be different. It is important to have good records. It should be possible to find out the preweaning rates of survival, pneumonia and scours treatments for past year or two for your dairy. Given individual farm circumstances (labor, facilities, herd health history and genetics for example), these national goals may not be appropriate. Thus, often our first step in achieving optimum calf health is to determine the farm’s experience for the previous year or two.

The futile search for **THE** cause of illness

You decide that calf health needs to be better this year than last year. What improvements need to be made to achieve better calf health – that is, fewer treatable illnesses?

One approach that is doomed to failure is trying to find **THE** single cause of calf hood pneumonia or calf scours. The consensus among calf health professionals is that each treatable case of either pneumonia or scours will usually have multiple causes.

For example, a calf with diarrhea at 8 days of age may have had excessive exposure to pathogens (bacteria, viruses, parasites). These may be from the calving pen, transport vehicle, contaminated colostrum and preweaned housing. In addition, receiving too little poor quality colostrum too late in life may have set the calf up with compromised immunity. Thus, looking for **THE** sole cause of this calf’s diarrhea is futile.

Observing the critical control points for immunity [for a summary click [HERE](#)]

Inadequate immunity levels among young calves are most often traced back to these factors:

- inappropriate colostrum management practices;
- inadequate neonatal nutrition;
- excessive environmental stresses.

It is a best management practice to assess regularly how well the antibodies in colostrum are finding their way into the blood of newborn calves. If you are not already monitoring the effectiveness of your colostrum management program, you need to approach your veterinarian for assistance. For a background resource on testing using blood serum total protein, click [HERE](#).

Observe and review the volume of milk being consumed by calves less than 2 weeks old. They need to be gaining at least 1 pound a day. This translates into at least 4 quarts of milk daily except in cold weather. This will assure that they build their own immunity to take over as antibodies from colostrum fade away.

Observing the critical control points for pathogen exposure [for a summary click [HERE](#)]

Excessive exposure to pathogens among young calves are most often traced back to:

- contaminated colostrum;
- maternity pen/calving pack management;
- lack of umbilical cord treatment;
- contaminated feeding equipment – milk/milk replacer handling;
- personnel carrying pathogens from calf to calf;
- overall calf housing environment.

On one hand, it is not complicated to observe most of these critical control points. For example, regular checking to see if calves have clean, dry bedding can be scheduled as daily, weekly or monthly tasks.

On the other hand, only laboratory culturing of colostrum and milk samples will reveal the extent to which these samples have bacterial contamination. Protocols for collection of these samples are found [HERE](#) for colostrum. And, [HERE](#) for milk/milk replacer. Standards for bacteria counts for colostrum are found [HERE](#). Milk bacteria counts should be <1,000cfu/ml coliforms and <5,000cfu/ml total plate count.

“Ducks in a Row” management

Sorry, it is not productive to focus on finding the “silver bullet.” You are very unlikely to find one single change to solve calf health issues. Rather, focusing our attention to all the little details is more likely to make the big difference. That is where the saying, “Get all your ducks in a row” applies. Following all the best management practices all the time with all the calves is a tough standard but it does work.

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