

Calving Ease

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Early Detection of Sick Preweaned Calves

Treating preweaned calves soon after they become clinically infected usually results in more rapid recovery than when treatment is delayed. And, usually the number of treatments is lower and expenses are reduced when treatment is timely. Don't wait for full-blown clinical symptoms to start treatment. The medical expenses are higher if you wait. And, the calves lose growth momentum. Days, even weeks, are lost in reaching our goal of their first milking.

Signs we cannot miss

Symptoms of an advanced infection are easy to see. For example, not getting up at feeding time. Unfortunately, by the time a calf is too weak to stand up at feeding time the infection is well advanced. She does need to be treated. The treatment, however, is not timely. Our goal is to detect the infection sooner than this.

Making observation a priority activity

Busy, busy, busy pretty well defines the life of a calf caregiver. Always too much to do and too little time to get it done. The routine "doing" can take over our lives. Then, we wait for a health crisis to capture our attention. Not good.

Live, healthy and well-grown calves do not just happen. We have to make correct decisions. One of those decisions is remembering that observing is just as important in calf rearing as post-natal care, feeding, bedding, vaccinating, dehorning, and all the other "doing" activities.

Productive "observing" takes preparation

On one hand, through repeated observations as caregivers we have the opportunity to build mental pictures of the calves we work with daily. It is possible to build images of what is "normal" and what is not. This seems to be true regardless of the number of calves for which we are responsible.

On the other hand, when managing calves I supervised workers who seemed wholly unaware of differences among the calves. To them the calves were no more individuals than the pails from which calves fed. Does it make sense to say that they could look but not see? Look – "to employ one's sight especially toward a give object." See – "to perceive, to be aware of, to comprehend."

Directing our attention to what is most important

1. When calves are hand fed milk (or milk replacer) it is easy to observe the rate at which calves drink and their general attitude. For example, a healthy calf moves around a great deal at feeding time and “attacks” the nipple or bucket of milk. In contrast, even a minor infection slows the calf down. They stand rather than bounce. They tend to have a more “so-so” attitude about drinking rather than attacking their meal.

Recently reported research suggests that the computer information from an automatic feeder can be useful for identifying infected calves. However, during the two days before calves showed the first clinical symptoms of an infection there were no differences in feeding behavior. Nevertheless, when calves were limited to 4.2 quarts of milk daily, sick calves spent less time at each feeding than healthy ones. This was the only difference in feeding behavior between healthy and infected calves when milk intake was limited.

In the more common situation with automatic feeders where feeding rates are much higher (in this experiment 12.7 quarts per day was the maximum) healthy and sick calves behaved differently once the infection began. Healthy calves ate more, ate more frequently and ate more quickly compared to infected ones. High-intake infected calves were somewhat off feed (drop of over two and one-half quarts per day). These calves spent more time lying down and visited the feeder fewer times than healthy ones (two and one-half fewer visits per day). They also spend nearly two minutes longer at each feeding – suggesting to me a slower rate of intake given the quantity at each feeding was a fixed amount.

2. When calves are housed individually watching for abnormal feces is a reliable way to pick up on an intestinal upset. Many calves will have their feces vary from day to day in general consistency and color. However, when feces are too loose to remain on top of bedding there usually is an infection involved. Among group-housed calves checking for wet and/or soiled tails is a workable substitute. When observing I prefer to use a list of calves in the pen in order to avoid missing individual calves.
3. In addition, it makes sense to watch for abnormal discharges from either nose or eyes. Both of these can be early signs of a respiratory illness. A reliable picture-guide for these observations developed by Dr. Sheila McGuirk (Univ. Wisconsin) can be found at http://www.vetmed.wisc.edu/dms/fapm/fapmtools/8calf/calf_respiratory_scoring_chart.pdf. When using this scoring system a score of “4” means watch this calf and a score of “5” or greater means treat now. Spontaneous coughing, as well, is always a suspect behavior.

References: A.M.K. Virtala, G.D. Mechor, Y.T. Gröhn, and H.N. Erb, “The effect of calfhood diseases on growth of female dairy calves during the first 3 months of life in New York State.” *Journal of Dairy Science* 79:1040-1049. T.F. Borferas, J. Rushen, M.A.G. von Keyserling and A.M.B. de Passillé, “Automated measurement of changes in feeding behavior of milk-fed calves associated with illness.” *Journal of Dairy Science* 92:4549-4554.

this topic.

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Our thanks to Alpharma for supporting this issue of Calving Ease.

Arguments continue about how early to feed hay to young calves. For pictures showing the comparison of rumen development with and without hay feeding see: <http://www.das.psu.edu/research-extension/dairy/nutrition/calves/rumen> Scroll down to view a number of different pictures. There is a good picture of the esophageal groove.

Diagnosing respiratory illness in preweaned calves can be made more consistent and easier with a picture guide provided at this web site: http://www.vetmed.wisc.edu/dms/fapm/fapmtools/8calf/calf_respiratory_scoring_chart.pdf Scroll down to page two for the picture