

# Northwest Veterinary Associates

## January 2008 Newsletter

### Feeding Calves in Cold Weather

Every winter when the cold temperatures hit us, an increase in calf trouble seems to hit many calf raisers. Problems with both scours and pneumonia are common in the winter. One explanation for this trend is that calves are not getting enough protein and energy for both growth and maintenance. A calf's immune system develops in direct proportion to the calf's rate of growth. So if she is just getting enough to maintain status quo, in other words, no growth, her immune system is in trouble and she is very susceptible to health problems.

The following chart shows the milk replacer (MR) needs for 80 and 100-pound calves at three different ambient temperatures, 50, 30 and 10 degrees F. The lower, dark part of each bar represents the amount of milk replacer needed for simple maintenance- no growth. The upper, lighter part of each bar shows the amount of milk replacer needed for a pound of gain a day.

First, notice the obvious relationship between decreasing temperatures and feeding more milk replacer. The 100-pound calf needs nearly 8 quarts of 20-20 at 10 degrees to gain a pound a day! Also, three of the dark bars show that more than 4 quarts are needed just for maintenance. When these calves are fed 4 quarts a day, they will lose weight. Secondly, the graph shows that the larger 100-pound calf needs more milk for maintenance (dark bar) at the same ambient temperature than the 80-pound calf. In fact, at 10 degrees, she needs 4.9 quarts compared to only 4.1 for the 80-pound calf. That is nearly an extra quart a day for the larger calf's maintenance.

Thirdly, in order for the calf to grow, you will need to feed well above the 4 quart a day line.

So, how can we feed more? One easy solution is to feed milk from the bulk tank. Whole milk from Holsteins has about 25% more energy than 20-20 MR. (Jersey's are about 50% more).

You can also save heifer colostrum and second and third milkings from fresh cows and mix this with MR to booster energy inexpensively.

Another strategy is to simply mix more powder with the water. If you add another 2 ounces per feeding in the same amount of water, you will increase the energy by 25%. Four ounces of extra MR increases the energy 50% but only do this if calves have free-choice water to drink in addition to their milk.

Or you can feed more of the standard mix of MR. This works well with larger calves that have the stomach capacity to drink a larger meal but with smaller calves, they will have a difficult time drinking that much fluid at one time. Several fat supplements are available to increase the energy levels of MR for winter weather, too.

We can help you evaluate your present feeding strategies or can show you where to get helpful information. Just ask your herd health veterinarian.

No matter how you do it, feeding more energy and protein during our Northern Vermont winters will result in better growing calves that will likely have fewer disease problems.

One last pointer: Be sure to have the liquid temperature AT FEEDING TIME at least 102 degrees. If it is less than this, the calf must use her own energy to heat it up to her temperature. She will often show this by shivering after she has been feed. You can use an inexpensive thermometer to check feeding temps.

Prepared by Steve Wadsworth,DVM

Thanks to Dr. Sam Leadley for providing helpful information for this newsletter.