

CALVING EASE

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Milk Feeding in an Accelerated Growth Program

At Noblehurst Farms I have fed the last eight hundred calves at an accelerated growth level. I have a few observations about the milk feeding part of calf care.

SELECTING A FEEDING LEVEL

At first I wasn't just certain what I wanted to achieve. Prior to adopting higher levels of feeding milk replacer I was getting about 1.5 pounds gain from birth to fifty-six days. This rate of gain varied quite a bit from summer (lower) to winter (higher). The treatment rate for in-hutch pneumonia was ten to fifteen percent in the summer and over twenty-five percent in the winter quarter.

In 1998 my goal was to reduce the pneumonia morbidity rate to under ten percent, especially in the winter quarter, and to increase the rate of gain to 1.8 pounds per day. I continued to feed both water and starter grain free choice from the first day the calf was in the hutch. The ration continued to be both milk replacer and starter grain. In 1998 in order to increase the rate of gain in calves less than four weeks of age I changed the milk replacer feeding rate from sixteen ounces of powder to thirty ounces daily. In 1999 as part of a feeding trial I fed seventy-five calves at the rate of forty-six ounces of milk replacer daily. As an aside, the 1998 feeding program did result in 1.8 pounds a day gain and the pneumonia treatment rate dropped to less than five percent.

FEEDING DIFFERENT AMOUNTS

I had to adopt a whole new attitude about "every calf get the same" kind of feeding procedures. For the thirty ounce ration I feed half at 7:00 AM and the other half at 4:00 PM. It is fed as three quarts of milk replacer at each feeding. For the forty-six ounce ration I feed at the same times. It is fed as four quarts of milk replacer mix each feeding. The larger calves (ninety-five pounds or larger at birth) just dig in and eat the full amount even before seven days. Smaller calves are another story.

As I went along I discovered that sixty-pound calves would eat about two quarts AM and PM. This seemed to be true regardless of the concentration of the mix. Larger calves (seventy-five to eighty pounds) eat more; roughly three quarts AM and PM by ten to fourteen days. If I feed too much in the AM the calves just drink less in the PM. I tried feeding the full four quarts in the AM to small calves and they didn't drink at all in the PM; they were not hungry. Many but not all of these calves would drink between one to four quarts of water overnight. I always check on water consumption for any calf that doesn't drink all her milk.

Sometimes I incorrectly estimate how much to feed. If I feed too much in the morning the calf won't get up to eat in the afternoon. We have tether-style hutches so it is easy to check individual calves when this happens. I'm not sure what to suggest for farms with wire cages in front of the hutches. I

know it's a lot of work to get inside those hutches to check every calf that doesn't come running out to eat at feeding time.

I found that by three weeks of age all of the calves on the thirty-ounce ration clean up all three quarts AM and PM without any difficulty. The forty-six ounce ration requires another week before the smallest calves come up to the full four quarts AM and PM.

Different amounts need to be fed to achieve optimum growth. In order to keep track, I set up a feeding chart by hutch to show amount to be fed calves less than three weeks of age. Beyond three weeks only one calf here and there needs special attention.

MANURE PATROL

I had a lot to learn about manure. All the calf raisers I know use consistency and color of feces as a way to diagnose diarrhea or scours. But when I started the higher rates of feeding I had to take into account the potential for overfeeding in addition to pathogens (parasites, bacteria, and viruses) as a cause of diarrhea. I can't describe the difference in words but abnormal feces due to overfeeding have a different appearance than those due to pathogens. By trial-and-error and overfeeding forty or fifty calves I finally learned to pick out abnormal feces due to overfeeding. Once I had that skill, fixing the problem was easy. Change the feeding chart and feed less for a few days. Presto! Feces change back to normal. As long as they have free choice water I have very few calves that require special treatment for diarrhea.

At the highest feeding rate (forty-six ounces of powder daily) the definition of "normal" changes, too. For the first three weeks or so, the feces are more loose or softer than I expect to see on calves at twenty or thirty ounces of powder. The calves are healthy and gaining weight in spite of the seemingly loose feces. But, remember that all these calves have free choice water all the time.

WHAT TO FEED

If our goal is accelerated growth [more recently called "normal biological growth" rather than "restricted growth"], then we need to feed a highly digestible product. This probably means either whole milk or an all-milk milk replacer. Our experience is with an all-milk milk replacer with all the fat from animal sources. Using an off-the-shelf product (twenty- percent protein and twenty percent fat) we have fed up to thirty ounces of powder daily with no observable toxicity problems. [Looking back, these calves may have been somewhat on the chubby side, however.] That period of observation extends to nearly two years.

But, at higher feeding levels we feed an all milk milk replacer with all fat from animal sources specifically formulated for an accelerated feeding program for dairy heifer calves. It's twenty-eight percent protein and twenty percent fat. [More recently we have seen 27-16 and 28-15 formulations on the market.] The vitamin and mineral supplements are in proportion to the higher feeding levels (up to three pounds of powder daily). None of our milk replacers are medicated with antibiotics. We have fed dry matter concentrations varying from twelve and one-half percent to nineteen percent. No problems such as scours or calves refusing to eat the reconstituted milk replacer have been seen. All calves, however, have continuous free choice water in the hutch and they are all fed with pails.

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** either 585-591-2660 (Attica Vet Assoc. office) or 585-343-8128 (Offhaus Farms Office) or **FAX** (585-591-2898) or **e-mail** sleadley@frontier.net . A limited number of back issues may be accessed on the Internet at www.calfnotes.com and clicking on the link, Calving Ease. PLEASE NOTE THE NEW WEB SITE ADDRESS FOR CALF NOTES.