Basics for Feeding More than One Pound of Milk Replacer a Day

It's difficult to go to any meeting of calf managers these days without hearing conversation about "accelerated growth" or "intensive feeding programs." These calf raisers are talking about feeding milk replacer at rates higher than one pound of dry matter or powder per day. But, we hear too little about the basic conditions that need to be in place before feeding for more rapid growth especially among young calves.

Newborn Management

Calves born in dirty conditions or left too long with a dam having manure on her belly and flanks scour consistently regardless of IgG level. These calves are not good candidates for intensive feeding programs.

Be sure your newborn management program is at least very good before considering feeding higher rates of milk replacer. That means:

- Calves are kept away from adult cow manure from birth to hutch or pen.

- Adequate amounts of good quality clean colostrum are fed as soon as possible after birth.

- Adequacy of your colostrum management is checked periodically. Having your vet obtain blood samples from about 12 calves can do this. Blood from calves from 2 to 7 days of age may be used.

- **If more than half of these samples give refractometer readings of blood serum total protein (BSTP) below 5.5, then it is my opinion that your colostrum program needs attention before starting an intensive feeding program.**

Water

Nothing much cheaper than water. Nothing is fed to preweaned calves much less often than water? Why? "Too much work." "It takes too long." "I can't be bothered." "The calves don't need water, they have milk. "

I measured my extra time involved in providing water to hutch calves at Noblehurst dairy. That time included loading water, dumping water pails and delivering the water. As long as the water didn't freeze I spent 1 minute per day per calf to provide water both at AM and PM feeding. During freezing weather I spent twice as long to provide water 2 times daily.

Why do we feed water? For calves before they begin eating much grain, we are trying to increase their milk replacer intake. It was my impression that calves came up on full feed (2 pounds of milk replacer powder daily) much more quickly with free-choice water from day one than without water.

Also, since I had a very high rate of cryptosporidiosis, I fed water to prevent dehydration due to crypto-induced diarrhea. Water is essential for dealing with heat stress, too.

We've heard the old wives tale about how feeding water keeps calves from drinking their milk. That's bunk! If calves have free-choice water consistently, then they will drink only what they need.

It is true that for an occasional feeding milk consumption may be down. But the general rule applies. Preweaned calves do better with water than without it, especially calves less than 3 weeks of age.

If you cannot include water feeding to calves, then do not even consider feeding higher rates of milk replacer (this does not apply to feeding some extra powder during very cold weather).

In my experience with nearly 800 calves fed at rates of 30 ounces of milk replacer per day and higher, it's either feed water or don't even try rates higher than 20 or 24 ounces of milk replacer powder per day. Why? Without free-choice water milk replacer consumption suffers. And, even otherwise healthy calves suffer from diarrhea and dehydration. Stress-induced pneumonia increases as well as mortality.

Big calf, small calf

Big 90 to 100 pound calves that were kept away from adult cow manure and receive plenty of good mature cow colostrum soon after birth can eat their little hearts out and never get sick. I've fed them up to 3 pounds of powder in 8 quarts of mix daily. They grow like weeds. They stay healthy.

But, lots of calves are not that large. Thirteen percent of our Holstein calves at Noblehurst dairy were less than 75 pounds at birth. Guess what? Sometimes they can't be fed the same amount as a 100 pound calf. This isn't news to anyone that's worked with calves.

Some small calves until they are several weeks old just won't eat that much (8 quarts) even if offered. Frequently, they will drink a lot in the morning and nothing in the afternoon if large volumes are fed. This may be more an issue when the interval between feedings gets shorter and shorter.

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Also, if you depend on calves running up to the feeding pail at the afternoon feeding as way to check on their health, then you may have to accommodate some morning-only drinkers under 21 days of age.

If your feeding program can accommodate feeding different amounts of milk replacer depending on calf size and health, you may be ready to consider an intensive feeding program. **If you are definitely a "one amount for all calves" operation, then forget higher feeding rates.** Feeding large amounts of high-protein milk replacer to every calf regardless of her newborn care, size and health is a recipe for high scours rates and death loss.

Come on, can't you say something positive?

Yes, I can. Let's say you have a good newborn management program already in place. IgG levels are high and navel infections are low. You are already feeding water year round to calves. Small or sick calves are receiving individual attention. Death losses are below 5 percent. Pneumonia cases are below 10 percent. Yes, an intensive feeding program for increased growth rates might be cost effective on your operation.

Adopt an intensive feeding program as a cure for a calf-raising program that does not meet these standards? No. No. No. A thousand times, "No." **Think of an intensive feeding program as frosting on a cake. Until you can bake a delicious cake don't spend time and energy making frosting.**

References: While no single source was used in preparing this paper, articles and presentations by and conversations with the following persons should receive credit for providing the groundwork upon which the author drew heavily in making his on-farm observations: Mike Fowler formerly at Land 'O Lakes, Jud Heinrichs at Penn State, Jim Quigley at Provimi North America and Mike VanAmburg at Cornell. September, 1999, revised October 2009, revised July 2013, revised May 2015, revised March, 2018.

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