

# CALVING EASE

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## Cold Weather Calf Care Tips

For a newborn calf weather below 60° is cold weather. Below this temperature a newborn calf begins burning energy to maintain her core body temperature of about 102°. Naturally, when the air temperatures are farther from 60° the greater the amount energy needed for maintenance. **A best management practice is to feed body temperature liquids to these young or neo-natal calves.** Liquids, either milk replacer or water, when fed at temperatures at or close to 102° do not have to be warmed by the calf.

Stop and think about what happens when two quarts of cool milk replacer is fed to a newborn. If it's 70° when fed we know that within a short period of time the calf will have warmed it to her body temperature, 102°. Where did the energy come from to warm these two quarts from 70° to 102°? The answer is pretty obvious. From the calf's body resources.

One easy way to maintain temperatures close to 102° is to use hot water. Simply bottle the necessary volume of milk replacer. Place three or four two-quart bottles in a five-gallon pail. Add some 130-140° water. By trial and error given varying outdoor temperatures you can judge how much hot water to add. At 40° not much is needed. At 10° I always have to fill the pail nearly brim full.

Even if you are pail training young calves this method still works well. It's common practice to fill pails for all of these calves with two quarts of milk. Then, we fuss with them feeding them one at a time. Meantime, while we fuss with the first calf in cool or cold weather all the rest of the milk is chilling to unacceptably low temperatures. Rather, leave the milk replacer in the bottle in the bucket until each calf is ready to be pail trained. Each calf receives warm milk, one at a time. Presto! The problem is solved at the minimal expense of washing several bottles. We may well have avoided several cases of early calfhood diarrhea, as well.

**A best management practice is to feed free choice water even in below freezing weather.** Yeah, Yeah! Nag, Nag! With appropriate scheduling feeding water in freezing weather is not that impossible. I'm not necessarily advocating making ice

Frisbees. I've heard that most of the water consumed by calves during cold weather (even if not freezing) happens in the first hour after water feeding. Now I have yet to see a valid scientific study to prove this to be true. But even if it is a somewhat true general rule, then we have a management guideline.

Feed water while calves are still active. For many of us that is in the morning between feeding milk replacer and starter grain. If water is fed prior to grain, then come back after grain is fed and dump the pails. The interval between feeding should be a matter of judgement. Dumping before the water begins to have an ice film may be too soon. Waiting until ice forms that requires banging buckets may be too long. Thus, the interval between feeding water and dumping it will vary as the seasons change.

Given the earlier observation about feeding chilly milk replacer you can guess my preference for water temperature for the youngest calves (not yet eating starter grain). Feeding water close to body temperature to neo-natal calves requires less energy from their bodies than chilly or cold water. Only small amounts need to be fed since very few drink more than a quart or two. Observe drinking patterns and feed volume to match their desire for water.

**A best management practice is to rinse all milk equipment with lukewarm water before washing.** Why this tip? Think about it. We come in out of the chilly or worse bone cold wind. What's our first impulse? Get warm. Sure, spray everything off with the hottest water available. If barrels, buckets and bottles have snow and ice on them? Melt it off. Lots of hot water will do the job just fine.

But, remember what happens to milk proteins when exposed to high temperatures? Oh, yeah. They are denatured. They get sticky. The proteins stick to the first thing they touch. They stick to the equipment. If we rinse with hot water repeatedly we create a protein film on barrels, buckets and bottles.

This film is a great growth medium for bacteria. They love it. The film is tough to scrub off, too. To make things worse, the film provides bacteria microscopic holes in which they can hide from disinfectants. For example, let's suppose one of our practices is to rinse bottles with a bleach solution before filling them with colostrum. When thick enough a protein film provides shelter for bacteria from this preuse rinse. They ride out the rinse back in the depth of the film. Then, these survivor bacteria inoculate the warm colostrum setting up conditions for screaming high bacteria levels.

Please rinse with lukewarm water before the equipment is exposed to high temperatures.

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@frontiernet.net](mailto:sleadley@frontiernet.net) or [pams91@2ki.net](mailto:pams91@2ki.net). A limited number of back issues may be accessed on the Internet at [www.calffnotes.com](http://www.calffnotes.com) and clicking on the link, Calving Ease.