

Feeding More Energy

How to do it

All calves burn up more energy to keep warm in cold compared to warm weather. Remember, when ever the environment drops below 16°C young calves start using energy to maintain their core body temperature. Newborn calves with their high skin surface to body mass ratio especially need proportionately more energy in the winter than older animals. How can we feed them after the first day to meet these requirements?

Feed something that has more energy than the milk replacer.

If good quality colostrum is available feed it.

Sometimes we actually have extra good quality colostrum. When combined with one-third warm water it makes an excellent calf ration. The mix is equal to milk replacer made at 165g/L. It will have between 25 to 30 percent fat (compared to a 20-20 milk replacer*). Thus, it provides plenty of energy and protein for early growth. Of course, feed conversion to growth is best when free ad lib water is available as well.

If poorer quality colostrum is available feed it.

If high quality colostrum is short supply consider colostrum of poorer quality for the first five to seven days. By poorer quality we mean lower antibody content. If you have a Colostrometer or Brix refractometer use it to check quality. That way you can save the really good stuff for first feedings.

If you do not have either one it may help to know that much heifer colostrum is poorer quality and makes a good high energy meal for very young calves. When combined with one-third warm water it is very digestible and palatable.

Also, consider the colostrum from a cow that gives lots of milk at first milking (for example, more than twenty litres). This first milk may have a

low antibody content due to the dilution effect and not be very desirable as the first feed for newborn calves. But it's still a great high-energy feed.

No colostrum? Try saving the second or third milking from freshly calved animals.

It, too, is high in fat and contains nearly fifty percent more solids than whole milk. Only a small amount of warm water is needed to bring this milk down to about fifteen to seventeen percent dry matter.

Excess whole milk? Feed it.

Try feeding whole milk the first week in cold conditions. It has about twenty-five percent more energy than 20-20* milk replacer. If you are milking Holsteins but have some Jerseys in the herd, try milking four to eight litres of their milk into a bucket for the youngest calves. Jersey milk has about **fifty** percent more energy than does a 20-20 milk replacer.

Won't this milk cause scours?

Worried about scours? Set your mind at ease. Much of the protein in this milk is casein. It is coagulated in the abomasum by the enzyme rennin. The resulting curds are slowly dissolved by another enzyme, pepsin, slowly releasing nutrients into the small intestine. This slow release helps with normal digestion and, thus, a lower chance of loose faeces. Naturally, we recommend having ad-lib water available for all these calves to promote good health and rapid gains.

Caution

Colostrum and whole milk are ideal places for bacteria to grow. The ideal situation if colostrum or milk is going to be fed is to handle it "udder-to-mouth." Milk the cow into a clean milker bucket. Use clean feeding equipment to feed it right away. If extra colostrum or milk is stored it must be chilled immediately after harvesting to prevent rapid bacterial growth. Coliform bacteria double every twenty minutes so rapid chilling is essential

to preserve quality. **Colostrum and milk contaminated with bacteria will cause serious scours problems.**

* Milk replacer nutrient analysis is shown here as two numbers indicating the content on a dry matter basis. The first is the protein content and the second is the fat or oil content. Thus a 20-20 milk replacer contains on a dry matter basis 20 percent protein and 20 percent fat or oil.