

Calves still need water & other cold weather recommendations

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As the weather cools down, many farmers are adjusting calf feeding and management protocols to match the cold weather.

WATER – Even when it’s cold out calves still need water! Livestock require water to maintain their immune system and stay healthy. Decreased water consumption leads to decreased feed intake and dehydration. While providing calves with water in the cold months can be a challenge, it’s still important. If you are worried about frozen buckets, offer calves warm water, shortly after feeding milk/milk replacer. Leave the water with the calf for 30 to 60 minutes and then collect the bucket.



Maintenance Requirements for Pre-weaned calves					
Temp. °F	60 ^a	50	32	15	5
Body weight, lb	Mcal ME/d				
30	1.31	1.45	1.72	2.00	2.14
40	1.62	1.80	2.14	2.48	2.65
50	1.92	2.12	2.53	2.93	3.13
60	2.20	2.43	2.90	3.36	3.59
70	2.47	2.73	3.25	3.77	4.03

^aLower critical temperature for calves less than 21 d age.

ENERGY - When the temperature drops below 60°F calves need more energy! Calves have less than 5% body fat and do not have a functioning rumen to help keep them warm. If you do not increase the energy in their diet, they will prioritize energy intake to stay warm and limited energy will be available to maintain the immune system and for growth. To improve health, growth and stay warm you want to feed adequate amounts of milk/milk replacer (make sure the calves get

enough MCals/day). As the temperature drops below 60 F, the energy needs increase. For a calf that weighs 70 pounds, and the temperature is 32, her energy needs are 2.73 Mcal ME/day. This will continue to increase as she grows and/or the temperature decreases more.

You can calculate the energy content of milk or milk replacer with the following equation – just make sure you calculate on a 100% dry matter basis. ME (Mcal/kg) = ((0.057 × %CP) + (0.092 × %Fat) + (0.0395 × %lactose) * 0.93)

If you don’t like math –use an online calculator <http://www.calfnotes.com/pdf/CN122.pdf>

In addition to adequate energy & protein, milk should be warm when fed, so the calf does not have to use energy to warm the milk while digesting it. During extreme cold a third feeding of milk/milk replacer may be needed to get enough energy into the calves when the temperatures drop below zero.

EXAMPLE:

Whole Milk (12.5% DM, 32.% CP, 3.8% fat)
Calculate all nutrients on 100%DM basis

$$\text{CP} = 3.2/0.125 = 25.6$$

$$\text{Fat} = 3.8/0.125 = 30.4$$

$$\text{Ash} = 6.4\% \text{ on } 100\% \text{ DM basis} = 6.4$$

$$\text{Lactose} = 100 - 25.6 - 30.4 - 6.4 = 37.6$$

$$\text{Gross energy (Mcal/kg)} = (0.057 * 25.6) + (0.092 * 30.4) + (0.0395 * 37.6) * 0.93$$

$$\text{Gross energy} = 5.34 \text{ Mcal/kg}$$

Jackets & Bedding – As the temperatures drop provide each calf with a clean and dry calf jacket. This helps the calf stay warm and allows more energy from feed to go towards growth. Provide enough clean and dry bedding so the calves can nest, shavings and straw are a great option for winter time bedding. Try to avoid bedding calves with sand in the colder months as it absorbs the cold, and can lead to sick calves. In addition to jackets and bedding, make sure the calf is protected from the elements. This includes wind, snow and rain.

Calf Management Checklist

- ✓ All calves receive colostrum or colostrum replacer ASAP after birth.
- ✓ Navel is dipped
- ✓ Calves are permanently identified
- ✓ Clean, dry jacket is put on calf if it's cold out.
- ✓ Calf is placed in a clean, dry and well ventilated pen/hutch.
- ✓ All calves receive a volume of milk/milk replacer to maintain health, growth and vigor.
- ✓ All calves have access to clean, fresh water to maintain proper hydration.
- ✓ All caretakers are trained in calf care, nutritional requirements and feeding techniques.