



NUTRITION NOTES

Innovation + Research from Kent Nutrition Group

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COLD-WEATHER CALF FEEDING: MILK FORMULA 1™ WINTERIZER VS. MILK FORMULA 1™ PLUS MILK ENERGIZER ECONOMICS

In cold weather, calves need more energy for body maintenance, depending on their age and environment. During the first three weeks of life, the maintenance requirement increases about 10% for each 10°F drop in temperature below 60°F. After three weeks, the maintenance requirement doesn't increase until the temperature drops under 40°F.

Kent offers several feeding options for dealing with cold weather. **Milk Energizer** is a 60% fat product that can be supplemented with any of the **Kent Milk Formulas** to supply the additional energy needed for calf maintenance requirements during cold weather. Generally, 2-4 oz/calf/day of **Milk Energizer** is fed along with the regular amount of **Kent Milk Formula**. Kent also offers **Milk Formula 1 Winterizer** which is a 22% protein, 24% fat all-milk replacer that supplies equivalent energy and protein as feeding **Milk Formula 1** and two ounces of **Milk Energizer** per day.

Protein and Fat Content

	Milk Formula 1	Milk Energizer*	Milk Formula 1 Winterizer
% Protein	20	7	22
% Fat	20	60	24

The total cost of feeding **Milk Formula 1 Winterizer** versus **Milk Formula 1** plus two ounces of **Milk Energizer** is about equal. The chart below indicates feeding amounts, nutrients supplied and cost of both programs.

Costs and Nutrients Supplied Feeding Option

	Milk Formula 1 Winterizer	Milk Formula 1 + Milk Energizer
1.25 lb/powder/calf/day	\$2.17	\$1.98
0.125 lb (2 oz) ME/calf/day	-----	\$0.19
Total cost/calf/day*	\$2.17	\$2.17
Protein supplied, lb	0.275	0.259
Fat supplied, lb	0.300	0.325
Energy (Mcal ME)	2.61	2.64

*Costs based on wholesale price list prices at time of publication.

The two programs supply similar amounts of nutrients. The **Milk Formula 1 Winterizer** supplies slightly more protein while the **Milk Formula 1/Milk Energizer** program supplies slightly more fat/energy. Each feeding program would support equivalent growth in one-week-old to three-week-old calves when the environmental temperature stays above 32°F. Or each feeding program would support equivalent growth for calves over three weeks of age when the temperature stays above 14°F.

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Cost-wise, the two feeding programs are very similar. The costs above were based on the September 2014 wholesale price list. To calculate the exact cost in your area, local and dealer prices should be used. Cost will vary with dealer markup, etc.

In addition to the cost of feeding the two programs, the customer will want to consider the convenience of mixing and feeding one product versus mixing two products.

For producers feeding other **Kent Milk Formulas**, the total feeding cost when supplementing **Milk Energizer** will be less than the **Milk Formula 1** calculations above. The cost difference is due to the savings from the alternative proteins in those products.

From an ease-of-feeding standpoint, most calf raisers who supplement **Milk Energizer** only use 2-4 oz/calf/day. As you consider calf maintenance requirements as influenced by cold temperatures, keep the following in mind. To avoid possible poor growth in very young calves (1-3 weeks) when the temperature drops significantly below 32°F, the feeding of four ounces of **Milk Energizer** along with 1.25 pounds of their current **Kent Milk Formula** OR feeding an additional quart of milk replacer is necessary to meet maintenance requirements and keep these calves growing.

For more accurate feeding recommendations for specific environmental temperatures the new Kent Calf toolkit should be used.