

BUILD A BETTER HEIFER



STRATEGIC LIQUID FEEDING

MILK REPLACER



Choosing the proper milk replacer will help keep calves healthy and assist you to reach your business objectives. Milk replacers have varying specifications including: protein and fat levels, protein source, medication and feeding rate. To achieve your calf performance goals, an optimal milk replacer feeding program can be developed combining the appropriate quality milk replacer formulation and feeding rate, calf expertise and consulting, and available research proven prediction resources.

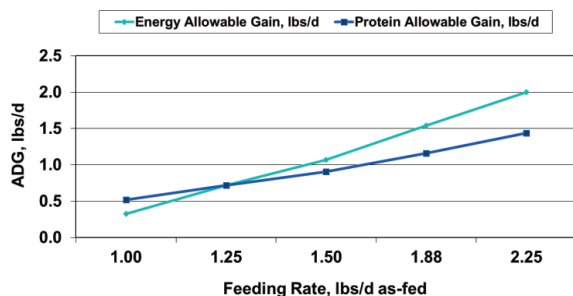
The NRC predicted gains program can be used to predict the net energy available for gain and the crude protein available for gain at set conditions to compare feeding programs. The calf's actual gain will be the allowed gain by the limiting component. For example, if the predicted net energy allowable gain is 1 pound per day and the crude protein allowable gain is 0.8 pounds per day, the calf's gain will be 0.8 pounds per day. The ideal model is where the net energy allowable gain and the crude protein allowable gain intersect at an acceptable gain.

If the energy allowable gain exceeds the protein allowable gain, this indicates we are over feeding energy. When the fat or energy component is over fed calves become, fat and exhibit reduced starter intake.

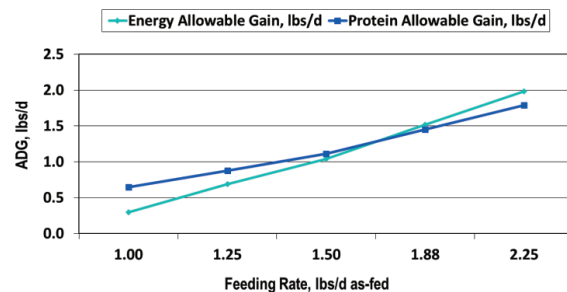
When the protein allowable gain exceeds the energy allowable gain, this indicates that protein is being over fed. Over feeding protein is not ideal as protein is the most expensive component in milk replacer and if energy is the limiting performance factor the additional protein does not result in increased performance.

The NRC examples below shows the predicted nutrients available for gain for different P:F ratio milk replacers. This demonstrates that higher protein milk replacers fed at high feeding rates will achieve more productive gains.

20-20 MR, 100 lb. Calf, 68°F Conventional

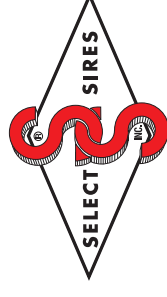


26-20 MR, 100 lb. Calf, 68°F



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Milk Replacer



In addition to a complete line of high quality, proprietary formula milk replacers, Select Sires has the tools and expertise to apply strategy to your milk replacer feeding program to achieve your calf performance objectives and maximize heifer lifetime productivity. Optimal liquid feeding strategies have demonstrated positive productivity outcomes such as:

- Increased available metabolizable energy (ME)¹
- Increased average daily gain (ADG) and skeletal size²
- Healthier calves³
- Increased mammary development^{4,5}
- Reduced age at first calving⁶; and
- Increased milk production⁷

UNIT OF MEASURE	DESCRIPTION	PROTEIN SOURCE	PROTEIN	FAT	GUARANTEED ANALYSIS			DFM	ADDITIVE	CHELATED		INSTANTIZED FORMULA FOR EASY MIXING	MEDICATION
					IU/lb Vit. A	IU/lb Vit D ₃	IU/lb Vit E			MINERAL	SELENIUM		
50 lb bag	Performance Plus	All-Milk	20	20	30,000	10,000	150	Tri-Mic WD	Mos	YES	YES	No	
50 lb bag	Performance Plus *	All-Milk	20	20	30,000	10,000	150	Tri-Mic WD	Mos	YES	YES	Bovatec® - 90 grams/ton	
50 lb bag	Accel Max (with gelling agent)	All-Milk	22	20	30,000	10,000	200	Tri-Mic WD	Mos	YES	YES	No	
50 lb bag	Hi-Performance Plus	All-Milk	22	20	30,000	10,000	200	Tri-Mic WD	Mos	YES	YES	No	
50 lb bag	Hi-Performance Plus *	All-Milk	22	20	30,000	10,000	200	Tri-Mic WD	Mos	YES	YES	Bovatec® - 90 grams/ton	
50 lb bag	Calf Accelerator	APL	24	20	30,000	10,000	150	Tri-Mic WD	Mos	YES	YES	No	
50 lb bag	Calf Accelerator *	APL	26	20	30,000	5,000	200	Tri-Mic WD	Mos	YES	YES	Bovatec® - 43 grams/ton	
50 lb bag	28-26 JERSEY 50LB *	All-Milk	28	26	20,000	2,500	100	Tri-Mic WD	Mos	YES	YES	Bovatec® - 72 grams/ton	
50 lb bag	First 21-C	APL	24	20	35,000	10,000	150	Tri-Mic WD		YES	YES	No	

Notes: Custom Formulations Available - 2-ton minimum

* Formulations with Clarify® Available - Seasonal

¹Quigley et al. 2006. "Effects of additional milk replacer feeding on calf health, growth, and selected blood metabolites in calves." J. Dairy Sci. 89:207-216.

²Barlett et al. 2006. "Growth and body composition of dairy calves fed milk replacer containing different amounts of protein at two feeding rates." J. Animal Sci. 81:1641-1655.

³Ballou et al. 2015. "Genetic, epigenetic and management factors contribute to the risk of morbidity and mortality of Holstein feeder calves. American Dairy Science Association Annual Meeting 2015, #4518.

⁴Geiger et al. 2016. "Growth, intake, and health of Holstein heifer calves fed an enhanced preweaning diet with or without postweaning exogenous estrogen." J. Dairy Sci. 99(5):3995-4004.

⁵Geiger et al. 2016. "Feeding a higher plane of nutrition and providing exogenous estrogen increases mammary gland development in Holstein heifer calves." J. Dairy Sci. In Press.

⁶Soberon et al. 2009. "Early life management and long term productivity of dairy calves." J. Dairy Sci. 92(Suppl. 1):238. (Abstr)

⁷Soberon et al. 2012. "Prenatal milk replacer intake and effects on long-term productivity of dairy calves." J. Dairy Sci. 95:783-793.

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