FrontLine®
TECHNICAL INFORMATION FOR TODAY'S FEED PROFESSIONAL

Which Milk Replacer Do I Feed?

Choosing the proper milk replacer will help keep calves healthy and help you reach your business objectives. Milk replacers have varying specifications including: protein and fat levels, protein source, medication and feeding rate. It is important to choose one that makes sense for your labor arrangements, performance goals and financial objectives.

Protein
Milk replacers vary in protein level from 18% to 28%, with products at 20-22% protein being most common. Producers have long fed the industry standard, 20% protein; but, higher protein products are increasingly common in the market. Protein levels vary so they are balanced with energy when fed at a certain rate.

Energy
Gain is determined by the limiting factor, which is typically energy. Energy in the ration is supplied by fats (lard or tallow are most common), lactose (milk sugar) and sometimes coconut oil. Milk replacer formulas contain between 10-25% fat. Fat level recommendations vary greatly depending on environment, feeding rate, and growth objectives, but 20% fat is most typical.

The bottom line on protein and fat level in milk replacers:

Feed a ration that best balances protein and energy and contains enough energy for the maintenance and growth you desire in cold weather feeding situations.

Protein Source
Milk replacers are composed of either 100% milk proteins or a combination of milk proteins and alternative protein sources such as soy, wheat, or plasma. Milk replacers containing all-milk protein have long been the standard and deliver exceptional performance. Soy protein concentrate and soy isolate proteins provide acceptable calf performance but will settle out of solution over time. Much research has been conducted using plasma-containing milk replacers. Plasma contains functional proteins and other compounds with antibacterial and antiviral activity and has shown positive results in both research and farm settings. Milk replacers containing wheat gluten protein are used extensively in Europe and research conducted in the U.S. has been favorable.

Medication in Milk Replacer
Medications are available in calf milk replacers for the prevention or treatment of calf ailments. It is important to know what disease challenges are problematic for your calves. It is best to work with your veterinarian to isolate and identify the pathogens that are harmful to your calves. The most widely used medication option in calf milk replacers is the FDA approved combination neomycin-oxytetracycline. It is available to be formulated at lower or higher levels to prevent or treat bacterial enteritis. Deccox® can be included for the prevention of coccidiosis, or Bovatec® can be added use for coccidiosis control. Medication combinations are controlled by the FDA and are not cleared for use unless approved.

Feeding Rate

Milk Products
The Milk Replacer Source™
FOR MORE INFORMATION, CALL OR WRITE MILK PRODUCTS, LLC
P.O. Box 150, Chilton, Wisconsin 53014, (920) 849-2348, Fax (920) 849-9014 www.milkproductsinc.com

Calves fed milk replacer in the U.S. typically receive between 1 lb. and 1.25 lbs of powder per day. Calves will consume more starter feed when fed these rates of powder, assuming starter feed and water are available free-choice. Accelerated feeding programs are designed for more growth, and combine higher protein and more total powder fed per day. A 26-20 product fed at 1.5 lbs. per day is better balanced for protein and energy than a standard 20-20 milk replacer fed at the same rate, at thermo-neutral temperatures. Accelerated feeding programs offer early gains, but producers should also consider added labor and cost for milk replacer powder.

Environmental Influence

Weather is a factor in determining calf nutrient requirements. Calves in cold housing conditions have higher nutrient requirements. Other factors include:

- Wind: Effect of wind can alter temperature to be outside of the thermo-neutral zone.
- Sun: Daytime vs. night time temperatures can be much different based on solar energy.
- Moisture: Calves should be kept dry to be insulated from environmental effects.

Take Home Messages for Choosing the Right Milk replacer:

1. Gain is determined by the limiting factor (typically energy or protein).
2. Balance the ration first for energy and protein to avoid limiting growth or wasting other nutrients.
3. Choose a protein type that is acceptable based on your performance expectations
4. Choose a medication that will be effective against the pathogens on your farm, if needed.
5. More groceries = more growth: Intake is as important as product specifications.

As you can see there are many options to consider when choosing a calf milk replacer. Focus on what your objectives and challenges are to find a product that works best for your situation. What works for the neighbor may not work for you.

*Deccox and Bovatec are registered trademarks of Alpharma, Inc.

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