

Deluxe Protein Milk Replacers from NRV

NRV has developed a new milk replacer that performs equally to an all-milk milk replacer but with a lower cost. Since milk replacer is the most expensive feed a calf will consume in its entire life, and protein is often the most expensive component of milk replacer, our research efforts have focused on improving protein balance and digestibility using non-milk ingredients. Lowering the cost of production is the bottom line!

Equal Performance to All-Milk

NRV has a long history of innovation through research. Table 1 shows data from one trial which confirms that calf performance was equal for calves fed All-Milk vs Deluxe Protein Blend milk replacers. More importantly, producer experience in the field confirms that calf performance is outstanding for thousands of calves fed this unique protein blend that is exclusively available only from NRV. Our Deluxe Protein Blend has both high digestibility and proper amino acid balance to deliver high performance!

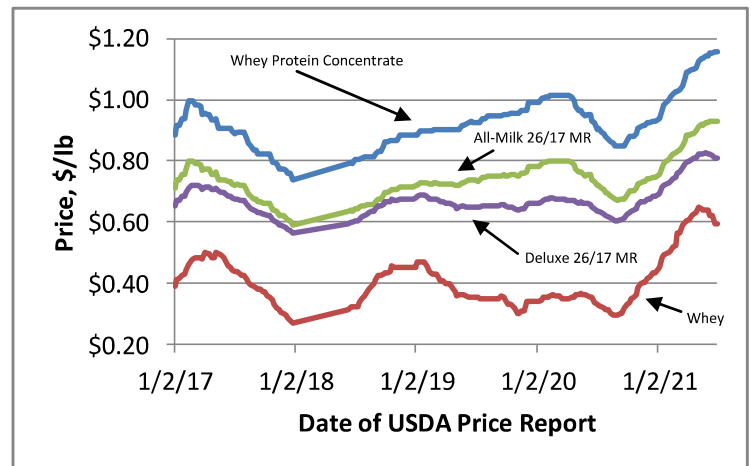
LOWER PRICE DOES NOT MEAN LOWER PERFORMANCE

	Deluxe™ Protein	All-Milk	Deluxe™ Advantage
Gain, days 1-28, lb	29.6	29.8	No difference
Gain, days 28-56, lb	48.9	48.8	No difference
Gain, days 1-56, lb	78.5	77.8	No difference
Milk Replacer, lb/head	50.9	50.9	No difference
Milk Replacer Cost/head	\$47.19	\$50.53	\$3.34/head Savings

NRV research trial DB01 MIA 20

Lower Cost than All-Milk

Milk replacers are primarily made from ingredients that come from milk, cheese, and butter such as whey, whey protein concentrate (WPC), and non-fat dry milk (skim milk). High-protein ingredients, such as WPC and skim milk are the highest-priced ingredients (per pound) and also contribute to the highest cost (\$/per bag or \$/ton) of milk replacer. Replacing a portion of these high-priced milk ingredients with non-milk ingredients results in milk replacers with lower cost per bag and per ton as shown in figure 1. The all-milk 26/17 always has a higher price than the Deluxe 26/17 milk replacer, regardless of the prices of WPC and whey.



More Stable Prices than All-Milk

In the timeframe of April-June, 2021, the high price of calves, combined with high feed and high milk replacer prices kept some calf producers sitting empty. While we can't control the price of calves, corn, or soybean meal, our unique Deluxe Protein Blend milk replacers have helped to keep some producers growing calves through these difficult times.

It is important to note that there is wide price fluctuation in milk ingredients as shown in figure 1. Whey, for example, has been as low as 27¢ to as much as 65¢ per pound just within the last few years. By replacing a portion of the milk-derived protein ingredients with non-milk ingredients, we find a secondary benefit in addition to a lower price. The price of our Deluxe Protein Blend milk replacer has less fluctuation and is more stable than with milk replacers made with all-milk ingredients. This helps keep producers growing calves and helps better budget the cost of production.



We take care of calves, naturally!

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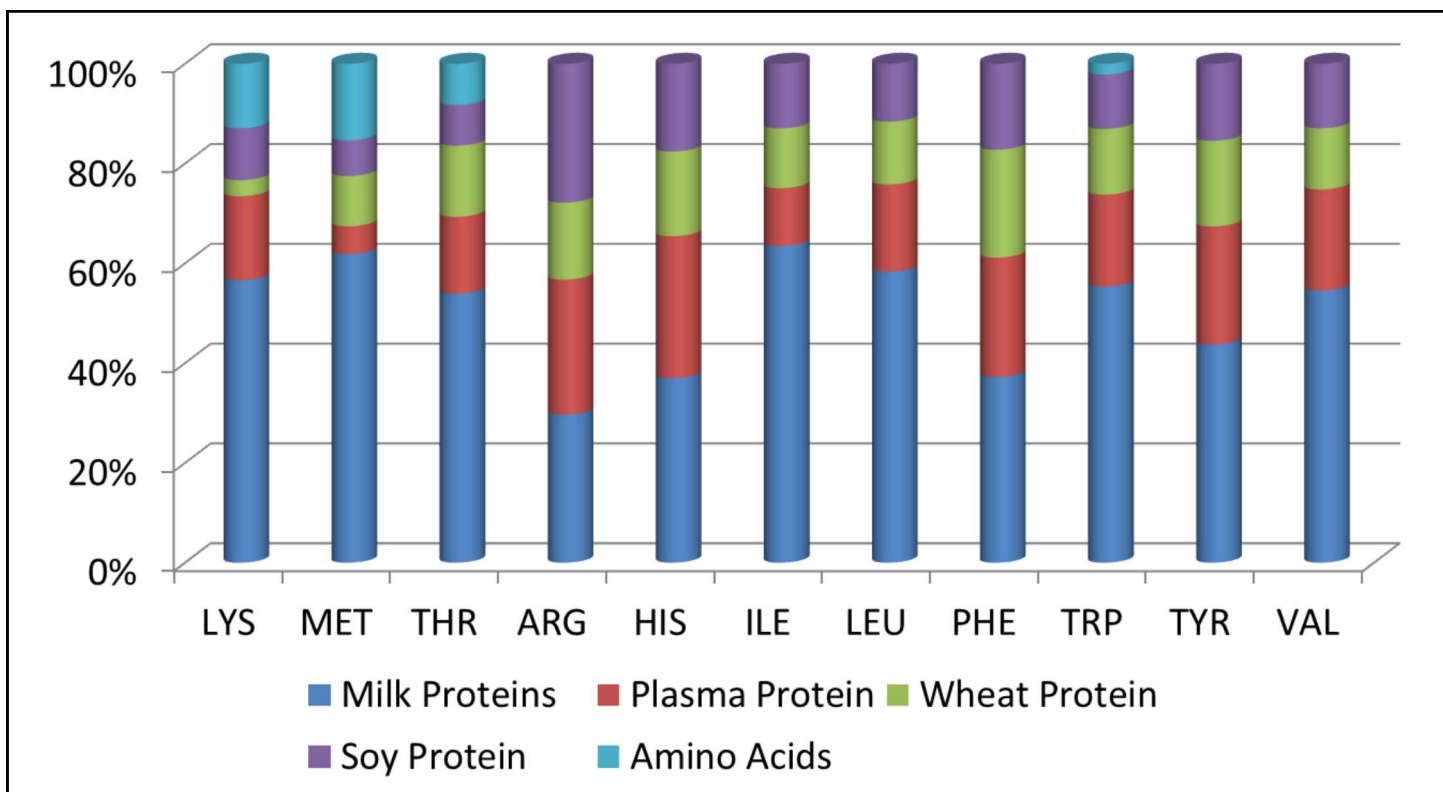
NRV's Exclusive Deluxe Protein Blend

NRV's Deluxe Protein Blend is a unique blend of Milk Proteins, Plasma Protein, Hydrolyzed Wheat Protein, Soy Protein Concentrate and Specific Amino Acids to maximize calf performance with a lower cost. Research has shown that these ingredients have very high digestibility which is similar to milk ingredients. Deluxe Protein Blend is very soluble so there is minimum settling and calves readily drink milk replacers made with Deluxe Protein Blend so there are no issues with feed refusals. NRV's research has shown that calves fed Deluxe Protein Blend have performance equal or superior to all -milk formulations but with a lower cost to the producer and often with lower incidence of sickness.

Complimentary Amino Acid Composition

Amino acids are the "building blocks" of protein which calves require for growth and other body functions. Protein quality refers to how closely amino acid composition meets the amino acid requirements of the calf. The ingredients that make up NRV's Deluxe Protein Blend create a very high quality protein when mixed together, in fact, the blend is superior to any of the individual ingredients. This "complimentary" effect is illustrated in Figure 2. For example, while plasma is relatively low in methionine and isoleucine, whey protein concentrate is relatively high in these two amino acids so they compliment each other. When all of these protein ingredients are combined, each amino acid need is met completely.

Figure 2. Amino Acid Composition of Individual Ingredients and Total Composition of Deluxe Protein Blend



Here's What Calf Producers Say:

"The Deluxe Protein milk replacer mixes well and calves perform well on it."

"We love how healthy our calves are with this milk replacer."

"We haven't lost a calf since we started using Deluxe Protein Blend Milk Replacer from NRV."

"We love how well calves finish on this milk replacer!"

For more information call us at (800) 558-0002, or visit our website at www.nrvmilk.com