

Why Buy the Milk Replacer When I Can Get the Milk for Free?

Famo Flier

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Debating over milk or milk replacer is much like debating which came first, the chicken or the egg. Everyone has an opinion but is there really *one right answer*? Maybe not. Choosing milk or milk replacer for your calves is a decision to be made off of what works best in your management scenario and economic situation.

Often we assume that the milk we pull from the tank is “free” and of no cost to feed to calves. However, once you consider the market value of that milk it becomes clear that there is nothing free about it. Some farms feed waste milk to their calves because it is unsaleable. However, nutritionally, waste milk isn’t “normal.” Waste milk is typically collected from cows or heifers that have high somatic cell count (SCC), have been treated with antibiotics, or have recently calved. Impacts to the calf can vary:

Bacteria – Some bacteria are present in all unpasteurized milk. A bacterial infection, even if mild, can reduce growth and vitality in young calves. Whole or waste milk can be pasteurized to reduce bacterial levels but pasteurization does add extra cost and management.

High SCC – Elevated somatic cell levels are indicative of a mastitis infection. Somatic cells along with pathogenic bacteria are shed in milk. In some cases, blood clots may be shed as well. Farms that feed waste milk from cows with active infections could be exposing calves to these bacteria. Also, the composition of milk during an infection is altered and may not be suitable for growth promotion in calves.

Antibiotic residues – Milk collected from treated cows will contain residues of the antibiotics they are being treated with. These residues can lead to the development of antibiotic-resistant bacterial strains that may threaten calf health. Producers that plan to sell calves for meat also run the risk of antibiotic residues being present in the tissues. Remember, pasteurization will destroy bacteria; however, it will not affect antibiotic residues.

Transition Milk – After the colostrum is harvested, the milk produced in the subsequent few days is considered transition milk. This is a great feed for calves because it contains elevated amounts of nutrients as it transitions from colostrum to

Components: Milk vs. Milk Replacer

When looking at growth and development of calves, the most critical nutrients are protein and fat. Whole milk typically contains 24-27% protein and 28-36% fat on a dry matter basis. There are a wide variety of milk replacers available on the market that can range from 18-30% protein and 10-28% fat. Consequently, we see that there are some potential differences in growth and development between milk and milk replacer fed calves, depending on the nutrition level of the milk replacer being used. With milk replacer, we see a wider variation in the fat and protein levels available. This is because there are various sources for protein and fat available to put in milk replacer, where milk produced by a cow is limited to her natural capabilities. Milk replacers come in varieties offering all milk protein sources, like whey protein and skim milk, or alternative sources, such as animal plasma and soy protein.

normal milk. Transition milk will have low levels of immunoglobulins, or antibodies, present that may help provide localized immunity in the calf gut and improve health.

Whole milk is fed successfully on many farms and is an excellent source of nutrition for calves. If your operation struggles with viral diseases such as Johne's or Leukosis, feeding unpasteurized whole milk (waste or not) should be avoided because of the risk of disease transmission.

Quick Care Notes:

Remember, whether whole milk or milk replacer-fed, calves all need:

- Access to fresh, clean water
- Access to quality starter free of mold and fines
- A clean environment with dry bedding protected from the elements.

Milk Replacers are a great alternative to whole milk and provide a consistent source of customizable nutrition with little concern about bacteria. However, poor measuring or mixing of the product can cause nutritional deficiencies/excesses in the calf that could be detrimental.

Why Feed Milk Replacer?

Unfortunately, quality of whole milk is limited to the cow's genetic capabilities. Milk replacers provide a convenient alternative to milk that give the producer more control of their calves' nutrition. Milk quality can vary daily depending on a variety of circumstances such as weather, cow health, feed, and even stray

voltage. Also, the lower levels of fat in milk replacers can help to encourage intake of calf starter. Beyond protein/fat, milk replacers can also be purchased with additives that span from improving gut health to fly control.

What about Whole Milk Fortifiers and Balancers?

Balancers are designed to balance the solids content of whole milk as well as extend the supply of milk available when whole milk supplies are inadequate. They are

often designed to improve the protein to fat ratio to encourage more starter intake. Fortifiers are designed to complement the nutritional content of whole milk by adding supplemental vitamins and minerals, and depending on the type, MOS, fly control and coccidiosis control as well. In a way, fortifiers help give the flexibility of a milk replacer while still using whole milk. This is a great option for herds that are Johne's and Leukosis free. If herds are not free of these diseases, they are capable of being spread in milk and can cause the disease cycle to continue. If these diseases are present, both colostrum and milk replacers should be used to end the disease cycle.

Milk Replacer: All-Milk vs. Alternative Protein

We often hear that milk replacer has to be all-milk to be the gold standard. However, certain alternative proteins, such as plasma, can effectively be used and may reduce cost without affecting calf growth or performance. However, be cautious of other protein sources as they may not be utilized well by the calf. Avidin, a protein found in egg whites binds biotin, a vitamin needed by calves. Milk replacers containing egg-derived proteins should be avoided unless a supplemental source of biotin is provided.

Economics

Although calf health and growth is a priority, the costs of different feeding programs need to be considered. Determining the economics for milk replacers is relatively easy with purchase price and labor as the only major factors to be considered. When feeding whole and/or waste milk, the value of the milk, additional handling, cooling and/or heating, variable calf performance, and potentially pasteurization need to be factored in. The cost of health treatments can also be an important factor to consider.

See your Famo Feeds dealer or representative for more information.