Colostrum Replacer Guide

Professional Services Veterinarian Department Technical Bulletin

ANIMART®
Dairy & Livestock Solutions

With so many colostrum replacers on the market today, trying to decide on which colostrum replacer is best for your farm can be overwhelming. To help with the confusion, here is some general information so you can make a more informed decision.

Why is Colostrum Important?

When calves are born, their immune system is barely functional. In order to be protected from bacteria and viruses in the environment calves need to acquire antibodies, or immunoglobulins (IgG), from their mothers. Colostrum contains a very high level of antibodies.

- Calves can ONLY get IgGs from colostrum
- IgGs are absorbed by a calf straight through the gut into their bloodstream
- IgG provides almost immediate protection from pathogens
- Failure of passive transfer (FPT) is when a calf does not receive or absorb enough IgG from colostrum
  -These calves are much more likely to get sick and die, thus increasing treatment costs

Preventing FPT by providing adequate colostrum is significantly less expensive than treating sick calves or losing valuable replacements. All calves should receive 1 gallon of high quality colostrum within 1 hour of birth.

Do I Need A Colostrum Replacer?

Natural maternal colostrum is still considered the best option as long as you are willing to spend the extra time ensuring its quality. Colostrum should be collected as hygienically as possible less than one hour after calving. This ensures that the colostrum is clean and not diluted out by milk, as milk contains minimal IgG.

Colostrometer with color indicators

Check the colostrum using a Colostrometer or Brix Refractometer

Both of these instruments provide a value that correlates with the amount of IgG in the colostrum. **If using a colostrometer**, it is very important that the colostrum be at **room temperature** for an accurate reading.

Digital Refractometer

Quality	Percentage	Recommended Action
High	Green or Greater than 22%	Feed mother's colostrum to newborns
Medium	Yellow or 18% to 22%	Give colostrum replacer to newborns and use mother's colostrum as second or third feeding
Low	Red or Below 18%	Give colostrum replacer to newborns and discard mother's colostrum or feed to calf 2 days of age or older

Colostrum should be heat-treated for 1 hour at 140°F to reduce the bacterial count and destroy harmful microorganisms. The colostrum from one cow should go to one calf. Multiple cows' colostrum should never be combined and then fed to multiple calves due to the risk of infecting every calf from one cow shedding harmful bacteria.

Colostrum Replacer Guide

Professional Services Veterinarian Department Technical Bulletin

ANIMART®
Dairy & Livestock Solutions

Why Would I Use a Colostrum Replacer?

Ease of use:

- Readily available from many different companies
- Shelf life of at least 6 months when unopened
- No need to train employees on proper colostrum collection and management
- Ensures that every calf receives the same quality and amount of colostrum without having to test it yourself
- Colostrum replacer may be the best option if you want to stop the Johne's cycle

Replacer VS. Supplement

Replacer: contains at least 100 g IgG per package

Supplement: contains 50-55 g IgG per package

What is "Colostrum-Derived" and "Serum-Derived"?

Colostrum-derived is dried cow colostrum

- Same IgG, growth factors, and nutrients as maternal colostrum

Serum-derived is dried cow serum (a part of the blood)

- IgG comes from dried serum globulin proteins
- Need to add additional fat, carbohydrates, and nutrients

Calves absorb considerably less IgG from serum-derived products than from colostrum-derived products. Therefore, you would have to feed MORE of a serum-derived product than a colostrum-derived product, even if both packages had the same level of IgG.

Recent research has shown that too many calves will have FPT if only given 100 g IgG. If using a colostrum replacer, each calf should receive 150-200 g of IgG within one hour after birth in order to prevent FPT.

A replacer, a supplement, or a combination of both should always equal at least

150 g IgG

If colostrum replacer is necessary or desired, **always consult your veterinarian** to decide the best protection from failure of passive transfer for your operation.

What's the Importance of a Licensed Colostrum Company?

Licensed companies are regulated by the USDA

- Samples are sent to private lab for testing quality and purity
- Manufacturing plant is inspected
- Required to do feeding trials
- Can claim that colostrum replacers "**aid in prevention or treatment of failure of passive transfer**"

Non-licensed companies aren't regulated by the USDA

- Not required to do additional testing, but most companies do conduct studies
- Most companies also conduct feeding trials
- Can claim that colostrum replacer is "**formulated to replace maternal colostrum**"
- Companies still manufacture high-quality product

What's the Difference Between IgG1 and IgG2?

IgG1 and IgG2 are sub-types of IgG. Some manufacturers like to state that their products contain more of one sub-type than another. Calves absorb both types from colostrum.

Some differences include:

- IgG1 is secreted back into the gut, lung, and nose to help with local surface protection
- IgG1 is the major type found in colostrum
- IgG2 remains in the bloodstream
- Serum-based replacers have equal amounts of both types of IgG

There is no definitive research defining which is better for a calf and both types are beneficial.

For more info:
Katie Kohn
Professional Services Manager
920.319.4341
katief@animart.com