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Colostrum is Important

Hopefully the last blizzard of the season is behind us. Wouldn't you know that the March blizzard was when the first baby calf arrived at my operation. Fortunately, the calf was delivered quickly and easily by the first calf heifer, but unfortunately, she didn't claim the calf despite all my efforts. My understanding is that there are research around extreme cold weather events being linked to this phenomenon, maybe a topic for another day. What is known is I've now got a bucket calf! Administering colostrum to this baby via a bottle, got me thinking about the importance of this topic.

Being ready and prepared before the start of calving season can make life much easier for cow-calf producers and potentially save a calf. By the time calving season starts, all necessary equipment and supplies should be on hand that might be needed to assist. Additionally, all equipment and facilities should be prepared and in working order. One very important and time-sensitive item is a supply of colostrum or colostrum replacer before the first baby arrives.

Adequate colostrum intake is extremely crucial for newborn calves in order to gain passive immunity from the mother. Calves born after a prolonged delivery can suffer from severe respiratory acidosis. Such calves are less efficient at absorbing colostral immunoglobulins or antibodies, even if artificially fed colostrum. The only disease protection baby calves will receive is from the passive transfer of antibodies from the colostrum they ingest. Colostrum also contains transferrin and lactoferrin, which bind iron and restrict bacterial growth. These factors, together with immunoglobulins, help limit growth of bacteria in the gut.

Colostrum or colostrum replacer will need to be administered by bottle suckling or tube feeding within a few hours of birth for maximal absorption of immunoglobulins. The general rule of thumb is the sooner colostrum is ingested the better and calves will typically stand, walk and nurse within one hour after birth. What if there is any question of whether a calf has received adequate colostrum? The answer - when in doubt, immediately administer colostrum to the newborn. Calves that miss getting timely colostrum ingestion are much more likely to suffer from calf scours and other health related issues, which can have lifelong effects on general hardiness and disease resistance.

Previously obtained colostrum must be kept frozen to protect the integrity of the large protein molecules that make up the various immunoglobulins. Fresh colostrum can be stored in one-quart doses by putting that amount in a gallon-size plastic freezer bag, be laid flat and frozen. When the time comes to thaw the colostrum and feed it to the newborn calf, the "best practice" is to thaw in a warm water bath at 122 degrees Fahrenheit for one hour. Avoid thawing at room temperature or in a microwave oven. Be careful where you source fresh colostrum, you could inadvertently be bringing in health issues that you don't have on your operation. Sourcing fresh colostrum from the mother or your own herd is a better approach or simply using a commercial replacer and/or supplement.

The amount of immunoglobulin ingested is a major factor in final blood immunoglobulin concentration and disease protection. A practical rule-of-thumb is to feed 5% to 6% of the calf's body weight within the first six hours and repeat the feeding when the calf is about 12 hours old. For an 80-pound calf, this will equate to about 2 quarts of colostrum per feeding. Commercial colostrum replacers contain more than 100 grams of immunoglobulin per dose. Always read the label before purchasing. It is important not to confuse supplements and replacers. Supplements are used to boost antibody protection a calf gets from nursing and contain 40 to 60 grams of immunoglobulins, which is not enough to provide protection in a calf that has not nursed its mother.