



## Importance of Colostrum for Kids

By: Jackie Nix

One of the most important functions of colostrum (first milk) is to provide kids with immunoglobulins (also called antibodies) that provide passive immunity for the first two months of life. Kids (as well as other newborn mammals) are born with no antibodies of their own and rely on those provided by the mother in colostrum for protection.

Protection provided by colostrum starts during pregnancy. Does must be properly vaccinated and receive proper nutrition in order to mount the proper immune response needed to manufacture antibodies for colostrum and remain healthy themselves. It is generally recommended that does be vaccinated against *Clostridium Perfringens* Types C & D and Tetanus toxoid. However, consult your local veterinarian for vaccination recommendations specific to your geographic area. Providing a complete mineral/vitamin supplement designed for goats like the **Sweetlix 16:8 Meat Maker mineral**, **Sweetlix Caprine Magnum-Milk** or **Sweetlix 20% All Natural Goat Block** is also vitally important. Minerals such as selenium, copper and zinc are vital components of immune function. Newborns are very dependent on copper acquired during the prenatal period since copper levels in milk are poor. Therefore, proper copper nutrition in gestating females is critical to body stores in newborns. Maternal copper deficiency has been linked to increased mortality and morbidity in lambs and calves. The Sweetlix line of goat supplement products provides the daily-recommended levels of essential minerals and vitamins needed for proper immune function.

Does must also be kept in the location they are due to kid for at least fourteen days prior to kidding. This enables them time to manufacture the correct antibodies for their specific kidding environment to pass on to their kids.

The immunoglobulins found in colostrum are absorbed whole by the kid through the lining of the stomach. However, the efficiency with which a kid can absorb immunoglobins declines within just one hour after birth. The ability to absorb immunoglobins drastically decreases after 12 hours and is essentially gone by 24 hours of age. Therefore, if a kid doesn't get colostrum within the first 24 hours of birth, its chances of survival are very slim.

The single most important component to successful transfer of antibodies from doe to kid is the consumption of sufficient amounts of colostrum. Kids must consume enough colostrum to provide the immunoglobins needed for passive immunity. This is normally not a problem as long as does accept their kids and have enough milk and teats to feed the litter. However, occasionally you will run into the problem of a doe rejecting her kids or producing a larger litter than she is capable of nursing effectively. In these cases you will be forced to bottle feed colostrum or risk losing the kid(s).

In order to be prepared for such a calamity, it is a good idea to have frozen colostrum on hand **BEFORE** kidding. In an ideal situation, freeze extra colostrum from several healthy older does (colostrum quality

is better in older does than first time fresheners). It is important to thaw only the amount of colostrums needed (once thawed you cannot refreeze), thus it is best to freeze colostrum in small quantities. I would suggest ice cube trays (place the cubes in zip lock bags after frozen) or pint zip lock bags (frozen flat). These can be thawed quickly due to high surface area and allow you to use only the amount you need.

What is the best way to thaw colostrum? The main concern is to thaw the ice without degrading the protective antibody proteins. This is best done by placing the colostrum in warm (not hot) water (< 120°F, 50°C) and allowing to thaw. Alternately, colostrum can be thawed in a microwave with little damage to the antibodies if it is heated for short periods on low power. Periodically pour off the thawed liquid to minimize excessive heating. It is also important to avoid "hot spots" inside the frozen colostrum. Use of a turntable in the microwave can help to minimize this kind of damage. How much do you need to thaw? A good rule of thumb would be 8 to 10% of the body weight of the kid, however it is best to feed according to appetite. For example if the kid's birthweight were 5 lbs, that would mean that you would need roughly 1/2 lb of colostrum (5 lb X 10%). This translates into about a half of a pint (1 pint roughly equals 1 pound).

In summary, antibodies in colostrum provide kids with passive immunity for the first few months of their lives. Therefore, it is vitally important that kids receive adequate amounts of colostrum as soon after birth as possible to ensure survival. The quality of the colostrum will be dependant on how the doe is managed during pregnancy, especially during the last few weeks. The Sweetlix line of goat supplement products provide the daily-recommended levels of essential minerals and vitamins needed by gestating does to produce high quality colostrums at kidding. Contact you local Sweetlix dealer or call 1-87SWEETLIX to learn more about the selection of Sweetlix supplement products for goats and how they can improve your herd performance.

My thanks go to Dr. Jim Quigley of American Protein Corporation for his expertise and contributions to this article.

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