

## Feeding dried colostrum to newborn lambs and kids proves a highly effective and convenient alternative

*Newborn lambs and kids require colostrum at birth as a sole source of nutrition. When the dam cannot provide enough high quality colostrum, producers now have a highly effective and convenient alternative.*

### **What is colostrum?**

Colostrum is the first secretion produced by the doe/ewe's mammary gland, and is the key and most important source of nutrition for the newborn. This milk is an important component for the survival and health of the offspring, not only because of its high nutritional values, but also because it is a source of antibodies that helps development and protects from infections. Since it is an energy-rich source, it helps the newborns maintain their body temperature in order to

survive. The colostrum also contributes to the kid/lamb body and organ growth and development, as well as their future milk production performance due to its diverse components such as bioactive factors, cells and hormones. Feeding high-quality colostrum in sufficient quantity immediately after birth protects the neonate, both in the short and long term. Ideally, each newborn should be fed colostrum as soon as possible (within 30 minutes) after birth, taking care not to exceed more than two hours after birth for this first ingestion.

Because of the type of the ruminant's placenta, the transfer of passive immunoglobulin from the mother to the foetus during pregnancy is impaired. Therefore, colostrum is the sole source of initial acquired immunity. Thus, the percentage of newborn kids/lambs' survival depends on the access of colostrum during the first hours after birth.

### **When and how much colostrum?**

Morbidity and mortality of kids and lambs are a

global challenge that affects their welfare and productivity on the farm. Providing adequate quantities of colostrum is key to reducing losses that may occur due to infectious diseases that harms newborns. In most intensive dairy farms, lambs and kids are separated from their mothers immediately after birth and transferred to an artificial rearing unit. Early access to colostrum that is of good quality, enough quantity and is fed as quickly as possible, is essential for their health, since the lack of adequate passive immunity from the dam to the offspring is the main cause of morbidity and mortality in small ruminants.

Lambs and kids must receive at least 50 ml/kg of good colostrum (>25% Brix) as soon as possible after birth. This first feeding must not exceed 2 hours after nascency. In 24 hours, a newborn lamb/kid must receive the equivalent of 200 ml/kg body weight in colostrum (AHDB) or at least 30g of IgG. Thus, a 3 kg newborn should get ideally at least 600 ml of colostrum on its first day of life. This amount can be divided into two or three meals. However, if this amount is not possible, the suggested intake to secure adequate passive immune transfer is between 10-15% of the newborn body weight. That means that the 3 kg kid/lamb should get at least 450 ml divided in two to three times during the first day of life.

Difficulties regarding colostrum may arise, due to poor quality, lack of adequate quantity, or even due to short of farm staff to help providing colostrum quickly. All these problems can harm newborns' health and expose them to infections and low development in their first months of life. As a result, protocols have been developed for the administration of dried colostrum, which can help ensure that newborns receive sufficient amounts of high-quality colostrum.

## Can I use dried cow colostrum?

The use of commercial bovine-dried colostrum already exists in several rearing units. Studies have shown the high efficiency in the absorption of IgG antibodies that originate both in bovine colostrum and sheep/goat colostrum. This means that cow colostrum can be provided to newborn kids and lambs and show excellent results.

Using a whole bovine colostrum substitute reduces preweaning morbidity and mortality, as well as decreases the use of antibiotics. This results in a better daily weight gain, and increases the number of lambs/kids marketed. In addition, colostrum is known to protect against diarrhea, improve overall health and weight gain.

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