



## Raising Healthy Calves 102

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Welcome back! This is a continuation of an article from the last issue about taking care of your pre-weaned heifers. In the first article I discussed what to keep in mind in the first days of life. Here I will describe best practices for the pre-weaning and weaning stages, including caring for their immune systems, feeding growing calves, and then weaning.

While you are building up calves' immune systems by feeding adequate quantities of high-quality milk, it is critical that you minimize their exposure to pathogens. This means providing your calves with a clean place to live and ample ventilation. Make sure to clean out their pens, provide them with fresh bedding regularly, and do your best to make sure the pathogens that may be present from

the previous calf in that pen don't contaminate the environment of the new calf. After a calf is weaned, the pen she was in should be deep-cleaned and allowed time to rest before the next calf moves in. If you are group housing calves, consider raising groups in an "all-in, all-out" manner rather than continually adding and removing calves from a pen.

Ventilation is important to consider in both the summer and winter. Summer is easy: windows and walls can be opened, calves can be outside, and fans can be blowing. In the winter months, make sure to have systems in place for adequate ventilation. Stagnant air holds pathogens and particulate

matter that can not only irritate a calf's respiratory tract but also infect her with disease. If you don't have indoor calf housing with adequate ventilation, set up calf hutches outside and use calf blankets. Calves can tolerate cold better than they can tolerate stagnant air.

Once calves have passed the neonate stage (2 weeks old), they are a little hardier. This is a time when their immune system starts to work on its own and they are more resilient. This time of their life should be focused on growing; they should be growing 1-2 lbs per day. In order for them to accomplish this, they need to be fed adequate milk. By two weeks of age, calves should be getting a gallon of milk twice daily. Jersey calves will need a little less, and large Holstein calves will need more. In the wintertime, when calves need to expend more energy to keep warm, you could increase their milk by adding a third feeding in a day. Calves will also need calf grain, high-quality first cutting hay, and free-choice access to clean water

As calves get older, they will start to get more energy from grains and forages and will be less dependent on milk. As they approach weaning, their milk can be reduced and grain increased, both gradually. At weaning, calves should be eating 3-5 lbs of a calf-specific grain daily. It is important to recognize that whole milk is about 28% fat and 25% protein as-fed. As calves' milk intake is reduced, they must be provided with high-quality forages and grains to make up for the reduction in the high fat and protein milk of their previous ration. Providing a high plane of nutrition is vital in order to meet growth demands.

Weaning age is dependent on your farm's system. Conventionally, calves can be successfully weaned onto a diet of grain and hay at about two months old. If their diet is more heavily reliant on forages, like on organic farms, it might be helpful to delay weaning to three months. If you are raising your calves as certified grass-fed, they should not be weaned before four months old. Pre-weaned calves are not ruminating yet. This means that, unlike adult cows, they are not able to convert forages into energy and will require more direct energy inputs. The rumen fully develops between four and six months old. If calves are weaned and not provided with grain, they need to be able to efficiently convert forages into energy. This means a grass-fed calf or a calf fed minimal grain should be weaned later to give their rumen a chance to develop more fully.

The principles of raising healthy calves are the same as most other animals: provide them with a clean and comfortable place to live and nutritious, age-appropriate food. These principles will provide you with good guidelines for preventative care in order to stave off disease. Raising heifers is an investment in the future of your farm. Improving your systems might cost money, but it will pay you back with healthy cows. As the saying goes, happy cows make more milk, and I would add healthy calves make happy cows.

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