

## Vaccinations for Beef Cattle

Vaccinations are an important part of beef cattle production. The number one loss of profitability for beef producers is the death of a calf, and this many times can be due to disease or sickness. Vaccinations play a critical role in helping to reduce the amount of calves that are killed by disease. It should be mentioned that vaccines do not prevent all disease by themselves, but if used correctly vaccines can be an important tool to use in herd health programs. Much of the information I am going to share in this article comes from a fact sheet by Dr. Clell V. Bagley titled Vaccination Program for Beef Calves.

When implementing a vaccination program, it is important to consult your local veterinarian. Veterinarians often times understand the local and current conditions, including prevalence of diseases in the area. They can be an important advisor for a health program or any vaccination schedule you plan to implement. If you already have a good vaccination program in place, there are additional steps you can take to increase vaccine effectiveness. Vaccines are not 100%, and vaccinating doesn't mean that you are automatically protected from that certain disease. However, the four points listed below, as well as practicing proper nutrition techniques (including minerals) can help increase the protection percentage.

Before we even consider vaccines there are four critical points of calf health that need to be covered. The four points provided by Dr. Bagley are as follows:

1. Nutrition
2. Care of newborn
3. Sanitation
4. Housing

Nutrition to a newborn calf is critical to success, but the nutrition the cow receives during the last 60 days of gestation can be just as important. This is especially true for first calf heifers. The nutritional components for calf health include: protein, energy, vitamins A and E, and the trace elements (especially copper, selenium, and zinc). These are utilized by the calf through the diet of the cow. Nutrition for newborn calves is especially important right after birth.

Newborn calves should be able to nurse and receive 2 quarts of good quality colostrum the first 2 to 6 hours of life. It is important during this time that the new calf is cared for, especially if in cold weather. It is important that calves get dried off and be provided supplemental heat in cold temperatures. During the first few days of life calves struggle to control their body heat and can be very susceptible to cold stress. This stress can decrease the calf's ability to absorb colostrum antibodies which could lead to future problems in the long run.

For sanitation purposes it is important that calves are born in a clean environment. The range often provides the cleanliness needed for newborn calves. When calving in a maternity corral or pen, it is important to clean out the area after a calf is born. Cleaning these corrals can help to prevent the spread of diseases among new born calves. In addition to keeping the housing clean, housing needs to remain dry and should be well ventilated.

When housing newborns, it is important to move the calves to a new clean location. Keeping groups of calves small (10 to 25 pair) and putting similar aged calves together can be good strategies to keep housing sanitary and decrease the chance of disease.

Vaccines will increase herd immunity and the resistance of disease in individual animals. The goal at the end of the day is to protect calves from disease, and as they grow into adulthood, increase overall herd immunity. There are a number of vaccines and vaccination combinations available to beef producers. Carefully consider what vaccinations are most needed on your operation. When choosing one for your vaccination plan remember to consult your veterinarian.