



# Management in Reducing Newborn Calf Disease

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Years of research on veterinary drugs, vaccines and treatment methods have not significantly altered the death rate of 5 to 10% in newborn calves. We have little hope that drugs or vaccines alone will decrease the overall losses to any great extent.

Progress is being made, however, where the sensible use of drugs and vaccines is incorporated into an overall management program designed to provide a better environment for the newborn calf. Your veterinarian and extension agent are the most qualified people to assist you in management design. This process must be done on an individual ranch-by-ranch basis with cost-benefit calculations taken into consideration. This publication outlines several management practices which, if properly carried out, will improve the cow/calf environment on individual ranches.

## Calving Facilities and Precalving Practices

Several months before the calving season, consider your calving facilities and precalving practices. Keep in mind several basic predisposing causes of calf mortality such as:

1. Poor nutrition of the cow.
2. Difficult calving.
3. Contaminated surroundings.
4. Bad weather.

Proper nutrition of the cow during the last 3 months of pregnancy is necessary for good calf survival. This subject is covered extensively in other fact sheets.

Pregnant cows should be forced to exercise for greater calving ease. Feed and water the cows at opposite ends of the pen or field for forced exercise. The feed and water may be as much as a mile apart.

Avoid animal congestion by making your calving area as large as possible. Calf scours outbreaks are most often attributed to fecal contamination of the calf's surroundings. Fecal material from sick calves rapidly spreads infective bacteria and viruses to healthy calves. Remember, human infant diarrhea remained largely uncontrolled before modern plumbing. Sometimes the best treatment for scours outbreaks is to "open the gate" and spread the cattle out.

Water also becomes contaminated with fecal material, so make certain calves have clean, fresh drinking water. Streams or ditches are often used for water but they can be a substantial source of fecal contamination leading to spread of disease. Make certain that lots are well drained so puddles do not accumulate.

Feed from bunks in confined areas. This practice not only saves a significant amount of feed but prevents calves from chewing on contaminated hay or feed. Feed bunks should be movable unless they are built with a hard surface apron that can be cleaned to prevent manure and mud accumulation.

If pens or lots have had scouring calves in them in previous years, don't use them for baby calves. Two of the principal calf scours-causing bacteria, *E. coli* and *Salmonella sp.*, can live in the soil for over a year and serve as a continuous source of infection.

Provide enough pens so that cows and their calves can be separated from the pregnant cows as soon as they calve. This will prevent scouring calves from contaminating the surroundings for calves which are yet to be born. Also be prepared to put newborn calves and the cows into additional clean pens in case calf scours breaks out.

We can do nothing about the weather, but we can at least provide protection against a great deal of its

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stress effects. In areas with severe inclement weather, some ranchers use calving barns. These may work satisfactorily if they are well ventilated to prevent moisture buildup and if they are kept clean and sanitary. If not, they can become death traps for new calves. Even under the best conditions calving barns are a problem. In some cases you may be wiser to move your cows to a milder climate for calving than to invest in calving barns.

Even in milder climates, calves kept outside should be protected against bad weather. Build sheds that are movable to prevent scours-causing bacteria buildup. They should be open on one side and made so only the calves, not the cows, can get inside. Cows usually don't need the protection. Calf sheds may not be needed where there is natural cover such as protective rocks, bluffs, trees or brush.

### **Equipment and Procedures During Calving**

Prime concern during calving is sanitation for both the calf's and cow's welfare. Any facilities or instruments you may use should be designed for easy cleaning. If they are not cleaned easily, the cleaning processes are often neglected and problems result.

Basic calving facilities should include a head catch for the cow and a pen. Don't use regular squeeze chutes. When a cow goes down during the process of pulling a calf, squeeze chutes do not allow space for proper extraction of the calf. You need to have 8 to 10 feet around the rear of the cow when she lies down. Many calves have been lost because working space was not adequate.

Do not be too eager to assist a cow during calving. A general rule is to wait 2 hours after a cow starts hard labor before trying to assist. If you must assist, make certain the cow is restrained. Many people have been injured because of lack of animal restraint.

When giving a cow assistance, always determine the position of the calf in the uterus and be sure you have the proper equipment to handle the task. Basic equipment includes:

1. A bucket with clean water and a disinfectant.
2. Soap.
3. A lubricant for the calf and birth canal.
4. Calf pulling chains or straps.
5. A calf puller. (Use caution with calf pullers since many calves have been killed or crippled through rough use. Know when a calf cannot be pulled and must be taken by other means.)
6. Antibiotics or furacin uterine boluses to deposit into the uterus after the calf is pulled.
7. Iodine for the calf's navel.

When pulling a calf, do not use any form of anesthesia such as an epidural. The contractions of the cow's uterus should be used to your advantage. The risk of permanent paralysis and uterine infection is increased any time an epidural is used.

Calves should receive colostrum milk from the cow as soon as possible after birth. If calves are weak or won't nurse, you may need to use a tube. The calf should receive 1 quart the first feeding. Colostrum protects the calf from diseases by the antibodies absorbed into his system. Calves low on absorbed antibodies have much less of a chance of surviving than those which have absorbed normal amounts of antibody.

First calf heifers sometimes do not have adequate colostrum when the calf is born, and others lack the "mothering instinct." Have an extra source of colostrum on hand to feed these calves. Colostrum can be collected from older cows, frozen in clean milk cartons and stored in the freezer without loss of potency. Colostrum from the first milking after a cow calves is far superior to subsequent milkings.

The cow's teats and udder should be checked for deformed teats, mastitis and sufficient milk. This will assure the calf access to sufficient colostrum and future milk.

After each calf is born, ear tag it for identification and record the number. Also record such things as vigor, special assistance needed, whether the calf was pulled or born normally, time of birth, sex and any treatments given.

### **In Case of Disease**

If calf scours, white muscle, coccidiosis, pneumonia or other disease becomes evident in any of your calves, have diagnosis made as soon as possible so corrective measures and proper treatment can be started. In case of scours find the cause. If viral in origin, vaccines may help. If white muscle or selenium deficiencies are a problem, selenium injections and feed supplements would be in order. In any case, early treatment and prevention will depend upon the diagnosis since many diseases are handled differently.

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