



Help first-calf heifers
establish a
*Maternal
Bond*

By HERMAN DETERING

When I first took responsibility for the management of 40 young Brahman cattle, one of the most upsetting and costly things that happened to me was the occasional rejection by a young heifer of her first calf.

When this happens, if someone is not there at the time of birth, chances are the calf will be lost to

the buzzards. Then you must decide whether or not to invest another year in the heifer in hopes she will accept her second calf.

After making a few phone calls, I learned that most ranchers — whatever their breed of cattle — have experienced this, especially with first-calf heifers.

Since then I have tried to learn all I can about why this happens and what I might do to prevent it. It is hoped the suggestions I am offering will increase your chances of achieving successful maternal bonding.

There appear to be two main reasons for the failure of a cow to bond with her calf. The first is an inadequate level of the hormone oxytocin in the heifer. This is a hormone that normally triggers the maternal response in cattle.

Oxytocin levels are characteristically lower in first-calf heifers, which may account for the fact that abandonment is usually not a problem with the second calf.

The other factor associated with a failure to bond with the calf is the stress experienced by the heifer in giving birth. When the delivery is difficult or is accompanied by human interference, the probabilities of abandonment are increased.

Preparing heifers for giving birth

Proactive gentling of your heifers is the key to increasing your chances of successful maternal bonding. By this I mean routine handling of your heifers in a low-stress way.

Because stress works to retard the production of oxytocin, low-stress handling will help maximize its production, provide a basis for calm intervention if needed during delivery, and make the remedial process of establishing nursing easier.

I spend at least 15 hours of formal gentling work with each group of my weanlings. I do this

by moving them calmly back and forth between pens, using the least possible pressure and quickly backing off once they yield to my pressure.

Then I send them, as quietly as possible, through the work chute over and over, until they can walk through and stop in a calm manner. A few sessions of this will help establish a sense of trust in the heifers and help them relax in the confinement of the work chute. This will be of immeasurable help to you in all handling situations.

For first-calf heifers it is important to breed to a low-birth weight bull. The smaller birth weight calf this bull produces will help ensure ease of delivery, which is extremely important.

It also helps to wait until the heifer is at least 15 months old or three-quarters of her projected mature weight before breeding her. With Brahman heifers it is customary to wait until they are 20 to 24 months of age before turning them out with a bull.

Finally, the amount of feed given the heifers can affect the size of the calf and the difficulty of delivery. Many ranchers I have talked with cut back on feed during the last two months before delivery. This consideration may vary from breed to breed, so I would advise checking with a veterinarian before deciding on a feeding program.

Preparations for assisting in the delivery process

Cattle, especially heifers, will normally seek a place away from the herd to give birth. This provides them security from interference by higher ranking females and a setting in which to develop their initial bonding with the calf.

Also, in giving birth to her first calf, the heifer is totally inexperienced and is reacting to a heightened sense of vulnerability. Because of this, preparation for minimal human and herd interference should be considered of great importance.

Courtesy of *The Cattleman* magazine.

Normally, a heifer will wander off from the herd and find a protected spot where she feels safe to give birth. However, I think it is better to place her in a pen, separated from other cattle, so she can be watched and helped in a timely manner if necessary. Here the earlier gentling work will pay off by allowing you low-stress access to her whenever necessary.

Responding to abandonment

If the heifer gives birth out in the pasture and has abandoned her calf, your first job is to get mother and calf, as quickly as possible, into a small pen and attempt to get the calf to nurse.

The first milk, or colostrum, is not only important for the calf's immune system but the smell of this milk in the calf's feces will encourage the mother to accept the calf.

Bonding seems to be most closely linked with the shared smells of mother and calf. Smearing birth fluids on the heifer's nose and mouth, and wetting the calf with the heifer's urine have been found to be helpful in bringing about acceptance on the part of the mother.

Isolating the heifer and calf together in a small area while helping the calf nurse will further aid in the bonding process.

I start out with the heifer in the work chute with some feed to distract her. If she starts to kick at the calf when he tries to nurse, I place a stick or other block in front of her legs and let her experience the consequences of kicking rather than tying her legs to prevent her from kicking. This lets her choose not to kick rather than wanting to kick and not being able to.

Also, I find that the calf will be of help to you as he gains strength and becomes more and more insistent in his demands for milk.

The plan here is slowly to remove the restraints on the mother as she becomes more accepting of the calf. At first the chute may be

necessary as a restraint, but try to move out as soon as possible into a corner of the pen and then to an open area.

Feed is always a helpful distraction for a heifer and should be used until the nursing becomes well established.

There are other things that might help you to arouse the maternal feelings in the heifer. For example, some have tried having a dog approach the pens to provoke a protective response in the mother and help in the bonding process.

Overall what I have learned is there are many things that might help to bring about a bonding of mother and calf, but every heifer is different.

Basic to every effort, however, is the fact that perseverance on the part of the handler is of great importance in getting the heifer to change her behavior. Cattle do not have much patience and need to be shown that you are not going to quit asking for what you want.

Finally, I have found that nothing you do will guarantee acceptance by a heifer of an abandoned calf, but I believe that if you follow these suggestions, you will greatly increase your chances of successful bonding. Otherwise your options are twice-a-day bottle feedings, or trying to get another cow to accept the calf.

I would like to thank Eugene Krenek of Bellville, and Ed Cullers of the Heritage Cattle Company in Hungerford, for their helpful suggestions. For further reading and citations to controlled studies on maternal behavior in cattle, look on the Internet for *Maternal Behavior of Beef Cows* by Joseph Stookey. ■