

# Health & Husbandry

## Develop a herd health management plan.

by Brad White, Kansas State University Beef Cattle Institute



If I'm late for supper, it is usually because something went wrong. But a couple years ago, I was

late for supper because something went right. My son and I were checking a few cows just before supper and noticed that one of the cows had started calving. As a veterinarian I've attended many births, usually because of a problem. This time we were able to watch a live calf come into the world from about 20 yards away.

The entire process is amazing to watch. The cow was up and down for a while, then she laid down and out came the calf. From the time we saw the first hoof to the time the calf was up and nursing took only about 25 minutes.

This was the best reason to miss supper, but not all births go this smoothly. A successful calving season starts with preparation — making sure the cows are ready, updating your calving kit, knowing when to intervene, and generating a plan for newborn management.

### Prepping cows

Preparing cows for the calving season includes maintaining appropriate herd health and nutrition. A complete vaccination program helps cows build immunity against potential disease-causing pathogens. Consult your veterinarian to

design the right vaccination program for your herd. Natural pathogen exposure and vaccinations cause the dam to build immunity to be passed on to the calf in the colostrum, the first milk the calf receives.

Assessing cow body condition scores (BCS) prior to calving season helps identify necessary ration changes. Ideally, cows are moderate or slightly fleshy [BCS 5 or 6 on a 1 (thin)-to-9 (fat) scale] prior to calving. Good flesh at calving can decrease the likelihood of difficult calvings,

improve colostrum and increase the probability of rebreeding in a timely fashion.

Difficult calvings (or dystocias) can not be completely avoided. The most common cause of dystocia in mature cows is malpresentation — the calf not coming out correctly. Fetus-to-dam size mismatch is the most common reason among heifers.

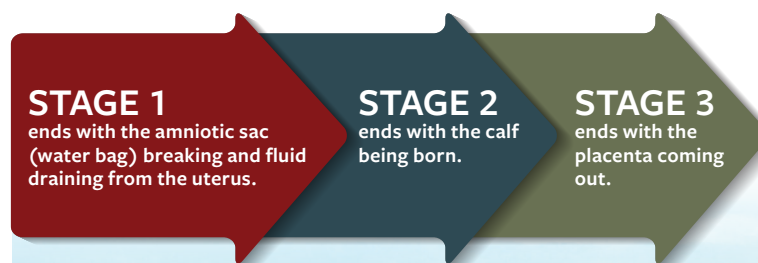
Calving is an energy-intensive event, and cows in good shape are more likely to have the energy reserves to have the calf without

assistance. Overconditioning (too fat) is not good, either. Our goal is to have moderate to slight flesh at the time of calving.

The first milk produced by the cow, or the colostrum, contains a high level of immunoglobulins. Immunoglobulins are proteins that provide the calf immunity for the first several months of life while the calf's own immune system starts to come online. These immunoglobulins are made from proteins. Therefore, cows in good body condition will produce a higher quantity and quality of colostrum.

Finally, precalving nutrition influences the length of time before cows can breed back for the next year. The normal postpartum interval (time period between calving and successful breeding) for mature cows is around 60 days, and 100 days for heifers. Dams in lower body condition at calving take longer to rebreed. If the cows are thin precalving, this is a great time to supplement nutrition, as precalving is one of the lower nutrient need times for the cow.

### Three stages of labor



### The calving kit

Creating or updating your calving kit prior to the calving season is a good idea. There are a couple categories that need to be in your calving kit: physical items and knowledge.

The physical items are pretty easy to put together, and may include tools to assist in a difficult calving: a halter, lubricant, sleeves, chains, handles, an esophageal feeder, identification tags, and a method to keep

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records. Including your veterinarian's phone number is also a good idea.

Knowledge in the calving kit relies on understanding the process of labor, when to intervene, and when to call for help. There are several good resources available, including local calving schools and online training, and it is always good to have a refresher prior to the start of calving season.

Difficult calvings rarely occur at a convenient time, and often require more than one person to safely and effectively provide assistance. Preparing an 'on call' list of people who may be able to help you can be useful, especially if a large number of cows or heifers are calving at the same time.

Finally, making sure the calving pasture has a facility or access to

a facility where cows can be caught is important in case an intervention is needed.

## When to intervene

Knowing when to intervene is based on understanding the normal calving process. There are three stages of labor in cattle, and each ends with something being expelled from the cow.

- ▶ Stage 1 ends with the amniotic sac (water bag) breaking and fluid draining from the uterus.
- ▶ Stage 2 ends with the calf being born.
- ▶ Stage 3 ends with the placenta coming out.

Each stage takes a different amount of time, and we focus on Stage 1 and 2. Stage 1 is typically the longest stage, starting with the cow appearing slightly

uncomfortable or anxious. This stage may take two to three hours in mature cows and as long as six to eight hours in heifers. During this period expectant cattle will typically stray from the herd to find a place to calve and may frequently switch between standing and lying.

The rupture of the fetal membranes signals the end of Stage 1 and the beginning of Stage 2.

While Stage 1 may vary greatly in time (especially between cows and heifers), Stage 2 should develop relatively rapidly. A simple rule of thumb is that progress should be observed every 15 minutes. If part of the calf is visualized, then after 15 minutes you should be able to see more of the calf. A lack of progress after 15 minutes indicates it is time to consider intervening.

The same 15-minute rule applies when manually trying to extract the calf: If you try something for 15 minutes and do not make significant progress, try something different, or call for assistance. Time flies when you are having fun (or not), so be sure to set a timer on your phone to keep you on track.

## Newborn care

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Difficult calvings may require more involvement to stimulate the calf and get it moving. If the calving has been prolonged, the calf may be depressed and may not breathe well. In this case, the first steps are to try to stimulate the calf by rubbing the chest and potentially tickling the nose to

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encourage more rapid breathing.

Many of us were taught to hold the calf upside down to let fluids drain, but this actually does not help the calf. If held upside down, fluid will come out, but it is actually coming from the stomach, not the lungs. When held upside down, all the weight of the abdominal contents press on the lungs, making it harder to breathe. I would not recommend this procedure.

Once the calf is breathing more normally, if you can get it up and have it nurse naturally from the dam, that is best. If it does not nurse, you will need to provide colostrum.

The best source of colostrum is the dam. Yes, I know milking beef cows or heifers is not on anyone's wish list, but she is a great source if she has some. If this is not possible, consult with your veterinarian to discuss providing a commercial supplement or using banked colostrum from other cows.

## Conclusions

Calving season is an exciting and busy time of year. Preparing for calving by getting the cows ready, building a calving kit, knowing when to intervene, and having a plan for newborns can make the entire process go more smoothly. **ABB**

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Editor's note: Author Brad White is on faculty at Kansas State University College of Veterinary medicine and serves as director of the Beef Cattle Institute. To learn more on this and other beef herd health topics, tune in to the weekly Beef Cattle Institute *Cattle Chat* and *Bovine Science with BCI* podcasts available on iTunes, GooglePlay or directly from [www.ksubci.org](http://www.ksubci.org).