

## Be Prepared For Calving

I have two yak cows who will be giving birth soon. Of course, soon on our farm means anything from tonight to May 15<sup>th</sup> as our bulls breed on their time clock, not mine. Am I prepared? Or in reality am I just going to react. The follow paragraphs contain recommendations for being prepared for calving. As you read them you will see that being prepared is more than a bottle of iodine and a syringe in hand. [Please note these recommendations are for beef cattle producers so volumes given are more than what is appropriate for yaks.]

1. Dr. Jody Wade, Professional Services Veterinarian with Boehringer Ingelheim Vetmedica, Inc., shares these management tips to help cow-calf producers have a more productive calving season.

- **Body condition:** It is important for cows to maintain a body condition score (BCS) between 4.5 and 5.5 during the final trimester. A higher body condition score allows for improved calving ease, along with higher quality colostrum. First-calf heifers should have a BCS of 5.5 to 6 before calving. "Heifers are still trying to grow, while also providing milk and preparing to rebreed. After calving, they won't add body condition so it is key that they are in really good condition before calving," says Dr. Wade.
- **Vaccinations:** Entering the third trimester, producers should consider vaccinating with a killed-virus vaccine to boost immunity. Dr. Wade explains that the immune response developed from the vaccination forms antibodies that pass from cow to calf through the colostrum.
- **First aid kit:** Don't wait until you have all of the supplies and tools needed organized and ready to take to the field.

[ Be sure your calf gets colostrum as soon as possible. Remember, the more time that passes before the calf drinks colostrum the less able the calf is able to process it. So if a calf drinks a quart of colostrum six hours after birth they will only be able to process about 50% of it. The sooner after birth they nurse the higher the percentage of colostrum they will truly utilize. Having colostrum on hand is a good practice for calves who do not nurse within the first few hours. Also, having oxytocin available for cows who do not release their milk/colostrum can be a useful tool. You should consult your veterinarian ahead of time about the use of oxytocin – under what conditions, when and how much.]

2. **"Duration of Normal Labor:** Labor at calving is divided into three stages. The first is characterized by uneasiness (seeking a quiet place away from the herd) and an elevated tail. The second stage is actual dilation of the cervix and starts with serious hard straining, lying down and delivery of the calf. The third stage is delivery of the placenta or "afterbirth." First-stage labor is often a clue that we need to closely observe the dam.

Second-stage labor in first-calf heifers that exhibit a normal birth (the calf's front feet and head first) often require about two hours of serious labor. This doesn't have to be continuous, but the heifer should be observed closely to assure progress. In older cows, serious labor is generally shorter, lasting one-half to one hour.

If reasonable progress stops, assistance is indicated. This assumption is based on the fact that the beginning of serious labor is known. If we check heifers approximately every two to three hours, we can be reasonably certain. If we check them every six to eight hours or even less, the rules should probably change.

Any heifer acting abnormally for several hours should be examined for a possible malpresentation or oversized calf. Examination is not detrimental if it is performed in a quiet, sanitary manner.

Mild to moderate traction is rarely detrimental and often results in a more favorable, less stressful outcome. Leaving heifers alone when the calf's front feet and nose are clearly visible for a prolonged time adds stress, reduces calf vigor and has been associated with decreased fertility at rebreeding in first-calf heifers.

Mild to moderate traction can be defined as two adults pulling a calf together with typical obstetrical chains and handles. If a calf puller/fetal extractor is utilized, traction should not exceed 500-700 lbs. pull. Depending on the size of dam and calf, this is only slightly more pull than two adults can apply with chains and handles (400-600 lbs.).

Calf pullers can exceed 2,000 lbs. of pull and must be used with extreme caution. It should be applied intermittently during abdominal press to avoid injury or death to the calf and damage to the birth canal.

If progress during assistance isn't obvious, it's time to think of an alternative method of delivery. When a Caesarean section is necessary, the decision is best made when the outcome results in a live, vigorous calf and a healthy normal dam.

**Colostrum Intake is important:** If a calf is assisted, it should receive colostrum immediately after delivery. Many calf deaths and disease problems are related to inadequate and/or delayed colostrum intake.

Administration immediately following birth reduces the interval of time the newborn calf is highly susceptible to invasion by pathogenic organisms. It also optimizes the amount of disease fighting protein (immunoglobulin) that the calf absorbs.

**"Mothering-Up" The Pair:** Following assistance of delivery, the pair should always be kept together quietly in a small pen until the calf is observed to suckle and the dam actively claims the calf. Under ideal circumstances, 24 hours of penning up a pair is best before turning them out. Longer may be necessary if the calf is slow or the dam fails to claim the calf.

Failure to assist in calving at the correct time, excessive traction, failure to administer colostrum immediately and failure to properly mother up the cow/calf pair can carry serious consequences. Such conditions often result in increased calf disease, death loss, reduced performance and delayed rebreeding.

**3.** Calving season is the time when all the preparation made during the past months to years comes to fruition. Results of the decisions made months before become evident; the get of a new sire, the mothering ability of that nice set of first calf 1/2 sisters saved as replacements from the last sire. Results of more recent decisions also can become evident: such as thin, poor-doing cows weak and disinterested in their calves because you couldn't justify the cost of better hay than what got rained on. There are a lot of events and influences that may not seem as important as they are until things start to go wrong. Proper preparation for the calving season begins long before that first calf hits the ground.

The necessary preparations can be broken down into two basic types: the long term breeding and feeding decisions and the shorter term actual calving season decisions.

Proper nutrition is one of the benchmarks of proper preparation for calving season. It is imperative that cows receive adequate protein, energy, vitamins and minerals that both maintain the cow and build the calf and colostrum to feed that calf. Without adequate nutrients, calves can be born weak and thin, with inadequate fat reserves to maintain body heat. Some producers start preparing for the calving season by feeding their cows in late afternoon or early evening during the last few weeks of pregnancy. This aids in synchronizing actual calving times; as many as 75% of the pregnant cows will calve between 7:00AM and 7:00PM when fed in this manner. Daylight calving is generally preferred to nighttime calving; a time when more attention can be paid to the cattle and their behavior.

When the actual delivery date arrives, it is important to have supplies needed to tend to both cow and calf easily accessible and in some semblance of order. Some items to include might be: a. A list of breeding dates, with expected calving dates calculated. Calves can easily arrive 10 days early or late. b. If use is made of calving pens, make sure they are cleaned, dry and ready for calving. c. Have feed and water easily accessible, with appropriate containers handy. d. Have some form of restraint easily available. e. Take inventory and restock calving necessities. 1. Obstetrical (OB) chains and two handles. Nylon calving ropes are also adequate and they can be thrown in the washing machine but stainless steel or Preparation for Calving Season by PatWhite,DVM chrome chains are easier and can be sanitized or even sterilized. Baling twine is a very poor third choice, it is not clean nor can it be cleaned. 2. OB sleeves and lubricant. Lubrication is essential when assisting a cow in labor. Mild non-detergent soap like Castile is acceptable, as is mineral oil. Veterinary lubricants are available; J-lube is a powdered lubricant that is excellent. It is merely wetted with water. Do not use liquid dishwashing detergent. Detergents strip the mucous membranes of their natural protective layer and these are extremely irritating and eventually drying. (Just look at so-called "dish-pan hands.") 3. Non-irritating antiseptic such as Nolvasan or Betadine solution (available from your veterinarian). If you get the "scrub" as opposed to the solution, remember that it will have detergent properties and should be treated with the same respect as dishwashing detergent, i.e. never used as a vaginal lubricant and completely rinsed off. Dial soap also makes a very good cleansing agent for the vulva and your arms. It is not as powerful as Nolvasan or Betadine however. 4. Needles and syringes: recommended to have 16g, (gauge), 18g 5/8 inch, 18g 1 inch, 18g 1 1/2 inch needles, 3, 6, 12 and 20 cc syringes. 5. Ear tags, tagging tools, tattoo kit with disinfectant. I

tattoo our calves at birth, using a Ketchum small animal tattoo kit. It makes a very tight and easily read tattoo when used correctly. It is also stainless steel, which makes for less broken tattoo letters and numbers. It will hold up to six digits and is small enough to use in a newborn calf ear. It would be much more difficult to use in an older calf. Sometimes I think the cowslick the ink out of the ear a little too enthusiastically and that may be the reason the occasional tattoo doesn't turn out well. I check all tattoos at weaning, and occasionally have to redo one. We also apply a radio frequency ID tag to the opposite ear. These are small and unobtrusive. We find it is easier to restrain a newborn calf for these procedures, particularly since we are processing them at birth anyway.

6. Weight tape, hoof tape or weigh sling and scale. We weigh all our calves at birth (within 24 hours) and use the calf sling and scale available through Nasco. You can pick them up and stand on a bathroom scale if that is what you have. Hoof tapes are also reasonably accurate to estimate calf weight. Please note weight or hoof tapes may not be used for AHCA's Performance Program.
7. Injectable Vitamins A, D and E, injectable Vitamin E/selenium combination. Depending on the quality of your feed and the time of year, you may or may not need to give fat soluble vitamins to your newborn calves. Vitamin E and selenium are usually only given in areas of the country with inadequate soil selenium; check with your veterinarian or extension agent on the need to give it in your area.
8. Strong 7% Iodine to dip the navel of the calf.
9. Dental floss or strong thread to tie off a bleeding umbilical cord on the calf if necessary. It is rarely necessary to tie off the cord but you should still have a package of dental floss on hand.
10. Vaccinations for newborn calves, if any. Intranasal vaccination for IBR and PI3 can be given to newborns, as can oral scours vaccine for rotavirus. A hanging scale attached to an ATV is an excellent system to weigh your calves.
11. Adequate supply of good quality colostrum. If you can bank colostrum from some of your heavier milking cows, do it. Keep only the first milking for freezing, as antibody levels in colostrum start to drop after every milking. Freeze in 12-16 ounce or ½ liter plastic bottles such as those bottled water comes in. Bottles this size thaw reasonably fast in a hot water bath. Do not microwave colostrum to thaw it. Cooking will denature the proteins needed by the calf in the uncooked state. A hot water bath may take 1/2 to 1 hour to thaw pint bottles. Remember that there are several diseases you can infect your calves with when feeding colostrum. Johne's disease is easily spread through infected milk and it is imperative that you trust the source of your colostrum stores. It is advisable to use colostrum from your own cattle, assuming of course, that they are free of Johne's and other diseases. There are absolutely excellent commercial colostrum available now, that offer guaranteed high quality immunoglobulins. Alta Genetics out of Wisconsin offers some highly recommended dried colostrum for reconstitution, free of Johne's disease. Purchasing colostrum of this quality is preferable to using colostrum from questionable sources. Their Calf's Choice Total Gold delivers 120 grams of immunoglobulins in 1 1/2 liters total volume. (2 packages of powdered colostrum in 750 ml water each.) If you compare this to many over the counter colostrum substitutes, it is obvious there is very little comparison. Alta has an excellent website explaining the value of high quality dried colostrum.
12. Esophageal tube feeder. If you don't know how to tube a calf, find someone who does and learn. I prefer the Fluid Feeder available through Nasco. The stainless steel probe is just a little smaller than the usual plastic probe and goes down that much easier. It also does not have to be hung up on a nail or held up by someone else. It is truly a one person operation, although made easier with another person to control the rear end of the calf. Tube feeding of colostrum to a calf that has not nursed can be life saving. The technique is also

useful for treating dehydration in calves, particularly from scours. 13. A good calving video or book. Nasco sells an excellent book titled Calving, the Cow and Care of the Calf. It is loaded with photos and has excellent descriptions of calving difficulties and how to correct them. 14. Pour-on Ivomec or Pour-on Eprinex. I use this at label dosages on any newborns delivered during fly season. I wait until all other processing of the calves is completed and the calf and cow are ready to be released onto pasture. The pour-on formulations seem to have an effect on fly larva for up to 3 weeks. Flies may leave eggs but they don't develop into maggots. You still have to keep an eye on manure buildup on the butt and should check out any calf with signs of skin irritation such as constant flicking of the tail or chewing the same spot on the skin. Calves can still develop skin infections from matted wet hair or manure tight against the skin. While the pour-on products may prevent maggots, they do not prevent all serious skin conditions. Once you have all your supplies in order, you are ready for almost any complication that might arise. Hopefu