



Safe Delivery

Tips for breech and backward calves.

by Heather Smith Thomas

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Most calves are born the way Mother Nature intended: head first and right side up with front feet extended (Illustration 1). However, some calves are positioned backward (posterior presentation) and may not survive unless assisted. The backward calf usually suffocates because its head is still inside the cow when the umbilical cord is pinched or breaks as its midsection comes through the cow's pelvis. Unless you can speed up the birth process when it reaches that point, the calf will die.

Backward versus breech

Some people confuse the terms "backward" and "breech" but the seriousness of these two situations is vastly different.

Keep in mind many consider a right side up, backward presentation normal because the calf can be born since its hind legs have entered the birth canal (Illustration 2). Backward calves can usually be born with or without human assistance, but they might not survive due to pinching or breakage of the umbilical cord.

Breech calves — rump first, hind legs forward in sitting position — cannot be born without assistance because the hind legs don't enter the birth canal (Illustration 3). The calf's rump presses against the cow's cervix first when the cow begins early labor and uterine contractions start moving the calf toward the birth canal.

Without assistance to reposition the hind legs, the calf will die, and the rotting calf and subsequent infection may kill the cow. To deliver a breech calf, the legs must be brought into the birth canal. If a posterior or breech presentation is recognized and dealt with early, however, there's a good chance for saving the calf.

Saving the backward calf

If cows calve unobserved and unattended, very few backward calves survive. However, by closely observing cows at calving time and by providing assistance when you see a calf coming backward, you should be able to deliver them safely.

A calf coming backward will be a slow birth (unless the calf is small) because it is not in the proper position to easily move through the birth canal. Mother Nature programs things for a frontward delivery, which stretches the cow's cervix and vulva gradually as the front legs and head come through, followed by the larger shoulders and even larger hips.

In the case of a backward presentation, with hind legs coming first, the hindquarters of the calf come through the birth canal early, which stretches the cow's cervix and vulva further and sooner than during a normal delivery. The calf's hips are difficult

to pass through the cow's pelvis and the calf's ribcage tends to catch on the way. When pulling a backward calf, it helps to use lots of lubricant. Put it alongside the calf as far into the birth canal as possible.

It may take the cow longer in early labor to get the calf's long hind legs aimed the right direction. When the calf's feet start to emerge through the vulva, you can tell if they are hind feet because the heels and dewclaws will be up, with bottoms of the feet showing. If it's the front feet, you will see the top part of foot with toes pointing down.

However, before assuming the calf is backward, restrain the cow and reach into the birth canal to get a feel of the whole leg. You will feel the hocks if they are hind legs. If they are front feet, you will feel the knees and head, unless it is turned back.

Sometimes a calf will be upside down or sideways, coming crooked, and when the feet first appear they are pointed upward. Always be sure which part of the calf is presented before you put chains on and start to pull. For instance, when front feet appear first in a normal delivery, reach farther to make sure the head is

there and that it is not turned back; rotate the calf into proper position before you assist.

You also need to check the cow if it is taking too long before the calf's feet appear. By reaching in, you can tell if the calf has started into the birth canal, and whether you are finding front feet or hind feet. One way to make sure they are hind feet is to reach along the top of the legs until you find the tail.

Saving a breech calf

As mentioned earlier, breech calves cannot be born without assistance because the hind legs don't enter the birth canal. Sometimes the hind legs

may be flexed, with the hocks trying to come through the cervix, but the calf still cannot be born unless you can bring the hind legs into the birth canal. If this proves impossible, then the calf must be delivered via cesarean section (C-section).

A breech calf is usually in a sitting position with hind feet up toward its head. Since the calf's legs are forward and beneath it, pressure on the abdomen from the contracting uterus can cause the calf to have a bowel movement. Fluids surrounding the calf or discharging from the cow's vulva (if the amnion sac has broken) will be yellow-brown instead of clear.

If the calf is breech, the cow takes a long time in early labor — just uterine contractions — and may not start straining. Second stage (active) labor is signaled by the water bag coming through the cervix, and the cow's abdominal contractions along with the uterine contractions. This does not happen until some part of the calf enters the birth canal, stimulating the cow to strain.

With a breech calf, the only part of its anatomy that can enter the birth canal is the calf's tail or maybe its hocks. Due to the length of the hind legs and limited space in the uterus, some calves that are positioned backward during late gestation fail to extend their hind

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legs during labor. The rump is jammed against the cervix and the calf can come no farther.

Cows with a breech calf may or may not break their water; they appear to be still in early labor. If no water bag is observed, there may be no visible sign that second-stage labor has begun. If you wait too long to check her, the calf will die. Deciding whether to restrain and check a cow that is obviously calving but not yet in active labor, or not yet straining much, can be difficult. It's always better to respond to a false alarm and check a cow. Either you find the calf's feet and head are coming and the cow just needs more time, or you discover a situation that demands immediate attention. Problems must be corrected before the placenta begins to detach and the calf dies.

To check the cow, restrain her, wash her hind end, use a clean obstetrical sleeve and apply lubricant liberally. When you reach in, if the calf is breech, you'll feel only the tail or rump, or sometimes the hocks. You must put your arm in a long way through the cervix to reach the calf in the uterus. If the calf is breech, its rump must be pushed forward so it is not jammed against the cervix or pelvis. Doing so creates space to grasp and maneuver each hind leg — one at a time — to bring each into the birth canal.

This will be much easier if the cow is standing. When the cow is lying down, all the weight and pressure of her abdomen will be

against the calf, making it harder for you to push it back farther into the uterus. Also, she won't be pushing against you quite as hard if she's standing, making it easier for you to get both arms into the birth canal while you are also standing.

It's a tight fit to get both arms in, especially if you have big arms, but it's the best way to get a breech calf repositioned. There is always enough stretch in the vulva and vagina to get both arms in; remember that a calf coming through this space is wider than your two arms.

The calf must be pushed back as far as possible. Hold it forward, with one hand pushing against the calf's rump, and grasp a leg with the other hand. Bend the hock and lift it upward, rotating it as you lift. Reach farther forward along that leg until you can find the foot. This takes a long arm. If you are a small person you'll need someone with a longer arm to do this.

Draw the foot backward in an arc, keeping the hock joint flexed tightly and the calf pushed forward as far as possible. Keep your hand cupped around the calf's toes so they won't scrape or tear the wall of the uterus as you bring the foot to the rear. Keep the hock joint flexed tightly and lift the foot over the cow's pelvis.

Do the same with the other hind leg after you have the first one straightened out behind the calf and in the birth canal. Make sure the umbilical cord does not get caught over one of the legs as you lift it up. Once both hind legs are extended and in the birth canal, you can attach chains and pull the calf, just as you would a backward calf, using lots of lubricant. If it is impossible to bring the legs into the birth canal, don't try too long before calling your veterinarian or someone who has more experience (and maybe longer arms!) so you can get the calf out while it is still alive. If your veterinarian cannot reach the legs either, he/she can deliver the calf by C-section.

Using a calf puller

Before using a calf puller, restrain the cow in a place where there is plenty of room behind her to maneuver it properly. You don't want her in the corner of a barn stall with her hind end too close to the wall. If you restrain her in a squeeze chute, the headgate should be one that will allow her to lie down without choking and with sides that can swing away. Otherwise, be prepared to put a halter on the cow; let her out of the chute and tie her in a more open area so you will have room to maneuver a calf puller, especially if she lies down.

Even if the cow is standing when you start to pull the calf, by the time you apply a lot of pressure (when the calf's hindquarters are coming out) she will usually lie down. This can be difficult

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Illustration 1: Normal presentation



Illustration 2: Backward calf



Illustration 3: Breech calf



Illustrations from Recognizing and Handling Calving Problems, AgriLife Extension, Texas A&M University.

(and possibly harmful to the cow and/or calf) if she goes down at an awkward angle to the calf puller. It's best to put the cow on the ground before you begin. That way, you can maneuver the calf puller without danger of her falling down during the process.

After the cow is restrained, do a more thorough check inside her to determine the calf's position. Sometimes the calf's umbilical cord is caught over a hind leg. This occurs if one of the hind legs passes under the cord as the legs are straightening out to enter the birth canal. If this happens, the cord will be stretched and broken before the calf is halfway out. If the cord is caught over one of the legs, push the calf back into the uterus if you can — far enough to reposition that leg (flexing the hock tightly) to give you

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enough room to untangle it from the umbilical cord. Also, make sure the calf's tail is not straight up and over its back; the tailhead will jam into the cow's pelvis, impeding the birth process.

Next, attach chains to the legs above the fetlock joints. Use a double half hitch knot with one loop above and one below the fetlock

joint to distribute pressure over more area and to reduce the risk of damaging the joint or breaking a bone. Insert as much lubricant around the calf as you can and start pulling.

Pull slowly at first, giving the cow's cervix time to fully dilate as the calf's buttocks and hips start through. Traction should be applied on one hind leg at a time until the calf's stifle emerges over the brim of the cow's pelvis. Bringing the hind legs into the pelvis one at a time enables the calf's hindquarters to come through more easily, since the pelvic opening usually will be tight on the calf's stifles.

If the calf's hindquarters are still “stuck,” cross one of its legs over the other and pull hardest on the lower one in order to rotate the calf a little to one side so the stifles can ease through the pelvis more readily. Another way to rotate the calf's hindquarters slightly is to bend the hind legs a bit and use them as levers in a circular motion. If the calf is rotated 45 to 90 degrees (nearly lying on its side), this takes advantage of the widest diameter (up and down) of the cow's pelvis.

Check again to make sure the calf's tail is not aimed upward as the hindquarters start through the pelvis. Put your hand over the rump and make sure the tail is down between the calf's hind legs. You will have to pull fast and forcefully at the end, so you don't want the tailhead to damage the cow.

The calf's umbilical cord won't pinch off until its hindquarters start through the cow's pelvis, so you have time to go slowly until the hind legs are far enough out to get past the hocks. Once the calf's hips are clear of the vulva, hurry it out. If you rush at first, you may injure the cow and kill the calf. It's not uncommon for a calf's ribcage to be crushed if you pull too forcefully too soon.

Direction of pull on the legs should be straight out and slightly upward from the back of the cow, with pressure applied by a calf puller or three strong people.

When using a puller with a winch/cable, stop for a moment and reposition the chains after the hocks appear, especially if it is a long-legged calf. This gives you more room (more length of cable) to winch. There's nothing more frustrating than running out of cable with the calf partway out while the calf's head and shoulders are still inside the cow. At that point you don't have time to reposition the chains; the calf will be suffocating because the umbilical cord has already been pinched or broken.

After you have the chains above the hocks and your cable repositioned — if you had to rotate the calf's hindquarters to get its hips through the cow's pelvis — rotate the calf back into proper position and winch it out. Go slowly and carefully at first until the calf's tailhead and anus emerge so you are fairly sure the back of the calf's ribcage has started through the pelvis. Then hurry the calf out before it suffocates.

Once the calf's ribcage starts through the pelvis, some people pull downward, following the natural arc of the birth canal, rather than pulling straight back, which can make it a bit easier to get the calf out. If you are using a calf puller, however, make sure the calf's hips are nearly out before you pull downward on the calf. Applying too much pressure on the calf's leg bones when pulling at a bad angle can break the femur bone (bone between hock and stifle) or damage the femoral nerves.

A backward calf is one instance where you need a calf puller unless the calf is very small or you have several strong people to assist. Only a few backward calves are small enough to be pulled by hand. A rare few will survive an unassisted birth if the cow calves fast and jumps up immediately as the calf comes out, so the membranes and fluids come away from the face and the calf can start breathing. Most calves will not survive a backward birth unless you use a calf puller to get them out quickly because the umbilical cord will be pinched or broken and the calf will suffocate before it is born.

Get them breathing quickly

After delivering the calf, clear the fluid from its air passages and help the calf start breathing. After an extended time in the birth canal, calves are at risk of being short on oxygen. Calves born backwards are in greater danger because the umbilical cord is often pinched or broken before the calf is fully delivered. Even if the calf is alive, its airway may be filled with fluid, and it may be short on oxygen.

The calf may be limp and blue with glassy eyes. Quickly feel its chest (behind the front leg, left side) for a heartbeat. These calves can be saved if their air passages are cleared quickly and if you can help them start breathing.

Traditionally, such calves were hung or held up by the hind legs. Theoretically, the idea was to use gravity to help drain fluid from the airways. Likewise, some thought swinging the calf by the hind legs would help clear the airways. Neither are considered standard practice today. Hanging a calf upside down or swinging it makes it harder for the calf to breathe because all of the weight of the internal organs puts pressure on the lungs. You might see fluid coming from the calf's mouth and nose, but it is fluid from the stomach, not the airways.

Instead, place the calf in recovery position — upright, resting on the sternum, with head and neck extended forward. This allows maximum airflow to the lungs; both lungs can expand more fully. If you lay the calf on its side, the bottom lung can't expand. Extending the head forward helps open the airway and allows some of the fluid and mucus from the nostrils to drain out.

If the calf is conscious but not breathing, try tickling the inside of one of its nostrils with a clean piece of hay or straw. This often causes the calf to cough and take a breath. If that fails, try the acupuncture/acupressure technique at the spot found at the tip of the calf's nose. Pressing or poking this spot stimulates the central nervous system, increasing heart rate, respiration and overall consciousness.

You can use a very small-diameter hypodermic needle, such as 20 gauge. Poke the needle into the center of the tip of the nose and give a little twist. If you don't have a needle, press the spot with a fingernail.

Some people use cold water. If the calf is limp and not breathing, they splash a bucket of cold water over the calf's head, trying to stimulate the calf to shake its head and wake up. It's like jumping into a cold lake; you gasp. It stimulates natural reflexes to take a breath.

If a calf is short of oxygen, unconscious and won't start breathing, provide artificial respiration. The calf should be on its side with head and neck stretched forward to open the airway so that air will go into the windpipe and not the esophagus. Blow into one nostril, holding the other nostril and the calf's mouth shut.

Apply light pressure with your free hand to the esophagus, just below the larynx, which is a little higher than mid-neck. This helps close the esophagus to ensure you are not filling the stomach with air. Don't push so hard that you close off the trachea, which is soft cartilage.

Giving artificial respiration to a calf can keep it alive and put enough oxygen into its system for revival. Blow in a full breath until you see the chest rise and then let the air escape. Keep breathing for the calf until it begins breathing on its own. **HW**

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