

Preparing for the Newborn Cria

By Karen Baum, DVM
Little Doc's Veterinary Care

Preparing for new cria on your farm or ranch can be hectic and a bit confusing. The following steps can help you to ensure that your mothers and their offspring can begin their new relationship comfortably and safely.

Preparation for new cria should start when the mother is bred. To ensure a successful pregnancy, keep the mother in good condition. Shearing can be especially important during hot, humid weather to keep her comfortable. Deworming on a set schedule is of added importance in pregnant females. Give the appropriate vaccine boosters (such as Covexin 8) 4-8 weeks prior to the due date. Check all vaccines and medicines if they are safe to use in a pregnant animal. Since products are not labeled specifically for llamas, apply precautions across species. Supplement your mother's diet the last third of pregnancy to allow for rapid fetal growth and colostrum/milk production.

Most of the fetal growth occurs during the last trimester of pregnancy (i.e. the last three to four months). Concentrates should be built up slowly – by one quarter pound per day – to the desired level. A guide in pregnant sheep and goats is to build up to two pounds of grain per day for late pregnancy. Sheep and goats are similar in weight, but are smaller than alpacas and much smaller than llamas (about one-half the weight, or less). Sheep and goats frequently have multiple offspring but the total weight of

all offspring may not be any more than the weight of a single baby alpaca or llama. The demands of the fetal growth would be similar for sheep and llamas. Sheep have a very efficient digestive system too.

Spend some time getting the mother used to going into the chute. Just give her a little grain the first few times to make it a positive experience. Gradually work your way back to her udder (milk bag) and check it for filling. This will allow you to monitor udder development, and allow her to become used to being checked. Once the cria is born you can then check for milk with minimal stress.

Have everything on hand months before you think you will need it. It is the premature cria that needs the most help. Even if you do not use the equipment immediately your neighboring llama owner might call you in a panic to borrow it! Being prepared can ward off disaster. Avoid birthing during hot and humid, or icy and windy seasons.

Be sure to have plenty of towels on hand to dry the cria, especially during cold or drafty weather. Provide your animals with



a clean, dry, draft-free place for birthing or immediate post-birthing care. Try to cover cracks in the wall during cool or cold weather, in particular those down low. Use lots of straw or hay to insulate the newborn cria from the cold of the ground. Bedding or newspapers make excellent insulators to cover the cria in order to protect against chilling.

Wool sweaters, children's sweatshirts and vests help insulate the cria even when walking about. Special cria blankets, dog jackets and towels can also

be used for this purpose. Be careful that the garment cannot trip the cria. Watch for this closely over time as many items stretch when worn. Wool seems the most natural. I recommend old sweaters that have shrunk, or child sizes, because they fit most cria well. Now when you shrink someone's favorite sweater it can go to a good cause!

A hand-held hair drier expedites drying of the cria. This can be most useful when it is chilly or windy. Rubbing the cria with the towel also stimulates the newborn. Pay particular attention to the legs and neck. These are long appendages with large surface areas that dissipate a lot of heat. Shivering indicates the cria is cold; shivering also indicates the cria is attempting to maintain body temperature. Keep the cria dry, avoid chills and feed the cria well. It takes energy from food to grow, stay warm and to live!

Plastic milk cartons work well as hot water bottles. Wrap them in a towel when placing them next to the cria. Putting a hot bran mash in a plastic bread bag or Ziploc bag is an excellent, safe source of heat for the cria as well. It

holds the heat longer than water bottles and can be conveniently reheated in the microwave. Eventually the bran mash will ferment, so the pressure needs to be released or the mash changed.

Be very careful with other heat sources such as heat lamps: they pose the dangers of burning an animal if too close, or igniting the bedding in the barn. Ceramic radiant heaters, on the other hand, are safe, dependable and inexpensive to operate. The initial purchase expense is readily returned in economical operation.

Some units can be wall-mounted out of the way for added safety.

Oxygen can be a lifesaver. Can't decide if you should make the investment? One use will pay for that investment, I assure you. If you decide to make the purchase there are several items you will need: a tank, a regulator with a flow meter for medical grade oxygen, tubing to go from the flow meter to the cria and a mask (home made from a plastic jug or bottle). Check into what is available in your area, amount of oxygen in different sized

tanks and cost. Figure on 3-5 liters per minute flow rate. Although welding oxygen can be used in an emergency the flow rate for welding is much higher. It behooves you to have a medical grade oxygen regulator and flow meter on hand to ensure the safety of your cria.

To prevent infection have iodine, or even better, chlorhexidine (Nolvasan) solution to dip the navel in. Dip the navel soon after birth and several times the first day. Give, or ask your veterinarian to give, an injection of vitamin E and selenium (such as 1cc of BoSe) if indicated in your geographic area. Watch for the meconium - the first manure that is dark and thick - to pass. If the cria is straining consider an enema (warm soapy water works well). Be sure to be gentle and careful when giving an enema. Ask your veterinarian to teach your how to give one before trying on your own.

Colostrum is the first milk the mother gives. It should be thick, sticky and yellow (especially goat or cow colostrum). If the dam's colostrum is being supplemented, continue feeding colostrum for at least 24 hours. Use colostrum that is the first milking. You can collect extra first milking colostrum from a goat or cow, preferably one which has had babies before. Ideally, vaccinate the goat or cow with Covexin 8 (and any other vaccines you use on your llamas or alpacas) one or two months prior to giving birth (and generating the colostrum).

Have a tube and a 60cc dose syringe, and some colostrum, on hand to feed the cria. Tubing assures that the amount is taken in by the baby. It is critical to the health and well being of the cria that you are capable of tubing the baby. Even if you have never tubed a cria, have everything on hand. Someone can teach you when needed, either in person or over the phone. Your veterinarian may not have the appropriate equipment; therefore, you need to be prepared. An 18 french red rubber feeding tube that is 16" long works well for crias.

Any time there is any doubt about the quantity or quality of colostrum the cria's mother has, give the newborn 8-10 ounces within two hours of birth. Some farms implement this as a routine for all crias to give them a good start. Doing this will not deter the cria from nursing, and

will give good nutrition and antibodies critical to the health of the newborn.

Administer another 8-10 ounces of colostrums within six hours of birth. Within 12 to 24 hours of birth the cria needs to consume 10-20% of their body weight in colostrum. A 15-pound cria, for example, needs 1 1/2 to 3 pints (24 - 48 ounces) - a pint a pound the world around. A 20-pound cria needs 2 - 4 pints within 24 hours. A 30-pound cria needs 3-6 pints within 24 hours. Three pints equals 48 ounces, which means six feedings of 8 ounces each, or five feedings of 10 ounces each. That means feeding every 4-5 hours - yes the baby can take that volume. If the cria is premature and inactive, 4-ounce feedings every 2 hours can be given in the beginning. Frequency can be decreased as the feeding volume is increased. Unless the feeding volumes must be small due to special circumstances, the night feeding can be eliminated after the first night. You need your sleep, as does the cria and mother.



Have three pints (16 ounces equals 1 pint) of Colostrum on hand for each cria expected. You cannot have too much on hand - it can always be used whenever supplementing crias when you are ready to refresh your supply. You can use colostrum to feed the cria at any time, but the antibodies are absorbed the best during the first 6 to 12 hours of life. By 24 hours of age virtually no antibody absorption occurs. However, there are antibodies in the colostrum which continue to help protect locally in the gut, even after 24 hours. Colostrum can be stored in your freezer for at least a year.

After the first 24 hours you can switch

to goat milk, Kid Milk Replacer (mix 1 part powder to 4 parts water on a volume basis), or whole cows milk. I like Land-O-Lakes Kid Milk Replacer - make sure it is not medicated. Be sure the cria continues to get at least 10 - 20% of body weight per day. This means giving 32-64 ounces per day to a 20 pound cria. Start feedings at 8 ounces each, gradually increasing the amount per feeding up to as much as 16 ounces in an active cria. This reduces the number of times you need to tube or feed the cria. Between feedings the cria should nurse the mother if healthy and strong enough.

Weigh the cria daily. Increase the amount fed until you see at least 1/4 pound of gain per day. A 1/2 pound to 1 pound per day of weight gain is common in high producing mothers. If the mother comes into milk, gradually cut back on the amount of supplementation, as long as the cria continues to gain weight. Reduce the number of feedings if possible, rather than reducing the amount per feeding. Again, this will allow the cria more time to nurse the mother and less time to get bonded to you. It is also inarguably more time efficient to feed less often. When tubing the number of times per day should be the minimum necessary. Do not let your baby starve - keep it fed and gaining. When the cria is getting plenty to drink urinations should be voluminous and frequent. The belly of your cria should feel full. Compare the one being supplemented with others in the herd.

Some crias will eagerly take a bottle. You will have to be persistent and patient with other crias to get him or her to take the bottle. The nipple that has worked well for me is the "Nuk" orthodontic nipple, which is hourglass shaped. You will need to cut a slit or "X" in the tip of the nipple for adequate flow. The "ANSA" bottle with a hand hold (donut) shape works well with the "Nuk" nipple. The oblong donut shape exposes more surface area to the warm water when heating it. The 10-ounce volume is a convenient size.

The "Nuk" nipple can conveniently be adapted to a calf bucket. A flat washer (which plumbing stores usually carry) is needed because the "Nuk" nipple is thinner than the calf nipple you remove.

Once the cria accepts the nipple, transition from a bottle to a bucket is usually smooth. This is particularly useful when the cria is supplemented for longer periods, such as when the mother does not come into milk.

As long as the cria is with its mother, and is supplemented, there should be little danger of becoming berserk. Switching to a bucket with a nipple is especially good for averting raising an overly friendly animal - this is especially true of males. Being with the mother, or the herd if the mother is gone, is essential for proper bonding, security and learning normal alpaca/llama behavior. The cria often nurses the mother after being fed, even if the dam has little or no milk.

Work closely with your veterinarian, and take the initiative to be astutely prepared for your special new arrivals.

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About the Author

Dr. Baum, a native of Wisconsin, graduated from Iowa State University, College of Veterinary Medicine, completed an ambulatory internship at the Ohio State University, a large animal medicine residency at Cornell University and worked at a racetrack practice before accepting a faculty position at the College of Veterinary Medicine, Virginia Tech. Dr. Baum managed a llama herd after leaving the University.



She is the owner of Little Doc's Veterinary Care, a private large animal practice emphasizing llamas and alpacas. Many patients are hospitalized which required special care and attention. Her special interests are newborns, problem breeders, intensive care, heat stress, nutrition, neurologic problems and physical therapy. She raises llamas, alpacas, sheep, goats, and cattle.

She has given over 100 seminars and invited lectures nationally and internationally, produced over 70 articles, handouts, autotutorial sets and book chapters, as well as helping plan and coordinate numerous conferences.

Dr. Baum is Past-President and past Vice-President of the Lama Association of Mid-Atlantic States (L.A.M.A.S.). Karen is on the Alpaca Research Foundation board of directors, having filled the roles of President and Vice-President as well as Secretary, enjoying involvement in ongoing research and the alpaca industry. She is the past Vice President, and past Treasurer, currently President, of the International Lama Registry and is enthusiastic about the llama and alpaca industries.

Karen received the prestigious PUSH ME PULL YOU award from the International Lama Association in 1992 for contributions to the betterment of the health and well being of camelids.