

# Chapter 8

## Kidding

*Marty Montague*

Kidding, the act of the birthing process in goats, shown in Figures 8-1, 8-2, and 8-3, is the culmination of the breeding process in goats. Goat kids are the primary source of income in commercial goat breeding herds. They represent the cash crop of the goat enterprise. Kidding represents the finale of the approximately 150-day gestation period in the breeding doe. Likewise it adds another level of management to the goat herd.

This chapter contains a discussion of a number of factors that should be considered or addressed prior to kidding to attempt to reduce the amount of stress on the goat herd and management.

### Deworming

Animals that have a rough hair coat and general appearance that stay thin and do not gain weight may have a high internal parasite or worm load. Such animals will not breed well. Therefore, it is a good practice to deworm the breeding flock (does and bucks) prior to the introduction of the bucks to the does. Does should not be dewormed during the first 20 to 60 days of pregnancy because the stress associated with handling and deworming may cause the animal to abort. In addition, some dewormers may induce abortion. Does should also not be dewormed two to three weeks prior to kidding or at kidding because the doe hormonal changes will induce gastrointestinal parasites to produce a lot of eggs. In turn these eggs will be excreted in the feces and contaminate pastures and the animals' other surroundings.

### Kidding

Close to the end of the gestation period, grazing the pregnant does close in helps producers to easily check on them. Any supplement of concentrate or hay, should be fed to the does at night. Late feeding can delay birthing to the early morning hours in the majority of animals. Having some kidding pens ready for weak kids or reluctant mothers is a good idea. Prekidding signs in goats are not always easy to detect; however, mucous discharge is a sure sign that kidding is close.



**Figure 8-1. The water bag appears.**



**Figure 8-2. The kid comes through the birth canal.**



**Figure 8-3. The birth process is complete.**

## Kidding Process

With goats there are three stages of the kidding process. Stage one is the preparatory stage. During this stage the kid should rotate into the upright position and the cervix will start to dilate. The doe will become restless as her uterus starts to contract. This stage can last between four to eight hours with mature does and six to 12 hours with doe kids (first time mothers).

Stage two is the delivery stage. The water sac will appear first as the kid enters the birth canal. The water sac will then rupture and the front feet and head should appear. Then the kid is delivered. This stage should take less than one hour for mature does, but can take up to four hours for doe kids.

Stage three is the cleaning stage. The doe's straining decreases as the attachment between the uterus and placenta relaxes and separates. The placenta then is expelled from the doe. The placenta is commonly referred to as the afterbirth. This stage can last from one to eight hours.

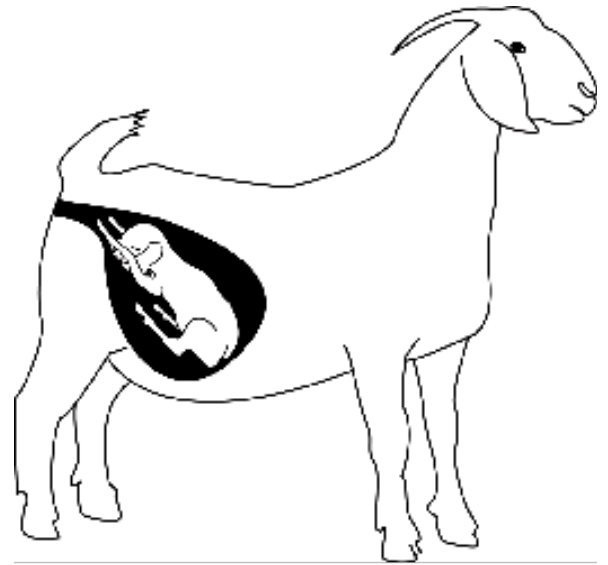
All three stages should take place with no to little assistance from the producer although sometimes it is necessary to lend assistance. Generally this assistance will be during stage two of the kidding process. Determination of when assistance is needed is sometimes difficult and usually requires close observation.

### Normal Births

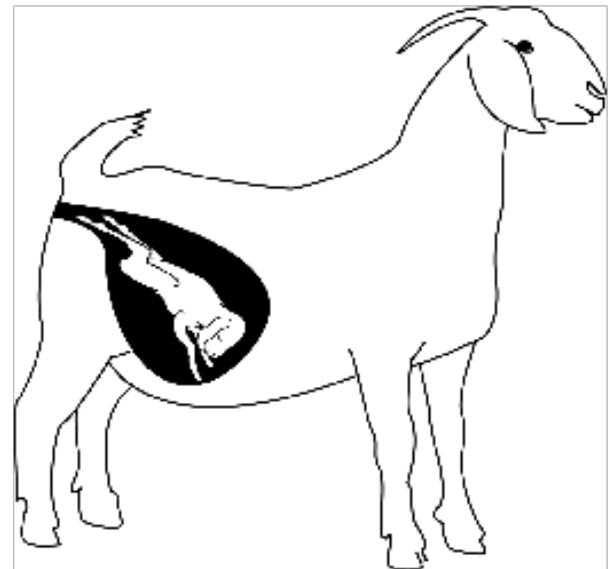
In goats, the kids can be delivered in two normal presentations. Figure 8-4 shows the anterior presentation. The kid's head is first with the front legs extended out of the birth canal. A majority of births occur this way. Unless the kid is too big for the birth canal no assistance should be needed. Figure 8-5 shows the posterior presentation with the hind legs extended through the birth canal and the back end coming first. This is normal and a doe should be able to have the kid with no assistance. It is when the presentation is not normal that assistance may be needed.

### Abnormal Presentations

If a doe begins stage two of the kidding process and the kid or kids are not positioned in a normal presentation the doe could have difficulty giving birth. Figure 8-6 shows some of the abnormal ways a kid can be positioned. If a kid is positioned abnormally it must be repositioned to a normal presentation before it can be delivered. This requires assistance from the producer or a veterinarian.



**Figure 8-4. Anterior presentation with front legs stretched through the birth canal.**



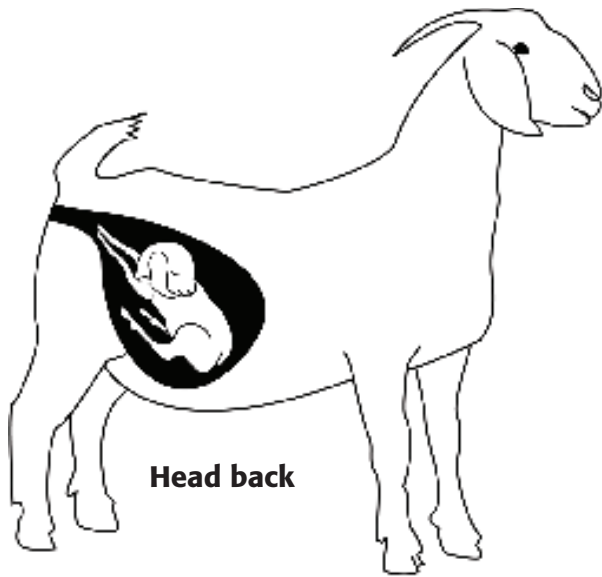
**Figure 8-5. Posterior presentation with back legs stretched through the birth canal.**

### When To Lend Assistance

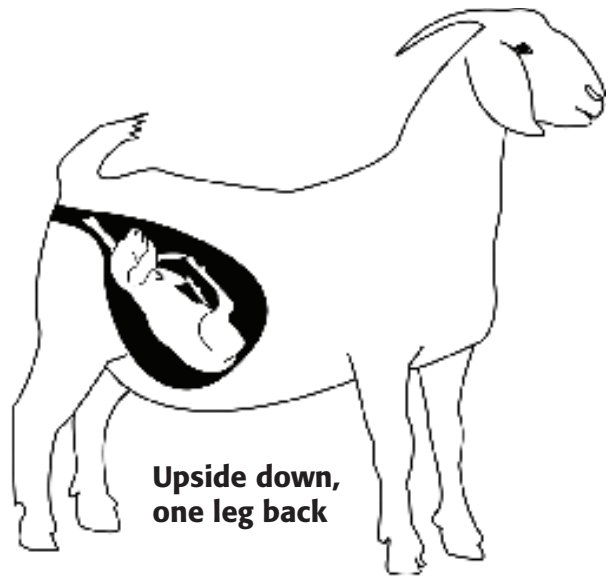
Once the doe enters stage two a producer should watch her very closely. Some does can deliver their kids quickly and some may take up to 2 hours. Unless a producer is closely observing the doe it may be difficult to determine how long she has been straining. It is recommended not to allow a doe to strain hard for more than 30 minutes. Many times the doe will stop straining and the uterus may contract around the kid.

### How To Assist

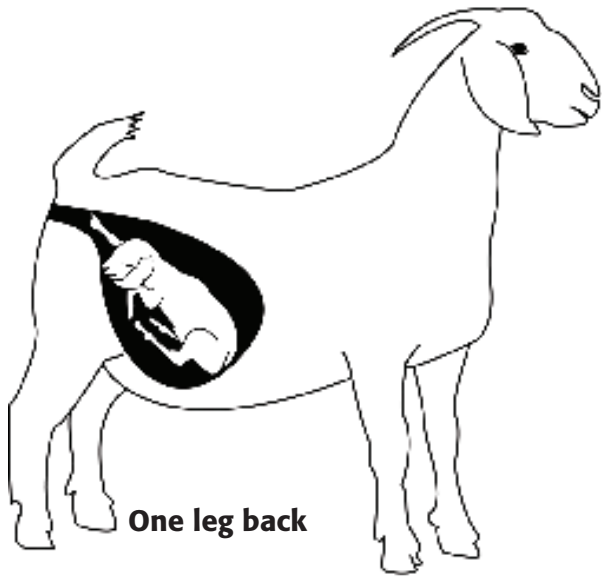
Once it is determined that a doe needs assistance the producer must choose to do it themselves



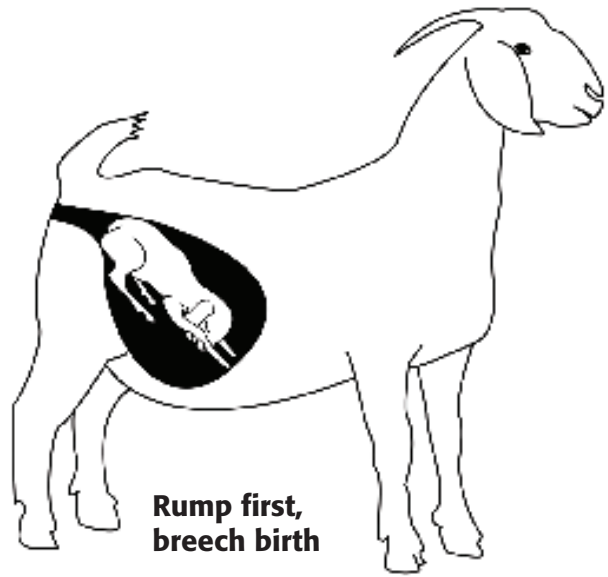
**Head back**



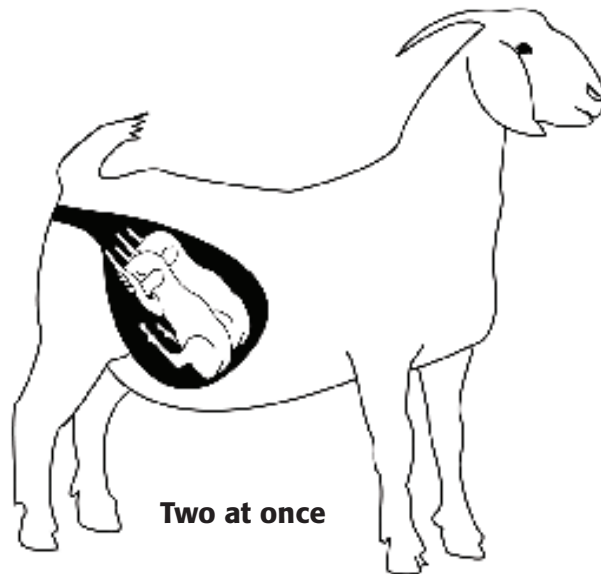
**Upside down,  
one leg back**



**One leg back**



**Rump first,  
breech birth**



**Two at once**

**Figure 8-6. Abnormal presentations.**

---

or have it done by a veterinarian. As mentioned before, if the kid is abnormally positioned that position must be correct. This requires inserting the producer's hand into the birth canal and uterus to reposition the kid. Now the birth canal of a goat is relatively small when compared to the average hand of producers. This size difference could cause another source of frustration because if a producer is unable to get their hand into the birth canal, they will not be able to reposition the kid.

In some cases it may be that the kid is just too large for the canal for easy passage. In this case all the assistance that is needed is pulling of the kid through the canal. Producers must be careful and not pull too hard or try and force a kid through the canal. This may cause damage to the doe.

## When To Stop

After attempting to reposition or pull the goat through the birth canal for 30 minutes and a producer has not been successful it is time to get professional help. Although commercial goats may not be valuable enough to justify a large veterinary bill, producers should consider the potential value of future breeding when making this decision.

## Nutrition of Newborn Kids

Colostrum is the first milk produced after parturition (the actual birthing process). Colostrum contains a high content of immunoglobulins (antibodies), vitamin A, minerals, fat, and other sources of energy. Antibodies are proteins that help the goat kid fight off diseases.

The ability of kids to resist disease is greatly affected by the timing of colostrum intake and the quantity and quality of the colostrum ingested. Reports from cattle indicate that if left alone, 25 percent of the young do not nurse within eight hours and 10 to 25 percent do not get sufficient amounts of colostrum. Colostrum should be ingested or bottle-fed (in case of weak kids) as soon as kids have a suckling reflex. In cases of extremely weak kids, they should be tube-fed.

The producer must be certain that all newborn kids get colostrum soon after birth (within the first hour after birth and certainly within the first six hours) because the percentage of antibodies found in colostrum decreases rapidly after parturition.

The antibodies in colostrum need to be consumed before the kids suck on dirty, pathogen-loaded parts of its mother or stall. In addition, the

ability of the newborn kid to absorb antibodies also decreases rapidly 24 hours after birth. Newborn kids should ingest 10 percent of their body weight in colostrum during the first 24 hours of life for optimum immunity.

The extra colostrum produced by high lactating does during the first 24 hours following kidding can be frozen for later use when needed. Only first milking from healthy animals should be frozen for later feeding, and the colostrum from older animals that have been on the premises for several years is typically higher in antibody content against endemic pathogens than is colostrum from first fresheners.

Ice cube trays are ideal containers: once frozen, cubed colostrum can be stored in larger containers and the trays used for another batch. Ice cubes are the perfect size for newborn kids, thus thawed colostrum is always fresh, and waste reduced to a minimum. Thawing colostrum either at room temperature or at a fairly low temperature is recommended. Colostrum should never be overcooked during the thawing process.

Revaccination against tetanus and enterotoxemia (over-eating disease) two- to four-weeks before the kidding date is commonly used to improve the protective value of the colostrum against these conditions.

## When to Kid and When to Wean

Kidding season and weaning age depend on several management and marketing factors. However, kids born in very late winter and early spring (March to early April), when grazed with their mothers on lush, high quality small grains or cool-season forages, will grow faster and will be healthier than kids born during the heat of late spring and early summer when forages mature and worm burdens increase. Letting the kids nurse and graze with their mothers for as long as the doe stays in good enough body condition so as not to impair the success of its next breeding season is a sound management practice that will ensure rapid growth of the goat kids.

Weaning is a very stressful period for kids and coccidia infestations generally show up at weaning. Frequent observation of weaned kids is very important. Kids showing signs of coccidia infestation should be treated immediately; otherwise they will dehydrate and die. Coccidia can damage the lining of the intestines, and if not treated properly, surviving kids may not grow to reach their normal size and production potential.

## Body Condition Scoring (BCS)

As the breeding season approaches, producers should be concerned with the body condition of their breeding does. Goats should not be allowed to become too thin or too fat. Failure in reproduction, low twinning rates, and low weaning rates can result if does are too thin. Overly fat does can suffer pregnancy toxemia, but fat does are rarely a problem. The BCS chart is located in Chapter 14.

Flushing, or increasing the level of feed offered to breeding does, can be accomplished by moving breeding does to a lush nutritious pasture three- to four-weeks prior to the introduction of the bucks. This cost-effective flushing method is underutilized in the Southeast where forage is abundant. Another method is feeding 1/2 pound per day of a high energy supplement. Corn is the grain of choice for flushing; whole cottonseed is another low cost, high energy supplement. The goal of supplements is to increase the intake and body weight. Breeding does should be grouped according to their BCS and be fed accordingly, first to improve their body condition, then to maintain it.

## Summary

Table 8-1 contains a summary of the reproductive characteristics of goats.

## References

- Alabama Meat Goat and Sheep Producers Small Ruminant Pocket Guide. (2006). Alabama Cooperative Extension Service.
- Damerow, G. (1993). *Your Goats, A Kid's Guide to Raising and Showing*. Storey Books.
- Meat Goat Production and Marketing Handbook. Clemson University. [http://Boergoatshome.com/kidding\\_photos.php](http://Boergoatshome.com/kidding_photos.php)
- Luginbuhl, J-M, M.H. Poore, J.P. Mueller, and J.T. Green. (1998). *Breeding and Kidding Management in the Goat Herd*. [http://www.cals.ncsu.edu/an\\_sci/extension/animal/meatgoat/MGBrdKidd.htm](http://www.cals.ncsu.edu/an_sci/extension/animal/meatgoat/MGBrdKidd.htm)
- Thedford, T.R. *Delivery Problems in Sheep and Goats and Methods of Correction*. 1984 International Stockmens School Sheep and Goats Handbook, Volume 4.

**Table 8-1. Summary of reproductive characteristics in goats.**

FEMALE	
Age of puberty	7 to 10 months
Breeding weight	60 to 75% of adult weight
Estrous cycle	
Length	18 to 22 days
Duration	12 to 36 hours
Signs	Tail wagging, mounting, bleating
Ovulation	12 to 36 hours from onset of standing heat
Gestation length	146 to 155 days
Breeding season	August to January
Seasonal anestrus	February to July
Buck effect on estrus	Positive
MALE	
Age of puberty	4 to 8 months
Breeding age	8 to 10 months
Breeding season	All year
Breeding ratio	1 buck: 20 to 30 does