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TECHNICAL BULLETIN No.7
THE LAMBING/KIDDING PROCESS AND
PROVIDING ASSISTANCE



ESGPIP

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FOREWORD

This Technical Bulletin titled “*The lambing / kidding process and providing assistance*” is the seventh in a series produced by the Ethiopia Sheep and Goat Productivity Improvement Program (ESGPIP). The ESGPIP is a USAID funded Project with the objective of improving the productivity of Ethiopian sheep and goats.

Lamb and kid mortality at an early stage is one of the major problems in sheep and goat productivity. The lambing/kidding period is a critical time not only for the offspring but also for the dams. Provision of assistance at times of problem at this stage is the subject of this bulletin.

This Technical Bulletin is intended to serve as an extension aid for Kebele Development Agents (KDA's) to help improve the productivity of sheep and goats through increasing producers' knowledge regarding the provision of assistance at times of lambing and kidding. The information contained in this Technical Bulletin is also relevant to other users engaged in business ventures based on sheep and goat rearing and also production of other types of ruminants.

At this juncture, I would like to thank all those involved in the preparation and review of this technical Bulletin.

Desta Hamito (Prof.)
Chief of Party
ESGPIP

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The lambing/kidding process and providing assistance

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1. Introduction

The lambing/kidding period is a critical time in the life of the ewe/doe and for the early survival of offspring as up to 70 to 80% of the death loss of young lambs/kids occurs during the first two weeks of life. Pregnant animals should be checked every 2 to 3 hours during the expected due lambing or kidding date, or when deliveries are expected. Many lambs/kids can be saved by providing immediate and early intervention to animals having problems giving birth. For this reason it is necessary to know the signs of approaching lambing/kidding and signs of problems in order to provide assistance.

2. What are the signs of approaching lambing/kidding?

The normal gestation period of sheep is around 140-145 days while that of goats is 145-150 days. One should look for the following behavioral and physiological/physical signs of approaching delivery starting around day 135 for ewes and 140 for does. These signs indicate that delivery will occur within the next 12 to 24 hours. It should, however, be noted that all signs may not be expressed and there could be species variations.

- Behavioral changes:
 - separation and isolation from other members of the flock;
 - acts more territorial than usual;
 - pawing the ground in an attempt to create a nest;
 - restlessness, nervousness and acting uncomfortable;
 - up and down;
 - tail switching;
 - frequent urination; and
 - depressed appetite.
- Physiological/ physical changes:
 - udders filling out;
 - strutting or teats engorged;
 - increased respiration;
 - sides caving in;
 - vulva area swollen;
 - mucous discharge; and
 - sagging of the vulva as ligaments surrounding it are stretched.

3. The normal birthing process

Understanding what is happening can help to determine when the birth is likely to occur and can help you decide when a ewe/doe needs assistance. The following is the usual order of events during labor and delivery.

- **Dilation of the cervix:** This first stage of birth consists of uterine contractions and cervical dilation. It may last anywhere between 2 and 14 hours, on average 2 to 6 hours. The ewe/doe may be uncomfortable, but is not yet fully straining to deliver the lamb.
- **Expulsion of the lamb/kid:** This is the actual labor and delivery induced by the feet or head of the lamb/kid entering the vagina. Under normal circumstances, the ewe/doe will use abdominal contractions and actively work to expel the fetus. It is normal that a ewe/doe passes her water bag prior to delivery. Normally, this phase does not take longer than 2 hours. Usually birth of the lamb/kid takes an average of 30 to 60 minutes.
- **Expulsion of the afterbirth:** The third stage of labor is when the animal expels the afterbirth. This normally occurs in 5 to 8 hours after lambing/kidding.

The following pictures show the sequential process of kidding:



a. Approaching



b. Pushing



c. The water bag



d. The water bag close up



e. Approaching kid



f. A foot appears



g. Two feet appear



h. The nose appears



i. More ...



j. Delivered



k. Mother and daughter bonding

Figure 1. The normal birthing process

Source: http://fiascofarm.com/galleries/Goat_Care_and_Information/index.html

4. Presentations of the Lamb/kid during delivery

The presentation of lambs/kids during delivery can be categorized into normal (most common situation) and various forms of malpresentation.

Figure 2 shows the possible normal presentations of lambs / kids while they are inside the dam. No assistance is generally required during such presentations. The most common normal presentation of a lamb/kid is when both front feet emerge first, with head, resting on legs, pointing forward and soles of feet pointing down (Figure 2a). Another normal presentation is both rear feet emerging first with soles of feet pointing upwards (Figure 2b). The normal presentation of twins is shown in Figure 1c where the twins are delivered in turns.

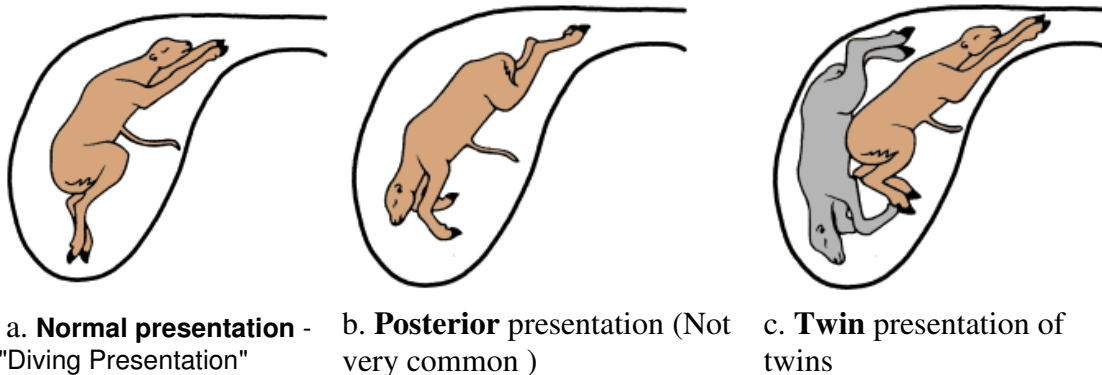


Figure 2. Different forms of normal presentations

5. When does the ewe/doe require assistance?

- Do not disturb the ewe/doe so that she remains comfortable and the birth proceeds smoothly. Try not to rush the process as unnecessary examination may increase the risk of infection. Examine ewes/does for problems only when necessary. Lambs/kids can survive inside the dam up to 8 to 10 hours after the second stage of birth begins. A ewe/doe showing signs of major discomfort for more than 2 to 3 hours without active straining may be an indication of a difficult birth. In this case the fetus may not have reached the vagina due to positioning problems and would need to be checked.

6. Causes of difficult birth (Dystocia)

- **Mismatch between lamb/kid size and the ewe's/doe's pelvic size:** There are many different problems that could occur during parturition, the most common problem is having a fetus that is too big to pass through the pelvis of the ewe/doe. Firm pressure can be used as in a

normal birth, but if delivery is not successful you can roll the ewe/doe onto her back for delivery. If the lamb/kid is still too big you should call for professional assistance.

- **Malpresentation of the fetus:** There are several abnormal fetal presentations that are fairly common and are likely causes of dystocia (difficult birth).
 - **One leg back:** The situation where one front leg is bent back is a common problem (Figure 3). This is best solved by pushing the body back to grab and reposition the bent leg into the normal position. This has been the most commonly encountered form of malpresentation at the Awassa goat farm when Anglo- Nubians sired Somali does.

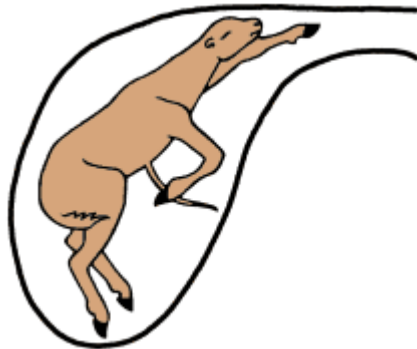


Figure 3. Leg Bent back presentation

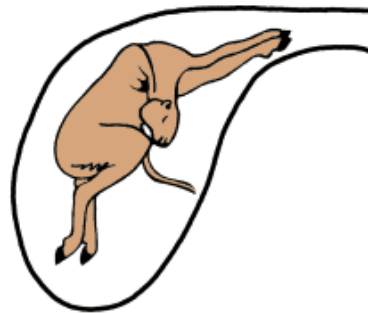


Figure 4. Head bent back Presentation

- **Both legs positioned backwards:** A situation where both legs are positioned backwards and the head is the only thing in the birth canal. This is a difficult malpresentation to deal with and requires patience when positioning the lamb/kid correctly. In this situation push the lamb/kid back, reach in and gently locate the legs and try to reposition them to the normal position. Professional assistance is generally needed under this situation.
- **Front legs only, head bent back (Figure 4):** This is a very difficult malpresentation to correct and requires patience when positioning the lamb correctly. Push the lamb/kid back, reach in and gently search for the head and try to position it face forward in a normal position.
- **Breech Position (Figure 5):** In this case, the lamb/kid is facing the wrong direction and both feet are facing forward. The ewe/doe can sometimes deliver in this position without assistance. If assistance is necessary, you need to push the lamb/kid forward and grasp one of the rear legs gently pulling it into the birth canal. Follow with the second leg. Be careful not to puncture the uterine lining with the toes. In some situations, the lambs/kids may have a similar presentation, but with the feet facing backwards. This is not a breech position. Lambs/kids can usually be pulled backwards. You should pull very gently, because the ribs are susceptible to breaking.

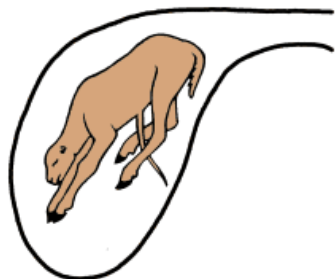


Figure 5. Breech presentation

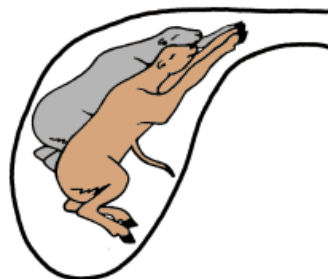


Figure 6. Malpresentation of twins

- **Malpresentation of twins:** The lambs/kids may be in the correct position or may also be tangled while both of them try to come out at once. The following are possible when two lambs/kids are coming together: four feet two heads, four feet one head, four feet no heads, one forward and one backward. Figure 6 shows a case of malpresentation of twins. In this case, reach in and feel which parts belong to which lamb/kid and try to straighten them out. Then push one lamb/kid back, to allow the other to come first.
- **Ring womb (poor cervical dilation):** This is when the ewe/doe will be in active stage of labor, but the cervix will not dilate. The cervical tissue does not respond to the hormonal changes happening to the reproductive tract during parturition. This situation requires professional assistance.

7. Steps to be taken when assisting delivery

It is necessary to take the following steps when assisting ewe/doe experiencing delivery problems:

- **Isolate the animal:** Separate and place the ewe/doe in a clean area, where her movement is restricted. It may be necessary to have someone assist in restraining the animal.
- **Protection and cleanliness:** Wash your hands thoroughly prior to examining the animal. You should also cut your finger nails short to avoid injury to the animal. Clean the area around the reproductive organs. Wearing gloves is recommended to protect you from some abortive diseases that can be passed to people. Women should not assist with birth due to a higher possibility of infection with zoonotic reproductive diseases.
- **Lubricate:** Adequate lubrication is very important. Failure to lubricate the birth canal may cause tissue damage and undoubtedly a very difficult birth.
- **Check for dilation:** When you enter the vagina keep your fingers close together so that you do not injure the reproductive tract. Find your way to the cervix and determine if the it is dilated. If it is not fully dilated, you can give her more time and gently run your hand around the cervix to expand the opening. If the cervix does not dilate due to ring womb and massaging the area is not effective, a caesarian section is the safest choice for the mother and offspring. Do not try to pull lambs/kids from dams with a partial dilation of the cervix.
- **Determine presentation of fetus:** If dilation has occurred, the next step is to check the fetus to establish its presentation; either facing forwards or backwards. Compare what you are feeling to the anatomy of the ewe/doe to distinguish between front and back legs. Make sure you follow the legs to the body to ensure you are working with one lamb/kid and not two.

- **Determine posture of fetus:** Next determine how the legs and head are positioned, the posture of the lamb/kid. Visualize the normal presentation of the lamb as you think about what parts you are feeling (Figure 1).
- **Pull:** Normally, there is no need to pull. It is, however, useful to know how to pull a lamb/kid if necessary. Allow approximately 45 minutes to an hour to elapse after the water bag breaks before attempting to intervene. If no progress is made after this period, there is probably a malpresentation or a mismatch between lamb/kid size and the ewe's/doe's pelvic size. Never rush to pull lambs/kids because further damage may be caused or even death to the ewes/does and/or lambs/kids.

Once the presentation of the lamb or kid is determined, take the corrective measures suggested for situations indicated under Figures 2 to 5. Then, gently grab the head and front legs to pull lamb/kid out of ewe/doe. Once these parts are outside of the body, begin to pull side to side and downwards.

8. Recommended procedures after lambing/kidding

Performing the following is recommended for higher survival rates of the lambs/kids delivered:

- Clean mucus and water bag from lamb's/kid's head with a piece of clean cloth. Clear mucus from around the mouth and nose.
- Gently insert something such as a piece of straw a short distance into the nose to clear the nasal passage or induce the lamb/kid to sneeze.
- If the lamb/kid is having difficulty breathing, gently swing it by its back feet with one hand, stopping it abruptly with the other to increase air intake.
- Spray or dip the navel of the newborn lambs/kids in a 7% tincture of iodine if available or another good drying agent to prevent navel ill.
- Place lamb/kid by its dam's head for her to clean the afterbirth. Do not remove the after birth because the ewe will use the scent to recognize her lamb/kid.
- It is advisable to check for other lambs/kids possibly remaining in the ewe/doe. The second birth may require assistance even if the first birth was normal. Allow approximately 30 to 45 minutes before trying to assist with the next lamb/kid.
- The first 18 hours after birth is the most critical period. The newborn lambs/kids should be placed in a warm, clean and dry pen with their dams. This allows them full access to colostrum (first milk of the ewe/doe). Colostrum provides antibodies for protection against diseases. Placement in pens during this period also gives the opportunity for the ewe/doe and her young to establish close bonds and to establish identification of the newborn.
- If the lamb or kid is weak, colostrum should be given, either passing a small feeding tube or by bottle. They need 10% of their body weight within 24 hours. Rule of thumb is 2 ounces / kg body weight within 12 hours.
- It is good precaution to clean up any afterbirth from the site of delivery to reduce the possible spread of disease.

9. Summary

The time of lambing/kidding is a very critical period as 70-80% of death losses of young ones occur during the first two weeks of life. Many lambs/kids can be saved by providing necessary assistance to animals that need it. The normal birthing process, normal and abnormal presentations of lambs/kids, conditions when assistance is needed, steps in the provision of assistance and also recommended procedures after lambing/kidding are described.

The Ethiopia Sheep and Goat Productivity Improvement Program (ESGPIP)

The Ethiopia Sheep and Goat Productivity Improvement Program (ESGPIP) is a USAID funded project operating with a goal to sustainably increase sheep and goat productivity in Ethiopia to consequently enhance economic and food securities. This will be achieved by addressing a large number of factors, including human and institutional capacity building, applied research and technology transfer and introduction of improved genotypes. The implementing institutions are the Prairie View A&M University (PVAMU), Prairie View, Texas and Langston University (LU), Langston, Oklahoma in collaboration with the Ministry of Agriculture and Rural development and other national and regional governmental institutions in Ethiopia. The project operates in six regions of Ethiopia namely Afar, Amhara, Oromia, Somali, Southern nations Nationalities and People's Regional state (SNNPRS) and Tigray. Project objectives will be attained through:

- Establishing a training program to upgrade knowledge of Kebele development Agents (KDAs) for more effective training of sheep and goat producers;
- Increasing effective use of available by-product feedstuffs to overcome shortages of feedstuffs for sheep and goats and elevate animal performance;
- Increasing employment of preferable alternative management practices for sheep and goats; and
- Introducing and evaluating improved genotypes of sheep and goats to elevate meat production and associated economic returns.