MANAGEMENT PRACTICES (REPRODUCTION & PARTURITION)

REPRODUCTION (Reproductive Management) ~

If a sheep/goat does not reproduce, and do so easily, it is worth no more than its current slaughter value, therefore, productivity of the flock/herd (ewes/does and rams/bucks) is a direct reflection on reproductive efficiency. This is true regardless of the use of the flock/herd: financial gain or educational gain.

Goals and objectives are ever-changing while focusing on education simultaneously with decreasing labor, time and facility/resource requirements during lambing/kidding.

Several factors influence and affect reproduction in both the ewe/doe and ram/buck: genetics, nutrition, environment, day length, health, etc.

In general, most breeds have seasonal breeding patterns – usually cycling when day length decreases. Typically, this time frame begins in early August until January, however, many operations begin breeding in November in order to have larger offspring for showing and slaughter time. In order to facilitate optimum educational opportunities at Shone Farm, we breed animals to coincide with classes – usually around August in order for January births.

Breeding is primarily accomplished with live cover, however, hormonal manipulation is a common occurrence with the use of CIDRS. Ewes cycle every 16 – 17 days and are receptive to the ram for 24 to 48 hours and give birth from 140 to 152 days post mating. Does cycle every 18 – 24 days and are receptive to the buck for 12 to 36 hours and give birth from 145 to 152 days post mating.

A mature (and healthy) ram/buck can settle up to 75 or more ewes/does during a breeding season. Ideally, male breeding animals should be at least a year old before breeding, however, a 2 year old will yield more pregnancies.

Breeding soundness exams are conducted by a veterinarian on all male breeding animals brought to Shone Farm for the purpose of breeding. Tests are also conducted to rule out specific diseases (Scrapie and Spider). As a general rule, all male breeding animals are held in quarantine to observe for any health problems, given a de-wormer and, if needed, feet are trimmed.

Approximately, 3 – 5 weeks (and depending on condition) prior to breeding, all breeding animals are “flushed” on pastures containing grasses of high nutrition. Animals are shorn and feet are trimmed prior to breeding and Mineral blocks are available to all breeding animals at all times.
MANAGEMENT PRACTICES (REPRODUCTION & PARTURITION)

REPRODUCTION (Reproductive Management) ~ continued

Reproductive Functions: The Estrous Cycle is the recurring physiologic changes that are induced by reproductive hormones in females. Estrous cycles start after females reach sexual maturity. Anestrous phases or pregnancies occur as part of the cycle. Estrus is the stage in the female’s reproductive (Estrous) cycle when she is “receptive” to breeding and is able to conceive.

Ewes of most breeds of sheep respond strongly to seasonal shifts and will ovulate in shorter days, longer hours of darkness. Usually, the natural breeding season lasts from late August to February. Shone Farm sheep are seasonal breeders.

Does of most breeds of goats respond strongly to seasonal shifts and will ovulate in shorter days, longer hours of darkness. Usually, the natural breeding season lasts from late August to February. Shone Farm goats are seasonal breeders.

Note: there are some breeds that are not affected by seasonal changes.

Ewes & Does are most likely to give birth to twins: if they are genetically predisposed; if the ewes & does are receiving high quality feed rations (meeting all nutritional needs) during time of breeding; if they are kept as comfortable and with the least amount of stress as possible and the ram/buck is not overused. Breeding animals at Shone Farm are “flushed” a minimum of 3 weeks prior to breeding to ensure they are receiving optimum nutrition for successful pregnancy rates. Usually, ewes & does in their prime (between 2-6 years of age) are more likely to have (successful) multiple births.

Goats show estrus more obviously than sheep. Does become vocal and will bleat loudly, wag their tail from side to side and their vulva will appear reddened and slightly swollen. Ewes may give no indication of estrus except to be receptive to the ram.

Preparing the Ewe for Breeding: Before the breeding season begins, it is important to have ewes shorn and then monitored for excessive wool or wool tags around the vulva and udder areas. “Crutching” or “Crotchning” the ewes before lambing may be an option if there is excessive or soiled wool. This also aids in observing changes that the ewes go through during gestation. Because the ewe and doe will be carrying excessive weight during gestation, trimming the animal’s feet prior to breeding is advisable. This will keep her feet in good condition and prevent lameness so that the she can easily graze and get to water.
MANAGEMENT PRACTICES (REPRODUCTION & PARTURITION)

REPRODUCTION (Reproductive Management) ~ continued

*Rams and Bucks* should be used sparingly if they are young. Separating the males from the females for several hours will assist in conserving their energy (this time can be used for feeding, drinking and rest). One older, mature ram/buck can usually breed 25-30 ewes/does. Using a different male every 2 years is appropriate to avoid inbreeding.

<table>
<thead>
<tr>
<th>PRODUCTION STAGE</th>
<th>OPTIMAL BODY CONDITION SCORE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breeding</td>
<td>3.0-4.0</td>
</tr>
<tr>
<td>Early to mid-gestation</td>
<td>2.5-4.0</td>
</tr>
<tr>
<td>Lambing:</td>
<td></td>
</tr>
<tr>
<td>Singles</td>
<td>3.0-3.5</td>
</tr>
<tr>
<td>Twins</td>
<td>3.5-4.0</td>
</tr>
<tr>
<td>Weaning</td>
<td>&gt;2.0</td>
</tr>
</tbody>
</table>
MANAGEMENT PRACTICES (Reproduction & Parturition), continued

Lambing Supplies to Have Available:

- **Medical Supplies**
  - Syringes: 3cc, 6cc, 12cc, 60cc
  - Needles: 18g, 20g, 22g
  - Antibiotics (as per veterinarian)
  - Pain Meds (as per veterinarian)
  - Lutalyse (as per veterinarian)
  - Oxytocin (as per veterinarian)
  - Betadine (for sterilization)
  - Iodine
  - Lubricant (for pulling lambs)
  - Disposable exam and obstetric gloves
  - Tube feeder

- **Tools and Equipment**
  - Obstetric & Nitrile Gloves
  - Lamb puller
  - 2 small ropes, cable, or twine
  - Plenty of dry towels and blankets
  - Bulb Syringe (Nasal Bulb)
  - Heat lamp
  - 8 oz. (250mL) or smaller baby bottles
  - Scissors
  - Knife
  - Processing kit (docking, tagging, and castrating instruments)

- **Other**
  - Birth records/log
  - Breeding (ewe) records
  - Frozen colostrum (should be kept in freezer)
  - Grease Markers
Estrus
- Ewe: at least 6 months of age and weigh 2/3 of their adult weight
- Doe: at least 6 months of age and weigh 2/3 of their adult weight

Estrous Cycle
- Ewe: 14-19 days between cycles - average is 17 days
- Doe: 18 – 22 days – average is 21 days

Fertile Period (“Standing Heat”)
- Ewe: 24 – 36 hours
- Doe: 12 – 36 hours

Ovulation
- Ewe: approximately 24 - 27 hours post onset of estrus
- Doe: approximately 24 – 36 hours from onset of estrus

Egg Viability Post Ovulation
- Ewe: 10 – 25 hours
- Doe: 10 – 25 hours

Gestation
- Ewe: Between 145 and 154 days
- Doe: Between 145 and 155 days
MANAGEMENT PRACTICES (Reproduction & Parturition), continued

Male Reproductive Tract

Female Reproductive Tract

Full Term Ewe with Lamb in Normal Presentation
MANAGEMENT PRACTICES (Reproduction & Parturition), continued

PREPARATION

Parturition (lambing / kidding) Preparation [Ewes / Does] ~ Ewes & Does remain out in the pastures for the majority of their gestation. A month prior to parturition, ewes and does are brought to the barn and: vaccinated; checked for “bagging up”; any injuries; foot problems or pregnancy associated problems (prolapse, udder problems, CL, etc). Ewes and does remain in the barn / Lot pasture for the remainder of their pregnancy for observation and are accompanied by the burros for protection from predators.

Any animals exhibiting health problems are housed in separate pens, away from the others, and if possible, are housed with an accompanying animal of the same species. Injured and ill animals are given any necessary first aid, long term care, medications and / or vet care until they can re-join the flock / herd. If an animal is unable to re-join with its same species, accommodations will be made to house her throughout the rest of her pregnancy. Care should be taken to create an environment as stress free as possible. Great effort should be taken to avoid startling the animal and she should be made to feel safe and comfortable enough to eat and drink. Sometimes the nature of the animal prevents the opportunity to have a stress-free environment for her, in which case, limited contact should be adhered to.

- **Feed** - Depending on the ewe flock’s condition, they are fed the appropriate hay or grain in order to maintain proper nutrition prior to lambing.

- **Health** - The ewe flock is inspected for illness, injury and any hoof problems prior to lambing. If any problems are observed, the ewe is treated appropriately for her particular issue.
MANAGEMENT PRACTICES (REPRODUCTION & PARTURITION), continued

PREPARATION
Parturition (lambing / kidding) Preparation [Pens] ~ All pens that sheep and goats will be using will need to be cleaned out and prepared starting approximately 2 weeks prior to lambing / kidding season. Pens should be free of manure, dust, bird feces and should be dry by lambing / kidding time. Waterers need to be cleaned and checked for any maintenance needs. Feeders need to be in place, cleaned and checked for any maintenance needs. Straw bales need to be ordered and ready to use for bedding by lambing / kidding time.

The rotation of animals will proceed as follows: Show Pen (to lamb / kid out), Jug (post lambing / kidding), Nursery, Creep Pen, Main pen with main population.

Jugs:
- Sweep walls with a broom and clean off any debris
- Rake out any debris from the floor of the jugs
- Clean out the waterers and check for any maintenance needs
- Keep water off so that there is no stagnant, standing water in the bowls
- Test heat lamps
- Make sure jug doors open and close easily and can be fastened closed
- Supply jugs with straw bedding, being careful to plug up an holes that the lamb or kid can squeeze through

Nursery:
- Rake out any debris from the floor of the nursery
- Clean out the waterer and check for any maintenance needs
- Fasten a blue panel to be used as a divider, if needed in the future
- Stack straw in front of the nursery to be used as bedding in pens
- Make sure nursery gates open and close easily

Creep:
- Rake out any debris from the floor of the creep
- Clean out the waterer and check for any maintenance needs
- Make sure creep gate is blocked off with a panel
- Make sure scale cords are up out of the creep pen (store in the chute)
PREPARATION

Pens

- Lambing
  When a ewe is observed to be within approximately 5 days of lambing she is moved to a designated lambing area (ex: Show Pen) for further observation. Ewes are moved into the lambing pen in small groups so that they are not isolated and to avoid stress. Once a ewe has completed lambing, ideally the lambs begin nursing and then she is moved into a Jug where she will bond with her lambs and pass her placenta.

- Post Lambing (Jugs)
  After a ewe has lambed, she will remain with her lambs in a lambing jug for up to 3 days to bond with her lambs. Twins and Singles are placed in the built-in lambing jugs in the sheep unit, however, Triplets and more are put into a larger lambing jug constructed of sheep panels within the sheep unit. These 3 days are also used to observe the new family and to make sure all are thriving. Families with exceptionally small and vulnerable or low thriving lambs may stay in the jugs longer than 3 days.

- Post Lambing (Nursery)
  After a ewe and her lambs have completed their stay in the lambing jugs, the lambs are ear tagged and the family is placed into the Nursery for approximately 3 days. Ideally, 2 or 3 families will share the Nursery at any one time in order to introduce new mothers and lambs into the flock. Traditionally, classes vaccinate, dock and castrate the lambs, however, in the event that a class will not be participating, Shone Farm staff will perform these tasks when lambs are placed into the Nursery.
MANAGEMENT PRACTICES (REPRODUCTION & PARTURITION)

PARTURITION (Lambing) ~

Shone Farm implements the style of “Intensive lambing/kidding practices” in order to: increase lamb/kid survival; teach the students all aspects of lambing (the physical changes a ewe/doe undergoes, parturition, recognition of dystocia and lamb/kid health).

Parturition is the process or actual event of giving birth to offspring. A fine-tuned series of physiological reactions between the fetus, placenta, and ewe is essential for labor to end in successful lambing. Problems (dystocia) associated with labor and parturition are not uncommon due to the complexity of the lambing process.

Several physical, physiological and hormonal changes take place to prepare the ewe/doe and fetus for parturition. During most of gestation, the fetus is lying on its back within the uterus - with feet pointing up. During the last month of gestation, the fetus will rotate into birth position in the dam. This normal birth position for lambs and kids is with the fetus resting on its abdomen with the forefeet and nose pointing toward and, at the cervix. Fetuses that are not in proper position prior to parturition are at risk to dystocia (difficulty in birthing). Hormonal changes in the dam cause mammary gland changes. The glands (udder) begin to fill with milk and sometimes leak milk from the teats as the dam nears parturition.

Parturition onset is triggered by the release of cortisol by the fetus. Cortisol is released into the maternal circulation which results in increased production and release of estrogen by the placenta. The muscular wall of the uterus begins contracting and preparing to expel the fetus.

Stages. The lambing process involves three progressive stages (I, II, and III).

- **Stage I**: Contractions, relaxation of ligaments, cervical softening & dilation.
- **Stage II**: Breakage of the first "water bag" and birth.
- **Stage III**: Placenta is expelled.
MANAGEMENT PRACTICES (REPRODUCTION & PARTURITION)

PARTURITION (Lambing) ~

Physiologic changes in the last days of Gestation:

- **Pelvis Expansion** - Secretion of the hormones Relaxin and Estrogen are the cause. This results in enlargement of the birth canal to prepare for fetus expulsion. The pubic symphysis actually demineralizes, which allows more expansion of the birth canal during parturition - as necessary.

- **Tailhead Softening and Sinking** - Soft tissues around the tailhead soften and look sunken so that the tailhead is more prominent in the last day (or more) prior to parturition. Relaxation of the pelvic ligaments is due to the secreted hormones.

Early Labor Behavior & Physical Changes:

Every animal is an individual, therefore, her response to labor will be unique, however, there are specific behaviors that most ewes and does exhibit.

Individual behavior may include, but is not limited to: restlessness; grunting; bleating; bumping her sides with her nose; licking her sides and legs or sticking her nose up; excessive interest in newborn lambs that aren’t hers; sitting like a dog; friendly or calm behavior; rubbing sides and vulva on fencing.

Typical behavior may include, but are not limited to: separation from others; pawing; laying down & standing up; increased respiration; decreased appetite. Udder will enlarge (“bag up”) and teats will engorge with milk. Flanks will appear sucked in and hips more prominent as uterus shifts in preparation (“dropping”). Vulva becomes very relaxed and loose – with slight separation as color changes to bright pink or red.
PARTURITION (lambing) ~

Late Labor Behavior & Physical Changes prior to Parturition:
Typical behavior may include, but is not limited to: complete separation of self from the flock; pawing; laying down & standing up; laying on her side while pointing nose up in the air; laying on her side and “pushing” in her hind end; low grumbling noises as they do during bonding and recognition. Milk may stream out of teats.

- Isolation - from the rest of the flock or herd.
- “Nesting”
- Off feed - most often dams will stop eating the day of parturition.
- Distress, discomfort - restlessness, circling, pawing, biting or kicking at the flank, crying, bawling and groaning.

Physiological and physical changes prior to Parturition:

- Vulva - softens and becomes swollen
- Cervix - becomes dilated
- Mucus - stringing from the vulva. This indicates cervical dilation and expulsion of the mucus plug (which sealed off the uterus to protect it from microorganisms throughout pregnancy).
- Change in body temperature - of dam.
- Amniotic sac - rupture. This results in expulsion of amniotic fluid (“water breaking”).
- Dripping milk - from the teats.
MANAGEMENT PRACTICES *(Reproduction & Parturition)*, continued

- **Lamb / Kid Checks at Shone Farm** are done several times during the day and sometimes throughout the night in order to assist any animals in distress. It is important to do thorough checks by looking at the flock / herd as a group to see if there is any stress or curiosity occurring and then to look at individuals for unusual behavior.

  The most vulnerable time for newborns is early morning when they may suffer from hypothermia. It is important to look for newborns as well as for any animals in labor.

- **Multiple Births** - With twins, triplets, and larger “litters” it is extremely important that the dam claims all of her lambs / kids and that they all get their share of colostrum. If the dam does not have enough milk for all of the lambs / kids, it is important to supplement her with high quality feedstuffs to assist in an increase of milk production. If the lambs / kids are vocalizing more than they should, a supplemental bottle may be needed.
Reproduction & Parturition

Lambing / Kidding Checks:

**Routine**

- Stop, look, and listen for any lambing / kidding activity [animals in labor & newborns]
- Observe quietly from a distance, and look for ewes & does that might be trying to isolate themselves
- It is important to check remote corners of the facility to make sure that there are not any missed ewes or does
- When there are night checks, it is best to leave some lights on for better viewing
- It is important to check the dams that have already given birth for any lost lambs or kids, multiple births, and to make sure that the newborns are nursing
- It is also important to keep the dams on a routine so that they are more familiar with the process and to decrease any additional stress or trauma
- Keep dogs and other visitor’s way to help keep the dams calm and stress free
MANAGEMENT PRACTICES (REPRODUCTION & PARTURITION)

**PARTURITION, continued**

- **Stages of Parturition**
  
  There are three stages to parturition (lambing/kidding):
  
  1st Stage: dilation of the cervix  [3 to 4 hours]
  
  2nd Stage: expulsion of the fetus(es)  [birth of a lamb/kid usually occurs within an hour or less from the rupture water bag]
  
  3rd Stage: expulsion of the placenta.

  **Note:** First time dams or multiple births may take longer

If labor takes over an hour for mature animals and over 2 hours for yearlings, assistance may be required. There are separate afterbirths for each lamb/kid in multiple births and the placenta is passed 2 to 3 hours after delivery is over. After the lamb or kid is born, the dam will lick and nuzzle it to begin the bonding process. It is best not to interfere with this process.

- **Proper Progression**
  
  - Lamb / Kid begins emerging 30 minutes to 60 minutes post amniotic sac with fluid is passed out of the vulva

- **Proper Presentation**
  
  - Lamb / Kid nose and front feet present
  
  - Lamb / Kid back is toward the ewe’s back (feet are pointing downward)
  
  - Ewe / Doe is usually in a laying down, having steady, long contractions
  
  - Lamb / Kid’s head passes thru the birth canal
  
  - Lamb / Kid’s shoulders pass thru the birth canal
  
  - Hips and back legs follow quickly behind expulsion of shoulders
PARTURITION, continued

**Dystocia Types & Recognition**

*Dystocia*: Difficult birth. Can be caused by a large or improperly positioned fetus, a narrow maternal pelvis, or by failure of the uterus and cervix to contract and expand normally.

- Head first with one foreleg back, body right side up
- Head bent down with forelegs correct, body right side up
- Head thrown back with forelegs correct, body right side up
MANAGEMENT PRACTICES (REPRODUCTION & PARTURITION)

PARTURITION, continued

Dystocia Types & Recognition

- Hind feet first, body right side up

- Hind feet first, body upside down

- Breech position with rump and tail, no visible feet
MANAGEMENT PRACTICES (REPRODUCTION & PARTURITION)

PARTURITION - continued

Dystocia Types & Recognition

- Head first with one foreleg, body positioned upside down

- Head alone, no feet visible
Reproduction & Parturition

Dystocia Types & Recognition
MANAGEMENT PRACTICES (REPRODUCTION & PARTURITION)

PARTURITION - continued

Dystocia Response
Whenever an animal experiences dystocia, she will need assistance. Immediately upon noticing there is a problem, human intervention must occur in order to provide pain and discomfort relief to the animals involved and, in most cases, to save their lives. Response and assistance must occur quickly and efficiently in order to have the best possible chance for a positive outcome. Preparation is key in that the ewe or doe is properly restrained in as clean an area as possible and that needed tools and supplies are readily available. Supplies to have nearby consist of a lamb puller or twine, bulb syringe, towels and naval dip.

When to Assist with Lambing and Kidding
- If the process is taking too long due to dam exhaustion or size of baby
- If there is any type of dystocia
- If the dam dies during parturition
- When one is pulled, the entire litter must be pulled in the case of multiples

Lamb Pullers
- Conventional
- Twine: slipknot on each end to put on front feet

When to call the Veterinarian [know your limitations!]
- Any time that you are unsure of how to proceed
- If you cannot get the lamb into proper position for delivery
- If the lamb is too large to pull out
- If the lamb is dead inside of the ewe and is too large to be pulled out
Dystocia After care

In the interest of time and urgency, care is more aggressive with multiples than singles. In other words, there should be no waiting to tube feed obviously weak babies – it’s best to treat all babies the same in this respect so that no one baby gets left behind in care or left unnoticed. When dystocia occurs, after care of the lamb / kid will always occur and sometimes that is also the case with the dam. Often, the baby is born unconscious, not breathing or without a heartbeat. Often the dam is exhausted and cannot stand to allow nursing. If the baby is not breathing but is conscious, creating a sneeze may trigger a breathing response. If the baby is not breathing and is unconscious, swinging it by its hind legs then dipping it quickly in and out of a bucket of water may stimulate a gasping response. Compressions can be performed on a baby without a heartbeat.

When the baby is conscious, it should be placed at the head of its dam as soon as possible so that the bonding process can begin. Care should be taken to assist the dam in drying off the newborn and rubbing it with a towel to stimulate circulation and survivability. The newborn should be encouraged to stand and move about as soon as possible, as should the dam. Time should be taken to see if the newborn can stand and nurse on its own. If the newborn gives any indication of being too weak or slow for this to occur or hasn’t nursed within an hour, there should be no hesitation in tube feeding. Tube feeding provides energy, a laxative and assists in the newborn’s thermoregulation abilities so that it doesn’t suffer hypothermia and death.

**NOTE: THE GOAL IS TO INSERT THE TUBE INTO THE ESOPHAGUS, NOT THE TRACHEA.** If fluid is passed into the trachea and lungs, the newborn will drown. If the tube enters the trachea (windpipe), the animal may cough, gag, and react violently. An animal that has swallowed the tube can still bleat and cry but an animal that has inhaled the tube cannot make these noises. It is unusual for the tube to enter the trachea and it will not go as far in as it does into the esophagus and stomach.
MANAGEMENT PRACTICES (REPRODUCTION & PARTURITION)

**PARTURITION** - continued

**Dystocia Immediate After Care**

In order to tube feed the newborn/s, the dam should be milked enough to provide what each baby needs. The newborn should be provided with enough colostrum (mother’s milk) - a 12lb baby needs approximately 8oz total - to sustain it for several hours while it recovers from its difficult birth. Adding “Nutri-drench” to the bottle provides the newborn with energy, vitamins and minerals that it may be lacking. 4 – 6oz of colostrum is a good amount for the first tube feeding and if the newborn/s continue/s to exhibit difficulty in nursing, tube feeding should be repeated 4 – 6 hours later (depending on the amount given). A 12lb lamb should never be fed more than 8oz per feeding due to the lack of stomach capacity.

The dam and newborn/s should be housed in a jug with no drafts with the heating lamp on. If there are triplets, a larger jug should be used for the new family to avoid the mother accidentally stepping on or laying on the newborns.

**Dystocia After Care**

The new family should be checked on often and encouraged to get up between feedings, if they are able. Sometimes, the newborn needs time to rest and recover between feedings. Allow time in between checks and feedings for the dam and newborn to bond. Healthy lambs/kids rest in a sternal position with their head tucked back – laying flat on its side or with its head back indicates a problem. Watch a lamb/kid when it first gets up – stretching upon standing indicates a healthy, well-fed and well-nourished lamb.
~ STANDARD OPERATING PROCEDURE ~

Reproduction & Parturition

Assisting with Lambing / Kidding:

Tools
- Towels
- Lamb / Kid Puller
- Twine
- Bulb Syringe
- Knife

Preparation
- Make sure ewe / doe is restrained
- Wash your hands and arms with soap
- If possible, clean the ewe off – especially if there is diarrhea present
- Put on either obstetric gloves or Nitrile gloves
- Place lubricant on one glove (that will be entering the uterus)

Rules of Pulling a Lamb / Kid
- Allow the ewe to be in whatever position that she wants (standing or laying down)
- Do not pull unless the head is fully in the birth canal
  - Grasping the back of the head to guide it forward is helpful
- Do not pull a forward fetus unless both legs and head are forward
- It’s ok to pull a lamb out backwards
- Keep even pressure and try to pull harder as the dam has contractions
- If dam is standing, pull slightly downward – toward the ground
- If dam is laying on her side, pull slightly downward – toward dam’s feet

Asses Situation
- Glove up and lubricate the glove
- Fingers together and hand slightly cupped
- Gently enter through the vulva and into the birth canal with lubricated gloved hand
- If the baby’s head is protruding, gently sweep your hand back and forth while you push into the birth canal slowly
- As your hand goes further into the birth canal toward the uterus, find the head and each limb to determine what the orientation is of each
Reproduction & Parturition

Assisting with Lambing / Kidding:

禄 Normal Presentation – Large Lamb / Kid
  - Restrain Ewe / Doe
  - Hold onto front legs of lamb / kid and guide head
  - Keep steady pressure and pull slightly harder with contractions
  - Once the head is out, clear the amniotic sac away from the nose and mouth while maintaining constant pressure
  - Once you are confident that both front limbs and head are out far enough to maintain control, pull one leg at a time to bring the shoulder forward and elbow out
  - Pull the lamb / kid the rest of the way out and follow Dystocia After Care protocol
  - Proceed to pulling out the next lamb / kid

禄 Breech (hind feet first)
  - Restrain Ewe / Doe
  - A lamb / kid can be pulled out backwards
  - Hold onto back legs of lamb / kid
  - Keep steady pressure and pull slightly harder with contractions
  - Pull the lamb / kid all of the way out and follow Dystocia After Care protocol
  - Proceed to pulling out the next lamb / kid
Reproduction & Parturition

Assisting with Lambing / Kidding:

**Dystocia**

- Restrain Ewe / Doe
- Assess the situation
- Work slowly to maneuver and position limbs and head properly
- You may need to push the baby further into the uterus in order to maneuver
- If you have feet showing but the head is back
  - Tie twine onto the feet
  - Push the baby back and pull nose forward
  - Pull on twine to guide feet out while holding the head straight and guiding it out simultaneously
  - resume pulling the baby out

- Multiples:
  - Before pulling, make sure you have limbs & head from the same baby
  - Push other babies out of the way in order to work on one at a time
  - Position each one into the proper presentation (or backwards)
  - Pull each baby out with the same care and revive each one as it emerges

- Follow Dystocia After Care protocol on all babies
Resuscitating a Newborn Lamb or Kid:

**Resuscitation**

1. Grasp the newborn’s hind limbs firmly, and swing the newborn lamb back and forth two-to-three times to force fluids down and out the nose. This also causes the internal organs to put pressure on the lungs to force fluids out and on the heart to help get it beating (NOTE: when swinging, make sure to be aware of the location of your knee’s/leg position and ground to not hit the newborn on the head).

2. Check newborn for signs of breathing (rib cage moving up and down, breathe on your cheek, sputtering and coughing).

3. If newborn is not breathing, hang it upside down again and dip it quickly in and out of a bucket of water to emit a shocked, gasp response.

4. Once the newborn is breathing, open her mouth to make sure that the airway is not obstructed in any way.

5. Using a bulb syringe, suction out any fluid from the inside of the mouth and nostrils of the newborn.

6. Suction the newborn again as needed.

7. Continue to hold the newborn in a slight downward position and rub the lamb vigorously with a towel (this will stimulate the lamb’s circulation and to continue breathing).

8. Give the newborn to its dam to help clean and warm it up and in order to begin the bonding process.

**Hypothermia**

1. Fill a sink with warm water

2. Submerge the lamb in the water bath with its head propped up

3. Rub lamb and keep submerged as long as it takes for the lamb to start struggling to get up

4. Change the water often to make sure it stays warm

5. Tube feed newborn with 4oz of warm colostrum mixed with warm water

6. Dry lamb

7. Place revived newborn with its dam under a heat lamp
MANAGEMENT PRACTICES (REPRODUCTION & PARTURITION)

POST LAMBING/KIDDING CARE

Once the lamb or kid is born, it should be checked for overall health and thriveability: limbs, mouth and jaw should be checked for any deformities or injuries sustained during parturition; breathing should be monitored for any unusual sounds; eyes should be checked for any deformities or injuries sustained during parturition. Entropion is a hereditary disorder where the eyelids roll inward causing the eyelashes to rub on the eye and create ulcerations. Some cases of entropion improve without intervention, however, in most cases, the lamb or kid needs veterinary care.

Unthrifty newborns should be brought to the attention of the Livestock Technician for proper care and potential veterinarian care. If the Livestock Technician is not available, the Farm Manager should be notified. If neither the Livestock Technician nor Farm Manager are available and the situation with the newborn is critical, the veterinarian should be called for consultation and possible treatment.

If parturition is uneventful, the dam and newborn/s should be left alone to bond. Staff should stay nearby to help dry the newborn/s, if necessary, and get them to a jug as soon as possible. Care should be taken to be quiet and calm in order to reduce stressing the animals during the bonding process.

Sometimes newborns inhale birthing fluids which can cause trouble with breathing and/or pneumonia, therefore, newborns should have the fluid removed with a bulb syringe. The bulb syringe should be squeezed then the tip of the syringe should be gently placed into the nostril and in the corners of the mouth whereupon the bulb should be released to suck any fluid out. Never squeeze the bulb when it is in the nostrils or mouth as this will force fluid further in. If the newborn is coughing or having trouble breathing, tickling its nostril with a piece of string or straw will emit a sneeze and sometimes force fluid out.

Regardless of the care being given, if possible, the newborn should be within reach of its dam. She should be allowed to clean her baby and emit bonding recognition noises.

The newborns should be observed for standing and nursing. If the lamb/kid does not seem to be getting any milk, unplug the ewe’s/doe’s teat by breaking the waxy plug on the end of the teat and strip it of several squirts of colostrum. If the ewe/dam is not able to feed the lamb/kid, it will need to become bottle fed or grafted to another dam as an orphan. Bottle fed young should remain with their dams.
MANAGEMENT PRACTICES (REPRODUCTION & PARTURITION)

POST LAMBING/KIDDING CARE – continued

Once it is clear that parturition is over for any particular dam and it is determined that all newborns are healthy, the new family should be placed into a jug, where they will remain for approximately 3 days. Twins may be placed into the permanent jugs, however, larger litters should be placed in larger pens to avoid suffocation or crushing by the mother when she lays down to rest. The jug should have ample straw bedding, a clean, working waterer, a hay feeder and the heat lamp turned on. The ewe should be fed as much orchard grass as she wants.

COLOSTRUM 101:

- Colostrum is the "first milk" that a dam produces after parturition and contains a high level of several nutrients that are important for lamb/kid health and performance. Also present, is a high level of antibodies against a variety of infectious agents that the infant does not carry because antibodies in the dam’s bloodstream do not cross the placenta.

- It is critical that newborns receive colostrum during the first 24 hours of life in order to ensure adequate absorption of colostral antibodies. Antibodies are large protein molecules that can cross the intestinal wall and enter the blood stream of the newborn only during the first 24 - 36 hours of life. Absorption of these antibodies is most efficient up to 6 hours after birth.

- It is recommended that lambs/kids receive 10 percent of their body weight in colostrum by 24 hours after birth. This means that a 10 lb. lamb should consume 1 lb. (16 ounces) of colostrum by 24 hours of age. Ideally, they should consume half of this within 4 to 8 hours of birth. A 60 cc syringe holds 2 ounces of colostrum.

- All lambs/kids need colostrum. While it is possible for lambs to survive without colostrum in a relatively disease-free environment, the likelihood of disease and death is higher in lambs that do not receive colostrum. The ideal colostrum source for supplemental feeding of lambs/kids is from healthy dams in one’s own flock.

- Older dams have had greater exposure to infectious agents and usually have a higher concentration of antibodies in their colostrum.
Reproduction & Parturition

Post Parturition Care:

- **Remove the amniotic membrane from the mouth or nose of the newborn**
  - Make sure that the muzzle and head of the newborn is completely free of the membrane and/or any moisture
  - Use a towel to wipe the head and muzzle firmly to dry it as much as possible

- **Remove any fluids from airways**
  - Use a bulb syringe to remove birthing fluids from the newborn’s nose and mouth
  - Use a piece of string or straw to tickle inside the nostril to emit a sneezing response

- **Allow dam to bond with newborn**
  - Make sure newborn is within reach of the dam
  - Dam should be allowed to clean her newborn
  - Dam will emit low grumbling noises for bonding recognition – avoid talking or making excessive noise during this process

- **Assist in drying and stimulating newborn**
  - Staff may assist the dam in drying the newborn
  - Use a towel to vigorously rub the newborn

- **Umbilical Cord Treatment**
  - Place a seven percent iodine solution in a small plastic jar with a wide mouth
  - The dam should have taken care of the umbilical cord, but if she has not, tie the umbilical cord and using a pair of scissors, cut below the tie
  - Hold the newborn tightly and place the jar with the iodine solution so that the umbilical cord is submerged. Press the container against the lamb’s body.
~ STANDARD OPERATING PROCEDURE ~

**Reproduction & Parturition**

*Tube Feeding:*

- **Measure:** Mouth to Last Rib
- **Inserting Stomach Tube & Administering Colostrum**
- **Stomach Tube Removal**
~ STANDARD OPERATING PROCEDURE ~

Reproduction & Parturition

Tube Feeding:

- **Warm Stomach Tube and Syringe**
  - Run hot water over and through the tube and Syringe
  - Warming up the equipment makes the tube more pliable and keeps the colostrum from being cooled off

- **Measure Stomach Tube Against Newborn’s Body**
  - Place the tube alongside the newborn’s body
    - The mouth of the tube at the animal’s mouth
    - The end of the tube at its last rib - where the stomach is located
    - Note how far the tube will have to be inserted to reach the last rib
  - It is possible for the tube to not be inserted far enough, but it can’t go too far

- **Hold the Newborn**
  - Sit somewhere balanced and comfortable and up off the ground (bale of hay, bucket)
  - Drape the newborn over your thigh so that the front legs are hanging over your thigh and the back legs are hanging down toward the ground. Or,
  - Hold the newborn between your knees – facing away from you – with the back legs hanging down toward the ground.
  - Never tube feed an animal on its side – it may inhale the fluid and drown

- **Insert the Stomach Tube**
  - Hold the animal so its head is in a normal position.
  - Slowly insert the tube into the corner of the animal’s mouth.
  - Gently advance the tube toward the side and the back of the animal’s mouth (there is no need to use pressure or force).
  - The animal may swallow the tube but sometimes they fight.
  - You can see the swallowing motion if you watch carefully
  - **NOTE: THE GOAL IS TO INSERT THE TUBE INTO THE ESOPHAGUS, NOT THE TRACHEA.**
~ STANDARD OPERATING PROCEDURE ~

Reproduction & Parturition

Tube Feeding:

Administer Colostrum

- **DO NOT** microwave colostrum (this will destroy its beneficial antibodies) – colostrum should be warmed up by placing its container into another container of hot water.
- Once the feeding tube has been fully inserted into the animal, attach a 60cc syringe to the mouth of the feeding tube.
- Fill the syringe with warm colostrum and allow the fluid to trickle in via gravity (DO NOT force the fluid in with a plunger as this risks stomach rupture or could cause fluid to enter the lungs).
- Thick colostrum may not flow freely and it may need to be diluted with milk replacer or water.
- Avoid allowing air to enter the tube and stomach by pinching the tube shut after the colostrum has exited the syringe.
- After the fluid has been administered, detach the syringe and crimp off or plug the end of the tube as it is withdrawn from the animal. This prevents the newborn from inhaling any fluid as the tube is withdrawn.

How Much and How Often to Feed the Newborn

- Ideally, a 12lb newborn should be fed 8oz of colostrum as soon as possible
- The goal should be to tube feed the newborn only once in hopes that it will be able to stand and nurse by itself.
- In the event that there is not enough colostrum, smaller feedings can be spread out over the next 6 hours, however, emphasis should be placed on providing adequate colostrum as soon as possible.

Sanitation

- To disinfect tube feeding equipment, rinse well immediately after use. Wash thoroughly with warm, soapy water to remove all debris.
- Dilute one ounce of bleach with 21 ounces of water and submerge all equipment in this solution for two minutes.
- Remove, rinse well, air dry and store in a clean place. Wash your hands well before and after tube feeding.