

KIDDING WITH CONFIDENCE

A Kidding Season Mentoring Program for Northeast Meat Goat Producers

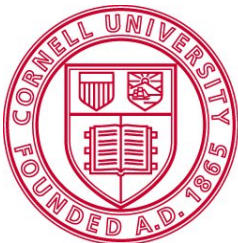
Sponsored by Cornell Cooperative Extension and the
Empire State Meat Goat Producers Association's Education Committee

Partially funded by the
Northeast Sustainable Agriculture Research & Education Program



Copyright © 2008. All rights reserved. No part of these materials may be reproduced without prior permission of the Cornell Sheep & Goat Ext. Program.

*Additional copies of this publication can be ordered through the
Cornell Sheep & Goat Extension Program, Room 114, Morrison Hall,
Dept. of Animal Science, Cornell University, Ithaca, NY 14853*



Cornell University
Cooperative Extension

2008

Acknowledgements

Text: Dr. tatiana Stanton, Extension Associate, Cornell Sheep & Goat Ext. Program,
Department of Animal Science, Cornell University

Assisted by past mentees, Susan Jaffe and Nancy Weber

Technical review: Drs. Mary Smith and Pamela Karner, DVMs

Illustrations: tatiana Stanton

Front cover photo: Susan Olson

Back cover photo: Jacqueline Baxendell

Content photos: tatiana Stanton and Dr. Mary Smith

&

To all the mentors and mentees who provided input from 2005 to 2007,
your thoughtful suggestions were deeply appreciated.

No endorsement of any product mentioned herein is intended.
Nor is criticism of unnamed products implied.

CONTENTS

Introduction.....	1
Getting the Most from the Mentoring Experience.....	2
Are You Ready to be a Mentor?.....	4
Activity 1 – Mentee List of “what you want to learn”.....	6
Activity 2 – What Does Will Kid Next?.....	7
Activity 3 – Typical Kidding Season Supplies.....	8
An Example Management Calendar.....	10
Activity 4 – Your Mentor’s Herd Management Calendar.....	12
Notes from Your Mentor’s Farm.....	13
Kidding Season Ailments of the Doe.....	16
Kidding Season Ailments of the Kid.....	17
Signs Of Kidding.....	18
Basic Kid and Doe Care at Kidding.....	18
The Birthing Process – Color Photos.....	19
Kid Positions.....	22
Using a Lamb Puller.....	24
Getting Ready to Assist When Needed.....	25
How to Milk.....	26
Steps to Bottle Feeding.....	27
A Sample Feeding Schedule for Orphan Kids.....	27
Feeding a Kid by Stomach Tube.....	28
Giving an Intraperitoneal (IP) Injection.....	29
Helpful References.....	30
Gestation Table.....	31
Activity 5 – Your Own Photo Album.....	32
Evaluation for Mentee.....	33
Evaluation for Mentor.....	34



The vast majority of kids, like this kid here, come into the world with no intervention. An experienced mentor can help you identify changes needed in your management or facilities if you find yourself intervening too often. A mentor can also teach you to identify those situations where it may be necessary to effectively intervene to save the life of a doe or kid.

INTRODUCTION

Kidding season is a challenging and highly critical time for new meat goat producers. The success of these first kidding seasons often determines whether new goat farms survive. Not only are productivity and profit limited when herds experience major health problems and death losses at kidding, but the accompanying emotional stress can irrevocably discourage new farmers. Reading books, looking at videos, and listening to experts on kidding can help prepare new farmers, but are nothing like the real thing. Assisting an experienced meat goat producer during his or her kidding season is one of the best ways to learn.

This booklet is designed to help new producers pair up with experienced producers to set up a mentoring situation. The idea is that knowledgeable, experienced farmers are often the best teachers or coaches (i.e. mentors) for new farmers. Farming is an excellent example of a circumstance where learning by emulating programs work effectively. Throughout this booklet, the word “mentor” will be used for the producer doing the guiding or coaching and the word “mentee” rather than trainee or student will be used for the new farmer.

Ideally, new farmers will participate in an intense mentoring program with an experienced farmer where they spend about 3 partial or whole days at the mentor’s farm during the mentor’s kidding season. This is followed by one or two telephone calls as they prepare for their own kidding season and to address any questions (not emergencies!) that arise. The booklet can also be used by producers who engage in a less formal program where they visit the mentor’s farm a couple of times and fill in the questions in the booklet either in person or over the phone and arrange to keep in touch by phone or email during their first season.

GETTING THE MOST FROM THE MENTORING EXPERIENCE

recommendations for mentees from past mentees

First off, try to find a mentor you feel comfortable with and whose farm appeals to you. If the farm appears poorly run, chances are you're not going to have a lot of confidence in your mentor's advice. Keep in mind that a farm whose owner's goals and situation are similar to your own is often the best match. However, the most important thing is to choose a knowledgeable mentor whom you like and can talk to easily.

Before you start

Discuss with your mentor what you hope to gain from the experience and how much (or how little experience) you already have. Can they give as much time commitment to the farm visits as you are hoping for? Are you going to stay at the farm for 2 or 3 days or are you going to stop by for a series of afternoons or mornings? The distance you live from your mentor will have a big effect on which situation is most practical for you.

However, even if your mentor lives nearby, keep in mind that part of the learning comes from spontaneous trips to the barn at all hours of the day and night! Discuss what hours of the day your mentor can call you for sudden opportunities to observe kidding. If you are coming to your mentor's farm from a long distance, find out whether it makes sense to stay at their home or at a hotel/motel. In general, the more time you can spend on farm the better.

One big decision if you have a family is whether to bring your partner or a child along. Often the more family members that come along, the more strain there will be on your mentor. Bringing the kids with you depends on the age of your children, the role they will play in kidding on your farm, and whether your mentor is comfortable with having them along. You want to develop a one-on-one relationship with your mentor. Children or spouses may be a distraction to the process. Your mentoring will be a short, intense time and you need to focus on the learning. Be sure to discuss with your mentor what calling arrangements you'll need to make in order to keep in touch with your family, employment, and/or farm.

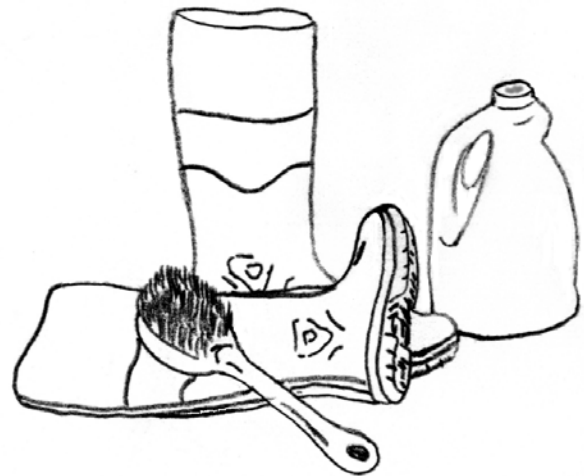
Getting ready to go

Try to get a general background on raising goats and on kidding by attending workshops and/or reading books. This way your mentor won't be bogged down explaining the very basics even if you have little livestock experience. If you have experience with other livestock, you'll become familiar with the terms used in goat production.

Familiarize yourself with this kidding mentoring booklet. Before going to your mentor's farm, please do **Activity # 1** where you make a list of questions you're hoping to get answered and tasks you're hoping to learn, i.e. tubing, giving injections, ear tagging, hoof trimming, milking, getting a kid to nurse. This list and the booklet will give you and your mentor a starting place to work from. However, your actual activities on the farm may diverge widely from your original list.

If you are staying over at your mentor's farm, make sure you have left your own family, farm or job prepared for your absence. You may want to prepare a meal to freeze and take to share with your mentor's household.

Be prepared to be sleep deprived – be well rested before you go. Be prepared to be roughing it and pack accordingly.



Things to take:

Clothes – you'll be dressing in layers. Bring both warm and light clothing and plan on washing them between use at your farm and at your mentor's and vice versus. Coveralls work well for this

Barn boots – disinfect before and after your visit

Your list, a notebook and pencils

A camera for **Activity #3**– a disposable inexpensive camera that can take getting dirty works great

Pocket snacks for you and your mentor to eat on the run

If spending the night-

Sleeping bag, pillow, toiletries, flashlight and alarm clock. Check with your mentor about household pets and bring allergy medicine if necessary.

Special foods – if you have a special diet try to bring your necessary food supplements along to make mealtime at your mentor's easier.

Set a time with your family for calling. You may want to encourage your family to not call you (except in an emergency).

Once you get there

1. Be open to new experiences. Remember this is a hands-on learning experience. You'll often learn as much from mundane chores as from more exciting events.

2. Remember that kidding season is a busy, stressful time for a farm family. House cleaning and complicated meals often take a back seat during this time or are in a little tow trailer way behind! Be a good houseguest and pitch in with household chores.

3. Be a willing farm helper. Doing basic chores can help clear up some of your misconceptions and brings up excellent opportunities to talk about raising goats.

4. Once you have unpacked, put on your barn boots, and located your notebook, get your mentor's permission to start with **Activity #2**.

5. Share your list from **Activity # 1** with your mentor. Set up a discussion time with your mentor to go over your list and for you to complete **Activities #3 and #4** and fill in your kidding mentoring booklet.

6. Remember the focus is to learn from the farm you're visiting. Draw out your mentor.

7. You are a stranger to your mentor's goats. Don't be dismayed if your mentor asks you to move away or to be quiet around them especially during kidding. Your actions could disquiet them. Also, follow your mentor's instructions about any guardian animals.

8. Listen to your mentor and follow his/her instructions. You are not there to change this farm; you are there to learn his/her best management practices.

9. If there is opportunity, use your disposable camera to complete **Activity #5**, a photo album of the birthing process, etcetera.

Wrap up

1. Review your list – are there things you did not get to yet that you feel are very important? Review the activities you did. What tasks did you not learn that you had hoped to?

2. Review your kidding booklet – are there parts you did not get a chance to fill out? Is there still time to go over them before the end of your visit or do you need to set up a time to discuss them on the phone instead?

3. Have your mentor's phone number ready to help prepare for your own kidding season. **However, it's the role of your veterinarian to help with emergencies, NOT your mentor.**

ARE YOU READY TO BE A MENTOR?

Recommendations from a past mentor

Why be a mentor?

There are several good reasons to be a kidding season mentor. The meat goat industry in the Northeast US needs more producers. Our markets are not limited by neighborhood competition. Instead we often run short of the supply needed to satisfy buyer demand and build buyer loyalty. Many people express interest in becoming commercial meat goat producers.

However, we lose new goat farmers when they are ill prepared for their first kidding season. Hobby farmers trying to transition into larger commercial herds often need help learning to more efficiently use and conserve labor at kidding time. Improving the success of new and expanding farmers by giving them the opportunity to mentor with a goat farmer who has already met these challenges benefits our NE meat goat industry.

On a personal level, mentoring can help improve the success rate of the start-up farms you have sold breeding stock to. It helps build a clientele for your animals or expertise and provides a thriving community of goat producers for you to socialize and work with. If you enjoy making new friends and teaching folks in an informal setting then you'll get a lot of personal satisfaction out of being a mentor.

Making a good match

One of the first questions to ask yourself if you decide to become a mentor is "Are you and your mentee a good match?"

1) Do you get along? Can you relate to their situation and communicate well with them?

2) Do you have the level of expertise they need to get them going? A new farmer with no livestock experience may need to

visit a smaller farm who's knowledgeable owner can discuss the basics in great depth, while a large scale producer transitioning out of dairy or sheep may learn more from management at a large commercial operation,

3) Are you and your mentee in agreement about the amount of time you have to commit to their visit? Take the time to discuss your mentee's background, past livestock experience and expectations.

Timing

A second important issue is determining when the mentee should visit your farm. Depending on your herd size, you may be too busy to give your mentee any guidance during the peak of your kidding. A person can learn a lot from watching just 3 or 4 goats kid. However, some does decide to delay kidding at the sight of a stranger. If the mentee is coming for a span of 3 partial or whole days try to arrange a span when you think about 6 to 8 does are due. Talk with other nearby goat farms and see if you can use their does as a "back up" if your does refuse to cooperate.

If you have a large breeding group due to kid and don't know individual due dates, remember that the majority of does usually get bred about 4 to 15 days after the buck was introduced. If you have the mentee come about 12 to 18 days into kidding they can help with kid care and probably still see some kiddings.

If your mentee lives nearby you may want to split up the visit and have them help with prekidding tasks like vaccinating and organizing supplies and then come again during kidding and after to assist with kidding and postnatal care. Be sure to plan the farm visits at a time when you do not have lots of off farm commitments. Your mentee is expecting you to be there.

Before you start

Before the mentee arrives, organize a game plan of possible tasks to do especially in case not much kidding goes on. Plan on having the mentee help with daily chores as this is when a lot of important management questions come up and when your does will become used to them. People learn far more by doing than just reading or hearing about something. If you don't know how much hay and grain you feed, locate a bathroom or livestock scale so your mentee can have the task of calculating just how much food you are offering per doe daily.

With the exception of daily chores, try to organize other tasks near areas where kidding is going on so that your pupil can observe the behavior of late pregnancy does. Rebedding jugs or kid areas will let a mentee observe how newborn kids behave.

Plan on including the mentee in any kidding related chores you need to get done. Not all tasks need to relate directly to kidding. For example, trimming hooves together is a relatively quiet task with plenty of opportunity for discussion on how you handle kidding. Keep the schedule pretty open as you do not know how busy you may both end up being with kidding or what specific tasks your mentee is hoping to learn. Don't spend time making your place look like a showcase. Remember your pupil wants to see your farm, warts and all.

Once your mentee arrives

When your mentee arrives, ask them to do **Activity # 2** where they guess what does are due to kid next "cold turkey" as soon as they have gotten themselves organized. Then arrange sufficient time to go over what chores you have planned and their list from **Activity #1**. Explain that depending on how kidding progresses, these plans may change drastically.

If possible, set up a time each day to help them complete **Activities #1, #3, and #4** and address any kidding or management questions that arise. It is good to have your mentee work alone at times but try not to put them in situations of great responsibility. If you have them check over your newest kids for possible health problems, remember they are just learning and follow up their observations with your own expert eyes.

Try to give your mentee plenty of time to observe kiddings and have them help out with relatively safe hands-on activities. Beginning farmers may need to learn how to: distinguish a water sac from the afterbirth; milk a few squirts of milk from an udder; get a kid started nursing; warm up a bottle and bottle feed a kid; check kid bellies for starvation; take temperatures, etc.

Don't force yourself to give a mentee a learning experience if you aren't comfortable having them do it. For example, some mentors may suggest that a mentee glove up and check a doe that has just finished kidding to see if there are any more kids left while other mentors may not. You may feel okay about having a mentee tube feed a weak kid under your supervision or you may be far more comfortable having them pass a tube down the throat of a healthy two day old kid without putting any milk into the kid.

Wrap up

Be sure to leave time at the end of the visit to discuss what your mentee learned and whether there are still some loose ends to follow up on. **Make sure your mentee understands that you're not a substitute for a veterinarian.** They should build a relationship with a veterinarian prior to kidding in case veterinary assistance is needed. Exchange phone numbers so you can answer more questions that come up as they go through their first kidding season.

ACTIVITY # 1 – Mentee List of “What You Want to Learn”

List a few skills you are hoping to learn while on your mentor’s farm

1.

2.

3.

4.

List a few questions you are hoping to get answered while on your mentor’s farm

1.

2.

3.

4.

ACTIVITY # 2 - What Three Does Do You Think Will Kid Next?

Quietly walk through your mentor's herd and without advice from your mentor note down the three does you think are most likely to kid next. Discuss your choices with your mentor. Keep track of these does during your visits or ask your mentor to tell you later which does ended up kidding next.

Doe name, description, or ID #	Signs of approaching kidding	Were you right?

ACTIVITY # 3 – Typical Kidding Season Supplies

Check off which supplies your mentor usually has on hand. Record their suggestions of other supplies to have on hand or particular brands they like to use, etcetera

For the Birth

- ___ **Vet's phone number*** - *in case of emergencies or questions*
- ___ **7% Iodine tincture*** - *to dip cords, can also tie off cord with dental floss or sterile fish line*
- ___ **Old towels or rags*** - *to dry kids fast in cold weather; clean straw, newspaper also work*
- ___ **Mild soap or disinfectant scrub** - *internal exam, clean udder*
- ___ **Thermometer*** - *to check health of kids and does- best are digital, waterproof w/flexible tip*
- ___ **Disposable plastic sleeves or gloves** - *internal exam, handling of abortus & placenta without being exposed to contagious diseases – women of child bearing age especially!*
- ___ **Sterile Lubricant** - *internal exam; dish washing soap also works*
- ___ **Clean bucket & hot water** - *internal exam, clean udder*
- ___ **Collar & lead rope** - *tying doe if you need to assist birth or assist kid to nurse*
- ___ **Baby nasal syringe or basting syringe** - *for clearing mouth and nose*
- ___ **Flashlight**
- ___ **Baby monitor/walkie talkie/cell phone**
- ___ **Lamb puller (head snare), nylon twine, or plastic coated wire** – *last two are less preferable but will also work to keep head straight during difficult births*
- ___
- ___
- ___

For Ailments of Very Pregnant or Recently Kiddled Does

- ___ **Procaine penicillin G or other effective antibiotic** – *to treat illness, retained placenta - (have your vet prescribe dosages and meat and milk withdrawal periods as label may be incorrect for goats*
- ___ **Propylene glycol or a recipe and supplies for homemade ketosis remedy** – *to treat ketosis*
- ___ **Calcium Gluconate** – *to treat milk fever*
- ___ **Mastitis treatment tubes** – *to treat mild mastitis*
- ___ **Teat dip** – *when milking for mastitis prevention*
- ___ **Paper towels** – *milking; clean rags or washcloths also work*
- ___
- ___

* These are often your most essential supplies

For Ailments of Newborn or Very Young Kids

- ___ **50% Dextrose or glucose solution** - *weak kids, IP injection- you will be diluting it to 20%*
- ___ **Tubing syringe kit, stomach tube, 60 cc dosing syringe*** – *tubing weak kids*
- ___ **Clean jar, bowl or pail** - *for milking or milk storage*
- ___ **Colostrum*** - *for emergencies (have some frozen colostrum from a disease free-no CAE or Johnes - doe or cow obtained within a few hours after kidding/calving or purchase the dried product)*
- ___ **A way to warm up hypothermic kids*** - *warming box, heating pad, blow dryer, sink*
- ___ **Plastic or glass 10 to 16 oz soda bottle*** - *for bottle feeding orphaned or in-house kids*
- ___ **Variety of nipples*** - *bottle feeding*
- ___ **Pepto-Bismol or Kaopectate** – *to treat temporary or mild diarrhea*
- ___ **Baking soda** - *to treat acidosis, floppy kid*
- ___ **Electrolyte solution** - *to treat mild dehydration*
- ___
- ___
- ___

Health and Record Management Equipment

- ___ **CD &T vaccines*** - *to help prevent enterotoxemia and tetanus*
- ___ **BoSe injections or other Se supplementation*** - *to prevent selenium deficiencies, white muscle disease in kids and does-must be accompanied by prescription from your vet*
- ___ **Syringes (3cc, 12cc) and needles (20 gauge 1 inch)***
- ___ **Official Scrapie Identification tags and eartagger***
- ___ **Tattooer, green ink, appropriate numbers and letters** - *to ID registered goats*
- ___ **Barn record sheets or notebook***
- ___ **Scale or weight tape**
- ___ **Appropriate dewormer for adult does**
- ___
- ___
- ___

Other Suggestions or Comments about Supplies:

* These are often your most essential supplies

AN EXAMPLE MANAGEMENT CALENDAR – very general

Prior to breeding

- Quarantine new bucks at least 30 days.
- Conduct breeding soundness exams on all bucks paying special attention to reproductive organs.
- Trim bucks' hooves, make sure they have plenty of opportunity to exercise, and increase their plane of nutrition unless they are obese.
- Keep bucks away from does (no sight, smell or sound) for at least 3 weeks prior to the start of breeding season to increase the "buck effect" and concentrate the number of does kidding in a short interval
- Conduct a health and soundness exam of all does and cull if necessary.
- Trim hooves on does. Monitor eye membranes or fecal samples and worm if necessary (you'll want to avoid worming in early pregnancy as sometimes abortions can result).
- Give selenium injections to does and bucks if your area is selenium deficient.
- Vaccinate unvaccinated does for *campylobacteriosis* (vibrio) or *chlamydia* if significant numbers of abortions have occurred before and these diseases have been diagnosed by a lab.
- Flush does with very high quality pasture and/or ½ to 1 lb of concentrate per head daily starting 2 weeks prior to breeding and for at least 3 weeks into the breeding season if you desire to increase litter size.
- Make sure your fences are in good shape if you plan on having separate breeding groups.

Breeding

- Turn bucks in with does at a ratio of about one yearling buck to 15 does or one mature buck to 30 does.
- Supplement buck with extra feed especially if he is with a large number of does.
- Observe and record breeding activity and check for recycling does.
- If using a marking harness or brisket paint, change colors every 18 to 21 days.
- Use a replacement or clean-up buck after 30 to 42 days if you note several repeat breeding.

Early Pregnancy (first 3 ½ months of gestation)

- Monitor health and condition of does and minimize stress to herd.
- Note any bloody tails (possible abortion) or does back in heat and rebred or cull.
- Feed a maintenance ration and free choice minerals/salt. Pasture or hay usually adequate without grain supplementation. Avoid letting does get obese. Separate thin does from main herd and feed them extra.
- Keep doelings separate and feed them for pregnancy as well as for growth.
- Administer second vaccine for abortion diseases if necessary following label instructions.
- Trim hooves that get too long before does are too heavily pregnant and awkward.

Late Pregnancy (last six weeks prior to kidding)

- Increase plane of nutrition for does by gradually increasing concentrate intake as the fetuses are now growing rapidly and does also need to build up their body reserves for nursing. Generally, ½ to 2 lbs depending on forage quality, doe condition, and probable number of fetuses.
- Increase protein intake, especially the last 2 weeks before kidding, to discourage the sharp increase in worm egg laying commonly observed as does go into labor and to insure good colostrum production.
- Monitor eye membranes or fecal samples and deworm the herd or individual animals if necessary. Avoid the de-wormers Valbazen (Albendazole) or Tramisol (Levamisole) during pregnancy. Consider feeding a coccidiostat.
- Put clean bedding in barn, set up jugs if you use them, and organize kidding supplies and equipment.
- Vaccinate does for enterotoxemia (*Clostridium perfringens* C&D) and tetanus about 2 to 4 weeks prior to kidding. Does that have not been vaccinated previously should receive a first dose about 8 to 6 weeks before kidding followed by a second dose with the rest of the herd.
- Encourage does to walk a lot. You can place feeders and waterers apart from each other.
- Observe does frequently. Does that are sluggish or hang back at feeding may have pregnancy toxemia (ketosis) and require early treatment.

Kidding

- Play it safe! Have everything ready for kidding at least 140 days after the buck was first put in with does.
- Check does at least four times daily for signs of kidding. More times may be necessary in extremely cold weather.
- At birth, dip navels in 7% iodine, give kids subcutaneous BoSe injections (1 cc/kid) if in Se deficient areas.
- Observe doe and kids frequently and treat for problems if necessary. Record any problems that should lead to future culling.
- Record weight of kids and litter size within 24 hrs of birth. Identify kids with eartags or “collar tapes”.
- If herd was not treated for internal parasites prior to kidding, remember that the estrogen released at kidding stimulates worms to lay more eggs, and deworm if necessary.
- Trim does’ hooves as necessary.

After Kidding

- Gradually increase plane of nutrition until it is adequate to support does in peak lactation, rarely more than 2 to 3 lbs of concentrate per day depending on quality of forage fed, doe condition, and litter size.
- If space permits, separate mature does with \geq triplets and yearling does with \geq twins from the rest of the herd to feed them more nutrition than the rest of the herd. Also, smaller groups better, less competition.
- Consider providing a creep feeder. It is important that creep fed kids be protected against enterotoxemia. Use an enterotoxemia antitoxin on the kids if does were not vaccinated before kidding. Decide whether to include a coccidiostat in the creep feed – often a good idea for all but organic farms.
- Disbud and tattoo kids (if desired) at about 3 days to 2 weeks of age. Castration can also be done at this time. Make sure kids protected against tetanus, use antitoxin if does were not vaccinated prior to kidding.
- Vaccinate kids subQ for enterotoxemia and tetanus at 6 weeks of age followed by a second booster 3 to 4 weeks later. Don’t vaccinate kids to be sold for slaughter as sucklings (meat withdrawal is 21 days).
- Gradually introduce herd to pasture and train kids to electric fences or netting if used.
- Monitor does’ body condition, eye membrane color and fecal samples throughout lactation and adjust diet and management accordingly and/or treat for internal parasites as necessary.

Weaning

- Generally occurs between 10 wks and 4 months of age.
- Separate does from kids, preferably out of sight and sound.
- A few days prior to weaning decrease any grain in the does’ diet and feed a lower quality pasture or hay to reduce milk flow and chance of mastitis. For 7 to 14 days after weaning, feed does no grain and low/average quality forage to encourage them to dry up. Do not remove water and minerals.
- Avoid milking out does if possible but observe closely for signs of mastitis (swollen, hot or very cold udder).
- Prior to or during weaning, consider treating kids with a coccidiostat. Deworm kids at weaning unless fecal samples indicate no need. Discuss with vet what drugs and methods to use for internal parasite control.
- Observe kids closely for poor appetite and/or scours. Avoid increasing concentrate rapidly.

Weaning to Breeding (growth period for kids)

- Cull poor producing does or does with unsoundness or health problems.
- Select doe kids to keep based on their dam’s production records, and their own growth records (after accounting for litter size and dam’s age) and their soundness/health exams.
- Put does on good quality pasture or hay to recover the weight loss from nursing. Monitor body condition and consider providing extra nutrition to lean does.
- Continue feeding kids good quality hay, browse, or pasture. If grazing, try to keep kids on “clean” pastures ahead of does. Consider vaccinating kids again for enterotoxemia. Provide concentrate as needed to meet targeted weight gains. Slaughter males at desired market weight.
- Keep track of hoof length and trim as necessary.
- Monitor worm loads. Adjust management accordingly. Keep drug withholding intervals in mind when deworming or medicating animals.

ACTIVITY # 4 - Your Mentor’s Management Calendar – *what do they do and when? Try to be specific about types and amounts of feed, vaccines, and treatments.*

Time of Year/ or stage of life	Activity

NOTES FROM YOUR MENTOR'S FARM

Kid and Doe Care At Kidding – outline your mentor’s procedures for caring for does and kids

Tricks of the Trade – does your mentor have some special recommendations for handling kidding or managing goats?

What kidding tasks or skills did you help with? Outline the steps for future reference

What advice does your mentor have for you for handling various diseases or problems?

KIDDING SEASON AILMENTS OF THE DOE

Aliment	Symptoms/Prevention	Typical Treatments (check first with vet)
Ketosis	Loss of interest in food; urine and breath may smell like nail polish remover; eventually, loss of muscle control, convulsions, death. Most common in fat does or does carrying many kids. Also occurs in heavily milking does. Occurs when doe stops getting enough carbohydrates from her feed to meet energy needs of growing fetuses or milk production. <i>Avoid getting does too fat in early pregnancy, avoid dieting does in late pregnancy, make sure does get daily exercise in late pregnancy to keep appetite up. Most importantly, increase energy intake in the last third of pregnancy to meet the needs of the rapidly growing fetuses. Very pregnant does have trouble consuming enough forage to meet their dietary needs and need to eat more "grain" or concentrate depending on the size of the litter they are carrying. Offering fresh feed several times a day will also encourage intake.</i>	Observe does carefully to make sure no one goes off feed. Treatment - Home remedies for ketosis or 2 oz (60 ml) of propylene glycol drench 2 to 3 times daily along with a tblsp of baking soda to counteract acidosis until appetite returns. If off feed, gently drench with mash from pelleted grains or yogurt/baby cereal mixes and hand feed forages and concentrates. Also give one day of 60 ml of 23% calcium gluconate subcutaneously (SQ), and several days of thiamine (10mg/kg). May need to IV with dextrose or fluids. Worse case scenario may need to induce labor or do C section to save doe.
Mastitis	Swollen, hot, painful udder with the exception of gangrene mastitis where the udder will become ice cold. Milk may appear bloody, clotted, or watery. Fever common. <i>Use good sanitation and avoid rough handling of udders. Dry treat does with pendulous udders or past problems.</i>	Milk udder out several times a day using warm wet towels and frequent bumping to stimulate milk letdown. Be sure to wash and dry udder before milking and dip teats afterwards. Inject effective antibiotics via teat infusions and SQ or IM.
Milk Fever	Sluggish contractions if occurs during kidding, Difficulty standing, wobbly, doe's temperature is subnormal → down, passive → coma, death. <i>Upset in calcium or magnesium metabolism results in doe removing calcium from her blood for lactation, fetus, etc. faster than it is being replenished from calcium stored in her bones. Rarely seen in first fresheners. Avoid excessive calcium during last third of pregnancy. After kidding, feed Ca: P ratio of 2:1 or higher and avoid milking does out completely for 24 hours after kidding.</i>	If doe is down, keep head up slightly and to the side to avoid any vomit getting into lungs. Administer 23% calcium gluconate very slowly IV following label directions (usually about 60 ml or more –consult with veterinarian). You can also administer it SQ (spread dosage over several sites) but response will be slower and may be less effective. May use Oral Tums if mild case.
Pneumonia	High fever, depressed, labored breathing, and possibly a runny nose or cough. <i>Keep barns well ventilated (but not drafty) and at low humidity. Bed frequently to avoid heavy ammonia fumes from urine buildup. Allow sufficient space per goat.</i>	Administer effective antibiotic. Keep animal comfortable and encourage eating and drinking by making food and warm water easy to reach without competition. Improve air flow in barn and decrease animal density.
Prolapsed uterus	Uterus pushes out after kidding. It will look like a mass of tissue the size of a watermelon with bumps on the surface. Recovery good if undamaged and replaced within 24 hours. However, will need to be amputated if damaged or left out for long period. <i>May be related to selenium deficiency and/or milk fever.</i>	Veterinarian may give calcium gluconate, BoSe and an epidural and then wash uterus and work through a towel to replace it without tearing it. Once uterus is back within cervix, fingers can be used to invert uterine horn completely. Tetanus toxoid, oxytocin, and antibiotics are then given.
Prolapsed vagina	Pregnant doe's vagina protrudes from under her tail like a small red handball. <i>Possibly caused by weak muscles (cull the doe) or lack of room for a very large litter in short bodied does. Susceptible to infection and to kinking of the urethra</i>	If it only occurs when the doe lies down, encourage her to stand much of the time. If permanently out, wash vagina with mild soap and push it back in after contacting vet for vaginal restrainer or coming up with a rope truss to keep it in.
Retained Placenta	Placenta is not passed within 24 hours after kidding. <i>Can be caused by mild milk fever or selenium deficiency.</i>	Administer effective antibiotic. Monitor temperature for possible infection. Do not pull hard on placenta. Instead, knot up what placenta is hanging so doe can not trip on it.
Septicemia	High fever, poor appetite, depression, and foul smelling discharge, not to be confused with the normal bloody discharge present for up to 3 wks after kidding. <i>Have doe kid in clean environment. Use sanitary methods if you need to go into doe to assist kidding and follow up with antibiotics.</i>	Life threatening condition. Contact vet quickly for an effective antibiotic. May need to administer the antibiotic IV and also give fluids and anti-inflammatory drugs such as banamine.

KIDDING SEASON ALIMENTS OF THE KID

Aliment	Symptoms/Prevention	Typical Treatments (check first with vet)
Coccidia	3 week or older kid starts to grow poorly and weaken. May have diarrhea or manure pellets coated with mucus or blood. <i>Keep pen clean and dry, avoid overcrowding. Keep manure out of mangers. Feed a coccidiostat such as decoquinate (Deccox), or monensin (Rumensin) in your feed or salt especially in late pregnancy and when kids are in the herd. Stressed kids are most susceptible (the runt in a large litter, kids during weaning, etc).</i>	Drench kid with a coccidiostat such as the sulfa drugs Sulmet or Albon, or amprolium (Corid) following veterinarian's directions. Treat for dehydration if necessary and encourage appetite. If the kid is already started on solid foods and is refusing to eat or nurse, gently drench with palatable feeds such as yogurt and baby food cereal mixes. Albon label - not correct for goats.
Diarrhea	Loose stools, extreme cases will excrete lots of foul smelling liquid and become dehydrated as you can confirm by pinching the skin over their ribs or eyes and seeing how quickly the skin goes back in place (the slower, the more dehydrated). <i>Make sure kid gets plenty of colostrum shortly after birth to build up immunity, avoid kidding in dirty areas, keep fecal contamination to a minimum, sanitize bottles and nipples used to feed kids before each use, make sure kids are protected against enterotoxemia, and avoid reusing bedding, etc. exposed to sick kids. Clean and lime jugs and kid areas.</i>	Mild cases caused by over indulging on milk often self correct but may benefit from Pepto bismol, etc). Serious cases are caused by contact with coliforms or cryptosporidia. You need to 1) replace fluid loss and correct electrolyte balance, and 2) kill the organism with an effective antibiotic. You can use commercially available electrolyte solutions or less accurate homemade recipes. Severely dehydrated kids may need Ringers Solution IV and SQ. Antibiotics (oral & inject.) often used.
Floppy kid (Acidosis)	Lively kid (~3-10 days old) with hearty appetite weakens suddenly and starts having difficulty standing or walking. Feels flaccid with full, watery stomach. Occurs when young kids get acidosis as a reaction to the milk they are drinking. Can confirm with blood tests. Hard to predict when or why a herd is afflicted with it.	Treat affected kids immediately with 1/2 teaspoon of baking soda (sodium bicarbonate). Bottle or tube feed kid with commercial electrolyte solution for 12 hours rather than milk. Antibiotics and/or sodium bicarbonate IV may also be advised. Prop kid up so not flat out.
Hypothermia and/or Starvation	Kid exhausts body reserves and is unable to maintain body heat or activity. May have abnormally low temperature (normal temperature for a kid is ~102-103 F), mouth will often be cold to the touch, belly is not well distended, poor appetite, inactive → flat-out → coma. <i>Plan to increase your monitoring of herd when does are kidding during extremely cold weather so that you can warm newborns up quickly if needed. Make sure kids get colostrum promptly. Low weight or ignored kids from multiple births are most susceptible. Always check doe's udder to make sure both sides have good quality milk. Monitor kids to make sure bellies are well distended with milk.</i>	If kid is comatose or too weak to swallow, give intraperitoneal injection of 20% warmed dextrose. Check kid's temperature and warm kid up to 99 F if necessary using water bath, heating pad, etc. Then get food into kid. If able to swallow but unwilling to nurse, tube feed with colostrum or milk (depending on age). Return to dam when kid is able to maintain body heat well and has vigorous appetite. Bonding is improved if you feed kid with dam's own colostrum and remove healthy kids from doe while treating the weak kid. Take them all to doe periodically for nursing until all kids can be left with doe.
Navel Ill	Hot, pus-filled navel stump, swollen joints, fever, convulsions, rigid movements, death. <i>Provide a clean kidding place, dip cords, and give colostrum promptly.</i>	Prompt early treatment with antibiotics can be effective.
Sore mouth	Virus enters through cracks in skin often on mouth and lips and causes thick, irregularly shaped scabs. The scabs are contagious and may contaminate a farm for several years. <i>Quarantine new goats. Isolate infected goat. Change boots, etc. if handling healthy goats after infected goats. A vaccine is available for infected herds or for goats in contact with other herds. The scabs from vaccinating are contagious so vaccinate well before the kidding or show season.</i>	The disease usually needs to run its course. Do not remove scabs as this can encourage serious secondary infections. Antiseptic sprays, rinses, etc. may help a little. Can be serious if kids get it badly on mouth or does on teats and nursing becomes difficult. If so, supplement kids with a bottle and gently milk doe. The scabs cause orf in people. Wear gloves when handling infected goats or vaccine.
White muscle disease	Forage in NE US is often deficient in selenium. Selenium is necessary for many body functions. Deficiencies in selenium or vitamin E cause muscle degeneration and progressive paralysis. Arched back, stiff hind end, widely spread front legs, difficulty nursing, respiratory distress, gradual or sudden heart failure. Kid may appear healthy and suddenly die after exercise or stress due to cardiac arrest.	<i>To prevent- supplement kids and does with recommended amounts of selenium and vit E through feed, salt, or injections. Too much selenium is toxic so follow labels.</i> Prompt early treatment with vit E capsules and an injection of BoSe (selenium and vitE supplement) are effective if disease is not too advanced. It may be advisable to treat all kids if individual kids exhibit the disease.

SIGNS OF KIDDING (SOMETIMES!)

- **Doe physical signs**
 - Ligaments around base of tail loosen, tail bone becomes prominent
 - Vulva and udder enlarge
 - Udder becomes rosy and shiny, teats appear stiff and full
- **Doe behavior signs as she goes into labor**
 - Introspective, may stand apart from the herd or act like she is listening intently →
 - Noisy, bleating or nickering continually →
 - Appropriating a “spot” and defending it →
 - Pawing and restless, making a nest
 - Temporary loss of interest in food - rare

BASIC KID AND DOE CARE AT KIDDING

- Try to be unobtrusive in your handling to insure good bonding between the doe and kids. Far less intervention is normally needed in moderate or warm weather as compared to cold weather.
- Allow the doe to kid in a quiet place without a lot of interruptions. Keep dogs away. Avoid loud noises or out-of-the-ordinary activities that may frighten her.
- Keep in mind that in moderate weather, the birthing fluids actually help keep the kid warm for the first few minutes of its life until the doe gets around to licking it.
- If the doe has multiple kids or refuses to lick off kids in extreme cold, dry kid vigorously with towels, rags or clean straw to warm him/her up and to trigger the sucking instinct – pay special attention to ears and legs to prevent frost bite.
- Make sure nose and mouth are cleaned off, and that the kid is breathing and has a warm-to-the-touch mouth. If the kid is not breathing, swing him by his hind legs while supporting his head, clean birthing fluids out of nose/mouth (basting or nasal syringe may help), and rub ribcage, chest and face vigorously.
- Dip navel in 7% iodine and note sex and abnormalities. Record litter size, weights, etc. for farm records.
- If unsure kids are getting milk, strip wax plugs out of doe’s udder and check for mastitis or blind teats.
- Check on the kids’ activity level (healthy kids will usually stretch when they get up and immediately look for a teat to nurse on) and stomach distention (signs of successful nursing).
- Make sure the doe has easy access to water and forage; watch for milk fever or ketosis.
- Observe whether the afterbirth is expelled and whether the doe has a hearty appetite.
- Administer BoSe shots subcutaneously to kids or oral dewormers to does if this is part of your routine.
- If necessary, use coats (made from cutting the ends off of tube socks or sleeves off of old sweaters), warming boxes, and warm water baths, heating pads or hair dryers to thoroughly dry and warm kid.
- If using a heat lamp, make absolutely sure that there is no way it can fall over and cause a barn fire – try to avoid leaving heat lamps or warming boxes unattended.
- Put the doe and her kids in a jug or small pen if the doe is having difficulty bonding to her kids.
- Tie doe up snugly in jug (making sure she can not jump wall and choke herself) if she is refusing to accept a kid or you are grafting an orphan kid onto her. Assist kid to nurse frequently until accepted.

BASIC TIME TABLE FOR KIDDING

Water sac or fluids appear→30minutes later →hard labor or examine→30minutes later →kid #1 or examine→30minutes later →kid # 2 or examine → 1hour later →placenta (considered retained after 8-12hours). **Does kidding for the first time may progress through the first stages slower than this, but it is still a good idea to cleanly and carefully examine doeling if progress becomes very slow or stops.**

THE BIRTHING PROCESS

	
<p style="text-align: center;">Doe pawing</p>	<p style="text-align: center;">Doe pushing – water sac breaks, kid sighted</p>
	
<p style="text-align: center;">Head and front feet emerge</p>	<p style="text-align: center;">Doe starts to bond with kid</p>
	
<p>Cord dipped – women of child bearing age (unlike this oldster) should wear gloves if handling newborns, birthing fluids, or afterbirths</p>	<p>Doe is resting between kids after being encouraged to move to a cleaner area by slowly moving her first kid there</p>

BIRTHING PROCESS CONTINUED

	
<p>Doe starts to push again</p>	<p>Water sac with kid inside sighted</p>
	
<p>Head and one front leg</p>	<p>Side view – this kid born with one leg back</p>
	
<p>A few more pushes and kid's shoulders are out</p>	<p>Kid is out, umbilical cord unbroken, hold cord between two hands and stretch slowly to break or let doe break it when she stands up</p>



Dipping cord



Kid nursing



There will sometimes small amounts of amniotic fluid trapped in the afterbirth even though all the kids are already out.



Afterbirth



Meconium – the tar-like first bowel movement



The doe licks the kid on rear end and under tail to stimulate the kid to suck, defecate, and urinate.

KID POSITIONS

Determining front or back legs – if the kid is being delivered right side up, the soles of the hoof point down on the front feet while the soles of the hoof point up on the hind legs. Regardless of whether the kid is right side up or upside down, the pasterns and fetlock joints on a kid's front legs always bend the same direction as the front knees while the pastern and fetlock joints on the hind legs bend the opposite direction of the kid's hocks.

Upside down kids – Do not pull a kid out upside down. Instead, flip the kid over while simultaneously pulling slowly on his legs to bring him out.

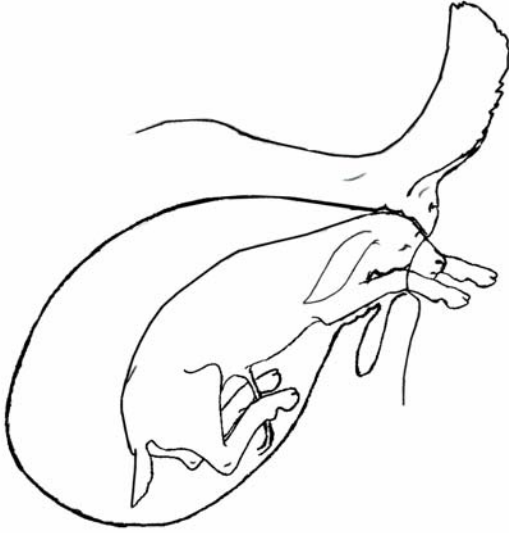


Figure 1. Normal Presentation



Figure 2. One Leg Back*

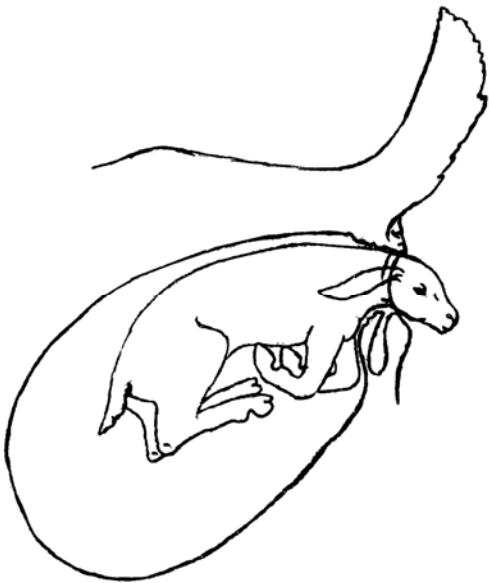


Figure 3. Both Forelegs Back- head will swell up and the kid die if a front leg is not retrieved quickly.*

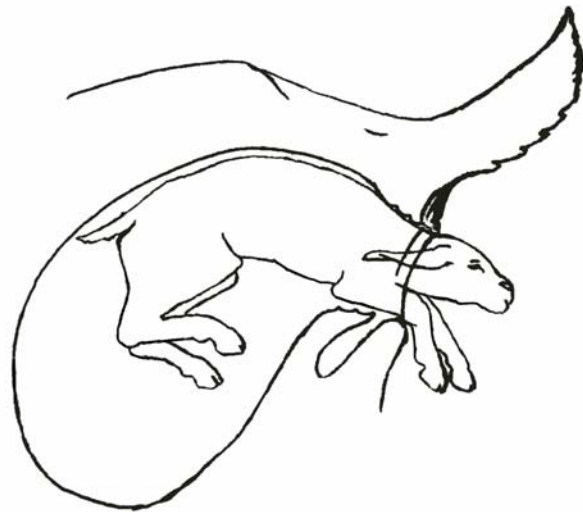


Figure 4. Elbow Lock – pull alternately on front legs to unlock.

* Follow the kid's head down to its chest and armpit to locate a front leg that you are sure belongs to that same kid. Reach under the kid's armpit and use your finger to hook the leg at elbow or knee and bring it forward into birth canal. Retrieve kid's second front leg if possible. Pull alternately on each front leg to bring out the kid. Keep in mind that you can often deliver a kid with one front leg back by pulling simultaneously on the front leg that is forward and on the dome of the kid's head. Pull out and down in an arc.

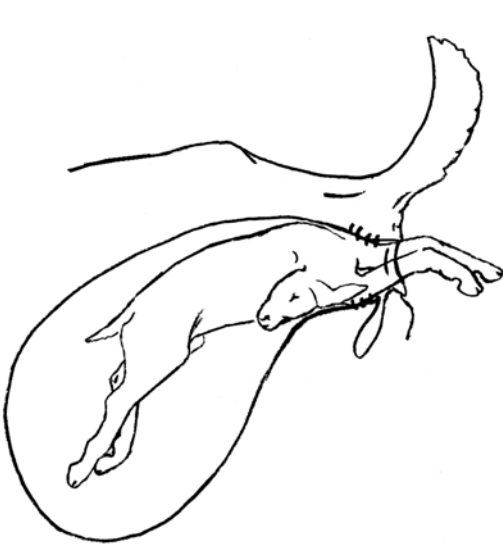


Figure 5. Head Back – a **bad position**. The doe may tear her uterus. Push the kid all the way back in until you have enough room to put your hand over the dome of his head and gently bring his head up.**

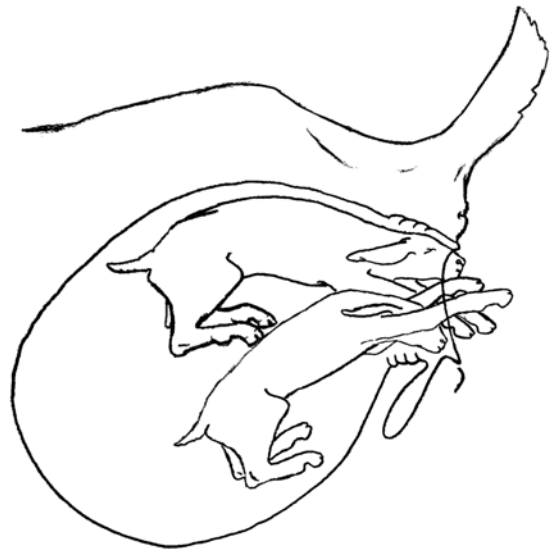


Figure 6. Four Legs & One Head – follow the head into the doe to confirm which legs belong. Push the other kid way back in and pull the first kid out.

** You may need to put the doe on a downhill or have someone lift up her hind legs in order to push the kid back in far enough to retrieve the head. Sometimes the cervix may feel tight not because the doe is “too small” or has not dilated but because she is tense and fighting you. A veterinarian may give the doe an epidural (lidocaine - xylazine) to relax her muscles and make it easier to push the kid back in. You may need to use a lamb puller or twine noose to keep the kid’s head from falling back again as you start bringing the kid out again. **Do not attempt to pull a kid out with his head back!**

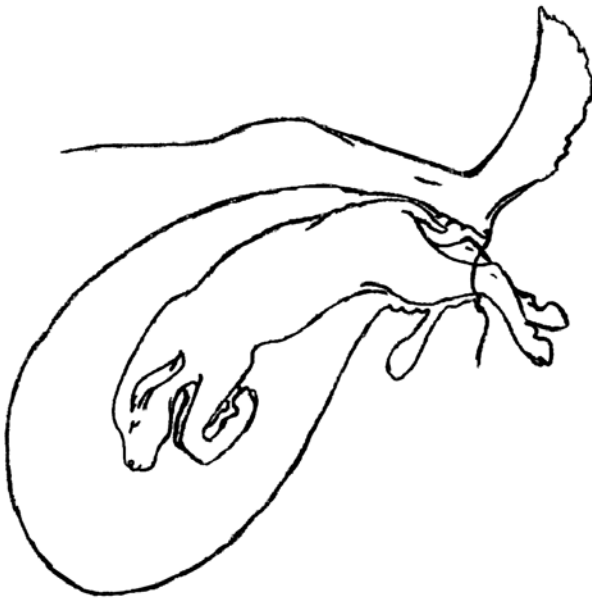


Figure 7. Hind legs first – kids are easy to deliver in this position but the umbilical cord may break as the kid’s shoulders pass through cervix. Assist slow kids with a firm pull at this point, turning the kid’s body sideways as it emerges so the cord does not break and to avoid hip lock in the pelvis.

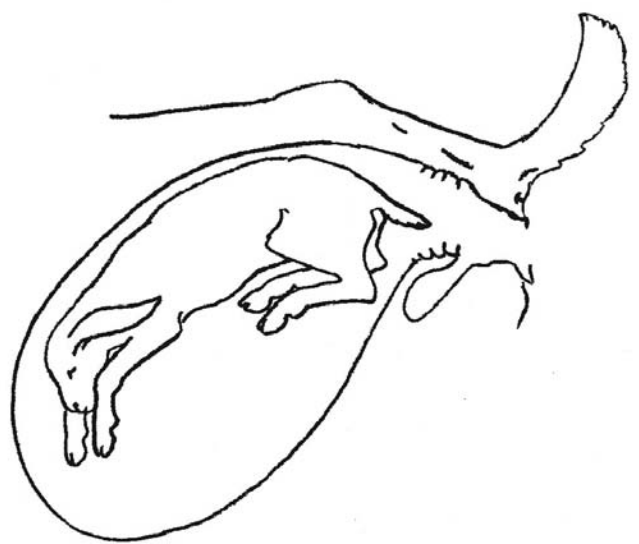


Figure 8. Breech Presentation – reach in and locate hocks under kid’s tail. Push the kid towards the doe’s front end until you can tuck your fingers under his hocks or back hooves, then straighten out the hind legs and deliver the kid.

KID POSITIONS CONTINUED



Figure 9. Twins - Front and Back- one of the normal ways twins are delivered.

USING A LAMB PULLER

A lamb puller is useful for delivering a kid whose head has slipped backwards. Push the kid all the way back into the doe so that you can straighten out his head. Put the noose of the lamb puller over your 3 middle fingers. Gently put your hand back into the doe and slide the noose over the dome of the kid's head so that it rests behind the kid's ears. See if you can get one or both front feet into the noose.



If you can not get the feet into the noose, just put the noose over the kid's ears and through his mouth. Use the lamb puller to hold the head steady while you pull the kid out by pulling out and down in an arc on his front legs. Disinfect your lamb puller between uses.

It is a good idea to fool around with your lamb puller earlier and learn how to tighten the noose automatically by pulling on the other end.

GETTING READY TO ASSIST IF NEEDED

- 1) Clip your finger nails.
- 2) Wash hands and arms with recommended disinfectant.
- 3) Tie up goat if necessary and wash under tail with recommended disinfectant.
- 4) Put on latex or plastic gloves, especially women of child bearing age, and also to protect the doe from infection.
- 5) Lubricate your hand or glove and the inside of doe's vulva with a recommended lubricant or dish washing soap.
- 6) Brush tail aside with one hand, cup the fingers of your other hand, locate vulva, and gently enter at a slightly uphill tilt.
- 7) Be clean, gentle, and use lubricant!
- 8) Take the time to orientate yourself and figure out what parts of the kid you are feeling.
- 9) Reposition kid if needed. Once kid is in a proper position, carefully and firmly pull kid out and down in an arc timing your pulls with contractions if possible.



Meconium: If the kid is stressed during delivery, it will often excrete the meconium (tar-like first bowel movement) while being born. This will cause the birthing fluids to be stained dark yellow. This sign of stress signals that now is good time to assist the birth and help the kid out quickly.

HOW TO MILK

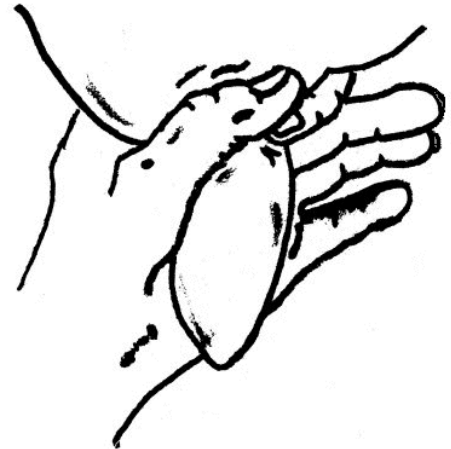
Step 1: Restrain the doe on a milking, fitting or trimming stand, or by collaring her and tying her up short with her head high in a corner of the pen or barn.

Step 2: Wash your hands with soap, rinse and dry.

Step 3: Wash the doe's udder with warm soapy water to stimulate milk letdown (like the warm, wet mouth of a baby kid). Rinse and dry her udder thoroughly (a wet udder can spread bacteria).

Step 4: Kneel or stand alongside the doe facing her rump. Massage her udder. If the doe becomes upset, use your shoulder to press her against the wall of the pen or stand, or an assistant can firmly restrain her by holding both her hind legs and pressing **down** on them to keep them on the ground.

Step 5: Trap milk in one of the doe's teats by locking your thumb and forefinger together high up on the teat against the udder floor. Visualize a water balloon that you are tying off at the top.



Step 6: Keep your thumb and forefinger locked tightly to keep the milk from back-flushing into the udder while progressively pressing in on the teat with your middle, ring and little fingers to push the milk down and out the teat end.

Step 7: The very first few squirts of colostrum may be hard to get out of the teat (there may be a wax plug at the end of the teat) and also help to clear bacteria from the end of the teat. Squirt two or three squirts unto the floor or into a test cup (preferable) to clear the bacteria and check that the colostrum appears normal. It may be thicker and yellower than regular milk but should be free of clots or blood. After that, use one hand to hold a clean container while you milk the doe with the other hand until you have enough colostrum for her kids. If you have "teat dip", dip each teat in a small container of it to disinfect them when you are done. Otherwise, wash and dry the doe's udder.

Step 8: Strain hair and dirt from the colostrum with a strainer, cheesecloth or paper towel. Store the colostrum in a refrigerator for immediate use or freeze in an ice cube tray for future needs.

STEPS TO BOTTLE FEEDING

Step 1: Warm clean milk or colostrum to roughly 105° F. Colostrum will coagulate and turn into cheese if heated too fast. It is best to use a double boiler or water bath to slowly heat colostrum and stir it constantly.

Step 2: Pour milk or colostrum into a small bottle (beer, soda pop or baby bottle). Attach a small, soft nipple (check opening and “X” the opening if needed).

Step 3: Check temperature of the milk by dribbling it on the inside of your wrist. It should feel just a little warmer than your body temperature. Wrap the bottle in a towel or insulated sleeve.

Step 4: Drape the kid across your lap or over your knees. Rub the kid’s flank and tail to stimulate the kid to suck. You can also loosely cover the kid’s eyes with your arm to simulate the kid being under his dam’s belly to encourage the kid’s instinct for nursing.

Step 5: Pry open the kid’s mouth gently and put the nipple in. Stroke the kid’s throat to get the kid to swallow. Jiggle the bottle without tilting it too high to try to get some milk to flow into the kid’s mouth. If the milk gets too cold, reheat it and keep trying until the kid gets the hang of drinking from a bottle.

A SAMPLE FEEDING SCHEDULE FOR ORPHAN KIDS

Day 1–2 = about 2.5 to 3 fluid oz of colostrum per lb live weight broken into multiple small meals (i.e. an 8 lb kid should be offered about $3 \times 8 = 24$ oz in the first 24 hrs. For example, 3 feedings of 8 oz each or 4 feedings of 6 oz each. One cup = 8 oz. Very small kids generally require more frequent feedings and smaller amounts of milk per feeding than large, strong kids. For example, 6 feedings of 2 oz every 4 hours.

Day 3–7 = 1 ½ pints to 1 quart of milk broken into two or preferably three feedings daily. Very small kids may drink less per feeding. Do not force the kid to drink more than he/she wants. One **milk recipe** some producers use at this young age if short on goat milk is 1 gallon of pasteurized whole cow milk with 2 cups removed and replaced with 1 cup of buttermilk and 1 cup of evaporated (not condensed) milk.

Day 8–14 = 1 quart of milk (can gradually increase up to 1 ½ quarts) broken into 2 or preferably 3 feedings daily. Gradually switch kids to a “lambar” if you are bottle feeding several kids at one time.

Week 2–10 = 1 to 2 quarts of milk broken into 2 to 3 feedings. The amount depends on quality of the concentrate and forage offered, and availability and cost of milk. Kids exposed to cold weather usually require more frequent feedings and more milk in total than kids reared under warm or moderate conditions.

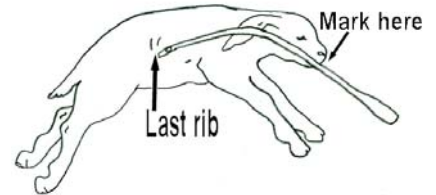
Please note – If feeding milk replacer, follow mixing directions on label. If feeding milk, keep in mind that pasteurization will kill the organism that causes Caprine Arthritis Encephalitis but will not kill the organism that causes Johnes disease. Avoid using milk from carrier animals for doe or buck kids being reared as breeding stock.

When to stop? Ideally, kid should weigh ≥ 30 lbs and consume $\geq \frac{1}{4}$ lbs of concentrate/day before weaning.

FEEDING A KID BY STOMACH TUBE

Needed: an 18 French feeding tube, 60 cc (cc = ml) syringe, water, colostrum

1. Only if kid is able to swallow and has a body temperature of $>99^{\circ}\text{F}$. If kid is unable to swallow, administer an IP dextrose injection (see next page). If kid is cold, warm promptly (monitor temperature so kid does not get overheated) and then tube feed. Note - Giving 50% dextrose orally sometimes revives weak but conscious kids enough to start swallowing.
2. Measure the feeding tube from the tip of the kid's nose straight to the level of the last rib and mark. This length from nose to rib is the amount of tube you'll want to insert.
3. Sit with the kid on your lap facing away from you. Hold his head so his mouth is level with his eyes. Pass the tube straight down the mouth past the cheek teeth down the esophagus and into the stomach. Some resistance is normal. Stop at mark.
4. You want the colostrum to go to the stomach and not choke the kid by going to its lungs instead. If the tube is in the correct place - in the esophagus rather than accidentally in the trachea (windpipe) - you will be able to feel it by rubbing your fingers along the neck between the trachea and the neck bones.
5. Indications that it went down the wrong pipe (trachea) are: kid coughing or unable to bleat, inability to see and feel the tube, tube stopping far short of the mark, or hearing breathing when you listen in tube.
6. Remove the tube if you are in the trachea and go through steps #3 - #5 again.
7. When you know the tube is in the correct place (i.e. you can feel the tube), inject 5 cc (cc = ml) of warm water into tube.
8. If the water doesn't flow, try pulling the tube out slightly, as you may be against the stomach wall. Reposition the tube back to pre-measured mark. If still no flow, remove tube and measure again.
9. Once flow into the stomach is confirmed, fit a 60 cc dosing syringe on the stomach tube. Be sure that the colostrum is at about $102 - 104^{\circ}\text{F}$. Check with your wrist. Colostrum can be delivered by gravity, using the barrel of the syringe as a funnel, or can be injected slowly with the plunger of the syringe. *Be sure to warm up colostrum carefully using a hot water bath or double boiler set up rather than putting it directly on stove or in microwave because colostrum readily turns to cheese at high temperatures and antibodies will be destroyed.*
10. Rinse tube while tube is still in kid by injecting 5 cc of warm water into it.
11. Kink the tube by folding over the end and then pull it out of the kid while keeping the kid's head elevated.
12. Place the kid in an upright position. Prop kid up on its chest floor with a rolled up towel if necessary. (steps #11 and #12 are to avoid aspiration pneumonia).



GIVING AN INTRAPERITONEAL (IP) DEXTROSE INJECTION TO A KID

1. This procedure is for very young kids that appear alive but comatose or far too weak to swallow. It is not indicated for older, severely weakened kids.
2. Prepare a 20% dextrose solution in a sterile 60cc syringe at a dose of 10 ml/kg body weight. (There are 2.2 lbs in a kg.) For example, an 11 lb kid (5kg) needs $5\text{kg} \times 10\text{ml/kg} = 50\text{ml}$ of 20% dextrose solution. However, generally you will have a 50% dextrose solution. Since $20/50=0.4$, you multiply $0.4 \times 50\text{ml} = 20\text{ml}$ of 50% dextrose. You will dilute the 20ml of 50% dextrose with 30ml of boiled water to get 50ml of 20% dextrose. An 8 lb kid needs about 35 – 38 ml of solution (14 ml of 50% dextrose to 21 cc of boiled water) in a sterile 35 cc syringe. A 5 lb kid needs about 25 ml of solution (10 ml 50% dextrose to 15 ml of boiled water).
3. Warm solution to $\sim 104^{\circ}\text{F}$.
4. Hold the kid up by its front feet and let kid hang from your arm or between your legs.
5. Locate your targeted injection site, 1 inch below and to the left of the umbilicus (where the umbilical cord enters belly) and clean if visibly dirty. You can use a marker to circle the site.
6. Using a sterile 19 or 20 gauge 1 inch needle (not on the syringe), enter the peritoneal cavity at a 45° angle aiming down towards the pelvis.
7. If blood, colostrum, or other fluids leak out of the needle hub, you have probably gone through an abdominal organ rather than into the intraperitoneal cavity. Pull out, get a new needle, and try again.
8. Please note, there is a risk for the kid of infection when you put the needle in alone because air can escape down into the body cavity. If you are sure the kid has not eaten, it is probably better to put the syringe directly on the needle. The disadvantage with this method is that if you pull back on the syringe and there is blood or colostrum in it, you will contaminate the dextrose solution and need to start over with a new batch and a new sterile syringe.
9. Once the needle is inserted without fluids being seen, attach the syringe to the needle and gently pull back to double check for blood, etc. Inject warm solution at roughly a 45° angle towards the rump (if a lump forms, the needle is only under the skin and needs to be deeper). Afterwards -warm kid up and give warm colostrum or milk, whichever is appropriate, when he/she revives.
10. To discourage possible infection from the IP dextrose injection, treat the kid with antibiotics SQ afterwards based on your veterinarian's recommendations.



HELPFUL RESOURCES

Suggested Readings

Goat Health Handbook by *Thomas R. Thedford, DVM*, Winrock International, 1983 – nice methodical tables on identifying diseases

Goat Husbandry by *David Mackenzie*, 4th edition, Faber and Faber, 1980 ISBN 0-571-11322-2 Pbk – old standard with excellent kidding descriptions

Goat Medicine by *Mary C. Smith and David M. Sherman, DVMs*, Lea & Febiger, 1994 – excellent for the medically inclined and the veterinarians you work with

Raising Meat Goats by *Sara Emond* – ISBN0#0-7732-6119-2, 1994 – excellent kidding drawings

Raising Meat Goats for Profit by *Gail Bowman*, 1999

Storey's Guide to Raising Meat Goats by *Maggie Sayer*, 2007

Your mentor's suggestions and comments:

Equipment Supply Catalogs

Caprine Supply, P.O. Box Y, DeSoto, KS 66018, 800-646-7736, www.caprinesupply.com

Hoegger Supply, 160 Providence Rd, Fayetteville, GA 30215, 800-221-4628, www.thegoatstore.com

Nasco Farm & Ranch, 901 Janesville Ave., Fort Atkinson, WI 53538, 800-558-9595, www.eNASCO.com

Premier Equipment, 2031 300th St., Washington, IA 52353, 800-282-6631, www.premier1supplies.com

Sydell, 46935 SD Hwy. 50, Burbank, SD 57010, 800-842-1369, www.sydell.com

Fencing Supply Catalogs

Kencove Fence, 344 Kendall Rd., Blairsville, PA 15717, 800-536-2683, www.kencove.com

Premier Fencing, 2031 300th St., Washington, IA 52353, 800-282-6631, www.premier1supplies.com

Veterinary Supply Catalogs

Jeffers, P.O. Box 100, Dothan, AL 36301, 800-533-3377, www.JeffersLivestock.com

Valley Vet, 1118 Pony Express Hwy, Marysville, KS 66508, 800-419-9524, www.valleyvet.com

Wholesale Veterinary Supplies, 800-435-6940

Your Mentor's suggestions and comments:

Important phone numbers

Your veterinarian:

Your mentor:

Nearby farmers or friends with animal birth experience:

USDA Scrapie ID Program and Animal Health Center: 518- 858-1424

Others:

GESTATION TABLE

The time from breeding to kidding is called gestation and is usually 145 to 155 days*

Breeding Date	Kidding Date	Breeding Date	Kidding Date
January 1	May 30	July 5	December 1
6	June 4	10	6
11	9	15	11
16	14	20	16
21	19	25	21
26	24	30	26
31	29	August 4	31
February 5	July 4	9	January 5
10	9	14	10
15	14	19	15
20	19	24	20
25	24	29	25
March 2	29	September 3	30
7	August 3	8	February 4
12	8	13	9
17	13	18	14
22	18	23	19
27	23	28	24
April 1	28	October 3	March 1
6	September 2	8	6
11	7	13	11
16	12	18	16
21	17	23	21
26	22	28	26
May 1	27	November 2	31
6	October 2	7	April 5
11	7	12	10
16	12	17	15
21	17	22	20
26	22	27	25
31	27	December 2	30
June 5	November 1	7	May 5
10	6	12	10
15	11	17	15
20	16	22	20
25	21	27	25
30	26	31	29

* This table assumes a 150 day gestation period

Remember, it's easier to anticipate due dates if you know breeding dates!
A marking harness can really help with this.

ACTIVITY # 5 – Your Own Photo Album

Try to follow at least one kidding through from start to finish taking photos of the different stages – due to circumstances you may find that you will actually have to take pictures off and on throughout a few births in order to get pictures of the whole procedure. It's hard to take a photo of yourself dipping a cord! Paste photos on following pages.

Kidding Season Mentee Questionnaire

Year 20__

1. How many mentors did you have? _____
2. How many kiddings were you able to observe? _____
3. In total, about how much time did you spend at mentors' farms? _____
5. Did any mentor visit your farm? ____ If yes, total time spent _____
6. How much time did your mentors spend mentoring you by phone? _____
7. Rate how helpful you felt the following experiences were to you from a score of 1 to 4 ---
(1 = very helpful, 2 = helpful, 3=somewhat helpful, 4 = not helpful, X= mentee did not do that activity)
- a. Going over the mentoring booklet _____
- b. Listening to advice from the mentor on goat management and kidding _____
- c. Doing Activity #1 (identifying skills they want to learn and questions they want answered) _____
- d. Doing Activities #3 & #4 (checking off supplies and filling out management calendar) _____
- e. Doing Activity #2 (looking at pregnant goats and guessing the next three due to kid) _____
- f. Doing Activity #5 (taking pictures of a kidding for future reference) _____
- g. Observing goats kidding _____
- h. Helping with on-farm tasks _____

Explains of what kept you from doing some of these activities:

8. What on-farm tasks did you help the mentor with?
9. Reviewing the list you made of tasks you wanted to learn –
Were you satisfied with how well your original list of questions answered _____
(1=extremely satisfied, 10=totally unsatisfied)

Were you satisfied with your exposure to the tasks that you had hoped to learn _____
(1=extremely satisfied, 10=totally unsatisfied)
10. How satisfied were you with the kidding mentoring program from a score of 1 to 10 _____
(1=extremely satisfied, 10=totally unsatisfied)
11. How could the program be improved for mentees? Give concrete examples if possible.
12. How could the program be improved for mentors? Give concrete examples if possible.
13. How satisfied were you with the mentoring booklet from a score of 1 to 10? _____
(1=extremely satisfied, 10=totally unsatisfied)
14. How could the booklet be improved? Give concrete examples if possible.
15. What part of the kidding mentoring experience was most rewarding to you?
16. Would you recommend this program to other new meat goat producers? _____

Kidding Season Mentor Questionnaire

Year 20__

1. How many years have you raised goats? _____
2. About how many pregnant does were in your herd this year? _____
3. How many kidding season mentees did you have?
4. On average, how much time did you spend mentoring each mentee at your own farm? _____
5. Did you spend time mentoring your mentees at their farm? ____ If yes, average time spent _____
6. On average, how much time did you spent mentoring each mentee by phone? _____
7. Rate how helpful you felt the following experiences were to your mentee from a score of 1 to 4 ---
(1 = *very helpful*, 2 = *helpful*, 3=*somewhat helpful*, 4 = *not helpful*, X= *mentee did not do that activity*)
 - i. Going over the mentoring booklet _____
 - j. Listening to advice from the mentor on goat management and kidding _____
 - k. Doing Activity #1 (identifying skills they want to learn and questions they want answered) _____
 - l. Doing Activities #3 & #4 (checking off supplies and filling out management calendar) _____
 - m. Doing Activity #2 (looking at pregnant goats and guessing the next three due to kid) _____
 - n. Doing Activity #5 (taking pictures of a kidding for future reference) _____
 - o. Observing goats kidding _____
 - p. Helping with on-farm tasks _____
8. What on-farm tasks did the mentee help you with?
9. How satisfied were you with the kidding mentoring program from a score of 1 to 10 _____
(1=*extremely satisfied*, 10=*totally unsatisfied*)
10. How could the program be improved for the mentee? Give concrete examples if possible.
11. How could the program be improved for the mentor? Give concrete examples if possible.
12. How satisfied were you with the mentoring booklet from a score of 1 to 10? _____
(1=*extremely satisfied*, 10=*totally unsatisfied*)
13. How could the booklet be improved? Give concrete examples if possible.
14. What part of the kidding mentoring experience was most rewarding to you?
15. What benefits, if any, do you think the kidding mentoring program provided to you?
16. Would you recommend this program to other potential mentors? _____