

# Small Ruminants for Technicians

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## Abstract

Goats and sheep have traditionally been production animals and continue to provide meat, milk, and clothing worldwide. However, the pet sheep and especially the pet goat have become much more common than even 10 years ago. Basic husbandry, handling, and common diseases of goats and sheep are discussed.

## Résumé

Les chèvres et les moutons sont traditionnellement considérés comme des animaux de production qui continuent de fournir de la viande, du lait et des vêtements partout dans le monde. Néanmoins, des moutons de compagnie et surtout des chèvres de compagnie sont beaucoup plus fréquents qu'il n'y a même pas 10 ans. L'élevage, le maniement et les maladies fréquentes des chèvres et des moutons sont discutés.

## Behavior

Both sheep and goats are gregarious animals, preferring to be with the herd/flock rather than being alone. Isolating a sheep or goat will be expected to cause a significant amount of stress. Therefore, bringing a companion along is a good idea. It has been said that, "A sick sheep is a dead sheep". This saying is generally true, as sick sheep will continue to move with the flock until they are too weak (near death) to keep up. If one observes an isolated sheep or goat, there is probably something wrong.

Young bucks and rams can be playful, and like female sheep or goats, are not really very dangerous. However, never turn your back on a mature buck or ram, especially if they are in the same pen as the females.

## Handling

Sheep can be difficult to catch but because of their "bunching" nature, one can usually catch the selected sheep by bunching them into a corner and rushing in. The key to hanging onto a sheep once it is caught is to keep a hand under the sheep's chin and keep the head up. If the sheep is to be examined, back the sheep's rear into a corner and straddle the sheep's neck while keeping your hands under the sheep's chin.

Although some goat owners prefer that the goat's horns not be used for handling purposes, the horns are natural handles. In addition, the horns, because most are pointed, can be dangerous and should be held

anytime a person's head is near the goat's head. Goats without horns can be handled like sheep. Some bucks have been trained to be handled by their beards.

## Physical Examination Basics

- Rectal temperature: sheep 102-104°F (38.9-40°C); goat 101.5-104°F (38.6-40°C). Both hot days and the process of catching the sheep or goat can elevate the rectal temperatures to > 105°F in a very short period of time.
- Pulse: the heart rate of both goats and sheep is typically 70-110 beats per minute but again, the processing of catching these animals can elevate the heart rate considerably.
- Respiration: the respiratory rate of both species varies considerably, but ranges from 15 to 70 breaths per minute. Panting respirations due to exercise can result in respirations greater than 70 breaths per minute.
- Rumen: rumen contractions should occur from 1-3 times per minute.
- Cud chewing: in general, cud chewing is a sign of a healthy animal.
- Manure: both species have formed "berries".
- Mucous membranes: mucous membranes should be dark pink. Pale or white mucous membranes indicates anemia.
- Aging: both species have four sets of incisors. The middle set (or first set) of incisors erupt at one year of age, and each subsequent set indicates another year. Thus, we can fairly accurately age a small ruminant through four years of age. Baby incisors are small when compared to mature incisors.
- Obtaining urine: urine in female sheep and goats can be obtained by holding off the breath of the female for 30-45 seconds.

## Herd Health

- Vaccines: there are numerous vaccines labeled for sheep and fewer vaccines labeled for goats. The basic vaccination to start with is *Clostridium perfringens* C, D & T, where C & D are toxins of *C. perfringens* and T stands for tetanus. Other vaccines may be added to the herd health program if deemed necessary.
- Parasites: routine deworming is no longer an acceptable practice as parasite resistance has become quite common. Fecal floatation and or

mucous membrane observation should be used to determine if deworming is necessary.

- Foot trimming: even when sheep and goats have access to abrasive surfaces, some will need periodic foot trimming to help prevent lameness.
- Dehorning: in general, goats should be dehorned at less than two weeks of age. Dehorning by hot iron is usually the best method, as it is less likely to result in scurs. However, leaving the hot iron on the skull too long can result in fatal meningitis.
- Castration: castration of the males early in life will decrease the size of the urethra and predispose them to urinary calculi. However, many are castrated at a young age when castration is considerably less stressful to them...so this is really a trade-off. Yet, if a young goat is to be a pet, I'd recommend allowing it to mature prior to castration.

### Nutrition

Sheep and goats are ruminants and their primary feedstuff should be roughage. Both species will forage among brush and weeds if given the chance. Grain is necessary in some cases (show stock, females in the last trimester, milking females, source of energy during winter months); however, grain can cause problems and should not be fed unless absolutely needed.

### Reproduction

The gestation period is around 150 days for both species. In general sheep and goats are short-day breeders and some breeds do not cycle during long days (summertime). Multiple births are more common than singles for most breeds.

### Common Diseases and Problems

- CAE (caprine arthritis encephalitis): this is the primary differential for older goats with arthritis. The encephalitic portion of the disease occurs in the young and is uncommon.
- Caseous lymphadenitis: this disease is the most common cause of enlarged lymph nodes and is highly contagious. It occurs in both sheep and goats.
- Coccidiosis: this is probably the second most common reason for diarrhea in the young small ruminant. The most common reason for diarrhea would be worms.
- Footrot: a classic sign of footrot is the goat or sheep grazing from their knees. Footrot is easily treated with antibiotics.
- Mastitis: the two most common agents of small ruminant mastitis are *Staphylococcus aureus* and *Mannheimia hemolytica*. Hard bag is a viral or viral-like disease that occurs in both sheep and goats that doesn't adversely affect the animal other than causing decreased milk production. The udder will look normal, but be rock hard.
- Urinary calculi: this disease occurs predominantly in males and is often due to excessive or unnecessary feeding of grain. The condition can result in rupture of the urethra (which usually means the end of reproduction for the intact ram or buck) or rupture of the bladder. Surgery is almost always necessary to treat this condition.
- Dystocia: lambing or kidding difficulties do occur, and are mostly due to malposition of the fetus. The majority of these can be successfully managed without surgery if intervention occurs in a timely fashion.
- Grain overload: both sheep and goats will eat too much grain if given the opportunity. The outcome can be fatal.
- Listeriosis: this bacterial disease is one of the most common neurologic diseases seen in sheep and goats. It usually affects the brain stem, more specifically cranial nerves. It can be treated successfully if treated early in the course of the disease.
- Polioencephalomalacia: this is the other common neurologic disease of sheep and goats and is usually due to a B-vitamin deficiency (thiamine). It can also be treated successfully if treated early in the disease course.
- Lice: lice tend to be fairly common in goats, and less common in sheep.
- Orf: orf or soremouth is similar to a fever blister. Humans can catch this disease from sheep or goats, and it is very painful.
- Vaginal prolapse: vaginal prolapses seem to be much more common in sheep than in goats. Vaginal prolapses tend to occur prior to lambing. These are not emergencies but need to be replaced. Vaginal prolapses will occur again... thus these females should be culled.
- Rectal prolapse: rectal prolapses tend to occur due to colitis or coughing. These are not emergencies but should be replaced and purse-string sutured as soon as possible because they are much easier to replace when fresh.
- Uterine prolapse: a uterine prolapse is an emergency. These only occur after lambing or kidding, and are often the consequence of a dystocia.
- Fly strike: maggots: this is one of the reasons that tail docking of sheep is beneficial. It is also another reason to shear yearly.

## Conclusions

Sheep and goats can be fun to work with and a basic understanding of behavior, handling, herd health, physical examination, nutrition, and reproduction will

instill confidence in the technician who interacts with the client. Knowledge of the common diseases and problems associated with your small ruminant practice area and the willingness to work with small ruminants will certainly help to build this area of a practice.