



BURNT FORK VETERINARY CLINIC

Small Ruminant Info Sheet

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Whether you're a new owner of a camelid or small ruminant or you've just moved here with your flock, we'd like to provide you with some helpful information about raising sheep, goats, llamas and alpacas in the Bitterroot Valley. While many of these tips would apply to large flocks in "production" facilities (where animals are raised to provide meat or milk), this pamphlet generally addresses "non-production" situations (meaning ten animals or fewer) and those kept as pets.

Facilities and Housing

The best type of fencing for camelids and small ruminants (especially sheep and goats) is "field fencing" (woven wire), "two-by-four" welded wire, or hog- or cattle-panels. Electric fencing is often adequate for cross-fencing (within an enclosed field), but it will not keep out predators like coyotes and free-roaming dogs. If you are fortunate enough to have pastureland, your animals can run on it year-round, provided you manage it appropriately to avoid overgrazing. Animals rarely crop pasture growth evenly but will pick and choose from what's growing, often preferring shorter new-growth to longer stemmed, mature plants. As "browsers" rather than grazers (meaning they'll eat forbs and woody plants as well as grasses), goats make great weed-eaters, but they have to be concentrated in small areas for extended periods to be effective; otherwise, they'll just sample a little of everything and move on to other available food. To prevent overgrazing of the most desirable areas, pasture should be divided up into smaller "paddocks" so your animals can be rotated to a new piece, allowing the grazed piece to recover. If you have a "dry lot" (meaning no pasture), then you will need to offer a good quality hay for your animals, and feed tubs or feeders to prevent hay-waste.

While it is not absolutely necessary to provide buildings for your animals, most will make regular use of the shelter. If you are breeding animals who will be having offspring during cold weather, an enclosed barn is essential for ensuring the health of both mamas and babies. For non-producing animals, an open-fronted building (or "lean-to") will be an adequate haven from wind, rain and snow. Also, sheep, llamas and alpacas—with their heavy wool—need shade during the hotter summer months and will appreciate having at least a lean-to for protection from the sun.

If animals become ill (especially in the winter), you will need to confine them in order to monitor what goes in one end and out the other. By having a space to confine a sick animal, you'll know whether they're eating and drinking (and how much). In wintertime especially, this will require having electricity in the barn or nearby for lights, heat lamps and water heaters. A

facility equipped with water and electricity will also make it much easier for you to confine and handle your animals for regular husbandry chores like deworming, vaccinating, shearing, and hoof-trimming. Since we can't (usually) teach small ruminants to sit! or stay! like we can with dogs, in the event that your veterinarian needs to treat your animals at your facility, you will need sturdy and adequate means of restraining them. An enclosed barn and/or pens with solidrail fencing are essential for most veterinary procedures.

Feeding

As browsers, goats and camelids prefer many types of plant species besides grass. In fact, a variety of forage—as well as having hay available all year round—will help them maintain a healthy rumen (gut). Sheep tend to eat grass primarily, and—like goats—graze selectively, preferring the higher quality portion of the plant. (1)

When feeding hay, you will need to limit the feed to what your animals will consume in a day, as all small ruminants will readily waste excess feed. Allowing your animals to become overweight is an invitation for many health problems, including laminitis and bladder stones. (This latter condition is especially common—and deadly—in neutered male goats.) If you have never purchased hay before, take someone with you who is knowledgeable about hay type and quality. Know the weight of the bales or have a scale to weigh the feed to ensure feeding the appropriate amount. In general, non-production ruminants need to consume at least three to five percent of their body weight each day. However, just like with humans, every animal utilizes feed uniquely, so this must be considered a guideline to start with. The exact amount you end up feeding will depend on how much energy your animals require, as well as external factors like weather and pasture availability. Using this guideline will require you to have an accurate weight for your animal. It's fairly easy to visualize the body condition (or "body score") of most shorthaired goats, but animals with wool or fiber will require a hands-on assessment. Heavily-wooled animals can be much thinner than they appear, so touch their backs and ribs to get a more realistic body score.

With most small ruminants, feeding **grain** is unnecessary, as long as good quality roughage (i.e. hay or pasture) is available in adequate amounts. Production animals (pregnant, lactating or meat-building) are the exception to this rule. Many people feed grain, often to the detriment and even demise of their animals. Grain needs to be fed with caution, and because of this, I generally recommend feeding a grain mix designed specifically for that species. With any small ruminant, grain should be fed in small amounts and weighed to ensure accuracy of measure. If you're unsure how much or what grain supplement to feed, ask your veterinarian! Also, be cautious of advice from feed store personnel, as they may mean well but sometimes give incomplete information. Consult with your veterinarian or with a knowledgeable animal producer instead.

In our mineral-deficient valley, **mineral supplementation** is crucial but must be done knowledgeably, as over-supplementing is dangerous. We recommend offering a **loose** mineral (rather than a mineral block) and plain loose or block salt (not trace-mineralized or iodized). This means offering both salt and mineral but not in a combined form, unless specifically prescribed by your veterinarian (certain mineral products are designed to be mixed with salt). Nutritionists will tell you that—due to the mineral deficiencies in the soil and feed raised here

in the Bitterroot—small ruminants cannot spend enough time licking a mineral block to consume an adequate amount to meet their nutritional needs. A salt-and-mineral block can contain an unpalatable amount of salt, preventing the animal from consuming as much mineral as it needs. Also, many of the mineral blocks sold in feed stores for goats and sheep contain a large amount of molasses and can cause weight gain in your animals. Choose the mineral that is designed specifically for the species you own. Sheep and goats are sensitive to copper, and the amount of this mineral in supplements meant for cattle and horses can produce fatal toxicity for those small ruminants. Additional care should be used with mineral supplementation for bucks and wether goats, as the development of urinary calculi (bladder stones) in these animals can be linked to the over-consumption (or over-supplementation in feed) of minerals.

Access to clean **water** is—of course—necessary for all animals, but it is especially essential for wether (neutered) goats and sheep. Increasing water flow through the animal helps reduce the chance for crystal formation in its urine. An accumulation of old, loose hay in water tanks can leach minerals, again leading to the possibility of mineral overload and stone formation. Ice is not water, and small ruminants cannot maintain a healthy gut in winter by just consuming snow or ice. They **MUST** have water available, so build your housing facility with electricity nearby to keep ice out of your water tank.

Parasites

Intestinal parasites are a common, often debilitating and sometimes fatal problem in sheep and goats. Animals that are pastured on irrigated ground are at greater risk for severe infestations. Because needs and situations vary greatly in the Bitterroot Valley, it is important to consult with your veterinarian regarding a deworming program suitable to your farm. Improper deworming practices in the past have created resistance among intestinal parasites to the dewormers currently available, making it more important than ever to deworm strategically. This means deworming only when necessary and managing pastures appropriately to minimize parasite contamination. There is no general rule for deworming small ruminants and camelids. A fecal examination—performed by your veterinarian—is the only measure that will allow you to properly control intestinal parasites in your animals and on your farm. Your veterinarian can make recommendations for the products you need use and can advise you on pasture management practices for your specific facility. Because older (senior) and younger animals are more susceptible to parasite infestations (and more likely to die from being heavily parasitized), parasite management is a crucial part of caring for your animals.

External parasite management—especially lice—in small ruminants can also be challenging. Maintaining clean jugs (including regularly changing the bedding) is vital to ensuring the good health of all your animals, but lice prefer to live on the animals. They are species-specific—sheep lice prefer sheep over any other animal (including humans), goat lice prefer goats, etc. They are particularly fond of the warm darkness beneath a sheep or goat's heavy wool along and adjacent to the spine. Many sheep farmers in the Bitterroot shear their herd in February or March —before lambing—just when lice populations are at their peak. Removing this cozy habitat appears to minimize the problem for sheep owners here, but unfortunately, most goat owners in this valley find lice infestations in their animals to be a perennial problem, especially with heavier-coated breeds like Boers and Nigerian Dwarfs. The

lice themselves are so small you usually won't see the actual parasite. A "lousy" goat (one infested with lice) will rub on fencing, gates and bushes—anywhere it can to relieve the itching. The goat's coat, especially along the spine and back of the neck, will be dry and flaky with dandruff. Brushing out the old, wooly undercoat can help, and shaving the saddle area may be necessary for heavier coats. (If you choose to shave your goats, please see the cautions about sunburn in the section on shearing below.) Bathing the animal will help to loosen the shedding wool and make it easier to remove. Cylence Pour-on Insecticide by Bayer is an effective treatment to use (after grooming or shearing, if possible) to control the remaining lice population. It is safe to use on pregnant does, and there is no withdrawal time for milk and only one day for meat. The dosage for administering Cylence as a pour-on for goats is 1cc per 25 pounds of animal weight, applied once a week for two or three weeks, depending on the severity of the infestation. You can use clean (needle-less) syringe for more accurate measuring, and be sure to part the goat's hair when applying to ensure direct skin contact.

While lice aren't much of a problem for sheep in the Bitterroot, new sheep owners should be aware of another parasite common to sheep: **keds**. This large, wingless fly spends its entire life on the host (sheep), surviving only a short time off the animal but are able to spread when sheep are closely confined (in barns in the winter, at fairs and livestock shows, etc.). Adult keds bite the sheep and feed on the blood, usually on the neck, shoulders, breast, rump and flanks, causing puritis (inflammation) over much of the body. Infested sheep will rub and bite themselves, damaging their wool, and may lose weight and vigor, failing to thrive. Excrement from the keds leaves a permanent brown coloration which devalues the wool. 2 Many woolsheep show events require treating the sheep for keds in a certain timeframe prior to the show. Products containing pyrethroids—including spot-ons, pour-ons and dusts—are available from local feed stores for this purpose, and treatment is usually done at (or shortly after) shearing. An experienced wool-sheep producer can advise you on application preferences and product effectiveness.

General Health Care

Small ruminants and camelids are generally **vaccinated** once a year; however, young or unvaccinated animals need a series of two vaccinations, given one month apart. The CDT vaccine covers the three most common clostridial (tetanus family) diseases and is available over the counter at feed stores and in some pharmacies. Consult your veterinarian for other vaccines available that may be necessary for your animals, depending on herd numbers and intended use of the animal.

Many new owners begin their farming adventures by acquiring young animals. If you purchase (or are given) an orphaned or small triplet or quadruplet lamb or kid, there are several questions you will need to ask the owner:

1. Did the animal receive either **colostrum** from the mother ("dam") or an artificial version? Colostrum is the first milk the dam produces. It contains life-saving antibodies that protect small ruminant and camelid offspring, as well as essential building blocks for the rumen that will affect the animal's immune system and overall health for the rest of its life. A lamb or kid that does not receive colostrum in the first 48 hours of its life will not thrive and is unlikely to live long before succumbing to disease.

2. Was the mother **vaccinated** with CDT? If she was, then her baby will be protected from most common diseases for a period of time after birth—as long as it received her colostrum.
3. How **old** is the baby and **how much** (and how often) is it being fed?
4. If your new ruminant is an older, orphaned lamb, ask (or look) to see if testicles have been **banded** or his or her tail has been **docked**. If you're starting your farming experience with a goat kid, again check to see if a male is banded, and ask about disbudding (removing the horn buds—both male and female goats can have horns). Goats grow large horns and learn to use them, becoming dangerous, no matter how gentle they may seem. Mature horns can get caught in fencing or dislodged in interactions with other goats, leaving a bloody mess. Some producers disbud their own goat kids, and others have a veterinarian do it. The buds develop quickly into horns, which can only be removed surgically by a veterinarian, so the disbudding should happen as soon as the buds are palpable. The process, which generally involves use of a local anesthetic and an electric dehorner, is not pleasant, but the kids recover quickly, and the short period of trauma is a small price compared to the potential trouble of a horned goat.

Unless your facility consists of dry, rocky ground, you will need to trim the feet of your small ruminant or camelid, probably several times a year. If you neglect your animals' feet, they can develop lameness and foot infections, which are more difficult to deal with than regular maintenance. How often you need to trim will depend on the conditions of your facility, as well as the genetic tendencies of your animals. Hooves are much easier to trim when conditions are damp (e.g. in the rainy months, rather than the dry heat of summer), so plan ahead.

The warm weather of summer here in the Bitterroot Valley makes **shearing** a necessity for the comfort and health of any heavily-wooled animal. The only exceptions to this rule are short-haired goats and hair sheep (like Barbados). Choose a time in April or May, before the sun becomes too intense. Shearing too late into the season risks subjecting your animals to sunburn, which can cause third-degree burns and irreparable skin damage. If you cannot shear your animals until summer, leave enough of a layer to protect the skin. Some individuals who shear sheep will also shear llamas and alpacas. Since alpaca fiber is valuable, we recommend having a specialist do the job. Your veterinarian can help you find an experienced shearer or you can find a list of shearers and their phone numbers at www.montanasheep.org.

Bibliography

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