



**LLAMA
HOUSING
AND
FENCING**



*International Lama Registry
Educational Brochure #5*

Although their original habitat is the arid, high-altitude regions of the South American Andes, llamas are quite adaptable, and with good care they are thriving in climates from Florida to Alaska, Europe, Great Britain, Australia and New Zealand. Llama facilities need not be elaborate, but adequate shelter and fencing are necessary. When planning housing and fencing, the animals' health, safety, and comfort are major concerns, as is the convenience of their caretaker. The more easily daily maintenance is done, the more time there is for training and enjoying one's llamas.

SHELTER AND HOUSING

Climate largely governs the type of housing needed for llamas. Some kind of shelter in the form of trees, sheds, or barns is necessary.

In considering the type and size of shelters needed, it is important to keep in mind that llamas treasure their freedom to come and go. They are more apt to use shelters with large doors or windows that give a feeling of openness than dark stalls or sheds which give the feeling of being shut in.

A general guide to the minimum shelter space for compatible pasture-mates is that five adults or seven yearlings shelter nicely in an open 12 x 16 foot shed, and six mothers and babies fit comfortably in a 16 x 16 foot shed. The key is congeniality. If an animal is forced to stay outside, it may suffer. Some owners successfully house with even greater density, especially in cold weather conditions.

In warm climates shade is essential, as llamas may suffer heat stress and even heatstroke, when the temperature rises, especially if the humidity is also high. Although they sometimes lie stretched out in the sun when it is very hot, they will more often seek shade and other means of cooling themselves. In areas of high temperature (110°F) or high summer humidity, llama owners have successfully maintained their animals by providing sprinklers, misters, streams, ponds, and plastic wading pools for cooling. An area under shade with deep sand kept damp is effective. Young shade trees should be fenced or wrapped with wire to prevent debarking by nibbling llamas. Large fans used in a shaded area have proven useful.

In rainy climates where the ground may remain soggy for long periods of time, llamas should have housing and holding areas where their feet can dry

out every day, preferably where their hay and water are provided. This should avoid a possible "foot rot" condition, which, though not common, is very difficult to heal.

Cold climate housing varies considerably, depending upon weather severity and relative wooliness of the llamas. It is a common misconception that the llamas' native high altitude habitat is very cold. The Andes' proximity to the equator provides average extreme temperatures of 20 to 55°F. Although it commonly freezes at night, the temperature rarely falls below 10°F.

In climates where temperatures do not drop lower than 15°F for long periods of time, three-sided wooden "loafing" sheds are usually sufficient. They should be oriented to afford maximum protection from prevailing winds and storms. In regions where cold temperatures range frequently from -20 to 15°F, large barns or enclosed shelters provide the best protection. Under these conditions, less woolly llamas need special consideration and should be watched for signs of hypothermia. Where temperatures remain below -20°F for extended periods, insulated and heated barns are commonly used for all livestock, including llamas. Enclosed barns should have adequate ventilation for fresh air and good straw bedding for warmth and cleanliness. When unprecedented cold spells occur in regions without heated barns, essential body heat can be preserved by forcing compatible llamas to cluster close together in barns or sheds. Provide extra feed during cold weather when additional calories are needed to maintain body condition. Older, or sick, llamas may need a warm coat during a particularly cold period.

In any climate it is useful to have at least one stall where a mother and newborn baby or an ailing member of the herd can be confined. A pair of heat lamps mounted on the walls will help warm a baby born in cold or damp weather and may prevent frostbitten ears. Heat lamps should be firmly anchored and mounted high enough so an adult llama cannot singe itself. Baby llamas must learn about their creature comforts and should be watched closely the first week or two, if born during extreme weather conditions. Even a normal, healthy baby may need protection of a coat or jacket in the first two weeks during very cold, snowy or rainy weather.

FEEDING FACILITIES

While most llamas seem to prefer feeding outdoors, they do not like wet hay. Waste can be avoided if some feeding mangers are located indoors for wet weather use. Hay racks with a catch tray below work fine for grass hay, but llamas will waste less hay if flat-bottomed feed bunks at least 2 feet wide are used. To decrease chances of their picking up parasites, llamas should not be fed on the ground or near dung piles.

Llamas need a regular supply of clean water. In subfreezing temperatures, electric floats or submersible stock tank heaters are necessary.

CATCH CORRALS AND CHUTES

For ease in managing one's herd, small catch corrals or pens are necessary. To facilitate catching individuals or groups of llamas for training, brushing, vaccinating, nail-trimming, etc., build catch corrals in the area the llamas are accustomed to entering for food and shelter.

A chute built into a corner of a small corral aids the handling of routine health procedures and medical emergencies. Several portable restraint chutes designed especially for llamas have been developed, but a simple chute can be built using sturdy wooden posts and two fence poles for each side. The chute should be about 2 feet by 5.5 feet, with the top pole about 45 inches from the ground, and located so that the llama is accessible from all sides. It need not open at the front, since llamas easily learn to back out. If desired, removable plywood side panels can be wired to the side poles to form solid walls.

Depending upon the arrangement of the barns and corrals, sorting gates are also helpful in controlling the movement of animals between the corrals and separating out individuals. In addition, it is often desirable to have large holding pens or small pastures surrounding the catch corrals to permit animals to be held temporarily without confining them to a small catch pen.

When llamas are kept with other stock such as horses, goats, or sheep, the llamas should be carefully observed to ensure they receive their fair share of feed and shelter, as greedier animals may prevent llamas from eating. If llamas are pastured with horses, it is easy to make a feeding area available only to llamas. Place a single pole across

the entrance just low enough to prevent horses from entering; the llamas will easily slip under the barrier to eat and rest without competition.

FENCING

What constitutes adequate and safe fencing for llamas varies enormously. It is often easier to caution against possible dangers and unsuitable fencing than to specify what may be best. In some circumstances a 4 foot-high, two pole fence may suffice, while elsewhere a 5.5 foot chain link or v-mesh fence might be necessary.

The nature of llamas and how they behave in given situations governs the choice of fences. Much depends upon herd size, pasture sizes and proximity, number and ages of males, females, and geldings, make-up of living-groups, the necessity of weaning babies at five to six months, and keeping young females separate from stud males until they are of suitable age for breeding.

When llamas are content in their living-groups and are left with their usual companions, even if just one other llama, they generally respect standard 4 foot fences used for other large livestock. However, llamas are very agile and can easily jump 4.5 feet when they feel the need to do so. They are equally adept at crawling under or through fences. Weanlings can be true escape artists in their efforts to rejoin their mothers, and stud males may jump or crawl under a fence to breed an available female.

As long as llamas have adequate feed within their pastures, they seldom put pressure on fences to reach more. Tasty treats such as asparagus and apple or other fruit trees, however, may tempt them.

If one stud male and a group of females are kept together there is usually little strain on fences. However, if several stud males are kept in adjacent pastures or paddocks, or next to a group of females, fences need to be more substantial. Adjacent studs may rear up, lean on, reach over and even lunge against gates or fences while "defending their territory" against neighbors. Fences and gates separating stud males should be at least 5.5 feet high.

Another factor to consider is the presence of wild or domestic predatory animals. A major threat to llamas are roaming domestic dogs, which have

killed and injured many llamas. In some areas peripheral fences must be dog-proof. Forty-eight-inch field fence set tight to the ground with one or two smooth wires running above it will usually discourage all but the most determined marauding dogs. Electric fence strung close to the ground or chicken wire partially buried around the outside fence is also an effective deterrent against digging dogs. Gates must also be made secure, as dogs will dig under them. In some areas mountain lions and bears are an increasing hazard, and a secure fence surrounding the llamas' nighttime housing and corral area is necessary. Strong, high fences with electric wires outside and at the top are the best deterrent.

It is more economical to build strong, safe fences at the beginning than to spend time and money rebuilding flimsy ones later demolished by your llamas. Wooden pole or board fences are aesthetically pleasing and are usually safe for llamas, unless there is a problem with dogs entering or young llamas crawling out. Cedar rails are attractive but llamas tend to chew on them.

Among the many kinds of wire fencing available, v-mesh is one of the safest and most durable - but also one of the most expensive. No-Climb fence is safe and strong. Chain link fence topped with either corral poles or sturdy boards works well. If it is used for interior fencing and hung without touching the ground, poles can be run along the bottom to prevent llamas from crawling under. Field fence (rolled wire), which has smaller openings at the bottom and larger ones at the top is relatively inexpensive, is flexible and easy to install on uneven terrain. Its flexibility is a safety factor, as it is quite "forgiving" if a llama gets caught in it. The heavier gauge is worth the added cost, is more durable and holds its shape better. High tensile "New Zealand" fence with several of the wires electric to keep out dogs and coyotes is being used successfully by many llama owners. However, several llamas, both young and mature, have died from "weaving" their necks through the taut wires and becoming stuck.

In some situations electric fence is useful for restraining llamas. However, the hair and hide of llamas' necks are so thick that electric fence shocks do not have much effect there. Putting one inch square pieces of masking tape every few feet along a newly installed electric fence shows the llamas where the fence is and entices them to touch it with their noses, after which they avoid contact with it. Small solar collectors to power electric fences are efficient and economical.

Several kinds of fence are best avoided. Barbed wire is potentially dangerous and is wholly unnecessary for llamas. Anywhere that single or multiple strands of wire are useful, llamas are restrained just as well by smooth as by barbed wire. Two x four inch welded mesh wire is too light weight for active males, but it may be satisfactory for peripheral fences on even terrain. Any wire fence with squares six inches or larger can cause problems, since llamas stick their heads through such openings. Therefore, when field fence or cattle panels are used for corral fences, it is safer to mount these with the smaller openings at the top and the larger openings at the bottom.

Round metal tube gates are durable and safe, but pole and heavy wood gates are also usable. In planning the location and widths of gates, the problem of the periodic removal and general management of dung piles should be taken into consideration. For cleaning up after just a few llamas, a sturdy wheelbarrow and shovel is adequate, but for larger herds, a small tractor and other mechanized equipment are very useful, and gates must allow their passage.

A FEW SAFETY TIPS

Because of their excellent eyesight and agility, llamas are not prone to injuring themselves. However, llamas of all ages tend to stick their heads through any opening including loops in dangling ropes, hay strings, slots in feed racks, gates, and fences. At about three to four weeks of age, baby llamas also go through a stage when they explore their new world by tasting and mouthing everything. Therefore, it is prudent to maintain an environment free of sharp or potentially harmful objects such as bits of plastic, baling twine, or toxic paints.

On the whole, llamas are easy to care for. If you are prepared for the more extreme situations, your llamas will be comfortable, happy, and safe, and you will easily be able to manage and enjoy them to the fullest.



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