



LLAMA HERD MANAGEMENT



*International Lama Registry
Educational Brochure #7*

Though herd management includes all aspects of dealing with and caring for your llama herd, this brochure is intended to provide information only on the physical handling and care of llamas in a typical herd situation. Other ILR brochures in this series provide more detailed information on specific topics such as nutrition, birthing and newborn care, organization of facilities and medical management.

HERD GROUPING

A llama herd is a dynamic system with subgroups requiring special treatment or separation from each other. A good herd manager must pay careful attention to these groupings, especially as the herd increases in number. Keeping a precise record of transfer of animals from one subgroup to another, breeding and birthing dates and health notes will assist in developing accurate genealogical information and in making medical decisions.

The main herd typically consists of all the females (bred or open) and their young offspring of both sexes. An adult male may be kept with this group if he is your choice for breeding to all of the females. Keep in mind that female llamas are induced ovulators without a heat cycle, thus can conceive year round. Maidens are normally bred at 14-18 months of age depending on their size and the season, but have been known to be fertile as early as four months of age. Males become potent when they are 1-3 years old.

Expectant mothers within a few weeks of their due dates are often kept together in a separate group so they can be monitored for signs of impending delivery. When possible, they should be kept in a pasture that is easily checked. No male should be kept with this group because the scent of a female approaching delivery may stimulate breeding behavior. Even geldings or juvenile males may pose a threat to the baby by attempting to breed during the birthing.

Llama babies have special nutritional needs. Many breeders provide free-choice feed supplements for babies, who begin nibbling at solid food when they are only a few days old. A creep feeder, an area which babies can enter to obtain special or additional feed without competition from adults, may be free-standing or partitioned off inside the barn. Larger llamas can be denied access by making the entrance only 30-34" high. A 4" high threshold board will keep adults from crawling through the entryway.

Babies ready for weaning should be separated from their mothers for at least one month. Weaning is

usually done when the baby is 4-6 months old, depending on its size and the condition of both mother and baby. By that time the baby is able to provide for its own nutritional needs, and the mother, who is usually rebred, may be nutritionally stressed if she must produce large quantities of milk for a nursing juvenile while supporting her growing fetus. Note that the key to weaning is separation, and either mother or baby may be removed from the main herd. Many breeders feel that removing the mother creates less stress on the baby, who remains in familiar surroundings. Separation of a pregnant mother also presents less of a management problem since she can be kept with juvenile males, geldings or even with a stud. Separation by a single fence is not adequate because the baby may nurse through the fence. Stress on both mother and baby will be reduced if they are out of each other's sight.

Juvenile males (6-24 months of age) are often treated as a separate group. These young males can cause problems in the main herd by "play breeding" the females which may trigger ovulation, and confuse or disrupt a controlled breeding program. Juvenile males should be separated from adult males by more than one fenceline, since the youngsters seem compelled to pester until they provoke an attack.

Gelded (castrated) males of any age can usually be kept together without problems. Many responsible breeders recommend gelding all males who will not be used as studs. Castration is a simple, safe and relatively inexpensive veterinary procedure which is sometimes done as early as six months of age or any time thereafter. Depending on disposition and temperament, geldings may be kept with the main herd or with any other subgroup except expectant mothers.

Whole adult males represent a real management challenge because they fight. Fighting males scream and bash into each other so violently that they may cause serious damage to themselves or to your facility. Even across a single fence they may cause enough commotion to disturb the neighbors and disrupt the peaceful atmosphere of your llama ranch. The most satisfactory way to deal with stud llamas is to keep each one separated from any other subgroup and from other studs, preferably by at least two fences. Sometimes a stud is kept with the main herd, but he may breed related females, juvenile females or females in labor, or injure young males. Some owners successfully run all males together, but they must be kept out of sight of females.

Newly acquired llamas are a subgroup for which separate accommodations may be desirable.

Depending on the information available about the health and management of the herd of origin and whether new animals have entered that herd recently, it may be wise to provide a quarantine pen or field to isolate newcomers for a reasonable period of time until their health status is certain. A quarantine area should be organized so that contact with other llamas is not possible.

HERDING, CATCHING AND HOLDING

Before attempting any procedure which requires handling untrained llamas you will want to put on leather boots to protect the top of your feet from injury if a llama accidentally steps on them with its hard toenails. Light gloves will protect your hands from incidental scrapes, and sunglasses or other protective eyewear will allow you to face a llama unflinchingly in the unlikely event of threatened spitting.

Handling llamas, moving them from one place to another, catching and holding them for examination or treatment requires a basic understanding of the species. Individual animals may react in different ways, but a few generalizations about llama psychology will help you deal with your animals more efficiently.

- Llamas are quick learners, easily conditioned, and are willing to comply with the wishes of their human handlers if the intent can be communicated and if the humans can demonstrate their control of the situation.
- Llamas are uncomfortable about abrupt movement, direct eye contact, the silhouette of a human with arms widespread and about being touched, particularly by human hands.
- Llamas have a strong tendency to move as a group when being herded.
- Llamas instinctively oppose any pressure you apply against their body. It may be valuable to realize that pushing a llama to the right will usually result in it leaning to the left.
- Llamas are not very responsive to physical punishment or to the most common incentives used in training other types of animals (treats, petting, praise).
- Llamas are repelled by agitated behavior and calmed by a relaxed, peaceful attitude.

To herd a group of llamas in a given direction, apply herding pressure from the opposite direction. If there are no factors which repel the group (people, fences or other physical obstructions) or attract it (another group of llamas or anything which excites their intense curiosity) you can assume that they will move directly

away from you. In an open pasture you might begin herding pressure at a distance of 50-100' from the nearest llama, gradually approaching the group until they begin to flow in the opposite direction. Additional herdsman can help focus the herding pressure. Some llama handlers use herding poles (plastic pipe or bamboo 12-15' long) or ropes stretched between herdsman to extend their influence on the animals.

Once the llamas begin to move, or as the distance between you and them decreases, it may be desirable to lessen the pressure by moving more slowly and with more relaxed body language. Your success will be enhanced if you move the whole group, not allowing even a single llama to split off in another direction. Keep them moving along smoothly so they do not begin to consider other options. A single herdsman attempting to drive a large group of llamas may have to range from side to side to include all stragglers.

The object of most herding is to move the animals from a larger area to a smaller one where they may be sorted or caught. Once you are among the animals in a confined area, project a calm and reassuring image, eyes lowered, movements slowed and hands at your side or behind your back. Many llama handlers imitate the llama's soft moan or hum to calm them.

Sorting, separating one group into smaller groups, is most easily done with at least two people. After the whole group is herded into a confined space, a corral or small pen, one handler can be stationed at the gate to another pen, allowing the desired animals through and blocking the passage of others. Meanwhile, other handlers exert mild herding pressure on the group to present different animals to the gatekeeper for the sorting process. A herding pole makes maneuvering the animals much easier.

The best way to catch an individual is to herd it into a corner or small space where escape is impossible. Most llamas will surrender peacefully in this situation, especially if you allow a few seconds for them to adjust to the idea. If you feed in the barn or in a small pen at the same time each day, you can simply wait until they go in, then close the gate and quietly move the individual animal into a corner.

To make first contact with an animal who seems resigned to being caught, slowly and deliberately place a hand on its back. After a few seconds move your body alongside the animal and either halter it or "ear" it by running your hands up both sides of the neck from behind, maintaining firm contact until you reach the base of both ears. The ears may be grasped firmly

if the animal decides to struggle, but often simply cupping and massaging the base of each ear between your thumb and index finger will distract and calm the animal enough for routine examinations or treatments. Additional handlers in contact with the llama will lessen the chances of a struggle.

Catching a llama in a large field usually requires several people. An adult llama is a physical match for most people, and an untrained animal in the open is much more likely to bolt when surrounded and to struggle when caught. One technique is to use ropes stretched between the handlers to make a moving corral and to snag the animal if it tries to run through. The success of this approach depends on quickness and coordination, because the rope usually stops the animal for only a few seconds. Another method is to herd the animal against a fence or into a corner of the field where one or two handlers can move in to catch it. If it shows any intention of going over the fence, which in the case of barbed wire is a real danger to the animal, pause 6-10' away and wait a few seconds for the animal to calm down before approaching it. Experienced llama handlers may be able to accurately judge the moment of hesitation by the llama as it tries to decide which way to escape. By moving quickly at this moment, one person usually can restrain it long enough for others to assist. Unless you have confidence that you can act decisively at just the right moment, wait until the llama will tolerate a slow, deliberate approach, even if that takes a minute or more. The risk of injury and stress for both the animal and the people involved makes an open-field catch a very poor second choice to a controlled catch in a confined area.

NAIL TRIMMING

Some llamas have toenails which grow too long or twist to the side. Periodic trimming will improve their appearance and help prevent foot soreness. This procedure may be necessary only once a year and many llamas never need it.

Nail trimming may be done with side-cutting nippers designed for use on sheep and available at many feed stores or through veterinary supply catalogs. The animal may have to be restrained. Any of several types of llama restraint chutes on the market work well for this purpose. Some llamas will allow nail trimming while standing, either haltered or gently eared. Others may need to be held down on their side by two or three handlers. Adult male llamas can often be trimmed quite easily while breeding.

The object of nail trimming is to cut away excess horny material. Care must be taken not to cut the sensitive quick which is supplied with nerves and blood vessels. Lay the nippers along the length of the toenail. Trim along one side and then the other of each nail. One additional cut across the tip may be necessary.

REMOVAL OF FIGHTING TEETH

Male llamas have sharp-edged fighting teeth or fangs which may begin to erupt by two years of age. These teeth are along the side of the jaws about halfway back. There are two fangs on the upper jaw and one on the lower on each side of the mouth. Llama fighting teeth have a very sharp point and sharp cutting edges front and back, much like a shark tooth. They represent a danger to other llamas and to humans, so they should always be removed or blunted. Some llama owners choose to have tooth removal done by their vet, but many feel that the procedure is simple enough to be considered a routine part of their herd management.

The most commonly used technique for removal of fighting teeth is to cut them off at the gumline using a flexible braided cutting wire known as obstetrical or OB wire, available from your veterinarian. Special metal handles are available for gripping the ends of the OB wire, and if these are used a 24" length of wire is adequate. If no handles are available, the ends of the wire must be wound around your gloved hands or fingers, so allow a few extra inches.

Restrain the animal in a chute or by cross-tying from the cheek rings of a sturdy halter to two solid posts about 3-6' apart. A third lead line from the chin ring of the halter will provide additional control. If enough helpers are available one can firmly ear the animal. Carefully retract the lips on one side and hook the wire behind the forward upper fang. The fighting teeth are slightly curved backward, so the wire will find its proper position at the gumline as you pull the ends of the wire forward. The OB wire is designed to cut only hard tissues like bone or tooth without cutting soft tissue, so once the wire is in place the animal may be allowed to close his lips around it. Both ends of the wire should be directed forward out of the mouth, one end held in each hand. Draw the wire across the tooth by pulling first with one hand and then the other at a rate of about one stroke per second while maintaining a firm pull on the wire. Usually the fang will be cut off neatly at the gumline in about 15-20 seconds. There may be a little bleeding from abrasion of the gums, but this is no problem. Any sharp edges or points which remain can be smoothed with an ordinary metal file.

Make sure that the sharp, severed crown of the tooth is out of the animal's mouth before going on to the single lower fang on the same side, and then the rear upper fang. Repeat the process on the opposite side. After one use, the wire will coil when tension is released. This makes placement on subsequent teeth a bit more difficult, but the same piece of wire can be used on all six teeth and even reused on additional animals.

Fighting teeth can be cut off as soon as they have erupted even 1/4" and this is sound management policy. The teeth will continue to erupt until the animal is 4-5 years old, so put a reminder in your files to check the teeth of your males every 6 months and redo the procedure if necessary.

Female llamas can get small fighting teeth. These erupt much later and usually are not removed.

WASTE MANAGEMENT

Llamas instinctively deposit their manure in communal dung piles. This trait may reduce the spread of internal parasites, because the animals will not eat the grass near any of these piles.

Llama dung is pelletized and nearly odorless. In the high, dry environment of the Andes, llama pellets are used by the Indians for fuel. Dried pellets burn much like charcoal briquets, but the smoke has a pungent aroma.

Llama dung usually does not cause a serious odor or fly problem, but most owners clean up the dung in barns, corrals and pens. Though fresh dung may be used for fertilizer without burning garden plants, it is usually composted in large piles along with used bedding materials like straw or sawdust, and waste feed or moldy hay. After a year or more the composted material may be mixed into garden soil for an excellent fertilizer or used on the surface as a mulch. Because llamas will not eat dung-contaminated grass, it is not productive to spread it on pastures except in areas that will not be grazed by llamas for several months.

When introducing llamas into a new field, you may be able to designate the position of dung piles by "baiting" desired spots with dung.

AVOIDING HAZARDS

Llamas are "easy keepers" compared to any other kind of domestic livestock. They are not prone to accidents and injuries. Still, a good herd manager will anticipate hazards to the animals and take steps to avoid them.

Predators which can threaten llamas include coyotes, bears, cougars and, most significant of all, free-roaming dogs. Most of these can be discouraged by wire mesh field fencing, a guard dog on the property or by bringing the herd into a protected area at night. Be sure to pick up and dispose of all placentas and provide extra protection for newborns. Where wild animals are a serious threat, predator control programs may be necessary.

Skunks may carry rabies in many areas, and llamas' natural curiosity may draw them close enough to be bitten. The only real defense is to vaccinate against rabies in high-risk areas.

Porcupines can be a hazard to curious llamas and guard dogs. Quills are more easily removed after they have been snipped with scissors to release pressure in the barbs. Special fencing may be warranted.

Deer can carry diseases and parasites. Protection of a llama herd from contact with deer is very difficult, but good high fences and a guard dog may help. White-tailed deer, particularly in wetland areas with snails, can carry the deadly meningeal worm. You may need to use a systemic wormer on a regular schedule.

Plants poisonous to llamas include oleander, choke cherry, rhododendron and hemlock. Find out what poisonous plants grow in your area and eliminate them from your property.

Small apples can be a hazard to llamas, and choking fatalities have occurred. It is probably best to prevent access to orchard areas at times when there are small apples on trees or ground.

Phosphorus fertilizers and other chemical poisons should be properly stored where animals cannot come in contact with them. If chemical fertilizer is spilled in the fields it should be cleaned up before llamas are allowed to graze. Bulk seed is sometimes treated with insecticide, so spills or open seed containers can be dangerous.

Sharp projections of fence wire should be trimmed and other sharp objects in the fields or barns should be removed, blunted or covered. Llamas' large, protruding eyes are especially vulnerable. Though llamas have tough skin rarely injured by barbed wire, many owners replace barbed wire with smooth wire as a precaution.

Ditches and dust baths can pose a threat. Potentially dangerous ditches, especially deep, narrow ones, should be filled in or widened. Because llamas can

become trapped on their backs by rolling up against a fence, barn or wall, it is best to prevent use of dust baths uphill from these or other hazards.

Ice may cause serious falls, especially in sloping areas. Llamas will try to avoid areas of slippery footing, but you may want to spread sand or salt at times.

Grain overdose can be fatal to llamas. Take care to keep your grain and other feed supplements in covered containers in a secure area. Forgetting to close a door or gate to the grain storage area can have heartbreaking results.

Good llama herd management is based on an understanding of the animals and on common sense. Get to know each of your llamas and observe their behavior at least once each day to make sure they are acting normally. Try to anticipate. Seek the advice of experienced llama owners or consult your veterinarian about problems that arise.



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ILR Educational Brochure #7

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Paul and Sally Taylor have been llama breeders since 1975. Sally was one of four founding Directors of the International Llama Association, served on ILA's board from 1982 to 1985 and was a Director of the International Llama Registry. In 1982 Paul retired from dentistry to devote full time to llama ranching. He has been an ILA Director, organized the first major registry for llamas in North America and was active in legislative and international political matters on behalf of ILA.

In recent years Paul and Sally Taylor have done basic research in the field of advanced reproduction in the camelids and have become authorities and world leaders in embryo transfer in llamas and in cross-species embryo transfer among the camelids.

The Taylors are respected authorities on llama care and management. In 1986 they co-produced the *All About Llamas* videotape series, and they have written many articles on herd management, breeding, birthing and care of newborn llamas.

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March 2004