

LAMA CARE AND MAINTENANCE

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Lamas are fun to be with, train, use, show, etc. That is why we have them. In order to retain these traits in our *lamas*, we need to provide appropriate care and maintenance. That is why we are here today.

The genus *lama*, or South American Camelid, is composed of two natural wild species, the vicuna and the guanaco. Over the past 6,000 years, native South Americans developed and domesticated the llama (guanaco) and alpaca (vicuna). All are **camelids**, cousins to the Bactrian and Dromedary camels, which crossed the Bering Strait before any of us can remember.

Along with the horse, the camel family originated in what is now the Mississippi River valley around 40 million years ago. A lot of camel species have become extinct. We now have two Old World and four New World species.

From here on we'll talk only on the domesticated llama and alpaca.

The llama was developed as a pack animal – sometimes called “the Jeep of the Andes.” The alpaca was developed as a fiber animal. This occurred over the past 6,000 years. Twenty years ago Dr. Jane Wheeler, then of the University of Colorado, found samples of llama and alpaca fiber in archeological digs in Peru which now have been Carbon 14 dated to 4,000 BC.

The llama today is a medium size animal, generally weighing 200 to 400 pounds. The alpaca weighs 125 to 200 pounds. They are modified ruminants having three stomachs. They are resistant to bloat. Their feet have a soft bottom pad with a toenail covering each of two toes. Their fiber can be as short as 3” and as long as 12”. It varies from as fine as 15 microns up to 30+ microns, a micron being a millionth of a meter. Llamas shed periodically, usually on a two-year cycle, while alpacas must be sheared. Their dentition is similar, but the inside of the incisors of the alpaca is not covered, so they continue to grow throughout life. Teeth may occasionally need to be floated. They are similar to other ungulates in most regards.

Lamas are very stoic animals, often not demonstrating pain or discomfort. This gives partial rise to their reputation of being healthy animals. Their life span is around 15 to 20 years, with some living to over 30.

Lamas are well suited to the northern climates, and can be adapted to warm Southern areas with special care. In South America they live at an altitude of 4000 to 4900 meters – a pretty cold climate – with some alpacas being raised at lower altitudes of 1500 to 2000 meters.

Shelter requirements are quite simple, a three-sided weather shelter being adequate. In the south, and in closed barns, fans, water misters, and the like are often required during hot weather. Where we live in Vermont, many of our animals choose to remain outside during all but the coldest days of winter. Freezing rain is the largest problem. We use 8' x 18' three sided sheds, the size dictated by town zoning which requires a permit for structures of over 150 square feet. These sheds have a closed storage area for 10 bales of hay and grain in one end and a manger in the other. As many as ten animals can comfortably live in one shed through the winter. They cuddle nicely! The single largest problem with shelters is the potential for excess humidity. Adequate ventilation is a must!

Fencing is as varied as the weather. Some lamas have simple wood fences, while others have 6' high tensile New Zealand type. After remembering that the primary goal is to fence out unwanted species (dogs and coyotes, in this case), what to use in your area is easy. Usually high tensile or page wire is the answer.

In South America, lamas walk up to ten miles a day to browse on plants having a protein content of five to eight percent. With 15 percent second cut hay and 18 percent grain being some kind of a standard here, the single largest health problem of lamas is obesity, according to Dr. LaRue Johnson of Colorado State. With first cut hay (protein around eight to nine percent) and our blend of nine percent grain, our lamas do very well thank you. Our grain is blended as closely as possible to South American forage mineral content. We also supply a free choice mineral supplement that contains minerals similar to those found in South America. Selenium is the significant difference, but there are others. It is worth saying that lamas in the United States, in the F3 generation after importation, generally weigh 20 to 50 percent more than the imported great grandparents. We can't quantify how much of this gain is a health improvement, but certainly the F3 animals are more structurally sound – and, potentially, fat!

Training of lamas is, perhaps, the most rewarding activity of all. They like to learn! We start them on an inner tube at two or three months. We use an old bicycle tube tied to a gate and the other end to their halter. When they pull, it pulls back in equal measure. Within two or three fifteen-minute sessions they are lead trained. We work on stairs, in the house, around our dogs, into strange pastures, away from mom (scary), etc. We use this time to desensitize their legs and head as well. At weaning, about six months, they are used to, and accept being, led, handled, toes trimmed, etc.

-3-

Lamas are among the brightest of domesticated animals. I know, everybody says that about their horse – dog – cat- etc. Everybody is right for them, so there is no argument. We, of course, have **no bias** whatsoever; I feel free to say that lamas are the brightest of all... Lamas do have an amazing capacity for quick learning and retention. I trained a llama to kush on command in 1988. It took five lessons of about ten minutes each for him to get the concept. A month later I was in the same pasture training another llama to do the same thing. I had not touched the first llama in the meantime. I looked over and he was 30' away independently getting up and down on command. A few months ago I talked to the owner where the llama is today, asking him to halter him, and pull down lightly on the halter with the verbal command of "down." One pull and verbal command and he was laying down, and waited for the "up" command and a tug to rise.

With only a short time on the trail, a pack llama learns that he is wider than he used to be and he compensates for it. With only a few short lessons, crias (baby llamas) learn that it is easier to follow a lead rope than to resist it. Alpacas learn and remember that their annual shearing is not a death threat, indeed, they feel better later and remember that.

Llamas are a flight animal, and as such are sensitive to interruption of their ability to see and/or escape. For us to work with their feet (occasional toenail trimming) they must be desensitized. We suggest to people that they pet the neck or body, not the head.

Toenail trimming is a simple process on a desensitized animal. The toenail is a cap above a soft pad, like a dog. With the foot raised so you can see the bottom, simply make a cut along each edge of the nail on each toe and then cut off the tip about a quarter of an inch back. It takes only a couple of minutes with a trained animal, and can be impossible (short of chemical restraint) on an animal that hasn't been worked with. Use bypass shears.

Breeding is a most rewarding part of the picture. Llamas are induced ovulators, copulation being required to release the egg from the ovary. Their cycle seems to be to produce a follicle every eight days on alternate ovaries, i.e. a follicle ready every fourth day. Without copulation, the follicle simply is reabsorbed - without an estrus cycle. Females refuse to participate in the breeding operation if they are either already pregnant or there is not a follicle ready. Pregnancy results in continued refusal to breed, while they will breed in a couple of days if it is a follicle question. Repeated breeding without a result, say over ten times, should be checked by a veterinarian. We expose a female every fourth day once we find her cycle. Reabsorption of an implanted egg is possible up to 120 days. Pregnancies should be reconfirmed.

-4-

Llamas give birth standing; it usually takes less than an hour. The female may make repeated trips to the manure pile. Some will occasionally roll repeatedly. They often become quite vocal. If all this lasts an hour without result, it is time for a closer professional look. As with any animal, birthing problems can occur. In about 200 llama births on our farm we have seen perhaps ten distocias, most of which we could resolve ourselves by simply pulling a leg forward or some such. One was too large, and the vet got it turned just right and pulled mightily, with 100% success. We have had one with a punctured womb where we lost both. Posterior presentations are delivered that way.

Crias are from 12 pounds (alpacas) to over 40 pounds (llamas). The average alpaca cria is around 14 to 18 pounds, while llamas run from 20 to 30 pounds. We have seen full term, viable, llama crias as small as 12 pounds, and as large as 45 pounds, with 54 being the record. Twinning is rare and usually not desired - they are similar to a horse in this regard.

We went to the Cummington (MA) Fair showing llamas a few years ago. An old dairy farmer sitting nearby was heard to ask; "Can't milk 'em, can't eat 'em; what the hell good are they?" Great question - who owns llamas anyway; why?

There are about 135,000 llamas, and 25,000 alpacas, in the US today. As with horses, most people must have a perceived use for a large animal before they are comfortable owning it. This is in spite

of the fact that most of them end up being an oversized dog or cat – a pet. Incidentally, boats are not different... We have 90 llamas and 10 gelding alpacas, all pets.

By far the largest percentage of llamas and alpacas are pets or companion animals. There are exceptions, of course. Some alpaca farms have over 300 animals. One llama farm in Washington has over 700 animals. According to the registry, the median owner has fewer than ten animals. They are owned for the pleasure that they give us. The rewards are great.

Lamas are quiet animals - the barn silence is broken only by an occasional soft, high pitched, questioning hum - usually a mother talking to her cria. Lamas are almost always aloof, preferring their human interaction to be at about four feet. Only occasionally will they ask to be touched, and very rarely do they, themselves, touch. Touching is not their nature - a facet of their personality that some cannot accept. These folks should have dogs.

-5-

Uses? How about as guard animals for sheep, goats and the like. We have one guarding weanling calves against coyotes. We have not yet done it, but believe that they will effectively guard birds such as turkeys and chickens.

Fiber? Wow, what a story there is here. Alpaca fiber (let me use the word 'wool') is one of the finest natural fibers in the world. Llama is just as fine but often has guard hair, which must be removed or it is itchy in a garment. The wool can be used for anything that sheep wool can – from garments to brake linings. Llama wool is medulated, or hollow. This gives a garment a thermos effect. It is a great insulator. My wife wears a bulky knit sweater and a windbreaker in the barn when the temperature is down to zero. After that she puts on a coat over the sweater. Llama fiber can be spun, felted, woven, dyed, etc. Hand spinners love it for its softness, as do knitters. Weavers think that it is the greatest. Woven outer garments – shawls, capes, jackets and the like – are wonderful products.

In the western US there are many llamas being used by the Forest Service BLM and the Park Service as pack animals. Due to their soft foot pad they leave almost no track in alpine tundra. For this reason, many parks require their use above timberline. There are quite a few packing services that offer llama treks. A mature, well-conditioned, llama can carry 25% of his own weight for 10 to 15 miles per day. A well-conditioned 320-pound llama can carry 80 pounds. They are not big enough to ride.

Veterinary health maintenance is pretty standard - a checkup, CDT and rabies shot once a year. Additionally, a regular deworming program should be followed by the owner. For most of the country, worming with fenbendazole and Ivomec on a quarterly basis is adequate. In the area where the white tail deer lives (and carries *Parelaphostrongylus tenuis*), monthly deworming **must** be carried out. The deer passes *P. Tenuis* in the stool and it is then ingested by the lama. We call it the meningeal worm since it gets into the nervous system and kills the host by growing in the meninges.

Coccidiosis is a problem often seen in crias, and it will kill them quickly, often in only a day or so. Watch for loose stool, and treat with Corid as necessary. We understand that coccidia is species specific. We have not seen a problem with guard llamas living with other animals. Crias will often nibble hay that is closer than it should be to the poop pile, and...

Many llamas have been trained to pull carts. It is a most delightful experience to ride behind a well trained llama. There are a number of professional trainers working with llamas in this regard today.

A Jackpot Competition Circuit has recently begun, with shows throughout the US. In these events llamas are led through an exceptionally difficult obstacle course, with negative points being scored for balks, refusals, skipped obstacles, tight lead rope, dangerous behavior, etc. All participants and sponsors have paid into a fund for prizes, so it can be quite lucrative.

There is a show association, Alpaca and Llama Show Assoc., which is quite active, and is working to help those who want to be active in this area. There were 135 shows in the US in 1999 and 153 this year, plus regional and national competitions. Age group classes include Halter, Produce of Dam, Get of Sire, Performance, and various others. There is also a Pack Llama Trial Association, working toward qualifying llamas as pack animals, and helping potential pack llama owners understand what a good packer is.

The International Llama Registry keeps a register of all llamas born, with their geneology and a photographic file of each animal. More and more animals are blood typed, and DNA recording has begun. The International Llama Association and Alpaca Owners and Breeders are organizations handling the national affairs and interests of owners.

There are about 30 state and regional organizations that do everything from conferences, newsletters, workshops, library services, database maintenance, state by state representation with the departments of agriculture, etc. Most of these are available by phone, e-mail or via a web site.

Attached is a listing of good contacts for whatever needs you might have. This list can be expanded greatly. We will be pleased to do our best to answer questions that you may have. Please recall that we are not vets. If you are want a broad overview, but in more detail than we have presented, use the International Llama Association site and download their brochures. The Greater Appalachian Llama and Alpaca Association has around 600 members in the 13 northeastern states, the best newsletter, donates \$25,000 per year to llama medical research, and a membership directory that beats them all. Well worth joining.

It is worth noting that the llama and alpaca industry holds seats on the USAHA Board and the Morris Animal Foundation Board. Over the years the industry has contributed in excess of half a million dollars to medical research, and the number now grows by almost \$100,000 per year. This money comes from interested owners, not the feed or drug companies. We are the largest private funding group for animal research in the US, and very proud of it. We intend to do better! We challenge other similar groups to exceed our record. Surely the tide raises all boats. Everyone benefits.

Are there questions we can help with today?

VETERINARIANS - RESEARCH UNIVERSITIES

Dr. Murray Fowler, U. Cal, Davis – He wrote the books! All the books.

Dr. LaRue Johnson, Colo. State – He did the nutrition and breeding stuff

Dr. Brad Smith, Oregon State – Has the most owners, gets the most money, does the most research, very well.

Dr. David Pugh, Auburn – Hates to hear the story about the vet who treated the only llama to get rabies – guess who was exposed? The best sense, and sense of humor, in the llama world. Does great research.

Dr. David Anderson, Ohio State – is doing some great research. Dedicated.

AND

Our Simply Great Vet:

Dr. Linda Morris

West Mountain Animal Hospital

Shaftsbury, Vermont

802 447 7723 or limvet@sover.net

SUPPLIES, TACK

Ridge Mist Llamas 207 586 6800 Maine

Mt. Sopris Llamas 719 742 3447 Colorado

Llamas and More, 888 228 2588 Oregon

ORGANIZATIONS

International Llama Association, www.internationalllama.org 406 257 0282 - get their brochures from the web, for sure! Other stuff great too. List of local/regional organizations. Join for only \$35. Takes care of our needs on a national basis – interstate transportation, TB scares, Canyonlands exclusion, etc. Needs support, JOIN now.

Greater Appalachian Llama and Alpaca Association, www.galaonline.org. Super website. Join for only \$25 or \$250 lifetime (You only live once). Simply great newsletter, annual directory. 600+/- members in 13 states.

Alpaca and Llama Show Association, www.llama.org. 913 557 9489. Growing organization! 135 shows in 1999, 153 in 2000! What a way to go!

International Llama Registry, www.lamaregistry.com, 406 755 3438. All the info on registrations and the like you'll want, and probably more. Great organization, well managed. Real service to the industry. ALL camelids should be registered!

Contact us at llamawmf@sover.net, or call 802 694 1417. We'll do our best to help however we can.
Lars and Gayle Garrison, West Mountain Farm, Inc.

