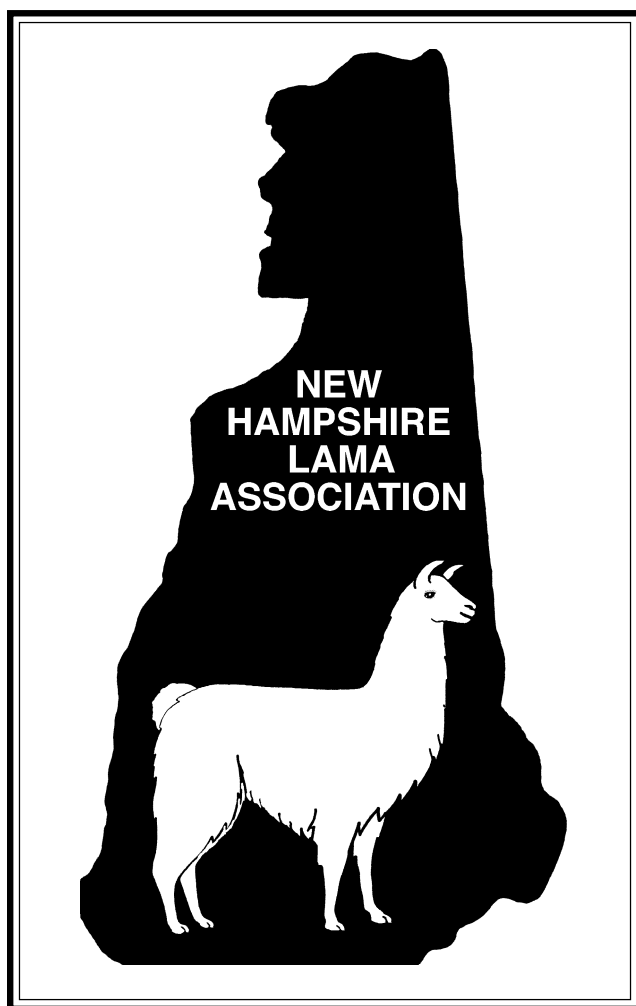


Guidelines for Lama Care

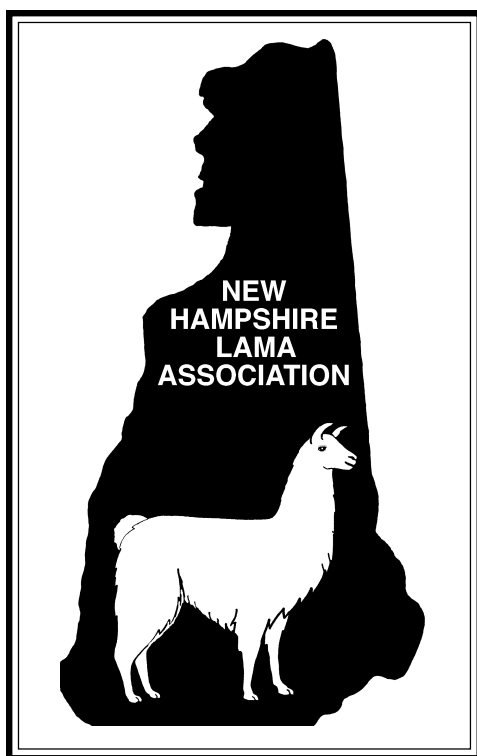
By

The New Hampshire Lama Association



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Herd Management

Guidelines for Correct Llama and Alpaca Care

By Gail Sanborn

PROPERTY PREPARATION

For the new lama owner, property preparation is the first step. Shelter and a “lama secure” area must be accomplished before the first animals arrive. The land should be well drained - lamas and mud do not mix well! Swamps are bad news too.

SHELTER

Shelter should include enough space that the lamas can be completely protected from our variety of elements and temperatures here in New Hampshire. Even a deep 3 ½ sided rainproof shed can accomplish this purpose, situating the shed with the opening facing south is recommended. Lamas, unlike some animals, do not like to be crowded and will even sleep outside during inclement weather rather than be forced to sleep too closely. A wide door is also recommended as one “gatekeeper” lama can lie in a narrow doorway keeping the rest of the lama out. The shelter needs to provide approximately 25 square feet per adult llama. The floor should be dry. If the flooring is hard (i.e., cement) or damp, several inches of bedding is needed in the winter.

FENCING

Fencing can vary. Any type of fencing except barbwire can be considered. The recommended height is between 4-5 feet. The size of fenced-in enclosures should allow enough space for the lamas to run and exercise and maintain body tone. The old adage of 4 acres to one horse is reversed to 4 llamas to one acre. The fenced are should be available to the lamas except in stormy weather.

POISONOUS PLANTS

Several common plants are poisonous to lamas such as rhododendron, wild cherry, yews, and lupus. These must be completely removed from the enclosed area and kept out. The complete list can be obtained from county extension agents or you can purchase a Poisonous Plant Book put out by GALA (The Greater Appalachian Llama and Alpaca Association) from the New Hampshire Lama Association Store.

Winter Management

By Judy Kimball

The following are some winter management practices that we use and have been successful with and we hope they will help some of you.

HOUSING

Look at your situation and work with what you have. Keep in mind the needs of the llamas. Think about where they have come from and how they have lived for thousands of years.

The barn should be set up for the ease of the handler and safety of the animals. Special care should be taken to insure there are no sharp objects that could cause injury, such as protruding nails or sharp corners on hayracks, feeders, or gates.

In winter, housing should be well ventilated but draft free. If the wind seems to whip around the corner and into your barn, think about a windbreak. This can be accomplished by putting two pressure-treated posts in the ground and using three or four 2' x 5's to connect them and screwing two 4' x 8' sheets of exterior plywood to the 2' x 5's. It can make an unbelievable difference.

If the floor in your barn is cement, or even if it is dirt, we like to bed the floor with the hay they have pulled from the hayracks. If you think this isn't necessary, the next time the temperature is at 20 degrees, sit yourself down on the concrete or frozen dirt and see how comfortable you are!

FEEDING

Have hay available at all times but not in great quantities. The amount of hay fed should be governed by what the llamas will clean up in a twelve-hour period, or the number of hours between the feedings. Hay should never be moldy or dusty. It should always be kept off the ground to prevent problems from parasites, dampness, and mold. Llamas seem to prefer it at their level. There are many opinions on the kind of hay to feed. We raise and sell about 20,000 bales of hay of all types each year and have found good, clean, early cut, first crop, timothy-orchard grass will maintain an adult female not nursing. Crias' stomachs just starting on hay do well on medium to fine stem grasses with lots of leaf. Be aware of your hay and when it is cut. Its value is reduced greatly each week it goes beyond its optimum peak.

Grain is a very debatable subject. It should be of good quality with natural plant protein. Grain should be made up of approximately 12% protein, and be adjusted for more energy in the winter. Energy, not protein, will help keep them warm.

When determining the amount of grain to feed, take into consideration the time of year and climate. If you're in Georgia and the temperature is 60 degrees, it is a little different than being in New England with a wind chill of -30 degrees. Feed accordingly. Just remember that with a wind chill of -30 degrees, an animal cannot eat enough in a day to maintain her under those conditions. Remember each llama is different just as we are and a two and a half year old lactating mother is still growing herself and should be fed to do so.

Free choice minerals based on requirements for your part of the country should be available at all times,

especially during winter. Provide clean fresh water daily or more often if it freezes. A little molasses in the water will keep it from freezing so fast. Try it ahead of time to make sure your llamas will drink it. There are electric water heaters available that will keep the water from freezing. Make sure you have an electrician because water and electricity don't mix. Clean those pails, no one likes to drink from a dirty pail.

HEALTH

November is a good time to worm to get rid of any summer problem and they will stay somewhat free all winter because the parasites will not survive in freezing weather. Be aware of the possibility of lice. Ivomec will solve it and there are dusts which can help. The greatest way to deter lice is to have a well-lighted barn. Stay away from vaccinations in extreme weather, there is no point to add more stress.

Be aware that this year's drought caused the soil to be very acid and it in turn caused acid stomachs. The hay crop will be high in acid that you are feeding all winter. Put some plain baking soda in one side of the mineral feeder and if an animal needs it, they will have it. It can relieve an acid stomach that you don't even know they have. Cattle people have been doing it for years.

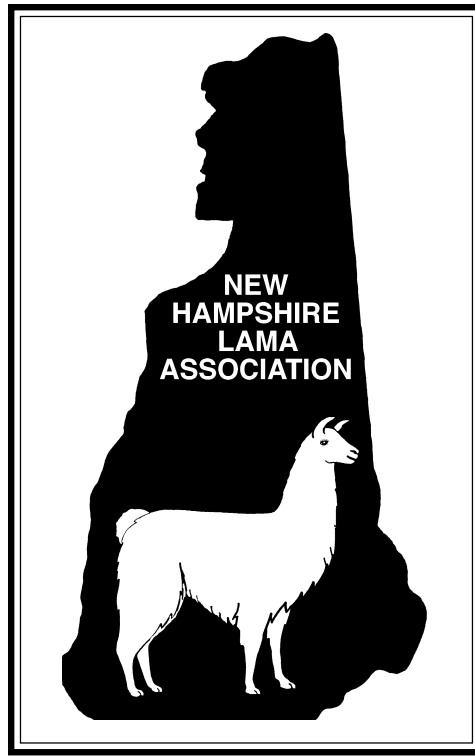
BREEDING

Like the rest of raising llamas, this is a matter of choice. We prefer to control when females are bred and therefore have accurate records. By controlling the breeding, a male is able to service more females. It is also easier to detect a fertility problem.

First time breeding for us is a case of size more than age. I don't care how old she is, if she isn't big enough, don't breed her. Be aware of the size of the male you are using on small females. The breeding site should be clean and dry. Know your bloodlines. Be aware of your weather conditions in the winter and don't risk losing a baby because it froze to death and you didn't know for sure when she was due. Fall and early spring are our choices for breeding. One day while I was blow-drying a baby and the temperature was squarely on zero, I decided that neither the llamas nor I needed that ever again.

CONCLUSION

The above winter management ideas are based on common sense, good records, observation, education, and many years of experience. They have worked well for us and we hope they will help you. Have a great winter!



Hyperthermia

A Note on Heat Stress

By Sharon E. DaDalt

With summer upon us, heat stress is a concern for all llama owners. I am aware of at least 2 llamas in New Hampshire which have suffered from heat stress this year, one of these succumbed to it. The month of September, too, can be a time when temperatures can soar and heat stress can be a problem. Let's review some symptoms and treatments for heat stress.

Heat stress, or hyperthermia, occurs when an animal becomes too hot due to heat and high humidity and his body temperature rises to 103-104 degrees F (normal body temperature is 99-101.8 degrees F). Death will occur when the temperature is about 10 degrees F above normal. Some llamas, such as overweight, very woolly, or an animal in stress (traveling, handled for vaccinating, etc.) will have a greater affinity for heat stress. Also crias, who have not yet learned to seek out shade, are at risk.

Llamas will display early signs of heat stress such as not being alert, open mouth breathing, and staggering when they walk. They will have an elevated body temperature. An emergency situation is when the llama is down and not moving. Any llama showing signs of heat stress should have his temperature monitored.

Prevention measures include traveling, worming, vaccinating, training, and trimming toenails on cooler days. Woolly llamas can be shorn for summer heat (not to the skin or they may get sunburned) and overweight llamas can be put on reduced feed rations and on an exercise regimen at cooler times. A sprinkler, fan, and wading pools can be provided, along with some shade. Fresh, clean drinking water should always be on hand. Animals used to a cooler environment should never be brought into the heat of a New Hampshire summer. Transport these animals to your facility in cooler seasons for breeding and purchasing reasons. Breeding can be held off for a cooler season.

When an animal shows signs of heat stress, it must be treated IMMEDIATELY. Put a fan on the animal, hose him off, use rubbing alcohol for the non-wooly parts, keep ice on hand and pack it around him, get him in the shade, and offer him some water. Start doing these things as soon as heat stress is noticed and then call you veterinarian for advice. But just don't leave the animal and expect the veterinarian to come at his convenience and do all the work. You must act quickly and get that llama cooled off to prevent losing him. Continuously monitor his temperature until it is back to normal. And be sure to keep an eye on him, as he may develop heat stress at a future time.

So let's be aware that heat stress can happen to you. Know the signs and start treatment before it becomes a serious emergency.

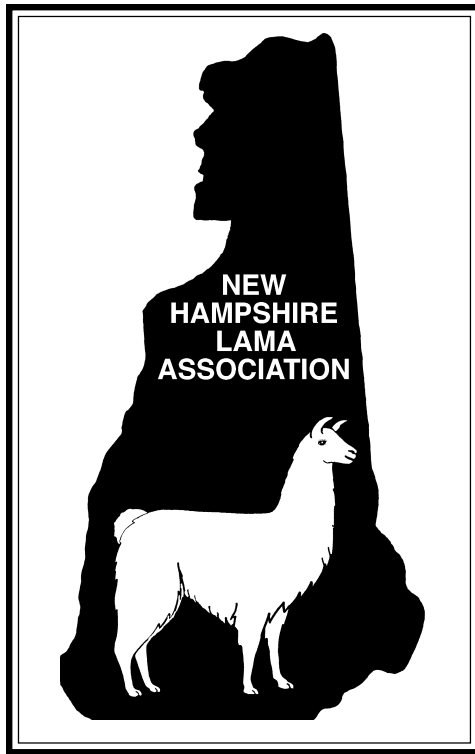
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Grooming

On Keeping Your Good Looking Llamas “Looking Good”

By Gail Sanborn

Today is rainy and my llamas lounge in the barn decked out in hay and rolling in debris. I have been on vacation and the llamas have not been brushed for two weeks, yet, I know that with a couple of hours work, ten llamas can be ready for visitors, without stress, strain, or a restraint chute. Am I bragging? Yes, a bit, but really hoping other llama owners will realize that good grooming is important and not impossible.

WHY is it important?

HEALTH

Skin condition: Brushing and blowing gets out dust, seeds, sand, etc. so they do not irritate the skin. It straightens fibers before they become mats. It gives the owner a chance to find any skin bruises, adhesions, redness, or sneaky vermin.

Air circulation - cooling: Many owners here in the East have installed fans to prevent heat stress during our high humidity summers. However, even the most powerful fans cannot penetrate a matted coat to properly cool a llama. Try cooling yourself in front of the fan wearing your heavy winter coat on a hot day. That is what you are subjecting your llamas to if you do not either groom or shear.

COMFORT

Not only is a groomed llama more comfortable in the heat, but a packing llama must have at least his back groomed! Ungroomed, he is working under cruel conditions. Imagine yourself carrying a heavy backpack and wearing a tight girdle with the inside full of sand and hayseed!! How many miles would you go?? Enjoyment? Hardly!!

LOOKING GOOD IS LOOKING GROOMED

- Why do we find beauty parlors in every town? For our looks.
- What draws people to llamas first? Their looks.
- Which llamas look most attractive? Groomed llamas.
- Which llamas sell the best? Well groomed llamas.

And if the above is not enough, add on the added value of mat free, brushed under fiber versus sheared with stiff guard hairs mixed all through it.

EQUIPMENT

My most used brush is a dog’s pin brush because it penetrates the fiber and separates it. They come in several sizes to fit your hand. Do not use pin brushes with balls on the tips. They catch and pull the fiber. Buy a good brush with “give” to the pins when placed against the palm of your hand. Slicker brushes were designed for wirehaired dogs with very stiff dense coats. They barely get into the fiber and tend to break and split long hair. The wire also scratches the skin easily. I sometimes use them very carefully around the head and legs of a woolly animal. A bristle brush is my recommendation for training crias and

short hair areas.

A blower is a nice piece of equipment to have, however, it does not replace brushes and “elbow grease”. The blower is the best tool for getting out the dust and small debris that llamas love to accumulate. It also helps desensitize llamas.

At the beginning of this article, I said I could get my ten animals ready for visitors with a couple of hours of grooming. I do, and the reason is because several times a year, I go over them thoroughly in the manner I describe next. Please don't get the idea my animals are immaculate and I spend all my time grooming! It is sort of like my house, clean enough to be healthy - messy enough to feel homey.

THOROUGH GROOMING

I start with a bristle brush around the head, neck, legs, and belly, going the direction the hair lays. Then, with either the bristle or pin brush, I brush the hay off the top layer of fiber on the rest of the body.

If I am going to use a blower, I do it now to remove dust, chaff, and show me what areas need the most grooming. Don't get too close or you will create tangles, holding the nozzle about 2.5-3 feet from the llama works for me.

Now the serious, down to the skin grooming starts with the pin brush. Begin with the top (elbow) of your llama's front leg, lift the fiber up with one hand, brush down two inches of fiber from the bottom of your hand. Brush this until it is clean and straight. Repeat, keeping your hand in place and brushing the fiber out from under it. Work your way to the backbone, two inches at a time, the width of your hand. “Slow but sure wins the race”. Watch your llama, if he is stressing, give him a treat and a break and go back later to continue. For some llamas, five minutes of grooming is enough, others will take 30 minutes. Do not make this a do or die situation! I often do just 1/4-1/3 of one side per day of a mature llama. This slows down stress on both the llama and my hand and arm.

WHERE TO GROOM

A restraint chute, tied to a wall, in a big pen, small pen, haltered or rope around the neck, loose in the pen, loose in the pasture, lying down (the llama!), I do all of the above depending on the llama, its fiber condition, if I am collecting the fiber, and the llama's reaction to grooming.

Restraint chutes are a needed piece of equipment if you have llamas. There are times it is necessary and time saving, however, I am using it less and less for grooming. After a few bad experiences, I realized that putting a llama in a chute away from the other llamas causes him to panic! I thought I would have the llama's full attention - **WRONG** - his full attention and all his energy were focused on getting back to the herd! A llama that is used to and relaxed in the chute may accept being away from the herd. **DO NOT EVER** leave a llama in the chute out of your sight and **ALWAYS** have panic snaps on the tie ropes.

Tying the llama to a post or wall is done a lot and I have done it a lot. However again, the more I groom the less I restrain them. My theory is that they fight and panic over the restraint as much as the pull of the fiber. Both combined make a very frightened llama. I believe that most kicking and feigning is done from fear, llamas are by nature quiet, peaceful, and non-aggressive. When they are frightened, nature tells them to “move it” and they sure can, in any direction!

Grooming in a big pen with one llama - remember to have the others nearby - it can be rather difficult unless you have a halter and lead line, or a lead line only, on your llama. On the other hand, brushing a llama in a big pen with his herd mates around can have a calming influence - if they are calm.

For training and hands on work, a small pen is nice - if other llamas are near.

To sum it up - where you groom is not as important as keeping the llama relaxed. Keep an eye on the llama's chin - if you see a ridge form, he is not a "happy camper".

When I start brushing crias, I use only a soft bristle brush all over their body for the first two weeks. I'm not trying to brush, I am teaching them not to fear the brushing and handling. I halter and snap on a lead line - they have already been halter trained previously - now I follow them quietly around, brushing softly. The lead is use to "keep in touch", but I follow them and restrain as little as possible. As they get used to the brushing and stand, I drop the lead or tuck it under my elbow. On mature llamas, a lead around the neck is all that is usually needed. This is the way I do most of my serious grooming, it leaves my hands free to hold and collect the fiber. I can move a foot or two with the llama, but if he walks away, I can reach out and lightly signal him to stop. If I come to a sensitive or badly matted area, I do a little, move on, and keep coming back. I also reward all llamas with a **LITTLE** bit of grain after and sometimes during the grooming. Just a taste will let them know all is well.

With the llamas I have raised, I can walk into the pen or out in the pasture or when they are lying down and start brushing. I have a couple who will come up and ask to be brushed while I am brushing another.

On the other end, some of my first llamas came from large herds where they did not brush and it was a year before I could brush them all over. I think now that a lot of my problem was tying them up and my insistence on getting the job done. I finally accomplished the job when they shed.

Now, after reading all of this, you are ready to grab your brushes and run out and groom those poor llamas who look so scraggly...right? **WRONG** - do not groom those poor llamas whose mats are many and mighty. **THAT'S CRUEL**. This is the time to shear or wait until they shed naturally and the undercoat has let go from the skin. Again, do it in small sections - rather than all in a day. The fiber will come off, neck, sides, legs, and back in that order, over a 3-4 week period, so work with the shedding area.

Shearing has its reasons; one of them is if you have too many llamas to groom, or llamas that are too matted. Do not shear close like sheep! Llamas grow a new coat every two years, and nature gave them guard hairs to protect them from the sun, rain, and wind. Close shearing removes this protection and leaves a llama susceptible to sunstroke and hypothermia the following winter. Shear with hand shears, leaving 3-4 inches of fiber. This will allow you to brush out any mats left and give protection to the llama.

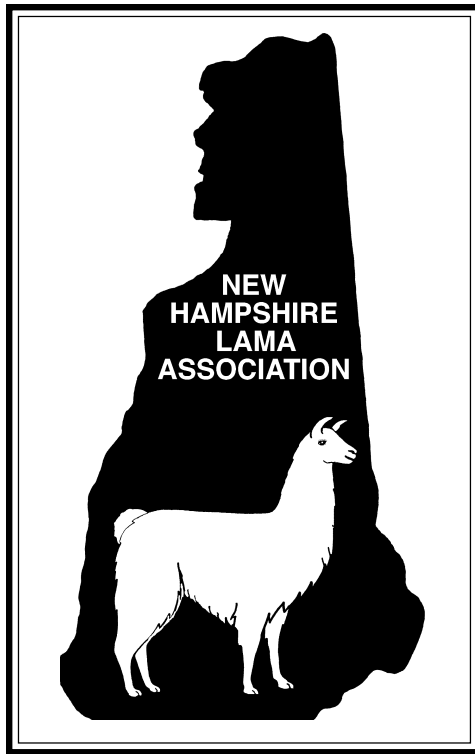
Shearing to make the llama look like a poodle is something I personally find distasteful. To my eye, it takes away from the lovely balance llamas have naturally. Sheared evenly, they maintain that balance all year. I also fear the poodle clipping will lead to a trend to make these lovely, dignified animals "cutesie".

WASHING

A few days before the show season and sometimes before a visit to a nursing home, I bathe a llama. If a llama isn't being shown or used for P. R., I see no reason to bathe him. I have used diluted dog's shampoo - wet a large section of the llama, have diluted shampoo - 1/2 pint bottle in a pail (8 quarts) of water - use a large sponge or small towel dipped in the pail to soap the wet area. Rinse each area well and finish the bath. Conditioners help a lot in brushing any llama out, but be careful, too much leave the hair limp as a rag!

DO NOT wash a matted llama! Think - how do you make felt? You rub to mat the hair and add water!! I use a towel or special sponge cloth to dry the drips - I also may put them staked out on the lawn to drip dry for a while before blowing with the blower. Remember, a well coated, medium wooly, llama will take two days to dry even with several half hour sessions of blowing. Plan ahead!

Keep those good looking llamas "looking good"!



Training

Training Notions

By Lisa Carlson

When Al and I were first considering how to go about getting into being “llama fahmas”, we did two years of research. We reviewed the potential of our land for grazing and the size of our property as regarded the needs of llamas for space. We considered fencing options, barn layouts, water sources, how to set up a telephone and electricity in our barn. All of these things were done in preparation to just **HAVE** them with us. I read everything I could get my hands on and we talked to folks who were already enjoying these wonderful creatures. When the reality of ‘we can DO this’ hit, then the fun really began! So much planning became a reality as we hacked and whacked and cleared for fence lines to go in. The barn went up, the water and phone lines were installed and we continued to visit farms to see what was available to us for our starter llamas.

The local llama community at the time was fairly consistent in its message to us... we needed more than one as they are very social animals needing their own kind. They are very intelligent and learn quickly so it is best to teach them the right way the first time or we would be spending a lot of time undoing what information they would be retaining. I decided I needed to get to some training sessions to learn how to do llamas the **RIGHT** way. My first training experience was prior to purchasing our first two llamas and it was the best thing I ever could have done for them and myself. I attended a three-day Marty McGee training weekend and it was **WONDERFULL!** Marty espouses having a non-adversarial relationship in order that you accomplish what you set out to do. This made perfect sense to me and I felt like a sponge for those three days. Not only did I have the benefit of learning on Caroline Boeckman’s already well-mannered llamas, but also I was surrounded by folks who already had llamas and wanted to learn how to better relate with them. You see, the training is most often not just about llamas, it’s about the owners and handlers...you and me! They are intuitive, sensitive and willing to please...we just have to figure out how to tap into this resource they are offering. SO, with this in mind I would urge you to read, read and then read some more. Get some of the excellent videos that have been produced about a variety of llama related subjects. Attend a TTEAM Training session with Marty or hook up with John Mallon.

After we had acquired several more llamas than our initial two, we began to discover differences in personalities and differences of opinions about our handling practices. That is to say, what Indy and Dahli were eager to accept, Gllory B thought was preposterous and had **NO** compunctions about showing us. Where we had been cooperatively zigging and zagging, she just up and refused most anything! There seemed to be no meeting of our minds over anything! So when the opportunity came to go to Stowe, VT to attend John Mallon’s clinic at Chris and Linda Woods’ there was no doubt in our minds who would go. John presented another school of thought in training methods and it was equally as enlightening. Gllory B and I learned a lot about each other that weekend and came away the better for it.

What I think is most important for folks seriously considering llamas or alpacas and having any kind of positive relationship with them is to do your research ahead of time. Visit farms; go for walks with owners and lamas if they are willing to give you the time. Listen to their experiences, talk with them about what concerns you might have. Take seriously what they tell you and then decide if llamas are for you. Marty and John aren’t the only trainers out there, they just happened to be my experience. There are others and you can gain much by just exposing yourself to a variety of methods. What we think works best for us may not for others. But for the most part we are all in agreement that llamas are highly intelligent animals that watch, think, ponder and consider. It is always better to work cooperatively together. It may take longer to accomplish what you want to do, but in the long run, it is what your

animal will remember and will make it easier to do the next time. Seek out folks who can share an hour or two on their farm showing you how they do routine health care (worming, toenails, grooming, shearing) or even the occasional new learning session. It will make all the difference to you to see how we train for packing or loading on trailers, becoming skilled at doing obstacle courses or showing at events. Just remember, all this takes training, time and patience. Your NHLA is a ready and willing resource, just give a call!

Training by Webster's Definition

By Gail Sanborn

Training: noun

Act, process or method of one who trains

A Train: noun

Something which trails behind (i.e. one llama)

A number of followers (i.e. several llamas)

A moving or continuous line or file (i.e. llamas on the trail)

To Train: verb

To entice, allure

I like these words: entice and allure, to me they bring an image of gentleness and convincing, rather than demand and force.

For forty years, I have been breeding and training dogs and farm animals. I repeatedly found that a firm gentleness is the best, easiest, and safest method. I started in college when a professor said sheep could not learn anything. A few weeks later, I had two yearling ewes hooked up in a cart, pulling me around campus. On the other hand, Cadbury, my beloved gelding, is trained to pull a cart for parades with me walking beside him (he even has had cannon shot off beside him - it only made him jump a little). On the other hand, being asked to turn in tight places when he is being driven is not his idea of fun and he spit that message out recently in the show ring! My face is still red!

Mindset: Yours and Your Llamas

You have your mind set on walking your llama through a gate or doorway out of his pen. Your llama has his mind set on staying in the pen with his buddies. You are going to "train" him to go through the door - remember entice and allure. He feels safe, secure, and content to stay with his friends. Outside may appear scary. To some llamas, even little ones, an open door is an open invitation to go through and explore the world; others seem to feel it is the end of the world!

I am assuming that your llama has had the halter on and off several times and been led around his stall and pasture. To put on the halter, lead him and ask him to have his safe space is too much. I use voice and small encouraging tugs on the lead. Llamas like to please, but just voice reward does not do it. The slight tug or light pull is a bit annoying and uncomfortable (see his ears go back?) so it is very important to relax the lead as soon as he takes a step forward. That is his reward, no more pressure on his neck and you give him back his own space and sense of freedom. Praise with your voice, wait a few seconds and start again with a light tug, a couple of more steps, and he's through the door! A handful of grain can add to the allure and help calm him down. Now take him for a very short walk, stay close to his pen. Remember that is his safe space. Return him through the gate one step at a time. Try not to allow him to jump or rush into the pen. Walking slowly into the pen teaches him respect for you. He is better now, but at 350 pounds jumping past or on you will not be cute. One of my own training rules is to never allow a puppy, calf, or llama to do as a baby anything that will be dangerous, uncomfortable, or disrupting to me when they are adults.

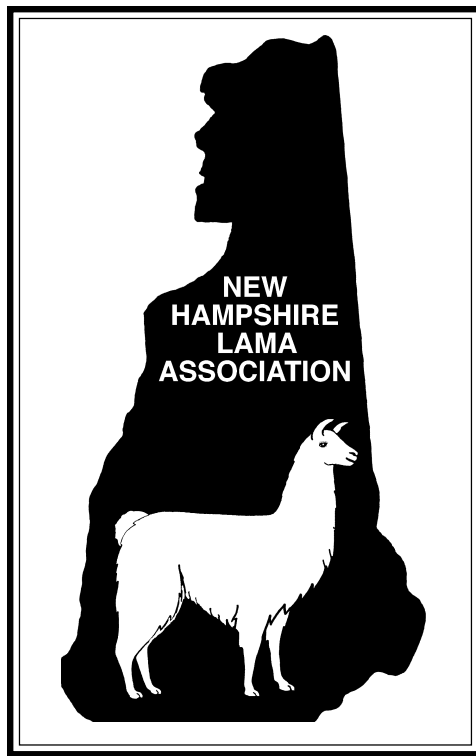
If the first few times you go back into the pen he jumps past you, try to anticipate him by talking the lead close to the halter and hold your arm back stiffly and give a backward tug when he comes too close. If after the third time he is still rushing and it is not from fear, a sharp snap may change his mind. If he repeats it again, a snap, thump on his chest, and loud voice **NO!** should make you more important than

getting back to his buddies. Sometimes just putting your free hand in front of his nose is all it takes.

If you feel that fear and anxiety are making him jump through the gate you should use a soothing voice, a nose to nose deep breathe, and move through the doorway quickly with that tight lead and stiff arm. Stop in the pen and relax him again. Reading your llama is so important in training.

One quick tip - watch under his chin for a “worry wrinkle “: it appears when the llama is stressed. I have found that if the wrinkle appears, the brain is not learning well. Relax and remember: training is enticing and alluring, **NOT** fear and force.

Good luck and Happy Llamering!



Vaccinations and Worming

A Note On Vaccinations

By Barbara J. Quintal, DVM

Vaccination of our animals is a tool that we can use to help them remain healthy. For those who would like to “just give ‘em what they need, Doc”, skip to the chart at the end. For those, like myself, who experience difficulty doing what they’re told unless they also know why and agree that it’s the right thing — read on.

The immune system is the body’s mechanism for combating microscopic invaders. One arm of this defense system we refer to as “humoral immunity”. Special “B-cells” produce antibodies which help fight disease. “Memory cells” store information, enabling recognition and quicker response to second invasions. B-cells must not produce antibodies against other cells of the body. (When they do, autoimmune disorders such as lupus occur.) Instead, they wait ready to be stimulated by antigens. An antigen is a certain part of the invading organism that the B-cell can learn to recognize. Once stimulated by a particular antigen, the production of the corresponding antibody in quantity sufficient to fight the disease may take days to weeks. Fortunately, a certain population of B-cells remains inactive but ready to mount a much quicker response to future invaders carrying this antigen.

We use this principle when we vaccinate our animals. The vaccine contains antigens for particular disease-producing organisms. These antigens trigger both the immediate production of antibodies and the formation of “memory cells” to provide a quicker response in the future.

Antigens can be present in the vaccine as whole live organisms, as weakened or less virulent whole organisms (“modified live” or “MLV”), as killed whole organisms, or as subunits of the organism. Generally, vaccines produced today by reputable companies and properly stored can be both safe and effective. Live or modified live vaccines could be potentially less safe, but subunit or killed vaccines are more difficult to produce and, in some cases, might be less effective.

Most killed vaccines require a booster two to four weeks after the initial, and then an annual booster. Modified live vaccines generally don’t require the booster soon after the initial immunizations. They tend to have a more potent immunizing effect. MLV vaccines may produce a mild form of the disease in the animal. Usually no overt signs of the disease are evident, but a weakened or stressed individual may shed virulent (live) disease organisms, or may actually come down with the disease. A pregnant animal may experience fetal damage, or the fetus could become infected.

These potential side effects are not possible with a subunit or a properly killed vaccine. For these reasons, if there is an effective killed vaccine or bacterin available for a particular disease, its use is recommended. However, in an outbreak of a disease in your area, or when needing to travel soon with your animals into an area with high incidence of disease not present in your farm area, a modified live vaccine may well be the best choice. Your local and state veterinarians can provide the information you need in formulating the most safe and effective vaccination protocol for your herd.

An additional area of concern is the newborn. For roughly the first two weeks of life, the immune system is not capable of forming either a very effective or long-lasting response to invading micro-organisms. For this reason, nature has sought to protect the baby by giving it antibodies from the mother—both directly through blood crossing the placenta prior to birth and later indirectly through colostrum provided during the first day after birth. Colostrum is the mother’s first milk, rich in antibodies to disease to which

she is immune. Most researchers feel colostrum is formed during the last two to four weeks of the pregnancy. The antibody proteins are large molecules, and are not able to pass out of the gut into the baby's bloodstream after the first 24 to 36 hours of life. For these reasons, it is important to ensure the mother's immunity with a booster two to four weeks prior to her due date (using a safe product!) and to make sure the baby gets colostrum during its first day. After the neonate is two weeks old, it then makes sense to stimulate its immune system with vaccines and properly timed boosters.

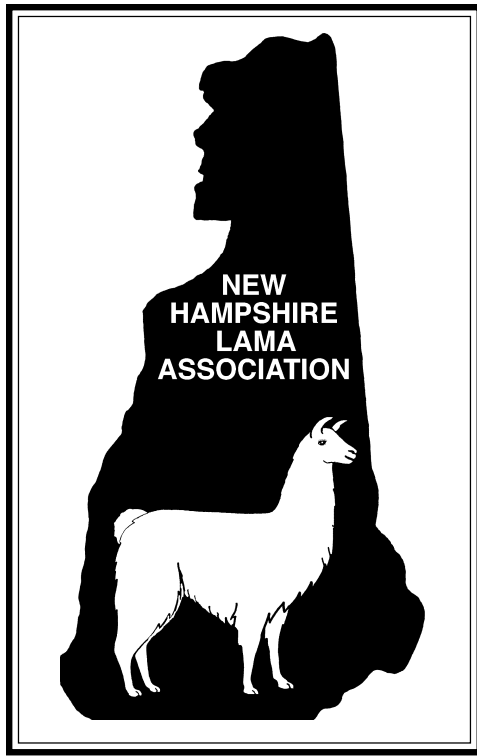
N. B. There are currently no FDA licensed vaccines for llamas. None of our vaccines has been tested and proven safe and effective on llamas.

* Basic vaccinations recommended for our New England llamas:

- Tetanus toxoid
- Clostridium perfringens C&D
- Leptospirosis bacteria (5 way)
- Rabies (KILLED ONLY).

* Vaccinate all animals annually.

- Boost pregnant animals during last month.
- Initial vaccination for young at 2 to 4 weeks with a booster 2 to 4 weeks later.
- Vaccinations for your animals prior to possible exposure to new diseases (to which they are not already immune), e.g. travel, should be completed at least four and two weeks prior to travel. The Department of Agriculture can inform you of disease conditions at your destination.
- Immunosuppressed animals (stressed or on corticosteroids) may not be capable of mounting an effective immune response, i.e. the vaccine may not work!



Packing

Packing With Llamas

By Deborah Frock

Llamas for use as pack animals were domesticated by the South American peoples in the Andes Mountains over 6,000 years ago. It was the Inca Civilization that uses these “ships of the Andes” for commerce, defense, agriculture, and the textile industry. As Spain conquered the South American peoples, gold and silver mines used the llamas by the thousands to plunder the wealth. Even today, the Andes Mountains are a challenge to cars, trucks, and horses. It is still the llama that can travel in the high altitudes and the harsh environment, and work.

North Americans began to realize the power of this animal as a pack animal in the 1960's in the Rocky Mountains. Since then, a business of 4-day treks for pleasure, hunting, or fishing has grown popular. Many government departments like Fish and Game, the Forest Service, and Surveying have continually used the llama for its low maintenance and agile climbing ability. Presently, llama trekking is offered in Montana, Idaho, Washington, Oregon, Wyoming, Colorado, Utah, California, Nevada, Arizona, and New Mexico, as well as the recent expansion into the Northeast and the Carolinas.

The features that best suit the llamas to the mountains are:

1. The ability for low impact on the environment because of their soft padded, two-toed feet. This cushions the impact and distributes the weight between 4 feet and 8 toes, leaving little or no imprint on the ground. This doesn't harm the mountain vegetation or dig a trail like a hoof will.
2. The ability to exist on little food. Being a modified ruminant (3 stomach chambers), the llama maximizes the nutrition of the eaten material by cud chewing.
3. The ability to require water once a day. Actually, dew or plants and drinking water or eating snow will sustain the llama. The llama has water conservation in its biology. Other pack animals require water sustenance every 4 hours while working.
4. The ability to climb, like a mountain goat, with agility and grace. Powerful back legs power the 400-pound animal in leaps up difficult terrain. Twelve to sixteen miles a day can be achieved in moderate terrain.

The structure of the llama requires the saddle, panniers, halter, and leads to be designed for their size, **NOT** like other pack animals. Their backbone is not supported by muscle and there is no collarbone at the shoulder so the weight is equally distributed on each side in the panniers (packs) supported by a saddle designed in a pyramid style. There are hard or soft pack designs and they can be purchased through many western manufacturers.

Here in the United States we teach our llamas to follow us. The lead line is attached to the halter (minus a bit because no top teeth in the front) and held by the hiker. Thus llama trekking is an exercise sport. Hikers still walk and climb while the llamas carry the load. Your backpack is left behind - on a llama. Usually, 60-80 pounds per llama that is in good condition for a 5-mile to 6-mile mountain hike is not unusual. One person can string llamas together in a line and easily manage three packed llamas to a campsite.

Spring training is a very important conditioning time. Roadwork toughens the feet, muscles, and builds up the endurance needed by the hiker and llama for the mountains. Each llama depending on age and experience will have different abilities. The straight legs, balanced body, and willingness to work are qualities that all athletic llamas have but experience is the best teacher.

In New Hampshire, hikers may take their personal llamas on any state or national land. However, it is prudent to notify the managing authority as to when and where you will have your llamas. All land is owned either by a conservation group, individual, or agency. Information as to any restrictions or regulations will ensure a great hike.

Llama trekking is being offered in New Hampshire as a gourmet lunch hike due to the greater hiking population and shorter trails with magnificent views. Gear portage to a campsite is available for those staying 3-4 days. Groups, families, reunions, photographers, and fly fishermen are some that utilize this peaceful packer. You, too, can enjoy this muscular activity by contacting llama trekkers on the New Hampshire membership list.

Llama Saddles and Packs Comfort and Function

By Deborah Frock

Choosing a llama pack system is harder than many would like. Of the incredible array of models on the market, some look similar while others are very different. The difficulty of choosing between those models is compounded by the pack llamas' varied uses and the llama packer's differing personal needs. A recommendation from an experienced trekker may not be applicable to your situation or suited to your llama. Most advertising of systems is not intended to educate but to convince someone to purchase a product and its accessories. Most people do not have the budget that allows them to buy a large sampling and decide what works best for them. With guidance, one can learn to eliminate most packs on the market, borrow a few systems, attend packing seminars, and finally select one that best suits your ability and inclination to modify it for your llama's maximum comfort. Let's get started!!!

All systems are a compromise. All systems will fail some criteria under some circumstances. All systems will not fit most llamas, even those in condition and suitable for packing. Your llama's function is affected by reality of fit, not by your belief. System fitting problems do limit time and distance in the training process and on the trail. This causes functional problems requiring the handler to repeatedly adjust the system and/or resulting in the llama feeling pain for a physical and mental lapse in performance. A llama refusal, fidgeting or nervousness on the trail will lead to a hazardous situation.

Research on pack systems involves evaluating your needs; assessing your llama's suitability, and most importantly, education on your part regarding the proper pack use, fit, and features. First, know the pack features llamas can not live without and do your best to choose or modify other features to function the best you can.

The pack system must:

- clear the spine at all times, even with a maximum load and jumping
- have no parts that rub, pull, or press into the animal on the sensitive parts or skin
- not shift out of position during normal use and must have effective rigging to minimize shifting in extreme terrain
- have enough contact surface to allow adequate circulation and chest expansion
- absorb the shock of jumping as well as normal travel
- be subject to pulling as from a llama string which commercial packers use or necessary in case of an emergency.

To help you determine your needs as a llama packer, consider the following questions:

- 1) What kind of packing do you want to try?
 - a) Recreational packer - well designed panniers to carry gear, coolers, photography equipment, and/or top load
 - b) Full-time commercial guide - large rugged panniers and simple, strong, string possibilities
 - c) Hauling contract loads or trail maintenance - utility panniers capable of carrying awkward, bizarre, and uneven weight loads, top load, and hitch loads
 - d) Pack with children - safe and simple equipment
 - e) Distance hiking light weight, rugged, good organization.

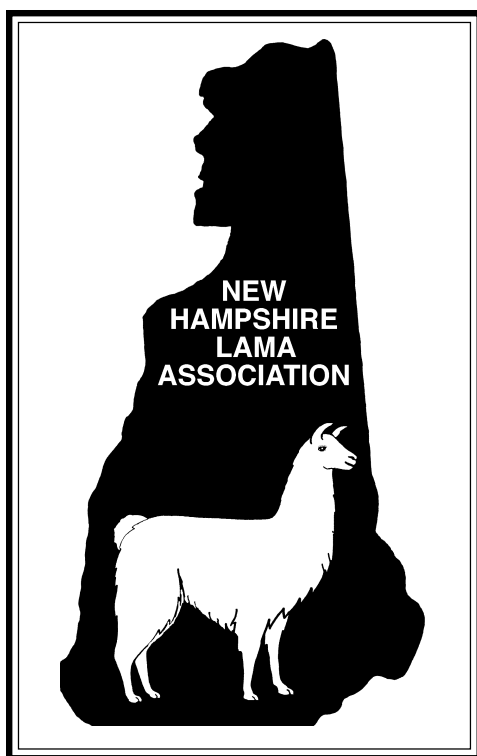
- 2) What type of terrain?
 - a) Steep and/or rocky - equipment must not shift
 - b) Forested areas - low profile and no parts to catch on trees
 - c) Inclement weather - components can't rust, warp, rot, crack - avoid water absorbing materials
 - d) Show Ring - good looking, clean, color coordinated and compact heavy weights.

- 3) What are your personal preferences?
 - a) Soft pack systems - one component
 - b) Hard pack systems - two components
 - c) Hard pack systems - three components.

Now, spend some time determining whether your llama is suited to pack. There are many reasons why a llama should have a non-packing career. Some are readily apparent as in structural leg faults. Others will not be apparent until training is complete as a dyslexic problem. In either case, your time and money are better spent on a good llama than trying to make a VW or a Cadillac into a pickup truck. The "large" (overweight or long-bodied) llama is not the very best for packing as some claim. A long-bodied animal is an inefficient pack llama (length is dead weight). Also, he is at risk for back problems and early retirement. A pack saddle that doesn't fit a properly proportioned animal is an economically poor choice. Another significant problem with a llama prospect is poor movement. No side to side dipping in front or rear, and the front to back motion will be minimal in a good movement animal. Leg faults or lumbosacral weaknesses that cause side to side motion will throw the best pack system off balance repeatedly. Those llamas will tire faster and their packs will not stay in place. Stiff hocks will cause rumps to bob up and down, causing any packs to work forward into and over the shoulder. Discovering and admitting your llama's faults will allow you to make the best possible choice for his pack system which is sometimes no system at all.

By the age of three and a half, most llamas are mature enough to fit a pack system. Your efforts to fit before that can be wasted and scare the animal out of packing because of his concern over too big a saddle. Loading a young animal puts the skeletal growth at risk. A young llama can accompany any trip as a trailer llama without packs or just 20 pounds (10 pounds on each side) of weight. I find that is the best solution after eight years of commercial trekking. A saddle system can be adjusted to a specific llama at maturity and periodically adjusted with growth. Seldom is a system used with another llama, however, panniers are interchangeable.

In our fast food, fax machine, instant cash world, pack llamas are a link to the past. A time when reality prevailed. If you didn't learn to wait, you suffered the consequences and perhaps risked your livelihood if the animal you depended on broke down. Our llamas are not new improved, man-made machines. They are not use it and toss it. They still are in the world where ill use means a ruined life. It is sad when we rush to get in touch with the wilderness that we also risk damage without taking education seriously. Take advantage of the knowledge learned by others and listen in seminars, festivals, and shows.



Breeding

Stud Quality Males

By Sharon E. DaDalt

Once upon a time, I went to a llama auction. And lo and behold, there was a chocolate brown male with much, much wool for sale. He had wool and wool and more wool. And he was truly a most beautiful animal, the highest selling male there, truly a nice guy! But he had this one small, tiny, minor little problem. He only had one testicle, for unspecified reasons. The seller didn't say if it was an accident or if he was born that way (genetic defect). But he was sold with the promise that this would not be a problem for the new owners, even though no one knew why he only had one testicle. He had been used for a stud for his whole life, producing many crias, and he was sold with the promise that he would continue to produce many beautiful, dark brown, wooly crias. And he was sold for much, much dinero (money, for those of us who don't understand Spanish!).

I guess I have some problems with the term "stud quality male" as used by many persons in the llama industry. I know that I would not have considered purchasing this male as a stud without getting an explanation as to why he only had one testicle. And certainly not for the amount of money that changed hands on this transaction. But he was a "stud quality male" and his basic soundness was sacrificed for his superior looks.

What points should be considered when determining whether a male llama is a stud quality male?

GOOD CONFORMATION

Legs and back should be straight with no genetic defects. Look at the head and jaws. Do they look normal? How does he position his neck? Does he seem to have any problem chewing? Watch the llama move and note any limping or improper leg movements.

Conformation is something that can be determined by looking at the llama and observing him. Not all traits can be readily determined by simply going to an auction and looking at the llama.

DISPOSITION

He should have a willingness and eagerness to please. He should be a non-spitter. He should respect humans as humans, a non berserk male. You should not have to drag him around when leading him.

As far as the herd is concerned, he should be protective of the females and the young. He should mark his territory and protect it from other males. He should patrol his territory vigorously. He will be constantly checking up on those females to determine if they are pregnant and quickly do something about it if they are not. Good libido (sex drive) is mandatory. He should be interested in breeding, do so without prodding, and do so without any outside intervention from his human owners.

Disposition is one of those traits that is not that readily observable, especially when putting a llama in a strange situation such as an auction, where he is away from his herd and territory. If you are interested in a male as a potential stud, spending time with him and checking his prior breeding record is important.

TESTICLES

He must have two large, functioning testicle. One is OK if it is absolutely known that the other one has been damaged through fighting with other males or an accident. The larger the testicles are, the better breeder he will make. The testicle must produce viable sperm.

HEALTH

Any animal has problems at one time or another, humans included. Look at his medical history. Is he constantly fighting infections such that he may have a poor immune system? Is he too skinny (not just light boned and fast metabolism skinny) for his age thus being a good candidate for the failure to thrive syndrome? Runny eyes? Diarrhea constantly? Ulcer medications? Problems with sterility (not just hot weather sterility)? Sensitive feet? Bad gums? Problems with rumination?

Look carefully at the animal and his health record. Constant problems are a problem and unsound animal.

GENETIC DEFECTS

There are few perfect llamas, just as there are few perfect humans. Things to look for are inbreeding or linebreeding in the known bloodline. This tends to pass on genetic defects. Look for atresia ani in the bloodline, crooked legs, a defective or missing testicle, difficulty in getting females pregnant, and abnormal breeding behavior.

Look closely at the parents and other relatives and determine if they have any defects that could have been passed on as recessive traits that may show up in future generations. Genetic defects or the possibility of genetic defects cannot be determined by just looking at the potential stud.

MOTHER'S TRAITS

Does she have a problem producing colostrum for her babies? Plenty of milk? A large udder? More or less than four teats? Attentive to her baby? Problems with dystocias or abortions? Problems with premature babies? Easy and willing to become pregnant? Tells the male when she is pregnant? How does she look? Any health problems? What kind of disposition?

FATHER'S TRAITS

Does he have two large, functioning testicles? Any problems with sterility? How many offspring has he produced? Any problems with libido or breeding? How does he look? Any health problems? What kind of disposition?

SUBJECTIVE CHARACTERISTICS

Once you have determined that the male is basically a sound animal, then things like wool color, wool thickness, wool length, ear shape, eye color, tail set, and amount of guard hair can come into play. These things do not make a "stud quality male". You must have the basic soundness to make a male a stud quality male. Then you can determine whether any particular male fits into your breeding program or

not.

What traits you breed for depend on what type of animal you wish to sell or work with. Shorter wooled, stocky, large boned llamas with plenty of guard hairs to protect them from the weather are great for packing or driving. If you're interested in wool products, a medium to heavy wooled llama with minimal guard hair is nice. If you're interested in dyeing your wool products, white animals may be what you want. If you're interested in selling llamas as pets or public relations animals, smaller llamas may be good. Show animals tend to be wooly with banana ears. Guard llamas for sheep herds should be aggressive with short to medium wool.

Note that none of the above characteristics should be chosen in place of the basic soundness and health of an animal. The main goal should be to select a sound, healthy, intelligent, breedable llama with a good disposition FIRST and then choose for those traits that you wish to have in your herd.

GOAL ACHIEVED

So mere appearances can be deceiving. Do your homework before you buy and you will be a long way towards minimizing problems and producing a healthy, happy, and carefree herd!

Twilight Zone Breeding
(Or Something To Think About)
By Sharon E. DaDalt

The world of genetics is an exciting field to be in today. It is the world of RNA and DNA, substances which carry the genetic code and determine who and what we are. It is the world of genotypes (what genetic code you carry) and phenotypes (the observable characteristics of an individual). The phenotype, or appearance of an individual, is not only influenced by genes but also by the environment. And sometimes it is not that easy to determine just how much of a role the environment plays in an individual's phenotype.

Hypothetical Case: You want to start a llama herd and you decide that you have enough resources to purchase one really nice breedable male, which you are also planning to use for stud services to get back some of your investment, and to purchase one really nice female to be used for breeding. You go to XYZ Llama Breeders, Somewhere, USA. Luckily, he has just what you want. You purchase a 1.5-year old male for \$30,000.00 and a 6-month old unrelated female for \$25,000.00. The excitement grows as the female approaches breeding age (1.5 years old) and as you work with, enjoy, and grow to love both of your llamas. When the female is ready, you breed her to your super male and she takes right away. This will be his first baby and you want to see what he throws before offering him for stud service.

Almost a year goes by and your female is ready to give birth. The anxiety and excitement mounts as she goes into labor, the baby hits the ground, it's a female, and low and behold, **THE BABY ONLY HAS 3 LEGS!**

You recall going to a lecture on genetics a couple of months back and dig out your notes. Sure enough, the lecturer had mentioned just this very situation. It seems that 3 legs is a recessive genetic trait, that is, both the male llama and female llama have contributed genes which resulted in a 3-legged cria. And just what did he say you should do about this? Sterilize everyone so that this trait and the genes contributing to it are not passed on.

You are into these 2 llamas for a lot of money so you try to contact XYZ Llama Breeders as you have a contract which covers this very situation (lucky you!). But XYZ Llama Breeders has seemed to disappear, they have gone out of business in the 2 years that you have been waiting for your female to mature and have her baby! You decide to use the contract in the bottom of your bird cage.

Being a responsible breeder (as I'm sure we all are), you know what you must do, the evidence is clear. The vet is contacted to come out and castrate the male. The cria is learning to deal with her 3 legs, so you let her nurse while she can, and then both mother and daughter are sterilized. You eventually sell the male for \$2500.00 to a couple who want a nice pet. You feel sorry for the mother and her baby and decide to keep them as pets for yourself.

Despite the problems, you are still interested in continuing with llamas and attend another series of lectures. One of the lecturers is talking about medications and mentions the ABC Worming Paste with XQ ingredient that is being used on llamas and recommended by vets and is not approved for use on llamas (nothing currently is). He mentions that a common side effect turning up when this medication using this ingredient is given to pregnant females is that the cria is often born with 3 legs.

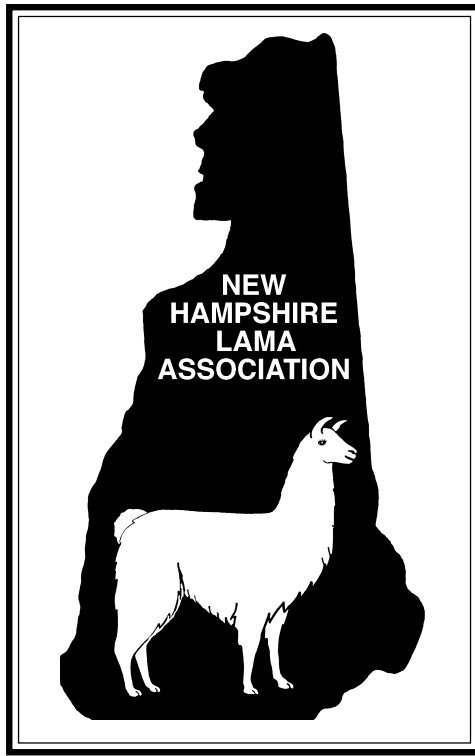
In absolute horror, you rush home to check your records, and sure enough, ABC Worming Paste with XQ ingredient was used by you on your female while she was pregnant.

Hypothetical case? Yes. Could it happen? Possibly. Cause of the 3 legs in the llama: genetics or medication (environment)? Probably the medication. Can we be absolutely sure at this time? No, not really, although we can make an educational guess that it was probably the medicine.

None of the drugs we use on our llamas have been tested on llamas or approved for llamas. They may be safe, or they may not. They may even cause long term problems we are not yet aware of. And not enough genetics research has been done to really go in and look at those genes and determine which ones are causing the problems and if a specific animal has the problem genes. We have to identify, genetically, which gene is causing the congenital condition (condition present at birth) in order to be sure that we actually have a genetic problem, and not one that is the result of the environment.

Even responsible breeders can be fooled with the evidence. We need more research, testing all drugs we use on all ages and stages of llamas. We need to be conservative in drug usage, using only what is absolutely necessary, under the vet's instructions and at his recommended dosage. Also let's consider insecticides, rodenticides, and pesticides. Every one of us wants to minimize those flies and pests, but can the insecticides, etc., result in abortions or birth defects? We don't know. Use more natural insecticides such as spiders (I know spider webs look messy, but the critters really do a good job) and parasitic wasps. Bug lights, flytraps, fly paper, and fly strips not in direct contact with the llamas are also a good choice. And fly swatters, although very labor intensive, get those flies just as well!

Let's support and encourage llama research, both with funds and information on what is happening with our herds. We need a lot more information about llamas to get the answers we need to properly manage our animals.



Berserk Syndrome

Berserk Male (Female) Syndrome

By Sharon E. DaDalt

As more and more people become familiar with llamas and begin to breed, they need to know and understand what to do to ensure that their animals are easy to work with and yet remain gentle and safe around human adults and children.

What is the Berserk Male (Female) Syndrome in llamas? This is a behavior that develops when the llama is around 2-3 years of age, going into his/her puberty years. It is due to too much or improper handling of the llama when the llama is a baby. Llamas need to be llamas: they need to remain with their mother until they are 5-6 months of age and to learn proper llama social behavior within the herd.

The berserk male (female) syndrome arises when a baby llama has too much or improper interaction with humans and bonds to humans at a young age. When the llama reaches the puberty years, he/she treats humans as another llama. Males will fight among each other, a perfectly normal behavior between male llamas. A male llama that has been bonded to a human will try to attack and fight with the human to establish dominance. A human is no **match** for a 300-500-pound llama and can be severely injured. Male llamas that have this behavior generally have to be euthanized as there is no cure and they can never be trusted around humans.

Female llamas generally will become spitters and will be pushy. They will come up to humans and will not back off and give humans their space. They will also try to show humans where they are in the llama social pecking order by spitting at them and putting them in their place. There is no cure for this behavior. Once a female llama is a spitter, she will remain a spitter and treat humans as another llama.

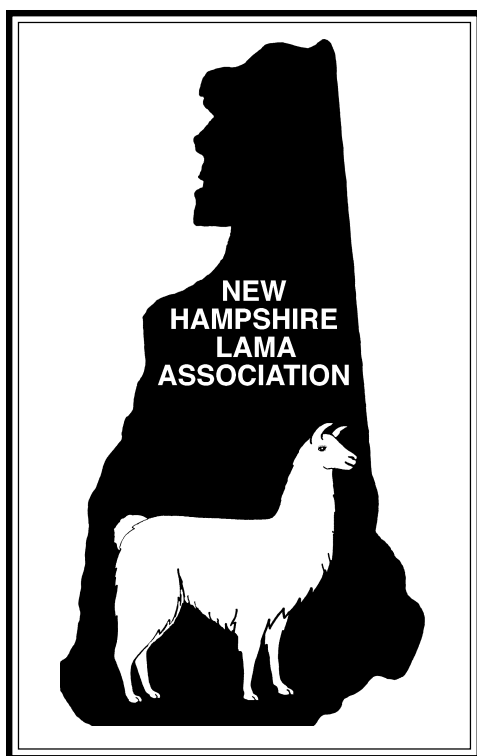
The berserk syndrome in past years was responsible for giving zoo llamas a bad reputation. Zoo animals were routinely taken away from their mothers and bottle-fed, a practice that just about guarantees that the llama will have the berserk syndrome when he/she is older. Many people's first experience with llamas has been in a zoo when they walk up to the llama area and are spit upon by these animals.

One symptom that may indicate that a llama may develop the berserk syndrome is a young llama that is too friendly, comes up to you, and does not back off. A young llama may also show you the "submissive response": hunching over and flipping his tail up over his back, acknowledging that you may be the "dominant llama" right now but **WATCH OUT!** Llamas are normally aloof and should not be friendly (they should be easy to work with, companionable, and gentle but their personality is quite different from our usual pets like cats and dogs that will come up and cuddle with you).

How does one treat baby llamas so that they grow up properly? At Llama Lledge Farm, we will check out our newborns to ensure that they are OK, treat the umbilical cord, handle the feet and legs, and then **BACK OFF!** They need their mother when they are first born and for the first few months of age and do not need us interfering with what care and education she will give them. Anyone who has watched baby llamas in a herd situation will see them imitate mom (mom spits and hangs her mouth open and the baby will walk around for hours with his/her mouth open). We will start working with the llamas at about 3-4 months of age, when they have been fully bonded to the herd and see us as "humans". Llamas should not be bottle-fed, except in an emergency situation (mother has no milk, etc.) and then should be kept in the herd structure, with the mother always present for comfort and care. They should not be brought into the home and treated like "pets". The least you can do for a baby to get him through the rough times, the

better off he/she will be.

Keeping these issues in mind, minimal touching now and then of a baby in a herd situation will not harm him/her during this time. It's the constant and improper handling or bottle-feeding that will cause this behavior. Be sure to check out the baby once in a while to make sure everything is going well. Most of all, enjoy those babies!



Interstate Transportation

Health Papers

What is she talking about?

By Judy Kimball

Many times I have seen that blank stare when you ask someone for their health papers. This article is written in answer to a request from some new people in the industry who didn't have a clue what health papers are or who needs them.

You just purchased a llama or you just sold a llama, your sweet little female is going to be bred or you're going to the fair so what do you need to know. Before you do any of these things, you better acquaint yourself with the rules of transportation. Each state has different requirements for your animals just as each country does for your entry. There are four tests and an approved health certificate that you should be familiar with. Unfortunately the regulations are not the same for each state. That would make life much too simple and when was the last time the government did something like that?

The four tests are as follows: Tuberculosis (TB), Brucellosis (contagious abortion), Anaplasmosis, and bluetongue. The time factor is usually within 30 days. The first step is to call a veterinarian and he/she will come to your farm and draw a vial of blood usually from the lower neck of your llama. You should have a good place to restrain the llama for its sake as well as the vet's. A good vet can find the vein in the lower neck and withdraw the blood in one or two tries. Others will want to shave your llama and some will still have a hard time. All but the TB can be done from this vial. The TB is a prick and a return in three days to make sure the llama hasn't had a reaction. Your llama should have a permanent identification either in the form of a tattoo in the ear, a microchip, or an ear tag. (Ear tag is the least desirable). If you have a microchip make sure you or your vet has a reader.

The results can take varying amounts of time depending where the samples are sent. TB can be verified by your vet in three days but the other tests are done in a lab. We have had the best and quickest results by sending them to the State of Maine lab in Augusta, ME. Usually five days or less. Be sure to arrange for your vet to come on a Monday so that your blood sample isn't sitting somewhere over the weekend, especially if it is hot weather.

It is important to realize that each state has its own requirements and they differ depending on which state your animals are coming from. Massachusetts and New Hampshire are pretty much compatible but that can change at any time. Bluetongue is usually found below the Mason-Dixon line and it is not a problem where there is a freeze in the winter, but the northern states do not want it brought in. It is important to realize that these rules not only protect you but also others. These diseases can be transmitted to other animals.

Also be aware that unless exempted a llama transported or moved into a state must be accompanied by an official health certificate issued by the state of origin. It must be in the possession of the driver of the vehicle transporting the llama. The certificate should include the full name and address of both consignor and consignee, the date issued, dates and results of the qualifying tests, the date the animal is to enter the state, and a statement that the llama has been inspected by an accredited veterinarian and does not show signs of infections, contagious, or communicable disease. Certificates are valid up to and including the 30th day following the date of the inspection of the llama.

An approved Health Certificate can only be prepared by a veterinarian in the employ of the state of origin, by those in the Veterinary Services of the USDA, or by an accredited veterinarian. Not all veterinarians are accredited. In order to keep up their accreditation they have to go to school each year and some don't find it necessary in their practice.

The sole purpose of this article is to educate the llama owner and not to point the finger at anyone. I hope it helps.