

Introduction

This manual has been developed as a study guide for the Florida State Fair Youth Llama Skillathon which is a part of the Champion Youth Program. The topic for this year's Skillathon is **Products and Marketing**.

The Florida State Fair recognizes that agricultural education instructors, 4-H agents, parents, and leaders provide the traditional and logical instructional link between youth, their animal projects, and current trends in the animal agriculture industry.

This manual is provided as a study guide for the skillathon competition and should be used as an additional aid to ongoing educational programs. At the back of this manual are additional web sites. Reference materials are also listed for further study.

Sections are labeled to help exhibitors and educators identify which materials are required for their age level.

J, I, S - for all exhibitors: Juniors, Intermediates and Seniors
I, S - for Intermediates and Seniors only
S - for Seniors only

Juniors (age 8-10 as of September 1, 2024)

Halter Class Wool Types
Evaluating Fleece

Intermediates (age 11-13 as of September 1, 2024)

All of the above plus...
Judging Fiber
Fiber Terminology

Seniors (age 14 and over as of September 1, 2024)

All of the above plus...
Harvesting Fiber
Clipper Maintenance
Clipper Parts

Only senior exhibitors will be eligible to qualify for the top 4 Champion Youth Awards. Intermediate and junior exhibitors will only complete the segments of the Skillathon and Record Book Test that are designated for their age level.

GOOD LUCK!

Alpaca / Llama Fiber History

South America is home to four species of camelids: llamas, alpacas, vicuñas, and guanacos, spread across the Andean Mountains of Argentina, Bolivia, Ecuador, Chile, and Peru. Unlike their cousins, camels, and dromedaries, they don't have humps. While llamas and alpacas are domestic animals, vicuñas and guanacos are wild.

Llamas were first domesticated by the indigenous peoples of the Andes in South America around 4000 BC. They were used for transportation, wool, and meat and played a significant role in the Andean culture. With the arrival of the Spanish conquistadors in South America in 1532, llamas were introduced to Europe. They became popular exotic animals in European zoos and were admired for their unique appearance. Llamas were first brought to North America in the mid-19th century as part of zoological collections. They later gained popularity as pack animals for trekking and hiking in the American West. In the 1980s, llama farming became a popular industry in North America. Llamas were bred for their wool, meat, and as companion animals. They were also used for therapy and as guard animals for livestock.

Alpacas are historically considered a gift from the gods; alpaca fiber was reserved for Inca nobility! Smaller than the llama, the adult alpaca measures up to an average of 2.7-3.2 ft at the withers. You can also recognize an alpaca by its' small erect ears, a characteristic that differentiates it from the llama. Domesticated about 6,000 years ago, it occupies an important and symbolic place in the history of the Andean people. The Quechuas are the ancestral native people of the Inca civilization, and they have always been at the heart of alpaca breeding. For them, it's much more than a form of agriculture, but the symbol of a life rooted in traditions and customs. Not only did the Incas have some of the world's finest fibers to work with, but they have astonishingly sophisticated hand-spinning and weaving techniques. The entire civilization, with its ingenious eye for detail and organization, put its best efforts into fine fiber and beautiful textiles.

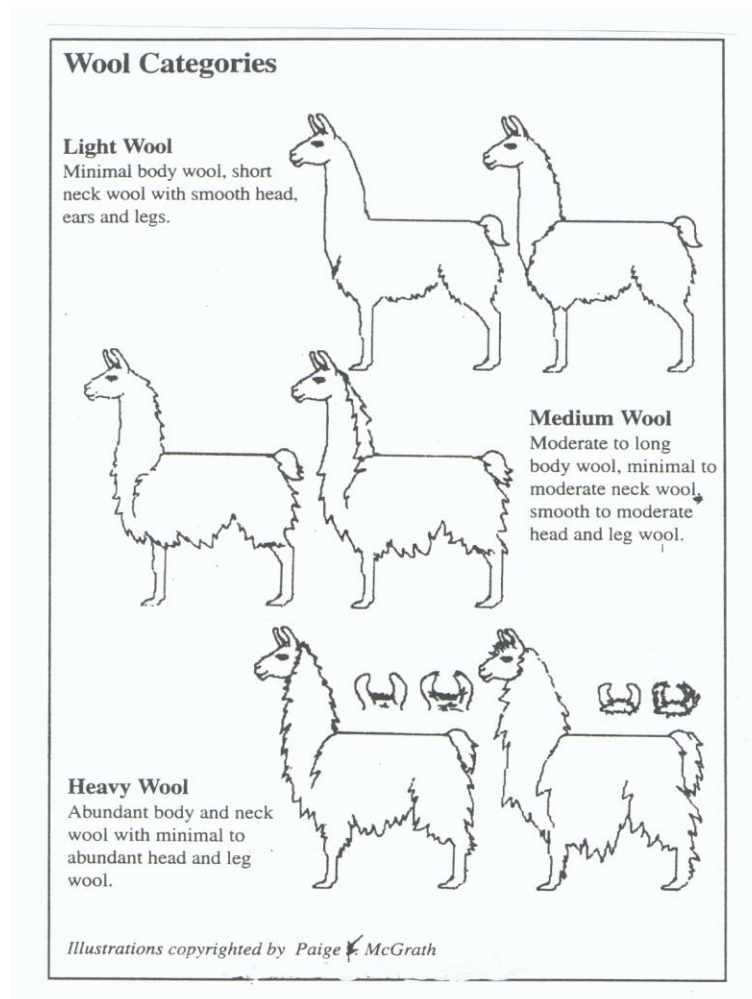
LLAMA WOOL TYPES FOR HALTER CLASS

The **light wool classification** requires (1) light or minimal fiber, (2) minimal body fiber, and then (3) smooth on the legs below the body line, i.e., very light on the stifle and gaskin to the hock and bare below the hock, and smooth or very light on the arm on the front to the knee and nothing below the knee.

The **medium wool division** represents the in-between animal in terms of fiber length and coverage. (1) The neck to be minimal to moderate and (2) the body moderate to long, with (3) smooth to moderate leg wool. When the classic medium wool animal is presented with moderate neck fiber and even a discernible mane, along with a moderate but not abundant leg fiber to the knee and the hock.

The **heavy wool division** also focuses the definition on the neck, body and upper leg fiber. The neck (1) must be full of abundant fiber often displaying a frame or ruff just below the jaw line. The ruff is not mandatory and may not yet be discernible in juveniles and may actually lessen again by adulthood. The body (2) must have abundant fiber, and (3) there is moderate to abundant fiber on the stifle and gaskin to the hock in the rear and the knee in the front.

The **Suri fiber division** grows parallel to the body and hangs in long, separated locks. (Sort of like dreadlocks!) "The Suri carries a silky, soft-handling, dense, locking fleece that moves freely, yet hugs the body giving the animal a flat-sided appearance. The fleece hangs from a center part...with well-defined locks forming close to the skin and twisting uniformly to the ends. The Suri's overall effect is similar to the drape of a curtain of silk tassels." [See websites below on page 4.](#)



Adapted from Llama Banner, Vol. 9, No. 1, Wool Division Placement for ALSA Shows, 1996

PRODUCTION & EVALUATION OF FLEECE

The Llama and Alpaca Judging Manual is a written addition of the standard which ALSA judges use as a guide to judge fiber. This information can be acquired from www.alsashow.net, Judges Manual 2015, Fleece Judging Manual 2015, pp 123-137 and Youth Judging, pp 31-38.

The fiber of llamas and alpaca varies greatly from individual to individual. Though we refer to it as wool, what grows on Llamas and Alpacas is technically hair because of its cellular composition. Magnified cutaways show that it is somewhat tubular hair with a medullated, or hollow core, structurally different from the solid or corticated fiber of sheep and most other wool-bearing animals. The degree of medullation decreases with fiber diameter, with the finest llama and alpaca fiber having an interrupted medullation, or none at all. This unique structure may account for the remarkable warmth and insulating quality of camelid fiber and contribute to its tensile strength and durability. The wool is remarkable light, sheds rain, snow, and comes in an array of natural colors. It shrinks little during washing or processing and lacks natural oils as compared to sheep wool with much lanolin.

Look and touch the fiber on your llama or alpaca periodically throughout the year. It will tell you all you need to know about the success of your management program. Healthy, shiny fiber usually means, healthy, happy, serene, well fed, well managed llamas or alpacas.

- A. Overall View: General Appearance for Type-Llama, Alpaca
 1. Llama Fleece –
 - a. Double Coat – a fleece which contains guard hair that is visibly coarser and longer than the undercoat. Standing back from it, the longer guard hairs form a halo around the body. They can range from coarse to very fine but are always distinguishable from the undercoat. The higher the percentage and coarser the guard hairs, the finer and more crimped the undercoat being protected.
 - b. Single Coat – a fleece in which there is minimal difference between the micron count of the guard hair and the undercoat and no halo. These fibers can also exhibit crinkles and crimps.
 - c. Suri Coat – the primary characteristics are luster, independent, narrow lock structure with no crimp, cool, slick handle and long staple length.
 2. Alpaca Fleece –
 - a. Huacaya (pronounced “wuh-kai-uh”) – their fiber is dense, crimpy and stands perpendicular to their body, much like would be seen in a wool sheep. When handling a raw huacaya fleece, it will feel warm, very soft and inviting to the touch.
 - b. Suri – the lustrous, straight fiber of the Suri hangs down in “dreadlocks” giving it an entirely different appearance. It has a high luster and feels like cool silk to the touch.
- B. Observe and Identify Lock Structure – the natural arrangement of guard hairs and undercoat.
 1. Double and Single Coat
 - a. Blunt – These locks are wide with a rounded lower edge. They grow perpendicular to the body and may overlap. The structure may be visible only in the tips rather than near the skin. Guard hairs are straight and can be quite coarse. The undercoat has the shortest staple length and highest amount of crimp of the 4 lock styles.
 - b. Triangular – Triangular locks can vary in shape from wide to narrow. As the triangle narrows, the staple length becomes longer, guard hairs finer and crimp less visible. Individual locks become more distinct and form closer to the skin as the locks approach the pencil type. The guard hair is about the same length and diameter as the undercoat in the narrowest triangles.
 - c. Pencil – These locks hang close to the body, are distinct with a long staple length and minimal loft. The structure can be visible from the skin out. Instead of crimps,

a spiral or wave pattern is often seen in the locks. As the guard hair micron count decreases, undercoat micron count increases until, in extreme cases, it requires magnification to tell them apart. There's higher density to the fleece due to the amount of fine guard hair-like fibers. High density and long staple length combine to give the fleece a heavy feel.

- d. Suri Coat – Suri locks are the most extreme and obvious type. The fiber is straight, with no loft, crinkle, or crimp. The locks are usually independent, well-defined from the skin to the tips, and often have a wave or spiral pattern superimposed on them. There is a natural part in them along the backbone and back of the neck. They also have a high luster, even on the neck and legs, and a cool feel (i.e., hand). The fleece feels heavy for its size and drapes next to the body. Micron count may range from extra fine to coarse but should be consistent within an individual animal's fleece. Ideally, a Suri fleece contains only one type of Suri lock structure; however, several types may be found.
2. Suri Lock Structure – while reading the lock structure definitions below, please keep in mind that the translation of the Aymara and Quechua word “Suri” is “straight”. In addition to describing fiber, it is also used in reference to the long, straight feathers of the South American Rea and a hard rain that falls perpendicular to the ground. When used with camelid fiber, it means there is absolutely no crimp.
- a. Straight – Suri locks have no twist, although there may be shallow wave pattern superimposed over them. They exhibit high luster and have cool, heavy and slick hands. The weight, drape and lower volume of a straight Suri fleece helps distinguish it from a silky, single coat with pencil locks. Watch for a free and independent movement of the string-like locks as the llama walks.
 - b. Flat – Locks also lack any twist but may have a tighter wave pattern superimposed over them. The lock width varies from narrow to wide. Narrow, flat Suri locks, unlike any of the other styles, are very fine textured. Narrow or wide, they are lustrous, independent, and form at the skin.
 - c. Spiral – Lock structure is very common in Suri llamas with single coat llama ancestry. This is not an alpaca lock structure term. It is usually found only on the surface of the fleece and may be mixed with twisted locks, the next step in this continuum.
 - d. Twisted – Locks range from 1/16 to ½ inch wide. This is the style most easily identified as Suri, although twisted locks may not always exhibit luster. A twisted lock with luster indicates high quality.
 - e. Corkscrew – Locks are rare in llamas but common in Suri alpacas. They are wider than twisted locks and lustrous. This structure reforms quickly after shearing and may be perpendicular to the neck and body instead of draping.

There are 2 styles of Suri llama lock structure that often have a warm handle and little or no luster:

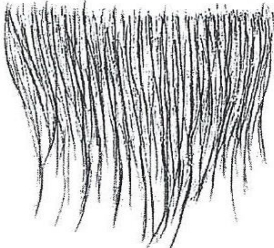
Loosely twisted locks are wider than narrow twisted ones and can be very coarse textured.

Fan-shaped, or paint-brush locks, are about an inch wide and flat at the skin. Part way down the lock, they begin to twist until they form a point at the tip.

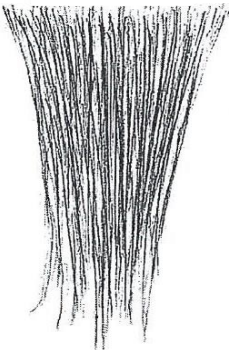
ILLUSTRATIONS OF LOCK STRUCTURE TYPES

SINGLE

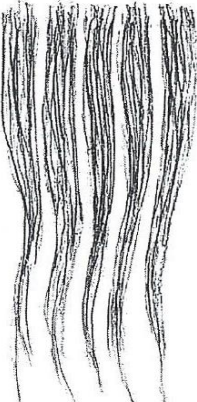
Blunt



Triangular



Pencil



Straight



Flat



Spiral



Twisted



SURI

Loose spiral



Fan or Paint brush



Corkscrew

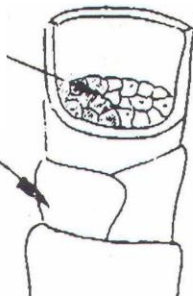


ALPACA FIBER DESCRIPTIONS

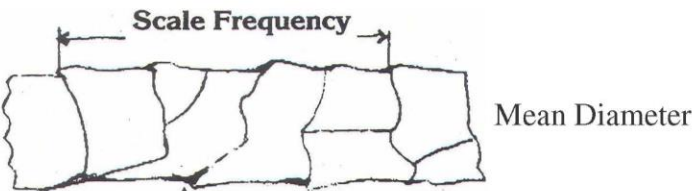
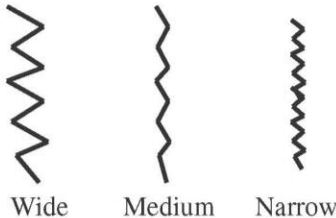
Fiber Structure

Cortical Cell

Cuticle Cell



Expression of Crimp



Scale Height.- Smooth

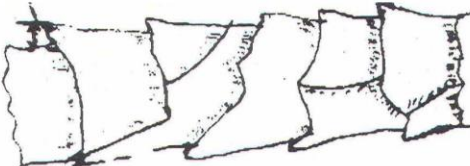
Suri Scales



Stronger (tighter)

Weaker (open)

Serrated edges of scales



Huacaya Scales

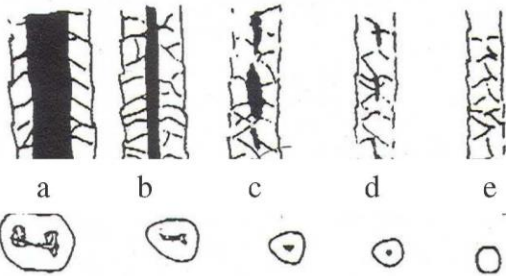
Expression of Density



Closed (Less skin shows)

Open (More skin shows)

Medullated Fibers



Judging Fiber

The positive alpaca traits of fleece are “hand, fineness, density, uniformity of density, fineness and crimp, character including crimp, condition, and quality of fiber throughout the fleece, absence of guard hair in blanket area, and luster, lock formation on Suri type. Those traits not desired are weakness, dullness, matting, debris, sun weathering, brittle fiber, parasites, and droppings. WE WILL USE THESE POSITIVE AND NEGATIVE TRAITS TO COMPARE FIBER.

The llama fiber classes are divided into double coat, single and Suri coat divisions. The fiber is shown according to the llamas’ age as of the date of shearing and the type of cut with a minimum of 3-inch undercoat. Fiber from llamas up to 24 months can be placed in the full or barrel fleece and in the area of fleece sample. Those fleeces harvested from a llama 25 months or older can be divided into full or barrel fleeces or fleece samples.

According to the 23rd edition of the ALSA handbook, section O 1-9, the “fleeces and fleece samples, shall be sheared, not brushed, consist of prime fiber from either the barrel or the full blanket, be sheared within two years of the date of the show, have lock structure intact, be skirted and hand-picked, be submitted in clear unmarked plastic bags; gallon zip lock bag for fleece sample, be displayed in clear plastic bags or in appropriate size white boxes supplied by the show, be judged by exhibitor number only.”

According to the 23rd edition of the ALSA handbook, the fleece score is out of 100 possible points. **The ALSA Llama Fleece Show Score Card sample (shorn & walking fleece).** See ALSA website for other sample scoresheets.

- | | | |
|--|--|---------------------|
| 1. Style | | |
| A. Fineness | | 10 points |
| B. Hand | | 10 points |
| C. Brightness/Luster (Suri) | | 10 points |
| D. Guard Hair | | 10 points |
| 2. Character | | |
| A. Over-all Uniformity | | 15 points |
| B. Lock Formation Crimp or Suri no crimp | | 15 points |
| 3. Preparation | | |
| A. Tensile Strength & Condition | | 10 points |
| B. Cleanliness & Preparation | | 10 points |
| 4. Density | | 10 points |
| | | 100 points possible |

Reference: ALSA Manual, Part O Fiber, Section O-3

FIBER TERMINOLOGY

*****Note: Alpaca/Llama used interchangeably throughout terms; additional terms may be found in reference at the end of the term sections.**

Intermediates are responsible for underlined terms **ONLY**,
Seniors are responsible for **ALL** terms.

APRON: Coarse fiber which forms an overcoat around the chest of the alpaca.

BELLY FIBER: Fiber harvested from the belly, usually of a coarser quality.

BLANKET: The back and side of a fleece from the base of the neck to the base of the tail and the sides from the backbone to the belly including the haunches.

BRITCH FIBER: Fiber off the lower thigh of the rear leg of the alpaca.

CARPET FIBER: Coarse hairy fiber.

CLASSING: Grouping of fleeces according to type and quality.

CHARACTER: The characteristics of fiber lock or fleece determined by qualitative evaluation of crimp, staple length and configuration, handle or softness, and luster. It indicates good breeding and growth.

CONSISTENCY: Uniformity throughout a fleece of fineness, staple length, character (crimp, staple configuration, hand) and density.

COTTED: Fiber naturally felted on the animal.

COVERAGE: The distribution of continuously growing fiber over the alpaca's body, neck, legs and head.

CRINKLE: The waviness in a single fiber, as opposed to a uniform wave in a lock. Usually, the coarser the fiber the less crinkle there is. Often used synonymously with crimp, although this is not correct to all experts.

CRIMP: The waviness found along the length of the individual fibers throughout the blanket. The waviness in crimp occurs uniformly in the fibers of the lock in the same plane.

CRUTCHINGS: Fiber from the britches and inner thighs

CURL: Waviness found along the length of individual fibers throughout the blanket that lies randomly in different planes and gives the fleece a curled looking appearance, e.g. Suri alpacas.

DEBRIS: Material that can be found contaminating a fleece.

DENSITY: Number of fibers per square unit measurement of the alpaca's body.

ELASTICITY: The ability of a fiber to recover its original size and shape after extension.

FELTING: The irreversible tangling of fibers together.

FLEECE: Fiber sheared from sheep or other wool class animal. A fleece is the entire coat shorn off an animal. The term is most commonly associated with sheep but applies to alpacas as well. Alpaca fleeces belong in the category known as open fleeces. Open fleeces are more apt to break apart due to the low grease content compared to most kinds of fine sheep's wool, which is held together by abundant grease.

FLEECE WEIGHT: The yield or weight of the spinnable fiber from shearing. To be relevant, the age of the alpaca, the particular shearing (i.e. first or subsequent) should be identified and the length of time the fleece was on the animal.

FIBER FINENESS: Refers to the fineness of the individual fiber and is measured in microns.

GUARD HAIR: The somewhat thicker, straighter and longer fibers found in the fleece.

HANDLE OR HAND: The tactile quality of the fleece to the hand.

LOCK: A naturally occurring tuft of fiber within the fleece.

LOFT: The springiness in wool (or fiber) as it returns to normal position after it has been squeezed. The term fluffiness is sometimes used synonymously for loft. In the natural fibers trade the term has come to refer to "blankets made of man-made fibers and blends, indicating bulkiness."

LUSTER: The sheen, gloss or shine of the fleece and fiber, due to reflection of light off the smooth scales of each fiber.

MATTING: The inextricable meshing of fibers in the fleece.

MICRON: A unit of measurement equal to one thousandth of a millimeter.

PRIME FIBER: The best quality fiber that a particular alpaca has to offer. This may include some neck fiber.

REGROWTH: Regeneration of fiber after shearing; an important factor in assessing an alpaca's fiber productivity.

SECOND CUTS: Short pieces cause by poor shearing.

SKIRTING: Fiber of lower grade removed from fleece.

STAPLE: Single lock of fiber.

STAPLE LENGTH: The average length of fiber within the fleece when measured from its point of origin at the animal's skin to the tips of the individual fiber.

TENSILE STRENGTH: The ability of fiber to resist breaking under tension from pulling; not to be confused with tearing or bursting strengths, which involve other forms of measurements.

UNIFORMITY: Refers to the degree of consistency from one area to another within the fleece of fineness, staple length, character (crimp, staple configuration, hand) and density.

WOOL CAP: The wool on an alpaca's head between its ears, considered a desirable, aesthetic quality by many alpaca owners. Also known as the *topknot*.

YIELD: The amount of clean fiber obtained from a particular alpaca.

HARVESTING FIBER

Any type of fiber can be evaluated for quality and usability by determining the value in its characteristics, as we saw in the sample Llama Fleece score card. Commercial fiber industries and hand spinners may both value a different set of qualities. So, determining your value and use is important in the shearing process.

Fiber harvested from the llama or alpaca blanket is the **best** quality wool. The blanket area is from the nape of the neck, in front of the withers, to the top third of the legs ending at the tail head. The neck wool is the **next best** cut with the pectoral, legs, and tail being the **least** desirable cuts.

Reasons to Shear:

1. To prevent heat stress
2. To harvest the fleece for processing
3. To preserve fleece integrity
4. To evaluate the quality of the fleece and your management program

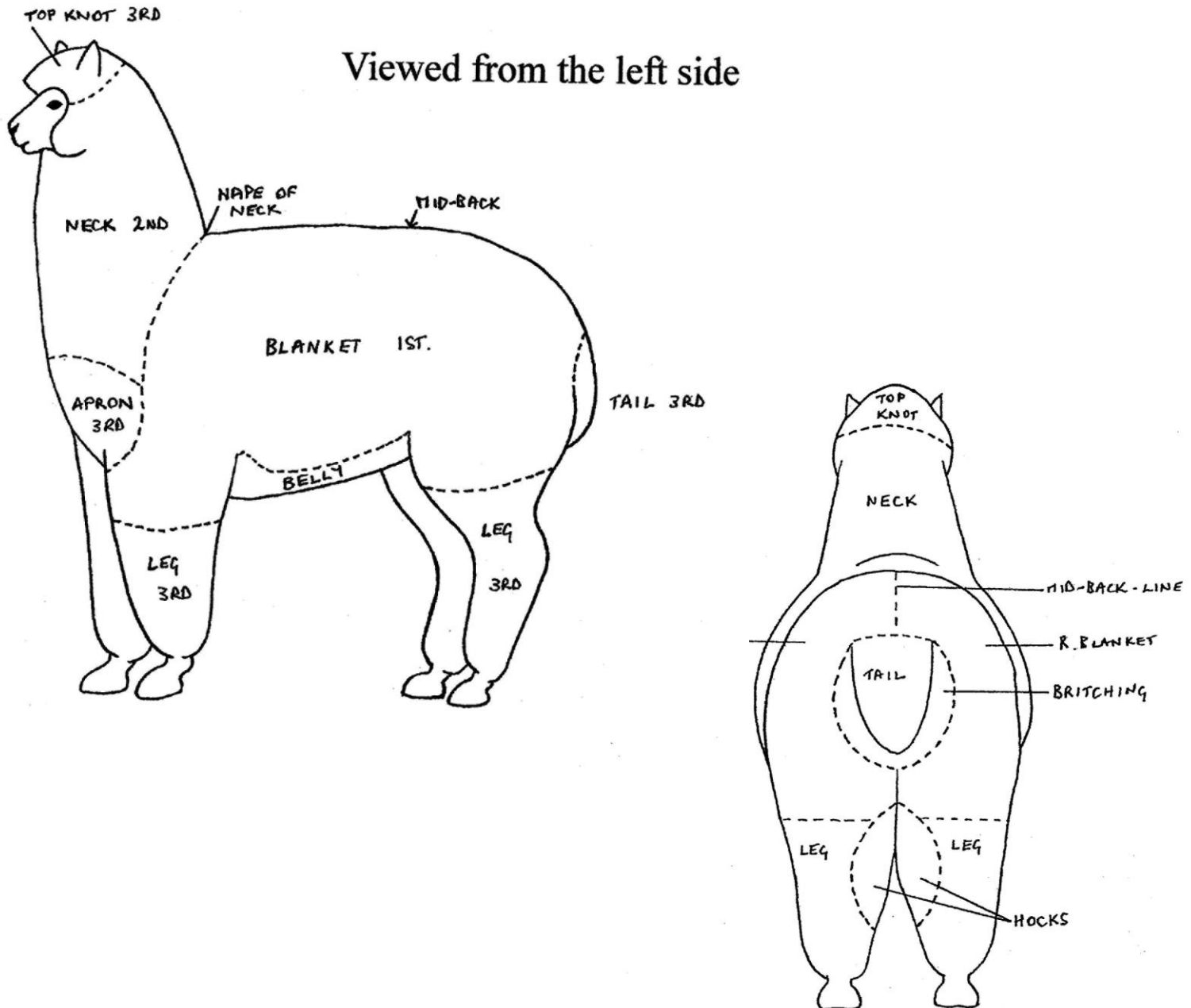
Steps to Harvesting Your Fleece - (Llama & Alpaca)

Harvesting your fleece plays a vital role in your end product and also a major factor in the amount of time you will spend on the fleece before it is carded.

1. First you have to decide if you want this fleece for use or fiber competitions. If fiber competitions are your goal please see instruction listed below.
2. One the most important rules are to start with a clean animal. Remove debris and if you have a blower use that to remove dust from the animal's fleece. In doing these two important steps you'll be amazed in what time it saves.
3. Keep your work area clean, sweep or use your blower to give you a clean floor. You may want to lay down tarps for the fiber that may fall. Care should be taken if you use plastic sheeting because it is slippery. Clean bare concrete is your best and safest option.
4. Next decide the cut you want to do on the animal. The prime fiber is harvested in the blanket area which is located from the shoulders to the hips and following the contour of the body until you reach the coarser belly fiber, determine that before you start, this will save you from doing more skirting later. I like to collect this area separately and bag separately. If you are doing a Lion Cut, (collecting from upper rear legs) you may want to add this also. This will depend on the fiber quality, which you will have to determine. Often times this fiber also has a finer micron count.
5. Time to shear! Some shear their animals in a downward motion and others from front to back. The issue here is avoiding the second cuts, if sections are uneven save that for clean up and only continue harvesting of the prime fiber.
6. It is a good idea to keep separate bags, one for blanket fleeces, one for belly and one for second cuts. Belly fiber can be used for rugs, lead ropes. This fiber is not recommended for felting unless there is enough down type structure fiber mixed in. The straighter coarser fiber, guard like, does not felt well alone.
7. After your prime area is harvested and bagged then proceed to do the cleanup by removing fiber

where there may be any unevenness. This is where most of your second cuts will be harvested, this fiber works great for felting.

8. These steps can be followed with use of hand shears also.
9. Label your bags! Include animal's name and date when collected.
10. If there has been enough growth that the fiber comes off in a whole blanket, keep and store it in that manner. This makes any fine-tuning in cleaning a lot easier, with alpacas that is almost always the case, and also, with some llamas. It is important when shearing that you support the weight of fleece as you are shearing but remember not to pull as you are shearing, this pulls the skin out and can lead to cuts and nicks.



CLIPPER MAINTENANCE

BLADES AND COMBS

Electric shearing blades consist of two parts. A comb or lower blade is fixed to the cutter head of the machine and does not move. This fixed blade is against the llama's body as you cut. The cutter or upper blade sits on top of the comb and moves side-to-side, cutting the fiber as it passes through the comb. All shears have a tensioning device, usually a knob or a nut to adjust the pressure between the upper and lower blades. Blades must be realigned if they have been removed for cleaning or replacement. If blade alignment is incorrect, add a few drops of oil to the blades, turn clipper "ON" for a few moments, turn "OFF" and unplug. Loosen screws slightly and adjust. Tighten screws after blades are aligned. In most cases the blades designed for shearing sheep will work for shearing llamas. Finer blades are available for all the shearing machines mentioned that were designed for goats and horses and they work well on llamas. In general, you'll want combs and blades with about 12 to 20 teeth. The more teeth on the blade the finer the cut. One advantage to more teeth is less chance for nicking or cutting the llama, but finer types are somewhat harder to push through the fiber than more open blades. This can be important for llamas with matted or very dense fiber.

OIL

Do not attempt to operate your clippers without first oiling the blades. The blades of your new clipper should be oiled every few haircuts. Simply place a few drops of oil on the teeth of the blades. Due to the high speed of your clipper, the correct type of oil must be used. Do not use hair oil, grease, or any oil mixed with kerosene or any solvent, as the solvent will evaporate and leave the thick oil slowing down the blades. Use natural oil, which will not evaporate and will not slow down the blades. Oil is necessary for the prevention of rust and friction. Lubrication is necessary to prevent heat buildup because of the friction that blades create from rapidly moving back and forth. You would not run your auto without oil. Without lubrication, the blades will get so hot they will actually burn the animal.

POWER SCREW

If your clipper has a power screw, it has been adjusted for peak efficiency before leaving the factory. However, if voltage in your home is low, you may need to readjust it.

To adjust power, use the plastic brush, a screwdriver, or a thin coin to turn power screw in a clockwise direction until the arm strikes the coil, making a noise. Then, slowly turn power screw out (counterclockwise), just until noise stops. This is the maximum power setting.

The cord should not be used to pull the clipper. Since freedom of movement needs to be maintained, care should be used to keep the cord untwisted and unobstructed. When stored, the cord should be coiled and the unit placed in original box or storage pouch, an old sock is always a good alternative.

TAPER LEVER

Some clippers are equipped with an adjustable taper lever. The taper lever is conveniently located near your thumb (if you're right-handed), so it can easily be adjusted while the clipper is in your hand.

The taper lever adds versatility to your clipper by allowing you to gradually change the closeness of your cut without a guide comb. When the lever is in the uppermost position, the blades will give you the closest cut and leave the hair very short. Pushing the lever downward gradually increases the cutting length. In its lowest position, the taper lever will leave the hair approximately the same length as the 1/8" guide comb.

The taper lever will also extend the use of your blades since a different cutting edge is used in each setting. In addition, if extremely heavy haircutting has jammed the blades, it will help you remove hair that has become wedged between the two blades without removing the blades. While the clipper is running, rapidly move the lever from "close cut" to "longer cut" a couple of times. Doing this each time you've finished using your clipper will help keep the blades clear of cut hair. If your clipper stops cutting and this does not help, your cutting blades may be dull. Either replace them or return them to Wahl for sharpening.

CLEANING THE CLIPPERS

Do not use WD 40 or other similar solvents/scouring agents to clean the clipper or the blades. Cleaning of the blades and inside of the clipper head should be thoroughly carried out after every clipping session to avoid a buildup of hair and dirt. Remove all traces of oil and hair with a small stiff brush and wipe clean with a dry clean cloth. This will enable you to remove most of the muck, after which a good “blow” will usually do the rest! Try to avoid a buildup of dirt and hair – it makes cleaning easier!

When completely free from hair clippings and oil, re-oil all working parts within the head and likewise to the blades to prevent any occurrence of rust. Remember even the smallest spots of rust can have an adverse effect on the cutting performance of the blades – in some cases making clipping impossible.

BLADE WASH

Some shearers use a blade wash to clean and cool the blades while shearing either purchased or home made. Be sure that the wash is not flammable. Oily residue and varnish can cause sharp blades to not cut. Hair will continue to build up enough to prevent the blades from cutting. The solution to this is to clean the blades several times or as much as needed when grooming.

We dip our blades, while they are running, into a coffee can that contains blade cleaner, a nonflammable solution, long enough to clean them. You can actually hear the clipper motor speed up when the blades become clean and lubricated. We then blow them off with compressed air and wipe them down before testing. Clean lubricated blades will ALWAYS run COOLER than dirty blades.

For those of you who are afraid to dip the blades while running, it is ok to do this as long as you don't dip past the vents on the side of the clipper motor. In fact, it is important that you dip while the blades are running in order for the back and forth motion of the blades to wash and clean out the very small hairs that may become trapped between the teeth of the top and bottom blades.

SPRING TENSION

The blade springs are necessary to keep the proper tension of the two blades between one another in order to slice even the smallest hair. Spring tension is set at the factory on new blades. The proper tension on the spring is set on blades that have never been sharpened. As the blades get sharpened over a period of time the spring tension becomes less and less due to the metal being ground away during the process of sharpening. At some time after several sharpening, the spring tension will become so weak that hair will get between the blades and not be cut. This will cause the blades to “bog down.”

SHARPENING THE BLADES

Do not attempt to sharpen the blades yourself – they need a special machine.

Blades need to be regularly sharpened to keep a good cutting edge, and they must be constantly oiled during use.

ADJUSTING THE BLADES...

Most all-professional blades are interchangeable. They will state on the package or in the catalog that they are for a particular type of blade.

Here is what you have to be VERY careful of: If the blade-set is adjusted to work well with one clipper brand, the blade-set may not work well on another clipper without adjusting it to fit properly on another clipper.

The hinge assembly part will differ slightly between companies. This difference will result in the blade-set not fitting well. Because of this, some groomers swear that one brand of clipper is superior to another, when the problem is actually the blade adjustment. This is why the blade-set should be adjusted to fit each clipper.

AFTER CLIPPING

At the end of the day, you should run the blades in SOME TYPE of cleaning solution, then remove the blades from the clipper and slide the small blade to one side, put one SMALL drop of household oil on both contact surfaces of the large blade (the parts where the two blades touch), then slide the small blade the other direction and put one SMALL drop of oil on the contact surfaces of the other side of the large blade. Wipe down and store on any absorbent material to collect any excess oil. If you have problems

with oil getting onto your animal's coat, then you are using too much lubricant. It takes only a VERY small drop of oil to lubricate this tiny area. But it is NECESSARY - NEVER run your blades dry.

www.wahlanimal.com

Resources – reference guides

Northern Tails Sharpening P.O. Box 588 Grayling, MI 49738 989-370-1084

Please visit the grooming and sharpening website for more info: <http://www.northerntails.com>

CLIPPER PARTS

ANDIS Model AGC single speed - clipper parts diagram

