

Alpaca Blanket Project Fleece Collection Standards

INTRODUCTION

The Alpaca Blanket Project Fleece Collection Standards are intended to provide clear guidelines to alpaca breeders, shearing contractors, and shearing staff with regard to best practices for alpaca fiber shearing, clip preparation, and fiber sorting and grading standards for processing by the Alpaca Blanket Project and Pendleton Woolen Mills. As there are as yet no clear standards for alpaca fiber shearing and collection set in the United States, these guidelines were adopted following standards set forth by Pendleton Woolen Mills, the Canadian Alpaca Industry Fibre Harvesting Code of Practice, and the Australian Alpaca Association's Fleece Industry Shearing Shed & Pre-Classing Code of Practice. By following these guidelines, growers can ensure that they obtain the maximum value for their clip each year by meeting the needs of ABP and Pendleton.

OBJECTIVES

- Production of quality fiber.
 - Maximize the net financial return to the alpaca fiber producer.
- Provide minimum standards for quality control from the producer to the manufacturer.

To become successful suppliers of alpaca fiber to the woolen and textile industry, breeders *must* take the initiative to learn how to properly harvest and prepare their fiber on the farm!ⁱ

In order to achieve maximum benefits a fleece must meet several criteria. Micron is simply one criterion. The other criteria in conjunction with micron are Handle, Style and Character, Length, and Lack of Guard Hair (Medullation). Uniformity within each of these characteristics is the ultimate goal of the breeder. Spinning problems are caused if there is significant deviation in micron and length. Likewise, excessive short fibers (second cuts) create noils causing a decrease in yarn yield and quality. Guard hairs create "prickle" factor. Many problems can be eliminated through cleaning the alpaca prior to shearing, careful shearing, sorting, grading, and handling of fiber as it is harvested from the alpaca.ⁱⁱ

IMPORTANT ALPACA FIBER CHARACTERISTICS FOR PROCESSINGⁱⁱⁱ

HUACAYA	SURI
<ul style="list-style-type: none">▪ Uniformity▪ Fineness/handle▪ Staple length▪ Crimp▪ Brightness▪ Yield▪ Lack of medullation (guard hair)▪ Tensile strength	<ul style="list-style-type: none">▪ Luster▪ Fineness/handle▪ Staple length▪ Uniformity▪ Yield▪ Lack of medullation (guard hair)▪ Tensile strength

The above characteristics can be influenced through breeding, and farm and animal management.

- Uniformity is determined by breed and genetic makeup.
- Fineness/handle (micron) is primarily determined by genetics but is also influenced by nutrition and health.
- Length is influenced by genetics, nutrition, and duration of growth.
- Yield is influenced by genetics, nutrition, health, climate and duration of fiber growth.
- Medullation is determined by genetics.
- Crimp is determined by breed (suri vs huacaya) and genetics.
- Tensile strength is influenced by health, nutrition and environmental factors.

RESPONSIBILITIES

A. **Producer's Responsibilities:**

- Plan ahead to reduce stress to the animals and the workers
- Provide a shearing area large enough to accommodate several people, the animal to be shorn, a shearing table, a fiber sorting table, and fiber bags to facilitate the smooth, continuous flow of work and essential communication.
- It is essential to keep dry any animals that are to be sheared.
- Provide adequate lighting, electrical outlets, and ventilation.
- Clean the shearing area of all sources of contamination, including polypropylene bags, twine, hay, or other food sources, straw or other bedding materials, manure, gravel, sand, cigarette butts, toe nail clippings, paper, or any other objects that do not belong in alpaca fiber.
- Organize an area close to the shearing area for preparing and holding animals prior to shearing. This area should be large enough so animals will not be crowded, provoked into spitting, or subject to additional stresses.
- We recommend that animals be blown with a leaf blower or vacuumed with a Shop Vac prior to shearing to remove debris prior to shearing. When blowing with a leaf blower, do not blow directly into the animals' skin thereby imbedding debris more deeply into the fiber. Do not blow into animals' ears or face.
- Ensure that designated handlers are available to clean the alpacas prior to securing them on the shearing table. Typically alpaca are cleaned prior to moving to the holding area.
- These same handlers should secure the alpacas on the shearing table under the direction of the Shearer. The Shearer should not be expected to handle the alpacas *and* shear.
- If trimming nails and teeth, micro chipping, or performing herd health procedures - arrange to do these procedures sometime prior to or after shearing. This will eliminate considerable stress during shearing. Do not expect the Shearer to perform these procedures.
- Provide a person to clean the shearing table and floor after each alpaca is shorn.

B. **Shearer's Responsibilities:**

- Arrive early on shearing day to confer with the producer regarding procedures, facility, setup, and to ensure adequate help is available.
- Review the expectations of the producer: Shearer and producer should come to a mutual understanding of how the shearing day will progress.
- Determine prior to the start of shearing day whether or not fleece side samples will be taken for testing.
- Avoid second cuts. If second cuts should occur, remove them from the fleece!
- Implement best shearing practices and be familiar with current practices for shearing alpacas.
- Maintain the shearing equipment.
- Work as part of the shearing team.

PREPARATION

PREPARATION OF ALPACA HERD BEFORE SHEARING:

- No feeding chaff or loose hay within 24 hours of shearing.
- Clean each animal's fleece of surface contaminants just prior to shearing.
- Keep animals in an area where recontamination will be kept to a minimum.
- Keep animals dry. This is *essential*. Watch for dew on cold mornings and over-sweating in areas of high humidity.
- Shear pure white animals first moving progressively darker through cream, fawn, brown, gray and finally to black.
- Shear working males separately from females.

Shearing should be carried out at the optimum time, taking into account climate and other environmental conditions in your area as well as reproductive functions of the herd. Fleece should be at its maximum growth for the year.

SUPPLIES AND EQUIPMENT

- ✓ Refreshments, patience, and a sense of humor.
- ✓ Alpaca halters and lead lines.
- ✓ Shop Vac/leaf blower, and flicker tool to clean alpacas of dust and debris.
- ✓ 1 shearer, 3-4 helpers
- ✓ First Aid kit.
- ✓ Old towels & paper towels.
- ✓ Brooms and/or Shop Vac for cleaning shearing area between animals.
- ✓ Garbage cans or containers.
- ✓ Small Ziploc bags and felt pens for collecting fiber samples.
- ✓ Clear plastic bags for collecting fleece. A separate bag should be used for blanket, britch (rump); neck and upper legs. Lower legs and belly should be disposed..
- ✓ Sharpie markers to label fiber bags.

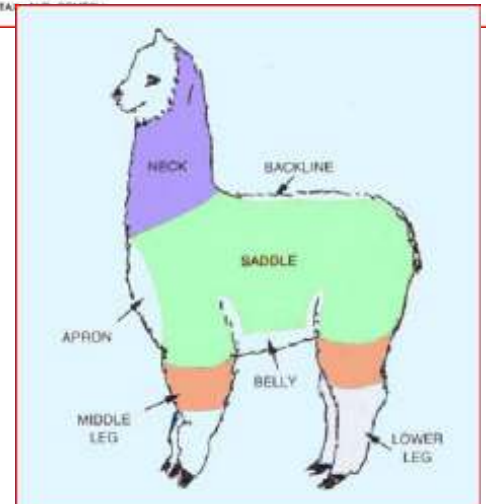
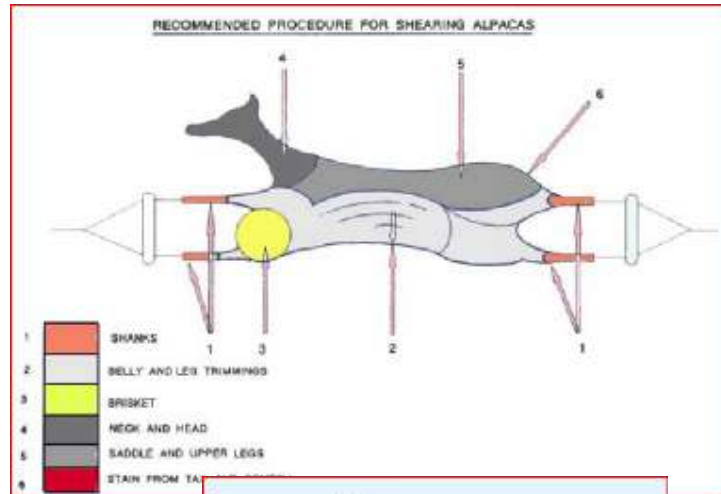
SHEARING

There are 3 basic methods for shearing:

1. The lying-down or prostate position, using restraints.
2. The shearing table.
3. The standing position.

It is recommended that when shearing in the lying or table positions, the fleece should be sheared, removed, sectioned, and kept separate, as follows (Sections marked with * indicate fleece usable by ABP. Neck and upper legs will be accepted only by prearrangement.):

- Lower leg
- Belly
- Apron
- Neck*
- Middle leg*
- Saddle/Blanket*
- All stains
- Excessive vegetable matter



In the standing position it is recommended that the following order be used:

- Saddle/Blanket*
- Neck*
- Apron
- Belly
- Middle leg*
- Lower legs

Since alpaca fiber is not yet uniform across the entire usable fleece, shearing in this order ensures that the better quality fiber is not contaminated with coarse fiber and the micron spread for each grade of fiber is closely followed. This procedure allows producers to more readily identify the changes in fiber micron spread within a fleece.

Fiber must be between 2-1/4 and 5 inches in length. Avoid second cuts and eliminate guard hair as much as possible. In addition, fiber stronger than 31 microns has no commercial value; therefore it should not be sent to ABP. Fiber that is tumbled cannot be sorted. If there are excessive second cuts tumbled in with the fiber, it cannot be used in commercial processing.

Suri breeders are encouraged to shear their animals before the fiber exceeds 5 inches in length, or the fleece will be overgrown and of no commercial value to the ABP.

SKIRTING

(The following section on Skirting has been taken directly from the Australian Alpaca Fleece Industry Shearing Shed & Pre-Classing Code of Practice. While many of the practices are the same in both countries, there are some slight variations.)



HUACAYA & SURI FLEECE

1. FULL FLEECE

If time permits, when the saddle/blanket is shorn, it should be spread out on the skirting table **shorn side on the table (SHORN SIDE DOWN - tip side up like you see on the alpaca)** as illustrated in the diagram. Check for excessive variations and skirt off, i.e. **Coarser fibre**, heavy medullation, short fibre, second cuts, stain and excessive vegetable matter in the back and base of the neck.



2. FLEECE SHORN IN HALVES

When the two halves of the saddle/blanket are shorn, it should be spread out on the skirting table in a mirror image to the other side, and use the same procedure to skirt as for the full fleece.

SKIRTING PROCESS

Using the above diagram as a guide, try to recognise the various parts of the fleece. Having established that you will know where to look for any neck, britch, stain etc. On the flank areas some medullation may appear as this area attaches to the belly region. Also up near the neck you might find apron fibre that will be more medullated. In the areas behind the front leg, in front of the back leg and down the back leg coarser and more medullated fibre may also be found. **Skirting is a learned process and after practice you will find it easier to carry out.**

Also look for a midside sample that may have been marked for removal (see later).

SORTING MULTI COLOURED FLEECE

Where multi coloured fleeces are shorn, the colour that is in the minority should be removed. **This would not be done if showing the fleece in a multi section of a fleece show.** In the case of some fawn fleeces, if the minority colour varies outside the current classing or showing standard tolerance, then remove only that area. **(refer to classing house guidelines)**

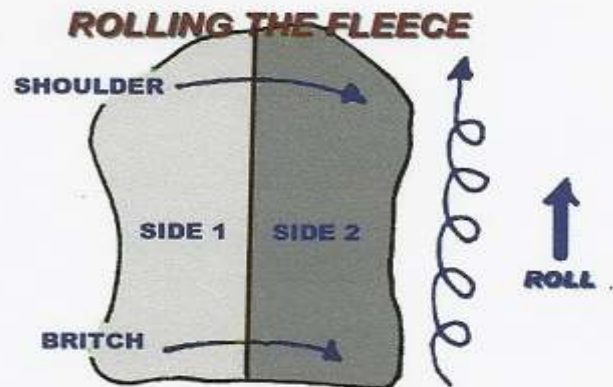
ROLLING THE FLEECE

HUACAYA

The fleece should then be folded and rolled into a bundle as shown. Fold side #1 over to side #2 and roll from the britch to the shoulder. This makes it easier to open for inspection.

SURI

Due to the fact that most suri fleeces are being shorn with two years' growth, and that these fleeces in general (due to their length) have some slight matting on the shorn end, it may be wise before rolling the fleece (after skirting) to turn the fleece over so that the tip side is on the outside.



If the fleece is free of entanglement it should be rolled in the normal manner.

FLEECE SHORN IN HALVES

As mentioned earlier, if the fleece is placed on the table as two halves together, roll the fleece as for a full fleece.

If the halves come to the skirting table individually, skirt the half fleece, fold it in half as shown above and roll in a similar manner. Place the two halves side by side in a plastic bag when finished.

Do not tie or bind the fleece in any manner, simply place in the storage bag or container.

SHEARING SHOULD TAKE PLACE EVERY 12 MONTHS

Some suri breeders may for show purposes shear every 2 years. This is not desirable for processing. Overlong fleece has a tendency to cot (mat - entangle).

SKIRTING AT A LATER DATE

If for whatever reason you decide not to skirt the fleece at time of shearing, you can store the fleeces and come back to them at your leisure.

To do this,

- Place the fleece as normal on the skirting table.
- Place paper over the top of the fleece and roll from britch to neck. The fleece will look like a big sausage and you now place this in a plastic bag.
- If you intend to store this fleece for some time you should use a perforated plastic bag to avoid moisture content.
- When it comes time to skirt the FULL fleece, simply place the sausage on the table and unroll it. You will have no fibre entanglement and the fleece should look just like it was when you first placed it on the table.

Failure to place paper (or similar) over the fleece for this type of storage will mean the fleece will become entangled within itself and inadequate skirting will take place. Contamination could take place also.

OPTION SOMETIMES USED BY BREEDERS WHEN SHEARING IN HALVES

When the saddle is shorn in two sections (halves) gently gather the fleece from the board / shearing- table and tuck underneath the shoulder & britch and place directly into a new or clean plastic bag. Repeat the same action when the alpaca is rolled over and shorn on the other side. The saddle/blanket will be able to be skirted correctly if removed gently from the bag when required and skirted.

HERD RECORDS

Once the fleece has been rolled, it is time to record the characteristics of the individual fleece. Good fleece production records are an invaluable tool in helping to make appropriate mating choices. Tracking the fibre harvest information on an annual basis will also begin to provide a view of the “big picture” of your herd fleece production capabilities after a few years. It is recommended that the following information be monitored:

- **Estimated fineness/handle**
 - **Colour** – carefully checking each fleece, particularly whites and blacks, for random coloured fibres. Colour contamination in the pure colour fleeces will put them into a different colour category and they must not be packaged together with pure colours.
 - **Length** of staple
 - Notation on **crimp style** and consistency
 - Degree of **medullation** – where on the body does it begin to increase
 - **Total fleece weight**
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- **MIDSIDE SAMPLE**- This sample (although scientifically biased) is a reasonable representative of the fleece considering it is a single site sample.

A sample 50mm X 50mm in size is drawn from the midside.

The sample can be taken at shearing time or directly from the animal prior to shearing. If the sample is taken during the shearing process the sample area must be identified on the animal either by a chalk mark or by placing an elastic band around staples in the midside area. This sample is then collected when the fleece is being skirted.

The sample is placed in a plastic bag with a tag showing the Alpaca's number. Refer to “testing lab” for instructions

Notation should also be taken on any faults the fleece may have.

Does the fleece exhibit any sheen or lustre or is it dull, is it overlong in length. Also do a flick test for soundness and strength of the staple. To do this, pull a staple from the fleece, which is approximately the thickness of pen or pencil. Grasp each end between your thumb and finger and pull to apply approximately 3 kg. (7lb) of pressure. This is not as much as you might think, it is generally enough to cause the crimp to disappear with some additional gentle pressure.



While maintaining the pressure, flick the middle of the staple with your middle or 3rd finger. If there is breakage, the fleece is tender and it will have difficulties withstanding the rigors of processing – This fleece should be kept aside.

If only an odd fibre breaks (you feel the fibre stretching but not breaking) then this fleece should be able to withstand normal processing tolerances and can be treated as a sound fleece.

If the staple entirely breaks with great ease across one area, this is a major stress break. Stress breaks indicate that the alpaca has undergone some form of stress. It is important to utilize this information and determine what may have caused this to happen within the course of the previous year of the alpaca's life – ie. stress, sickness, change in nutrition etc. If there are a number of alpacas exhibiting tender fleeces then you will need to identify when the stress took place (indicated by where the break is in the staple) and you may need to assess your husbandry practices during the growth of the fibre, particularly at the problem time.

PACKAGING FIBER FOR SHIPPING

- Bag blanket and britch fiber separate from neck and upper leg fiber in clear plastic bags.
- Identify EVERY bag by including a complete Fiber Contribution Ticket within each individual bag.
- No numbers or identifications should be written or taped onto the bag! Bags that cannot be identified will not receive credit!
- An Animal Identification number may be used if the grower wants to be able to identify fiber sorting information on specific fiber submitted and should be a number known only to the grower. Please use simple numbers (no letters) of no more than 4 digits. Do not use animal names.
- If shipping fleece bags, squeeze out as much air as possible and pack *tightly* in shipping boxes. Shipping boxes can be mailed to:

Alpaca Blanket Project
10868 Siegmund Rd SE
Stayton, OR 97383

- If you wish to have unusable fiber returned, please indicate this on your Fiber Contribution Ticket. You will be notified as to the cost to return the fiber and it will be returned upon receipt of payment. Shipping fees must be paid within 30 days of email notification or fiber will not be returned.

STORAGE

If you are going to store your fleece for any amount of time, be sure to use clear, plastic bags which can be closed to keep out pests. Moth and pest control must be implemented. Store fleece in a dry area with good air circulation and check it frequently for any infestation or mildew. We recommend you identify the contents of each bag in the manner above prior to storage.

SUMMARY

A CONSCIENTIOUS APPROACH TO HARVESTING YOUR ALPACA FIBER WILL HELP TO INSURE THAT YOUR PRODUCT WILL MAINTAIN ITS HIGHEST VALUE. WITH A LITTLE PRACTICE, THE PROCESS WILL BECOME VERY EFFICIENT AND SHIPMENT AND PROCESSING OF YOUR FIBER WILL BECOME EASIER AND MORE PROFITABLE TO YOU, THE GROWER.

ⁱ Holt, Cameron; Australian Alpaca Fleece Industry Shearing Shed & Pre-Classing Code of Practice 2006, Edition 1, 2006.

ⁱⁱ Elvestad, R.P., Canadian Alpaca Industry Fibre Harvesting Code of Practice, 2000

ⁱⁱⁱ Op. cit.