HARVESTING AND MARKETING YOUR OWN FLEECE *by Marsha Rennie*

With the advent of the new AABA Market, we as growers have a wonderful opportunity to market our fibre direct to consumers. At present a lot of thought and membership funds are currently being invested in promoting the online market to a broader audience outside the immediate Australian alpaca industry.

These consumers may be hobbyists, textile artisans, commercial buyers or mini mill processors. These people are discerning fibre users and understand the relationship between fibre characteristics and the quality of the end product. It is important, that we, as growers understand their requirements and together, work towards meeting those needs when harvesting, preparing and advertising our fleeces for sale.

This document aspires to three objectives:

1. To help breeders understand the expectations of the processors and consumers
2. To encourage the presentation of a uniform product free of contamination
3. To help alpaca breeders correctly document and describe their fibre

Guard Hair and > 30 micron fibres

The coarser primary fibre that consists of medulla (hollow core) along the entire length of the fibre is known as guard hair. Guard hair is easy to recognise on a fleece. When an alpaca is viewed from the side with the sun directly behind it, a halo of coarser hairs will appear to stand out from the main edge of the fleece. It will be more apparent around the chest.

These fibres are longer, straighter, stiffer and are of a much higher micron (up to approx 60micron) than the surrounding fibres and therefore do not behave during processing the same as the finer fibres. They do not absorb dye nor spin well and therefore have a severe impact on the processing uniformity, finish and wearability of the end garment.

Yarn spun with a high guard hair percentage will render knitwear unwearable close to the skin whether it has been spun by a mini mill and machine knitted or whether a home craftsperson has hand spun and hand knitted a garment. When these fibres, and other classes of medullated fibre over 30 micron, represent over 5% of any yarn or finished garment it is known to add the *'prickle factor'*.

It is also a poor choice for felting and stuffing within fine fabrics as it produces hairy weak felt and prickles through cloth. It is classed as no commercial value within commercial classing operations and should also be considered as such by the grower/marketer endeavouring to market elite fibre.

With alpaca known to have the advantage of a more superior handle than sheep's wool (of equivalent micron) due to the lower cuticle structure along the fibres length, it is a shame for alpaca breeders not to make ridding 'guard hair' from their clip a priority so we can best capitalise on one of our key points of difference from wool.

- When shearing consider grouping animals in ascending order of age, micron and guard hair classes. That is, shear your better and younger animals first to minimise guard hair contamination.
- Areas that contain excessive guard hair, which typically are the apron, lower leg and bellies should be thrown into the rubbish bin.
- Consider marketing individual fleeces differently. Eg. An even cria fleece free of guard hair may be sold as entire whereas a guard hair free saddle from an adult is best not left unskirted with areas of guard hair.
- Use results from a fibre test. When a buyer is unable to handle what they are buying it still provides an important indication. (For more info on fibre testing see glossary)
- Make guard hair reduction a priority in your breeding programme.

Vegetable Matter (VM)

The level and type of vegetable matter contamination is worth disclosing to a buyer. If you are serious about producing fleece of commercial value, for sale in any marketplace, you should always consider ways in which you can reduce VM contamination.

- Maintain clean paddocks and shear before seed sets.
- Trial coating your best fleeces.
- Be careful of contamination levels on the wither (back of neck).
- Taking the 'cria tip' off whilst young to produce a cleaner and stronger first fleece.
- Improved fleece density will also reduce the level of contamination.

Colour

- Avoid contamination of colours by shearing in colour groups from lightest to darkest, ensuring that you clean the area before shearing animals of different colours of fleece.
- Remove colour spots in otherwise good solid coloured commercial fleeces.
- The current colour classifications used within Australia for breeding purposes are inadequate for the purpose of fleece purchasing for processing. The various colours and hues are far more complex. A good digital photograph taken on a white background in daylight is perhaps the best tool we have in order to allow the buyer to decide whether the colour is suitable.
- It is useful to identify any colour variation within the fleece. A fawn fleece with a sprinkling of white or black fibre should be identified. The crafters will love unique coloured fleeces with natural variations and commercial processors will be happier avoiding them.
- If you are serious about supplying commercial fleece consider specialising in one colour.
- Don't get dark fibre mixed with white. It can be commercially costly for a processor to have a dark fibre appear in a white yarn.

Length

Commercial processors ideally require fleece staple lengths between 80mm and 120mm, although the range of a useful staple can extend to a low of 60mm and a high of 150mm. Overgrown (OG) fleece ranges from 150mm onwards and spinners may pay a premium for these staples that spin into beautiful fine worsted yarn. Desirable OG does not include cotted and matted fibre.

Show fleeces are desirable and they could be marketed with their judging card. Some breeders however, should honestly assess whether an overgrown fleece on their show animal is a marketable commercial fleece come shearing time. Speaking from experience it is a nightmare to process overgrown fleece that has become matted.

- Staple length is very important to all fleece users. In the photo you could place a ruler beside the staple or just note the staple length.
- Until genetic refinement brings greater uniformity across their herd, some fleece growers may consider shearing to the individual animal. An individual with a low staple length neck may have the neck left in place for

another year, whilst an animal that produces a fleece over 160-180mm may be shorn twice a year like Angora goats.

- Watch out and remove second cuts whilst shearing and sorting.
- Short-stapled fleeces that are fine to mid micron and free of guard hair can be useful for craft felting and stuffing. This is also a good use for clean 'tender' fleeces.

In general

- Herd health and nutrition throughout the year is important for maximising your yield of sound fibre.
- Note the weight of your fleece.
- Note the age of animal the fibre was harvested from.
- A photo of a staple (taken in daylight and focussed!!) is a useful indication of style, staple length, colour, lustre and condition.
- Use correct terminology when describing the fleece. *Eg*. *Which piece of fleece is it? Is it skirted/unskirted?*
- Thoroughly vacuum or sweep clean shearing area prior to shearing and between animals to reduce contamination.
- If fleece shearing and handling procedures are new to you consider attending an experienced breeders property at shear time to learn.
- Fleeces stored for long periods are best kept in cloth bags that breath.
- If you don't have the time to put into the preparation and marketing of fleeces perhaps you may consider sending your pre-classed fibre into AAFL. For contacts and detailed information on their fleece handling requirements see www.australianalpacafleece.com.au
- In the future, some alpaca breeders in regions could bring in a classer on-farm and pool similar fleeces for sale in the online market, marketed as a region for example as New England Alpaca.

As individual sellers, the combination of both the E bay™ style format of providing feedback and competition within the market place should encourage sellers to adopt best practice. If you deliver the right product, you as an individual grower have the potential to build a reputation for quality and have repeat sales season after season.

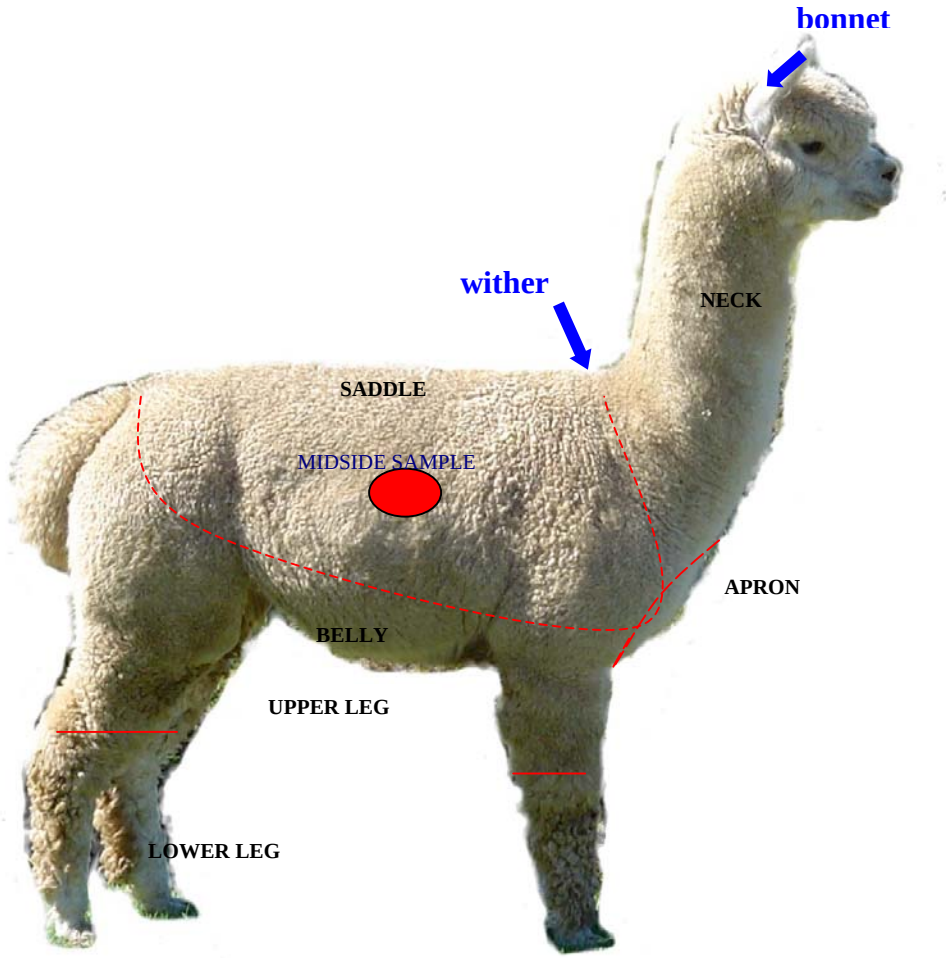
Collectively, we have a responsibility to lift the value and profile of our commodity by presenting our finest fleeces that live up to the luxury '*fibre of the gods*' tag. This document should not only be embraced by AABA Market traders, but also by growers that supply the hobby and craft industry or sell at farm gate.

Think of your fibre as an ambassador for your farm and our industry from the moment you send it off farm. Quality Australian alpaca products and quality

Australian alpaca fibre in the marketplace are good advertisements for our local alpaca industry as a whole.

Glossary

The fleece is commonly divided into three components:
1. Saddle
2. Neck
3. Skirtings



CLIP: Refers to the sum total of fibre harvested in any one shearing season.

COEFFICIENT OF VARIATION OF DIAMETER(CVD): A measure of uniformity within a fleece sample, expressed as a percentage and derived by taking the SD and dividing it by the micron count. A CV of 21% or less is highly desirable. Through lowering your CVD and therefore having greater uniformity of fibre (or a tighter range of micron) the yarn evenness will be increased and the effect of fabric prickle is reduced.

COMFORT FACTOR (CF): The percentage of fibres <30microns within a fleece sample. This is relevant to the 'prickle factor'. A fleece that is to produce a comfortable garment worn close to the skin should aim for a CF 95% or greater.

CONSISTENCY: Good fibre has one overall major attribute, consistency. It is consistent in length, it is consistent in diameter throughout the length of the fibre (no break points, weak points) and it has a consistent diameter throughout the fleece (low CV).

CONTAMINATION: Contamination is of utmost importance and an area that breeders can work together to reduce immediately. Contamination reduces the value of fleece as it increases the labour involved in preparation and processing and may also decrease the quality of the end product. Contamination includes everything that reduces the uniformity of the fleece presented and it's ability to be processed. These include examples such as guard hair/kemp, second cuts, different coloured fleece to rodent droppings, burr, hay, seed, nail clippings and baling twine.

DEHAIRING: The process of removing coarse medullated fibre from a fleece. Generally a cashmere dehairing machine is used. Although it may improve the quality of an alpaca product produced from such a fleece it is not considered as a profitable commercial exercise.[#] For most people it may be more profitable to skirt harder to eliminate the need for an extra costly process.

DENSITY: The number of hair follicles within a specified area. Eg. Square inch.

[#] Wang. X, Wang. L, Liu. X, *The Quality and Processing Performance of Alpaca Fibre, RIRDC Report,* 2003

FELT: The deliberate entanglement of fibres usually to produce a solid piece of fabric.

FIBRE TESTING:

Midside sample- The mid side sample is taken from an area behind the third rib (see diagram above). It is an area midway between the front and back leg.

Grid sample- The grid sample includes differences due to position within the fleece and so can detect variations in the fleece that the mid side sample does not detect.

The grid sampling technique involves:

1. Laying out the shorn fleece to be tested on a flat surface, ideally on a table measuring about 3 m2. The fleece needs to be laid out evenly.

2. Take 16 to 32 random grab samples from the surface of entire fleece. To help this process it is common for breeders to lay a physical grid over the fleece and to take a sample from each grid. A suitable grid can be made from plastic garden trellis mesh with a mesh size of approximately 10 cm x 10 cm. The idea is to take unbiased samples by pulling a tuft of sample from each square in the grid.

If alpacas are to be selected for characteristics such as low mean fibre diameter and high fleece weight then the mid side sampling site is recommended.
If alpacas are to be selected for low mean fibre diameter coefficient of variation, low incidence of medullated fibres and other characteristics of medullated fibre, then the saddle grid sampling technique is recommended.*

Whichever method used it should be recorded on your sample when submitted for testing.

GUARD HAIR: Is the stiffer, longer, and high micron hair, which protrudes above the lengths of the secondary fibre. Alpaca guard hair is usually medullated and measures approx 60microns in diameter. Fleeces with excessive guard hair are NCV. They are best thrown in the bin, used as mulch or stuff your own personal dog beds with it. This is arguably the number one trait we all should aim to reduce, as it is a major concern for processors and alpaca fibre users.

MAT/MATTED: The unintentional tangling of fibre. It usually occurs when the fleece is overgrown. This devalues a fleece by increasing the labour and time involved in processing.

MEAN FIBRE DIAMETER (MFD): This is the average micron contained within a sample of fibre. Has a large impact on the processing performance of the fibre

* B. Mc Gregor, *Variation in and Sampling of Alpaca Fleeces*, 2006

and likewise the performance of the resultant yarn and fabric. Has an important relationship with CVD.

MEDULLA: The hollow pocket of air within the core of wool and hair fibres.

MEDULATED FIBRE/MEDULLATION: Fibre with a central core of air filled cells. Guard hairs are examples of medullated fibre. Even fine alpaca fibre may consist of 'fragmented' medulla. Fragmented means it does not continue along the length of the fibre. This is the reason alpaca has such wonderful warmth properties. The difference between desirable alpaca fibre and guard hair is the degree of medullation. Medullation decreases with fineness.

MICRON: A unit of measurement used in assessing the diameter of a fibre, which equals 1/1000 of a millimetre (a millionth of a metre).

NCV: Fibre of no commercial value includes heavily contaminated fibre and skirtings with excessive guard hair. Although commercial processors regard OG and short pieces as NCV, these pieces are not regarded as NCV in the craft market if it is good fleece free of contamination and matting.

SECOND CUTS: Short fibre pieces created when the shearer takes a consecutive blow over a shorn area in an attempt to shear closer.

SKIRT: To remove the stained, unusable and undesirable portions from a fleece. Usually consists of the apron, belly, tail, bonnet and lower legs.

SKIRTED FLEECE WEIGHT(SFW): The gross fleece weight minus the stained, unusable and undesirable portions of the fleece as above.

SOUND FIBRE: A fleece that is not compromised by tenderness, excessive kemp or matting.

SPIN FINENESS (SF): A calculation using micron and CVD to approximate spinning quality. This is a figure of interest to fleece users.

STAPLE/STAPLE LENGTH: A measurement of the sheared fibre length, measured without stretching out the crimp. Uniformity in length is important to processors, ideally falling within 10mm across the batch.

TENDER FLEECE: Weakness in fibre causing breaks when pulled. It can be caused from illness, excessive exposure to weather or poor nutrition. It can make the fleece unsuitable for some forms of processing particularly combing. Felting can make good use of such fleece.

UNIFORMITY: Consistency of characteristics within a collection of fibre .eg. crimp, length of staple, colour and fineness. Uniformity in length, colour and micron are of great importance to processors.

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