

Methods for Measuring Weight and Fibre Traits

To ensure accuracy and repeatability of results so year to year comparisons of your herd can be made it is important to standardise your testing methods. Consistent sampling methodology will increase the usefulness of your data.

Weight measurements:

Birth weight. This can be done, on a dry cria, at anytime within the first 24 hours of birth. Recording the weight provides an important reference in the event the cria has a health problem or if you suspect the dam is not able to produce sufficient milk (for genetic or environmental reasons). Small, or large births weights may have a large genetic component.

Weaning weight. This weight is recorded at 6 months of age – the generally accepted time of weaning. Animals should be weighed at approximately the same time of day. Weaning weights can be an indication of the amount of milk produced by the dam. They may also allow us to identify genetically induced slow growth rates that may have health implications.

Animal weight at shearing can be measured at the time of this sampling (if very close to shearing day) or on the shearing day itself. Animals should be weighed at approximately the same time of day to give consistent results. Early morning is recommended after the animals have risen and voided themselves. An accurate scale is an essential piece of equipment for herd health management. Scales should be checked for accuracy using a known weight on a regular basis. The weight of the animal at shearing provides a useful point of reference which can be used to compare fleece weights of animals of disparate body sizes.

Gross Fleece weight. Measured after shearing of the animal and includes everything shorn from that animal. Follow the recommended Clip care guide practices regarding bagging the fibre and weigh the bags of fibre together. Subtract the weight of the bags from the final total.

Skirted Fleece weight. Measured after shearing of the animal and it is the gross fleece weight not including skirtings, belly and other pieces of no value. Follow shearing code of practice guidelines and bag fleece of different grades and lengths separately but weigh together. It is a valid measurement if the degree of skirting is consistent with all animals within your herd. For consistency it is obviously best performed by the same individual each time.



Fibre testing:

Most of the recorded fleece traits are taken from a mid-side sample. It is recommended, although not necessary, that this sample be taken in the day or days immediately prior to shearing. This better ensures accuracy and repeatability of site selection.

The mid side sampling point is the area in the middle of a line joining the point where the front leg meets the chest and the point where the back leg meets the abdomen. The fibre in the sampling area should be held firmly in one hand, or alternatively the tips of the fleece in the sampling area can be secured with an elastic band, and then cut as close to the skin as possible with the other. Scissors, hand held shears, electric shears or pets grooming shears are effective for this. The sample is then placed in a labelled ziplock bag, together with the fibre testing forms supplied by the testing facility, and mailed for analysis.

Standard tests record **Mean** or Average Fibre Diameter, **Standard Deviation**, **Coefficient of Variation** and **% of fibres over 30 microns** (or Comfort Factor). Additional tests that are available and are recommended are **Fibre curvature** and **% medullated fibres**.

Other measurable traits:

Staple length can also be recorded at the time of mid side sampling. Place a ruler at the upper section of the “hole” created by the removal of the mid-side sample. Most often the staple selected will have a pointed tip. Just behind that pointed tip will be the majority of that staples fibre. This is where you take your measurement. The fibre is relaxed (not pulled).

Fibre length – at the time of measuring staple length gently pull the fibre until its crimp is straightened. Gently stretch the fibre along the ruler or measuring stick and take the measurement just behind the primaries or the 'pointed tip' of the staple.

A highly crimped Huacaya may have a significant difference between its 'true length' (fibre length) and its 'staple length' . A Suri alpaca should not have significant difference between the two measurements.

