

Fibre Testing A CLAA Fact Sheet

A goal for most fibre producing animal breeders is to produce genetics that produce large quantities of fine and uniform fibre. Fibre testing can assist producers in achieving this goal.

The most basic information that can be used by breeders is Fleece Weight. Clean Fleece Weight is a good indicator of the total amount of fibre produced by the animal. It is important that this is scored in relation to the time it took to grow the fleece.

While important, simply using fleece weight is not a good measure of fibre production as it does not address issues of fibre quality and fineness. Further, selection based strictly on fibre weight is negatively correlated with improving fibre fineness.

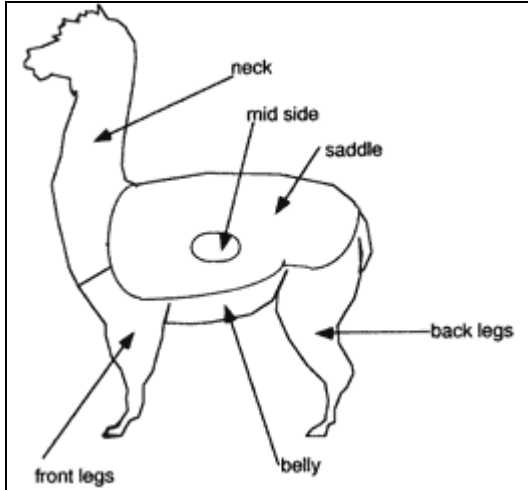


Figure 1. Location of Fleece Components.
Image from Department of Primary Industries, Victoria Australia, Variation in and Sampling of Alpaca Fleeces

To address this issue, fibre testing is required. Test samples should be collected midside on the animal (see Figure 1) and should be at least 25 grams (1oz).

Repeat testing of animals is also an extremely useful practice (with each annual shearing) as we recognize that fibre characteristics change with age and management of the animal. This not only helps in terms of production, but also allows tracking of genetics for longevity of fine fibre production.

Fibre Test Results

The three basic measures reported from a fibre test are:

1. **Fibre Diameter (Mean)** – the average fibre diameter within a test sample as measured in microns (1/1000th of a millimetre). Smaller values indicate a finer fleece.
2. **Standard Deviation (SD)** – a measure of the variation of fibre diameter in a fleece sample.

Smaller values indicates a more uniform fleece.

3. **Coefficient of Variation (CV)** – a measure of variation of fibre diameter spread throughout the fleece. Smaller values indicate a more uniform fleece.

$$CV = SD / \text{Mean} \times 100$$

The CLAA performance program provides reports indexing animals within your herd. These indexes are structured so that 100 is average and values greater than 100 are above average in your herd (more fleece, finer fleece, more uniform fleece).

By collecting and using fibre data in breeding and selection decisions it is possible to speed to pace of genetic progress in the herd.

Further Resources:

Fibre Harvesting Code of Practice

<http://www.oldscollege.ca/schools/ocsi/NFC/pdf/Fibre%20Harvesting%20Code%20of%20PracticeSept05.pdf>

Fibre Testing Facilities	
<p>Natural Fibre Centre Olds College School of Innovation 4500 50 Street Olds, AB T4H 1R6 Ph: (403)507-7970 www.oldscollege.ca/schools/ocsi/NFC/index.htm</p>	<p>Yocom McColl Testing Laboratories Inc. 540 West Elk Place Denver, CO 80216 – 1823 USA Ph: (303)294-0582 www.ymccoll.com</p>