Understanding Fibre Stats

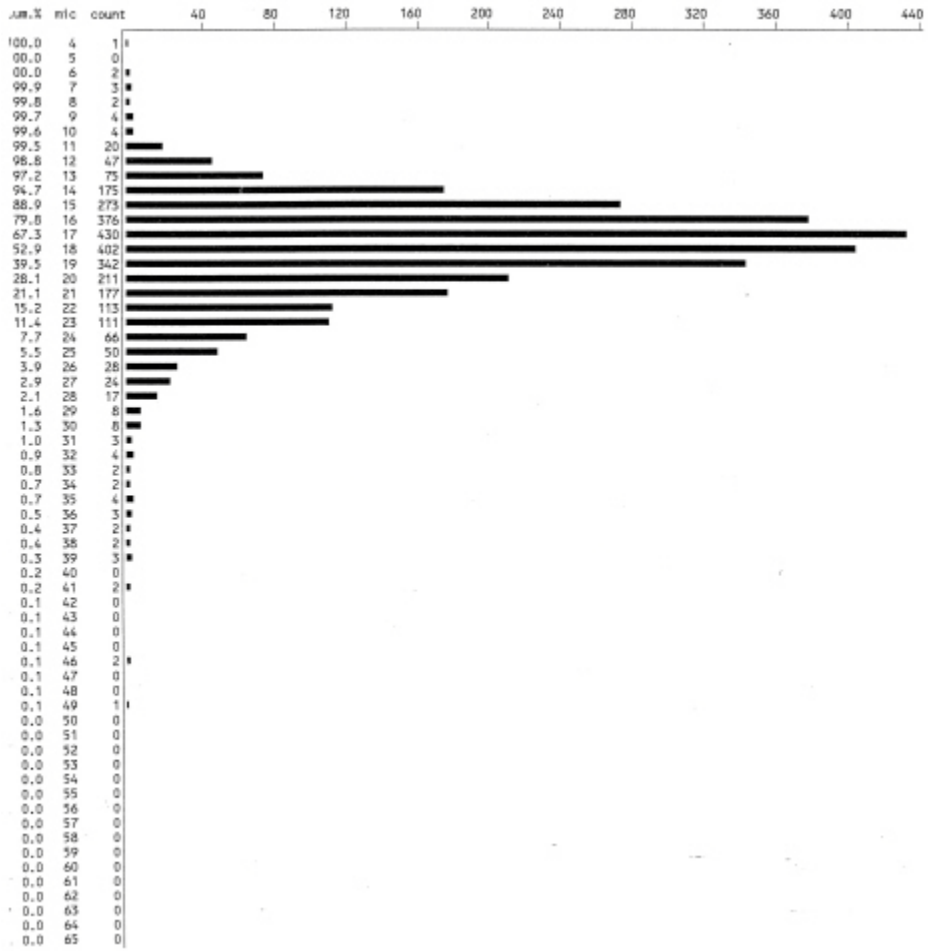
(from www.alpaca.org,nz)

Fibre statistics can often be quoted by alpaca breeders selling their animals, fibre or stud services so it is important to understand what these mean. Fleece testing is an objective measurement of various fleece characteristics that will allow comparison between different animals.

Fleece samples are taken before or at the time of shearing from the mid-side of the alpaca.

Here are some of the common terms used to describe the fleece.

Histogram:
A graphical representation of the frequency of fibre diameters in the sample. The peak shows the Mean Fibre Diameter and the Standard Deviation is shown in the spread of the bottom of the graph.



Mean Fibre Diameter (MFD):

Commonly referred to as “micron”, is the overall average fibre diameter. Measured in micron (µm). A micron is one millionth of a metre.

Standard Deviation (SD):
The standard deviation measures (in micron µm) how wide the spread is, of individual fibre diameters, around the mean (MFD). 66% of fibres fall within this range. The lower the SD the more uniform and desirable the fleece is.

Coefficient of Variation (CV):
The coefficient of variation is the SD expressed as a percentage of the MFD. The SD is multiplied by 100 and divided by the MFD.

Comfort Factor (CF):
The comfort factor is the percentage of fibres under 30 micron.

Curvature:
Fibre curvature is related to the crimp frequency of the fibre. It is measured in degrees per millimetre (Dg/mm) and is the amount of bend or curve over 1mm length.