

## FIBER SEMINAR DEFINITIONS

**Architecture:** The general structure of an animal's fiber. Can be ringlets, locks, staples, bundles or undifferentiated. Can be crimpy or straight.

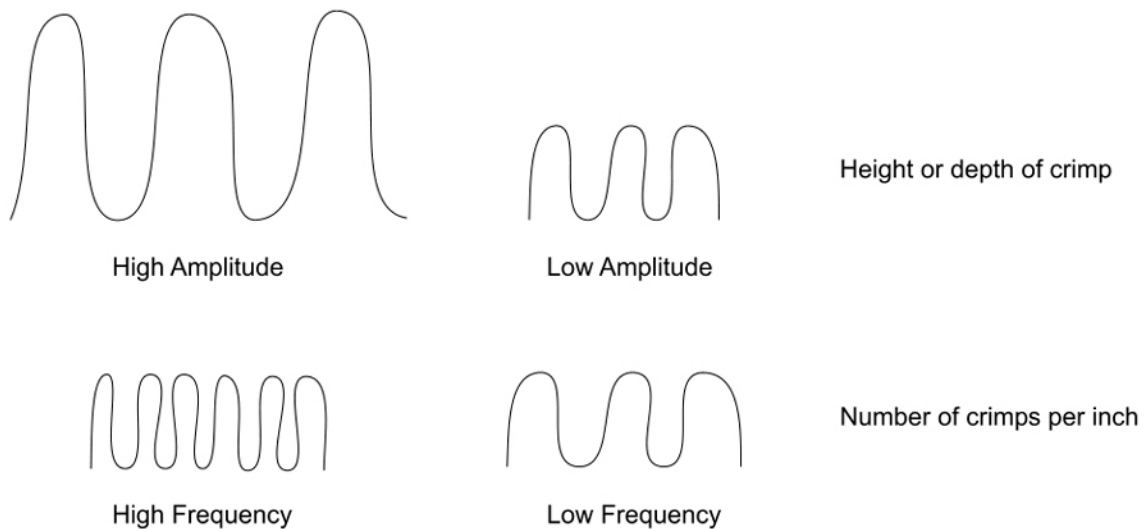
**Blanket:** The fiber on the animal's back, between the withers and rump, and extending down its sides to the point of departure from prime quality fleece to second quality fleece. Other areas are the neck, belly, britch and legs, which generally have coarser and less desirable fleece.

**Break:** The point where a single fiber breaks apart when tension is applied. Caused by poor nutrition, stress, illness. (See also tenderness)

**Brightness:** (also called luster). The degree of light reflected from an animal's fiber. In huacaya alpacas, this is known as brightness; in suri alpacas, it is called luster.

**Bundling:** A quality of "Soft Rolling Skin" (term patented by Australian sheep breeder Jim Watson as part of his Merino sheep breeding program), bundling is the grouping of numerous fibers into small, matchstick sized staple as a result of an extraordinary number of secondary fibers surrounding a primary fiber. Results in highly aligned fibers, extreme density, crimpiness and may have an effect upon fineness.

**Crimp:** Bends in fiber. Crimp can be high or low in amplitude (illustrated below) and high or low in frequency (illustrated below).



**Density:** High number of fibers per millimeter of skin. Important to breeders because sales are based on weight, although not important to processors. Coarser fiber *feels* denser than finer fiber.

**Handle:** The way fiber feels to the touch. Sensory perception of fineness and uniformity. Also "hand."

**Histogram:** A report of the measurement of a fleece sample for micron (fiber diameter or fineness), standard deviation (the difference between coarsest and finest fibers tested), Coefficient of Variation (a measure of the uniformity of all fibers tested), and percentage of fibers tested exceeding 30 microns (in alpaca industry). Alpaca fibers exceeding 30 microns are considered “mature” or coarse. Now sometimes replaced with Comfort Factor (degree to which the test sample is comfortable to the touch).

**Fineness:** The smaller the diameter of a fiber, the finer it is. Diameters are measured in microns, or  $1/25,400^{\text{th}}$  of an inch. Different industries have different scales of the micron range expected of its production stock.

**Lanolin:** Greasy coating of sheep’s wool. Protects the sheep from the elements. Alpacas have suint instead of lanolin. See 'suint' below.

**Medulated fiber:** A primary fiber. Also coarse fiber with a hollow center. Serves to protect the animal from environmental damage (weather, scratches, etc.)

**Prime Cut (or clip):** The best fiber produced by a fiber animal – usually found in the blanket area. Wool or fiber grown on the neck, britch, belly and legs can be “Seconds” or “Thirds” depending on its quality and the uses for which it is suitable.

**Staple:** A swatch or lock of fiber.

**Suint:** The waxy coating on an alpaca’s fiber which protects it from the elements.

**Tender Fleece:** Fleece which is subject to numerous breaks. Finer fiber is more prone to breakage and tenderness than coarser fiber. Tenderness is generally a sign of poor nutrition, stress, or ill health.

**Tensile Strength:** The degree of force required to snap a fiber.

**Uniformity:** The degree to which all fibers on an animal’s body are the same. Uniformity is measurable in color, micron, architecture, crimp, etc. The more uniform an animal’s fleece is, the more comfortable it is to wear beside the skin. Uniformity greatly affects handle, since the human touch can easily distinguish a single coarse fiber. Uniformity is indicated on a histogram through the Standard Deviation and Coefficient of Variable factors. The lower these figures, the more uniformity was found.