

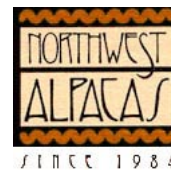


## **Don't Let Micron Madness Crimp Your Style**

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By Mike Safley

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## Don't Let Micron Madness Crimp Your Style

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I was always a chubby kid growing up. My Mom, God bless her soul, was the world's finest cook. We ate well, from biscuits and gravy to pork chops and apple pie. As a result I had a high micron count mid-side.

At the tender age of seventeen I went to Navy boot camp, lost thirty-five pounds and six inches around my waist. Ever since I've been overly concerned about the diameter of my waist. Now at age fifty-five and thanks to Julie's home cooking, my mid-side diameter is slowly inching up again. I gotta admit that I'm not as concerned about it today as I once was and that started me thinking about "micron madness."

Everyone who comes on the farm these days is concerned about two items – micron count and crimp. I, myself, have written much about the virtues of skinny fleece and bold crimp, so I began to ponder whether this narrow focus was all that healthy for our industry.

I am concerned that if we place too much emphasis on one or two selection criteria, we may do so to the detriment of the breed we're trying so hard to improve. We need to remember that large, well-muscled animals that forage efficiently are essential. Mothers need to be good milkers. The constitution of every alpaca we raise should be our first consideration if we are going to develop a sound livestock industry. See [Alpacas, Synthesis of a Miracle](#).

### MICRON MADNESS

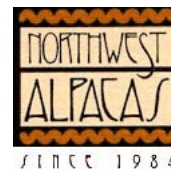
Today, people are going from state to state and farm to farm selecting alpacas, often with only one thought in mind – what is the micron count? I can tell you that a histogram is absolutely and unequivocally irrelevant as the basis of evaluation for two different animals from two different farms. The problem is further complicated if the animals being compared are of different age and different sex or if the histogram is an old one.

If you, the buyer, go out and purchase three animals, one from Oregon, one from Colorado, and one from Ohio, with identical micron counts, take them home to your farm for one year, and then shear them, you will find a huge variance from the original test results for those three fleeces. I guarantee it!

A selection criteria, which includes density, animal size, staple length, typyness, handle, an absence of medulation, good body condition, crimp, and luster, all viewed in perspective, is far superior to one based solely on micron count.

Fiber grows fat on overfed animals and "starvation fine" on underfed animals. I think most of us can relate to a changing waist line based on food intake. Putting too much emphasis on a particular criteria, such as micron count, which is directly impacted by environment, is foolhardy.

The only fiber fineness which is valuable or relevant is genetically based. It is much more revealing, if fineness is your goal, to ask a breeder for all histograms on his yearling alpacas which were sampled at the same shearing. This allows analysis with the environment neutralized. In other words, all the animals presumably ate the same diet over the same period of time. In this herd based scenario, the animals which have the lower micron count are more likely to be genetically inclined to fineness.



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Over time, I believe sound breeding objectives should have the following priorities: **1) raising alpacas which will grow and thrive, 2) fill as many fleece bags as possible, and 3) produce fiber of premium value.** Balance is the key. We want, overall, outstanding alpacas.

### IS CRIMP YOUR STYLE?

There is a lot of mystery surrounding crimp. Is it good or even necessary? Should the crimp be bold or fine, frequent or broad? Is crinkle the thing to have or is straight suri fiber superior? Does more crimp indicate finer fiber?

One person will tell you that processors won't pay a dime for crimp. Another person says that crimp makes for superior yarn. Some breeders find crimp attractive and many measure the quality of their fleece by the amount of crimp present. Other breeders couldn't care less about crimp and value handle as their main fleece quality. In fact, if you ask three alpaca breeders about their opinion regarding crimp, you're likely to get four opinions.

Crimp is obviously a complex subject. CSIRO, the Australian research organization, has recently developed a "style instrument." Crimp (amongst other things) can now be measured as related to processing performance in wool tops.

The results of the processing trials conducted by CSIRO are not what you might expect. Before we discuss the findings, it's important to understand that the trials were on wool and the results may not correlate to alpaca fiber. With that in mind, CSIRO found that:

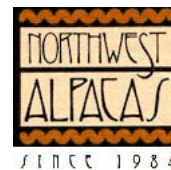
- 1) Wool with a crimp frequency of five crimps per centimeter would process four millimeters longer than wool of six crimps per centimeter at the same fiber diameter, strength, and length.
- 2) When wool was classified into three crimp style definitions, high, medium, and low, the wool with high crimp definition produced tops which were four millimeters longer than wool in the medium category.

David Marland of CSIRO maintains that once these measurements become commercially available processors will use them in "prediction equations" to decide which sale lots to buy for a particular order. Staple length is important to manufacturers. They pay a premium for longer fiber.

It's also interesting that Marland identified a series of trade offs that related to longer staple length or "Hauter" in the wool tops. They included an increase in strength, which is of commercial value in wool.

The concept of crimp and its relationship to value is undergoing change in the wool business. The old court system which was used to determine micron count (the more crimp, the finer the fiber) has been found to be somewhat inaccurate. With the advent of the LASAR SCAN and OFDA measuring devices, it's been proven that crimp count does not always accurately determine micron count.

The new style instrument will surely lead to more understanding of how crimp is valuable to the textile processors. Crimp can also be an informative guide to the breeder in selecting animals.



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I realize that little is known or has been written about what crimp means to an alpaca breeder. In fact, Rigoberto Calle Escobar's book, *Animal Breeding and Production of American Camelids*, states on page 68:

*"The crimp(\*) differentiates the alpaca fiber from sheep wool. Alpaca fiber lacks crimp, and if it has it, it is almost imperceptible; except in the case of the huacaya, where in some individuals it is possible to notice a curling, though not as noticeable as in sheep.*

(\*) Crimp: Regular and successive undulations on the same plane, which is different from a curl, which is curved, spiraled, and in different planes. Alpaca fiber does not have crimp, not even in the newly born."

In other words, Escobar is saying that crimp is not a phenotypic trait of alpacas.

With all due respect of Professor Escobar, I disagree. Alpacas do exhibit crimp. It can be selected for and it is heritable. From my point of view as a breeder, I find crimp definition to be a useful selection criterion. In my opinion, crimp is evidence of the following characteristics:

- 1) Crimp indicates uniformity in the fleece. A uniform fleece will exhibit the same crimp characteristics over the body of the animal.
- 2) Crimp is an indication of density. A dense, crimped fleece often has a well organized lock and staple structure that allows for more and longer fiber to occupy a smaller space, much like a well folded newspaper occupies less space than one which has been wadded up in an unorganized fashion and piled on the floor.
- 3) A fleece with high crimp definition will stay cleaner and more compact from one shearing to the next.
- 4) A staple with crimp measures longer than one without, once it is processed. This allows the breeder to select for longer staple length by breeding crimp into the alpacas' fleece.
- 5) Crimp indicates fineness.
- 6) Crimp wins in the show ring.

I realize the above are personal opinions. Crimp makes for an interesting debate. Given the data presented by CSIRO, and their ability to measure crimp frequency and definition scientifically, we, as alpaca breeders, should give this subject some thought. If we find that a certain type of crimp is a more positive trait than another style of crimp, we can select for it. If not, we should select against it. But there is no doubt that breeding for crimp in huacayas will improve our product's acceptance by the textile industry.

I offer the above discussion of micron madness and crimp style as food for thought. There is nothing like a well nourished mind.