

Update on Suri-Huacaya Crossbreeding: THE ROAD TO CATASTROPHE

By David R. TenHulzen, DMD, MD

Several years ago I authored an article which described the history and theory behind the practice of Suri-Huacaya crossbreeding in North America and reviewed the reasons for the cessation of such breeding practices. Obviously, the intentional introduction of the Huacaya gene into the Suri population accomplishes nothing more than a significant decrease in the quality and predictability of our national Suri herd. At that time, however, I only had a hint as to how devastating this could be.

A comprehensive scientific study was undertaken several years ago by an alpaca research group in Peru. The purpose of this study was to ascertain the full extent of the ramifications of the practice of Suri-Huacaya crossbreeding. The above title: "The Road to Catastrophe," was borrowed from a preliminary research report of the study as presented by Dr. Julio Sumar, the world's foremost alpaca research scientist and premier alpaca judge. My own personal observations regarding Suri alpaca inheritance pattern led me to the conclusion, many years ago, that the Suri gene was autosomal dominant and was a simple single-gene type of Mendelian inheritance pattern.

Apparently, others such as Ponzi, an Australian, arrived at the same conclusion. My discussions with Dr. Sumar many years ago regarding this theory of Suri genetic inheritance indicated that he disagreed. He advised me that it would not be possible to have a Suri born out of two Huacayas, as he observes in Peru, if this theory were correct. I



should have listened.

However, as I have pointed out in previous publications, the theory functions very well when an alpaca breeder is attempting to purify the Suri breed by "breeding purely Suri."

To the contrary, the adverse manifestations appear when one attempts to crossbreed Suris and Huacayas, and then attempts to somehow create pure Suris again. The method of the Peruvian research

mentioned above involves the intentional crossbreeding of a group of Huacayas to presumably "pure" Suri males, generation after generation, as well as a similar experiment with Suri females and Huacaya males.

Under the now-disproven theory of single gene inheritance, this should produce a majority of Suri offspring. Unfortunately, it does not. The results indicate that, generation after generation, there is an increasing percentage of Huacayas produced, and also an increasing percentage of intermediate fleece type cria. Under the single theory, it would be impossible to ever have an intermediate-fleeced animal. In Peru, animals which exhibit these fleece characteristics have a much greater value on the dinner table than they do in the fiber industry and are therefore quickly removed from the gene pool. The Huacayas, which are produced from such crosses at a much greater percentage than would be expected, enter the Huacaya gene pool. If this scenario is allowed to play out over thousands of years, with relatively indiscriminate breeding of Suris to Huacayas in a more primitive environment, this could obviously lead to the Huacaya alpaca population overshadowing the Suri population. Indeed, this may be the very explanation as to why the Suri alpaca is so rare worldwide in comparison to the Huacaya.

The intentional crossbreeding of Suri to Huacaya alpacas therefore leads us to not only a decrease in the predictability and quality within our breeding programs, but also leads to an ever-increasing percentage of intermediate-fleeced animals and of

Huacayas out of our Suris. This is what Dr. Sumar and other experienced Peruvian alpaca breeders call the “Road to Catastrophe.”

The vast majority of the Suri breeders in North America realized years ago that crossbreeding was deleterious to our industry, even before we had scientific proof as to just how adverse this practice really was. Unfortunately, there were a few that continued to practice and promote this concept. Publications in our national magazines have actually promoted the breeding of poor-quality Huacayas to ‘homozygous’ (pure) Suri males as a method of producing valuable Suris from poor-quality Huacaya breeding stock. Animals resulting from such crosses have even been sold to unsuspecting new breeders and, in some instances, misrepresented as quality animals. The concept of breeding Huacaya females to “pure” Suri males is even further clouded by the fact that it is difficult, if not impossible, to determine with absolute certainty if a Suri is homozygous or not.

Perhaps someday we will have a set of genetic markers for all of the Suri genes which will enable us to ascertain with a greater degree of certainty, but they are not available at this time. In addition, we have unfortunately experienced some breeders advertising their Suri male as “homozygous” when the male actually has registered Huacaya cria.

Some would say these practices relate to the “buyer-beware” concept, while others would call it outright false advertising and fraud. The reluctance of the members of our industry to take a stand and protect our new members from any and all fraudulent and unscrupulous business practices could have, and in my opinion will have, a severe damaging effect on all aspects of our industry as a whole.



Our alpaca industry has phenomenal potential, with many diverse areas of involvement such as fiber, finished products, Huacayas, Suris, breeding, showing, and a true “alpaca lifestyle.” It is indeed unfortunate that a few individuals with

compromised ethical principles could very well have such a devastating financial impact upon all aspects of the North American alpaca industry.

In conclusion, current scientific evidence now exists that provides validity to our previous ominous suspicions regarding Suri-Huacaya crossbreeding. Propagating this practice on a large scale, as has been suggested by a few individuals, would virtually destroy our North American Suri industry with financial ramifications on the industry as a whole, leading it straight down the “Road to Catastrophe!”

The Suri Network Statement of Purpose: “Dedicated to the preservation of the Suri alpaca”

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