

NO CATASTROPHE

A different perspective of USING “The Road to Catastrophe”

By Michael L. Schmit

You have to love to hate American Marketing! Our minds have been subjected to intense marketing on what we should eat, drink, wear, act and look like, smell like, drive-in and sleep on. Super size everything and be perfectly thin and fit or else? Education with one eye open might be a good way to always try to have an open mind throughout life.

The evolution of alpacas has been controlled by humans for thousands of years, from the ancient El Yaral herders to the finest alpaca cloths for Inca Royalty, followed by the Spanish Conquest and the coarser fibered hybrid alpacas of modern Peru. The alpaca Industry in North America contains thousands of people and farms with many different breeding and marketing strategies. Here, I will share my personal opinions on hybridization as it relates to crossing Suri/Huacaya alpacas.

Personally, I have yet to have the privilege to see or put my hands on one “pure” alpaca in America, although I believe there may be a few pure alpacas registered with the A.R.I. (One of these would be nice for us all to see and feel.) To my knowledge, no one in America has come forward yet to prove, with genetic evidence, they have even one pure alpaca in their herd. Current estimates say that over 90% of the world’s alpaca populations are hybrid/crosses. Further estimates of North America’s alpaca herd are at over 99% hybrid/crosses.

DNA testing for “Pure” alpacas can be done now; DNA test your alpacas for “Purity” at CONOPA® <http://www.conopa.org/>. (Contact Jane wheeler before sending samples) jwheeler@conopa.org

The American herd consists of “hybrid alpacas.” Once a hybrid, always a hybrid, so all of their offspring will be hybrids! Example: llama/alpaca, guanaco/alpaca, vicuna/alpaca are hybrids. Suri/huacaya alpaca breedings are type crosses with hybrid vigor. (This does not take away from alpaca purity.) Over the last 25 years large scale hybridization between alpacas and llamas in South America for heavier fleece weight for money has been common

practice. South American breeders also crossed suri and huacaya Alpacas extensively to create colored suris for exportation. My point (opinion) is there is “No Catastrophe” to anyone’s breeding direction of hybrid/crossed alpacas, as we all have them in America!

Our “Suri Network” has hurt itself (in my view) by “Purely Suri.” I would love for us all to see pictures of all the tested pure alpacas or even one “pure” dark colored suri alpaca in America (not crossed with huacayas or llamas to achieve color). With today’s blind breeding of (Ss) suris you purify nothing. Current breeding practices of suri to suri alpacas will absolutely produce more “Ss” suri male/females.

Homozygous suri (SS), heterozygous suri (Ss), huacaya (ss) - These are the three genotype combinations in breeding alpacas.

Dr. Raul Ponzoni’s and others’ research including the Punnett Square will be used for the following examples.

To the point, a homozygous suri male (SS) bred to a suri or huacaya female will always produce a suri cria. Homozygous (SS) alpacas will always produce a suri fleece type cria, but luster, lock, fleece weight, fineness, etc. are determined by other factors from the crias’ parents. If the suri Industry would like more suri cria and less huacaya cria from female (Ss) suri breedings, then more (SS) males and (SS)

#1 Heterozygous Suri (Ss) Male bred to Huacaya (ss) Females: Will produce 50% suri cria (Ss) and 50% huacaya cria (ss).

1. BREEDING

		Huacaya Female (ss)	
		s	s
S Suri Male (Ss)	Suri Cria (Ss)	Suri Cria (Ss)	
s	Huacaya Cria (ss)	Huacaya Cria (ss)	

A suri male that produces one huacaya cria is a (Ss) heterozygous suri! Huacaya fiber that comes from suri breedings has longer staple length, smaller scale factor (less itch), is easier to process (production) and works very well with some huacaya breeding strategies.

#2 Homozygous Suri (SS) Male bred to Huacaya (ss) Females:

All offspring will be 100% suri Phenotype.

2. BREEDING

		Huacaya Female (ss)	
		s	s
S Suri Male (SS)	Suri Cria (Ss)	Suri Cria (Ss)	
S	Suri Cria (Ss)	Suri Cria (Ss)	

A heterozygous suri is a heterozygous suri, just as a huacaya is a huacaya, just as a hybrid is a hybrid.

#3 Heterozygous Suri (Ss) Male bred to Heterozygous Suri (Ss)

Females: Can result in huacaya offspring.

3. BREEDING

	Suri Female (Ss)	
	S	s
S Suri Male (Ss)	Suri Cria (SS)	Suri Cria (Ss)
s	Suri Cria (Ss)	Huacaya Cria (ss)

With this combination you have the same chance of producing a homozygous suri (SS) as you do a huacaya (ss), but you have doubled the chance of producing heterozygous suris (Ss). With blind suri to suri breedings it is advisable to tell your clients (buyers) they have a 25% chance of birthing a huacaya cria - especially if that suri has thrown huacaya in the past.

#4 Homozygous (SS) Suri Male bred to Heterozygous (Ss) Suri

Female: Produces 50% homozygous suri (SS), and 50% heterozygous genotypes.

4. BREEDING

	Suri Female (Ss)	
	S	s
S Suri Male (SS)	Suri Cria (SS)	Suri Cria (Ss)
S	Suri Cria (SS)	Suri Cria (Ss)

In breeding #4 the female suri (Ss) used can be an F1 (suri/huacaya cross "Ss"), a BC1 (backcross "Ss"), an imported suri (Ss), or an American suri (Ss), which are all 100% suri phenotype and will produce with a homozygous male - heterozygous (50% of the time) or homozygous (50% of the time), all suri genotypes!

females tested true are needed. **Simple Enough.**

Today, if a suri male is bred to nine huacaya females and produces nine suri cria, you are over 99% true (SS) homozygous, which means that itested male will always produce a suri cria from your (Ss) suri females (those that have produced huacaya cria in their past). The (SS) gene is great if you always want suri cria. An F1 suri/huacaya cross (Ss) will produce the same percentage of suri offspring as any (Ss) male/female, because they are the same suri alpaca genotype and phenotype. Breed either of these (Ss) suri females to (SS) suri stud again and you have the same chance to produce a homozygous (SS) suri cria (**No Catastrophe**). Currently, no genetic test exists to determine homozygous or heterozygous from blood work.

Solution (simple): If you do not wish for people to breed suri/huacaya to test prove homozygous (SS) suri male status, then **fund (\$\$)** the genetic research required to create a test!

We (myself included) should not degrade breeders with their own, sometimes false, beliefs - for no one in America has the perfect breeding direction. There will never be one perfect breeding direction using America's hybrid/crossed alpaca herd. New breeders can be discouraged from the suri Industry if they feel they must breed their "hybrids" the "Purely Suri" way or else. Huacaya breeders can be discouraged if they believe their "hybrids" must come from some special country or ranch to achieve quality fleece.

We may all be guilty of something when it comes to marketing, when our goal

as an Industry is to produce production quality (Inca type) fleece in the end - no matter which path works best. Maybe to truly judge quality fleece we need to wear alpaca garments very close to our body. (Itchy or nice?)

Alpacas are great, so let's all breed with the best (production) quality studs we can. No title, no blue ribbon, no Accoyo, Chilean, Peruvian, Bolivian or farm name really matters. If a stud produces top fleece quality cria, we all win in the end.

To read an in depth discussion with opinions, facts and research go to Alpaca Nation Forum under general discussions and read a forum thread titled "Hybrids all around" http://www.alpaca-nation.com/forum/topic.asp?TOPIC_ID=3168 and see several different viewpoints on the topics I have discussed here, with many links to good research. Please take great care of all your pacas, breed the best you can and forget the rest.

UPDATE FROM JANE WHEELER, 9-11-06:

"Dear Mike, I do not know of any pure tested alpacas in the US." "Our lab is the only one to offer this service."

"We can do the test using hair follicles, but as always blood is better and allows us to preserve the sample should future testing be necessary. If hair follicles are used they can be extracted from the ear by pulling with forceps in a procedure that does not harm the animal, if blood is used it is only necessary to send the buffy coat and not the entire sample. The samples can be sent by courier to us at Los Cerezos 106, Urbanizacion Los Recaudadores de Salamanca, Ate Vitarte, Lima 3, PERU. ...The direct phone to the laboratory is 514-435-3348 or 435 3349, there will be a recorded message in Spanish which says mark the extension number and that is 234...The cost is \$65 plus 19% Peruvian value added tax per animal for fewer than 100 samples." Jane Wheeler

GIFT: Maybe? The next best breeding direction in America is finding a "Pure" alpaca. Now you may have something we all want! (Good Luck.)

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