

Genesis of a Breed

The SLA's role in defining and refining the suri llama.

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Published in Suri Llama Magazine Spring 2006

Reprinted in Llama Banner Spring 2008

Few animals compete with the well-bred suri llama for sheer ethereal elegance. None but the perfect suri llama radiates that quality of *stillness in a rainstorm* that inspires the poet in each of us suri llama breeders. But, as a population, as a breed, and as a sustainable investment the suri llama is a work-in-progress, a diamond in the rough.

The privileged purebred

We share our home with two purebred, registered Cornish Rex cats worth a tidy sum. "Our barn, however, often times serves as lodging for a phenotypically variable population of vagrant domestic short-haired cats of the "mouser" variety." These barn cats usually show up as kittens skulking in the wood pile and occasionally in a box on our doorstep. They arrive with teary eyes, itchy ears, and mangy coats, but are fortunate to leave vetted, well-fed, and adopted by charitable cat lovers.

Yet it would take little effort to produce a list of people waiting to pay a king's ransom for the privilege of owning a Cornish Rex kitten if we chose to breed them. Why such disparity between the Cornish Rex and the barn cat? The answer is "breed status." The Cornish Rex is a reliable investment, an art form, and yes, a luxury item. The barn cat belongs to a wildly unpredictable, albeit charming, population that has persisted as a mongrel swarm since long before the day of the pedigreed house cat.

That the general population of llamas is more akin to that of barn cats than Cornish Rex begs the question. Is it possible to tweeze from such a variable population of mongrel llamas the makings of a purebred suri llama? Since the Cornish Rex breed can be traced back to just such a population of barn cats in Cornwall, England only fifty years ago, the answer is an unequivocal *yes!*

The rewards of human ingenuity

Every breed existing today was born of isolation, selection, and inbreeding. Typically, regional populations arose that were selected for a specific function. Once these "landraces" or "primitive breeds" came to be viewed as isolated populations, there began the inadvertent process of selection toward ideal individuals representing that population and away from individuals that might represent a neighboring population.

This directional selection within these closed populations gradually reduced both the phenotypic and the genotypic diversity of the population (by way of inbreeding) and pushed it toward becoming an “improved breed” or a “standardized breed.” This gradual shaping of a population into a breed can take many human lifetimes. But by understanding and deliberate harnessing of the forces of nature this need not be the case.

Such a deliberate, systematic approach toward shaping a population into a breed is not the common or most traditional path of breed development, but it has been employed with great success. Many modern standardized breeds were developed using methodically planned strategies which utilize the same forces at work in the traditional process, but take a fraction of the time. This less conventional, more calculated, approach to breed development gave rise to tropical breeds of milking cattle, today’s “traditional” Thanksgiving turkey, the familiar Doberman Pinscher, and countless other breeds. This is human ingenuity at its finest.

Methods for success

Can we take a genetically diverse and phenotypically variable population of “unimproved” llamas and shape them into a sustainable, uniform population of suri llamas? Certainly! Much of what is necessary to accomplish this goal is made possible for us through the Suri Llama Association (SLA).

First, to prevent the suri llama population from being confused with neighboring populations and indiscriminately interbred with, say, silky llamas or suri alpacas, we *must* maintain a strict breed standard that quantifies the distinctive traits that define the suri llama. We might think of this as “brand identity,” to borrow a broad commercial term. A breed standard is an authoritative tool, representing the idealized animal and carefully guiding the individual breeder’s decisions. The standard’s primary function, however, is in that it forms a community of many breeders “selecting” in a common direction. As a direct consequence, the gene frequencies of the population, frequencies which a single breeder cannot hope to effect, can be shifted rapidly in the direction of the desired genotype.

Secondly, breeders can employ the Suri Llama Registry and Verifiable Pedigree Certificate to isolate and protect the “purity” of the population. As stated above, all breeds arise from one form of isolation or another. Sometimes the isolation is a natural, geographic separation from other populations of the species; in other instances it is separation from other populations of the species by the will of breeders. Only by isolating the suri llama population from the unimproved llama population can suri llamas begin the journey towards uniformity, predictability and, ultimately, breed status.

Keuring sets the standard

Thirdly, by selecting judiciously, and using *keuring* to grade each animal, we increase phenotypic uniformity within the population. Naturally, this requires resolute culling. We can no longer rely on “corrective mating” to remedy an animal’s faults. Rather, we must breed “like to like,” utilizing only the best animals and retiring those which fall short of the ideal standard. *Keuring* is a reliable way for breeders to evaluate each animal on its breeding merits and on specific quantifiable traits. With each animal judged against the breed standard and not against others in the show ring, the population is less vulnerable to the trends, politics, and prejudices of competitive showing, which has been the ruin of so many breeds.

Fourthly, to ensure genetic sustainability while maintaining the brand identity of the national herd, both *keuring* and the Suri Llama Registry may be utilized to allow in a select and limited flow of genes from the general llama population. It is true that outcrossing can correct the potential negative effects of inbreeding in a single generation, *but* it takes many generations of line breeding to correct the deleterious effects of outcrossing. Like a well designed water dam, keuring and the registry serve to maintain the genetic viability of the suri llama population by controlling the influx of potentially disadvantageous outcrosses. This, in turn, circuitously encourages the gamut of other healthy, trait-fixing breeding systems hitherto under utilized within our industry.

Strength in numbers

Finally, an organized community of breeders can better share information, technology, and even genetic resources to the benefit of its members and the animals they breed. Consider the expressed concern that the population of suris was founded with too few suri studs. If suri breeders continue to over-utilize males as in the past, the level of inbreeding will quickly build to an unhealthy level. Retaining and utilizing too few studs from each year's crop of crias quickly increases the degree of inbreeding in a population and inadvertently necessitates outcrossing. But, by retaining many studs from each generation, especially if the population of females that produces them is genetically diverse and phenotypically strong, the potential negative effects of inbreeding are minimized. This practice translates into a healthier gene pool with less risk of inbreeding depression. Retaining more studs also results in a more uniform population because new, unwanted alleles are not introduced. Rather, breeders reshuffle the alleles already carefully selected. To maintain the genetic viability of the collective herd will require the entire community working together.

The Suri Llama Association has constructed a framework under which this population of llamas will continually grow more uniform, more reliable, and more valuable with each successive generation. It has created a quiet space, its own *stillness in a rainstorm*, where the suri llama can grow to become more than the sum of its parts, a space where the suri llama can gain footing in an ever demanding market, and a space where the suri llama can develop towards breed status and all its privileges.