

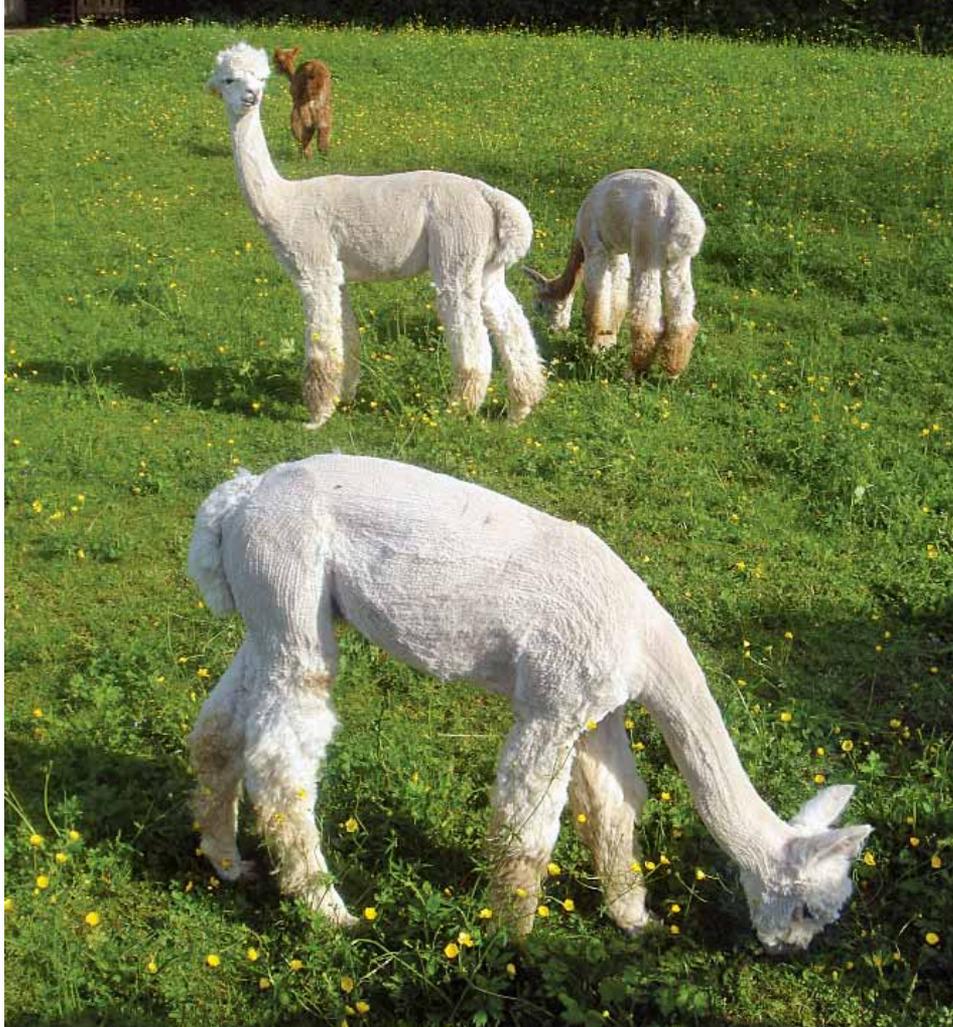
The German Alpaca Registry Implements Objective Measurements - Not Breed Standards

Mike Herrling, AZVD BOD, Screening Inspector

If you have read or been told that “The German Alpaca Registry implements a Breed Standard”, you have been misled. Several emails sent to me from across the North Atlantic have informed me that we have invented an alpaca breed standard here in Germany. We have not. There seems to be a misinterpretation of what and why the AZVD (German Alpaca Association) has introduced a common Herd-Book and an Elite-Book for its already DNA-registered alpacas. I think maybe it is time for an official statement to separate the fairytales from the facts.

In 2004, I was tasked by the AZVD membership to develop a system which describes the breeding potential of an alpaca and monitors the genotype throughout its lifecycle. The documentation of all matings, births and the subsequent screenings of offspring were soon agreed on as key features of the new system. Looking back at German animal breeding history, it was rather easy to find several systems that would suit our needs. Melting all their positive features into something new was challenging, implementing it, seemed almost impossible. The problem was, as usual, the “establishment”.

Until 2004, the ARI screening protocols were used for quality control and to determine phenotype and fibre quality of imported alpacas. I assume you are aware that phenotype and genotype are not automatically the same. Knowing that, means accepting all offspring into the registry without



further quality control is a genetic Russian roulette. We tried to separate the good from the bad by following the North American Alpaca Show criteria. However, since everybody enters a show to win, only the best animals are presented. Nobody would show their misfits, the pets, the cute ones that a serious breeder would hide on his secret pasture. Those together with the show winners will make the genotype of their progeny. And that is why shows fail as a breeding quality evaluation tool. Do not misunderstand me, Alpaca shows are the best marketing tool to inform beginners about what kind of animals we are looking for and, of course, where you might find them for sale.

I never intended to reinvent the wheel, but an expanded assessment tool had to be created since the only objective evaluation available was the ARI screening that had been designed and applied to young adults being exported from South America. The original protocols needed some refurbishing to suit alpacas bred outside South America. We paid special attention to adapting the fibre assessment for older animals. Over

600 fibre samples entered the database to establish “The German Average” in key areas of fiber measurement separated by age, colour and breed. Several scientific studies were cross-referenced.

We made real progress after Eric Hoffman was brought into the planning cycle. I am sure, that after our first phone call, he shook his head and considered me suicidal. A couple of hundred-dollar phone bills later, he was actively helping to develop the now established Advanced Alpaca Screening System for the German Alpaca Herd-Book. The screening itself contains basically the same medical exclusion parameters, as the original ARI screening but differs a lot in phenotype and fibre. A point system was developed that issues 50 points to the phenotypic exterior and 50 points to the fibre characteristics like density, microns, SD and percentage greater than 30 microns. Nothing new, you might say. Well, if you base a new system on internationally acknowledged scientific facts, there will be no major change to the former ARI screening.

The difference however, is in the details. We need to track and pinpoint each individual deviation from the

agreed standard. In most of the alpaca breeding countries, alpacas with severe or moderate deficiencies never showed up. They were disqualified by the screeners and remained in South America. The animals we examine remain in the market and people will most likely continue to breed with them. Therefore, we had to go more into the nuts and bolts.

The first big difference is the fibre evaluation. Based on the ARI points, we developed a program, that corrects for age, colour and breed by adding correcting factors into the equation. Now, even older animals have a fair chance of clearing the hurdle. Suris are not discriminated against because of a slightly higher mean fibre diameter. In our system like colours are compared within their own colour groups. The most important feature is, that other markers like mean curvature, crimps per inch, bone density, etc., are measured, documented and anchored in a centralized database for potential future scientific research. Fibre criteria will not be expanded unless a new criterion is proven to be essential for processing.

The second difference is, that the new screening is not considered a field evaluation anymore. With the ability utilize laboratory analysis to cross diagnose potentially heritable defects, overall membership acceptance was achieved. For example if a bent tail is discovered in a screening, the animal can be radiographed to determine if it is an injury or congenital defect.

After all this trouble, we could have said, "sit back, relax, and enjoy the ride."

But... Now, I had to create a system, that uses this tool to assess phenotype, fibre, health AND genotype. This is, where the new Herd-Book comes into place. The registry is part of the Herd-Book. All alpacas can be DNA-registered in the AZVD. A specifically designed alpaca passport will be issued to credit the breeder and to document the pedigree. All the animal data will be stored in a centralized database.



With a minimum of one year of age, and meeting the height and weight criteria, a breeder can decide to present an animal at one of our decentralized screening locations for evaluation. Two certified phenotype screeners and one vet will screen the animal and take fibre samples. The results will be evaluated and stored in the centralized database.

An animal with 80 points and more will achieve the status Category A, which means, it carries only minor deviations from the described standard.

An animal with 50 to 79 points, will achieve the Category B, which means, it carries moderate deviations from the described standard.

An animal with less than 50 points will enter the Category C, which means, it carries severe deviations from the described standard or was disqualified by the vet. This category is probably where you would find pet animals.

All individual results are documented in the alpaca passport and are also accessible through the database for future evaluation. This concludes the task of the Herd-Book: registry, screening and classification. You might wonder, "and where is the genotype evaluation?"

Good you've asked, which means, you did not fall asleep, yet.

This is the moment where the Elite-Book cuts in. We do not intend to screen only the first generation, but also their offspring. Since all crias enter the registry with a pending breeding status, each breeder will present them to be screened. The points achieved are equally divided between the animal's parents. Whenever an alpaca achieves the Category A status, 50% of its points will be added to dam and sire. 25% will be added to the grandparents. That way, the individual screening points of an animal will increase with good offspring. A certain number of good offspring and points will advance dam and sire through different stages within the Elite-Book. Since each member can review all the animals with all the crias, a full-scale assessment of the animal's genotype is possible. The advantage of such a system is that it provides: the highest amount of objectivity, a solid data base for breeding selection, traceability of heritable traits and it credits the ambitious breeder.

Creating a system like this was a tough job. Getting the AZVD membership to accept it, seemed impossible. This was only achievable by circumnavigating all the political trip wires. Having Eric as a consultant helped a lot. He conducted standardized training courses for phenotype screeners. DVM Pat Long trained the veterinarians. The first training course certified fourteen qualified phenotype screeners and two vets. The second course is completely booked and running now. A third one will follow next year. A cost effective nation-wide quality assessment program is achievable only with a large pool of qualified screeners. The acceptance of



these screeners was achieved by instituting a set of strictly enforced conflict of interest regulations. A specially developed electronic data base was created to minimize the paperwork and to effectively distribute all relevant information to the point where it is needed most: the alpaca breeder.

To answer the introductory question, no, we did not implement breed standards. Breed standards are usually invented to benefit those who create them. Breed standards limit genetic variety and lower the value of those alpacas that differ. Introducing breed standards is a marketing tool. The German Alpaca Association (AZVD) introduced an objective evaluation system to analyze and document our existing genetic pool to enhance breeding decisions. The aim is, that even the smallest breeder might have the best alpaca possible, if s/he does their job right. To do so, they need objective data. After 500 screened animals, I am proud to say, we have made a good start.

For more information contact Mike Herrling through zuchtwart@alpakazuchtverband.de or visit the AZVD website at www.alpakazuchtverband.de. A complete English translation of the website will be available soon.

CQ



About the Author

Mike Herrling was born in 1966. He retired from the German Air Force as a Major in 2004, after 18 years of service as a F-4 Phantom fighter pilot. Today Mike, his wife Silke, and

daughters Alexandra and Rebecca, enjoy working together running Avalon Alpacas. The Herrling's farm is located northwest of Bremen, Germany, close to the North Sea. At last they have the opportunity to realize their lifetime desire of raising and caring for animals. Mike has served as a board member on the German Alpaca Registry (AZVD) for 4 years. His research and commitment to alpaca improvement was rewarded with 80% of the membership voting in favour of implementing his vision of a modernized alpaca breeding program.