

SURI NETWORK RESEARCH REFERENCES

BACKGROUND DATA ON BREED STANDARDS - CLASSIFICATION – EPD\EBV

The formation of the Suri Network organization created the opportunity to develop educational materials to achieve their stated goal... ***“Preserving the Suri Phenotype”***.

The Suri Breed Characteristics were identified, defined and developed through research and shared knowledge of the Suri to produce a basic Format with trait emphases coming from Owners, Processors, Judges and native South American Information. A basic Document with descriptions of Suri Fiber and lock structure with diagrams was produced, along with Veterinarian approved Conformation drawings to provide pertinent information for owners, Judges and the Alpaca industry to maintain the balance of a 50/50 Emphasis Guide. ARI Import Screening Guidelines provided accepted criteria.

Following much discussion in the industry regarding the value and use of **BREED STANDARDS**, the SN moved forward to produce a DRAFT Suri Breed Standard for review and dialogue over a year's time, Numerous National Industry meetings used this Draft as an example. The Draft Document then was modified slightly and approved by more than 100 SN members at the Symposium. This approved Final SURI Breed Standard then formed the basis for development of a **Herd Review CLASSIFICATION SYSTEM**, utilizing input from owners, processors and product development, for priority traits.

Suri Fiber Data from specialized Suri research from Dr. Carlo Renieri and Marco Antonini – Univ. of Camarino-ITALY was utilized to define parameters of commercially valuable Suri Fiber traits.

Data collected from various Suri Network Research projects the past 10 years, and data collected from the 2000+ Suris classified for the S.H.I.P. (Suri Herd Improvement Program) along with baseline Suri data shared through the Pacamarca Experimental Farm is all being incorporated into the Suri Performance **EPD Programs and records**. This trail of steps in Livestock Improvement and Breed Association activity followed the successful achievements of Sheep Breeds, Dairy Cattle, Beef Breeds, Swine, Dairy Goats and numerous other species of dogs, cats, flowers, plants and insects. The scientific basis was established over the past 100 years.

Programs of individual evaluation and calculation were reviewed from The Canadian AHEAD program, the Australian/New Zealand AGE and the Ideal Alpaca Community.

The following list of Research sources for these Breed Standards and Performance Programs includes Breed Associations, Registries and Standards, in the US and foreign countries, Global Fiber studies, Conferences and research papers, Animal Science Departments and personnel from numerous University and foreign Institutions, Processing Mills, Product Development and numerous individuals involved with Livestock development and Improvement Programs. All SN educational materials and documents are based on and extrapolated from known proven scientific processes and programs.

Consultations occurred with Veterinarians with camelid experience include Dr. Murray Fowler, (UCDavis), Dr. Ahmed Tibary, (WA), Dr. Chris Cebra and Pat Long (OR), and Dr. Anderson OH and KS) Consultation with a number of Livestock individuals with active status in these programs has continued over the past 6 years to review materials and advise the SN Classification / EPD Program to provide a useful TOOL for owners to make herd improvement and selection decisions.

SURI NETWORK LIST of SOURCES for Performance Record Information

- Breed Standards
- Trait Definitions
- Classification & Linear Appraisal
- EPD/EBV

AMERICAN DAIRY GOAT ASSOCIATION <http://www.adga.org/> www.adga.org estab. 1904

The ADGA programs and materials have provided a strong basis for the SN procedures and processes. The Breed Standards for 6 types consider Milk production, Phenotype and specific conformation traits. The rigorous extensive Judge and Classifier (Appraiser) training and Certification programs are managed by a 9 breeders who have more than 50 years experience. Their Point System of scoring and the recording of performance data has followed the Holstein Dairy cattle formats (largest livestock database of performance records), with Categories for young animals and those in production. The SN Classification system was modeled on this scientific proven basis, utilizing the owner approved Suri Breed Standard Traits.

REFERENCE for JUDGES TRAINING Program:

Sheila Nixon and Stephen Considine from California... both in that business for 50+ years, had large Dairys, and basically established most of the programs. Both are still highly involved with Judge Training and Certification.

The HOLSTEIN ASSOCIATION USA <http://www.holstein.org> established 1850

As the largest breed organization in the world, the proven processes, procedures and programs are recognized throughout the world, and serve as the basic format for Measuring and recording Individual Performance Data. Specific Breed Standards, detailed Scorecards for Classification and the Type Evaluation, utilized with A.I./E.T. , have provided more milk production and healthier cattle. The Classification for 17 Traits in 5 Categories is scheduled 6-12 months prior to the annual Regional reviews by 17 Certified Professional Dairy Classifiers to ensure consistency and accuracy. Milk records are measured and maintained through DHIR (Dairy Herd Improvement Records) with the USDA AIPL (Animal Improvement Programs Lab) managing the database and EPD programs for predictions.

NOTE: Most Livestock Shows (Beef, Swine, Sheep) are judged by Breed association professionals and most EPD Data is collected by Certified Technicians and equipment.

Related Source groups:

American Dairy Science Association
National Pedigree Livestock Council
American Society of Animal Scientists

American Dairy Association
National Industry Animal Agriculture
International Wool Testing Org (IWTO)

The PACOMARCA Experimental Farm EPD program – Peru- Dr. Renzo Morante and the Animal Science Dept. Complutense Univ. Madrid Spain – Juan Pablo Gutierrez provided valuable consult and reviews of our programs and shared their data on Suri Trait Heritabilities .

Related Breed Standard Groups:

MOHAIR – Angora Goats - <http://www.mohairusa.org>
Selection Criteria and Fiber Traits most closely approximate the Suri Fiber criteria and this group continues to support dialogue, do fiber research and communication with Suri Network committees.

AMERICAN SHEEP INDUSTRY ASSOCIATION <http://www.sheepusa.org>

estab. 1865

Operates in conjunction with the American Wool Council, Texas A & M Extension Research Wool & Mohair Lab for Fiber Testing, Grading and Marketing Breed Standards for the Long Wool Sheep (Wensleydale, Lincoln, Border Leicester, Texel) were studied. The Wensleydale wool (long straight high luster fibers) most closely appears like Suri Fiber, except for a higher micron average, and is considered the most lustrous, curled or purred, free and open ropey staple, most valuable in the world, because the 8-12 inch fiber is also kemp (Guard Hair) free. <http://www.wensleydalesheep.org>
The Wool Council and Foundation, through the National Sheep Industry Improvement Center, provided research value relative to fiber measurements.

CASHMERE GOATS – Cashmere Producers of America - <http://www.capcas.com>

As a competitor for Alpaca fiber, the detailed Cashmere Goat Breed Standard has utilizes a 50/50 Fiber/Conformation evaluation and requires MFD less than 18.5microns, with a C.V. less than 24% and easily differentiated Guard Hairs for the combed down from the Double coat.

PERFORMANCE RECORDS – EPD/EBV CALCULATIONS – BREED STANDARDS

Data Scores and Measurements are collected by Breed Associations for calculations using the BLUP method (Best Linear Unbiased Prediction) for estimating potential genetic improvement in offspring.

NATIONAL SWINE REGISTRY (NSR) and the NATIONAL SWINE IMPROVEMENT FEDERATION (NSIF) www.sspro.com/stages <http://www.nsif.com> www.nsif.com/guidelines with Purdue Univ.

This organizations maintains Registries for the 4 major Swine breeds, monitors the List of 12 Genetic Defects, collects live animal and carcass measurement data on 20+ traits and calculates the EPD and EBV records on over 1 million swine daily. The extensive educational program with explanations for all aspects of the EPD/EBV programs was used as the model for much of the information for the SN S.H.I.P. Valuable consulting advice was available to the SN for setting up the Database, the collection format, and the reporting of results. NSR is running Suri Test Data and 1st run Calculations for the EPDs for Suris.

BEEF INDUSTRY - BREED STANDARDS - PERFORMANCE RECORDS - EPD/EBV - HERD SIRE SUMMARIES

All major Beef Breeds have Breed Standards for Registry and/or a Classification process for some crossbred cattle, and collect Performance Data for EPD/EBV calculations for use by the Ranchers, Owners, Youth, the Meat Industry and the public. All data is measured and/or collected by Certified Technicians trained for specific Trait measurement, much by Ultrasound diagnosis. All Breed Associations provide Online Data searches for the industry and membership to promote their breeds most valuable economic traits.

EPS/EBV Calculations are performed by some individual Associations, but the majority are maintained and new values calculated monthly by Animal Science Departments of major Agricultural Universities: University of Georgia, Virginia Tech Univ., Colorado State University, UC Davis-California, Kansas State Univ., Cornell Univ., Purdue Univ.

Junior Breed Associations train young people who normally follow the programs through college and then become Judges. No specific Training. Selection is Owners and management decision.

BEEF Associations consulted:

American Angus Association - <http://www.angus.org> - the largest and oldest - uses AIMS Information Management System for the Angus Genetics and EPD/EBV programs with more than 60 years of calculations and research. The Certified Angus Beef program was a result of the research data.

American Hereford Association - <http://www.hereford.org> – estab. 1881 - the 2nd most popular beef breed began Performance Testing and EPD calculations for 12 major carcass traits more than 50 years ago.

Red Angus Association of America – <http://www.redangus.org> - an easy to follow explanation and example of the EPD/EBV program and use of results.

American Simmental/Simbrah Assoc ASA <http://www.simmental.org> Classification System

American Brahman Breeders Assoc. <http://www.brahman.org>

North American Limousin Foundation <http://www.nalf.org>

American International Charolais Assoc. <http://www.aica.org>

Santa Gertrudis Breeders Assoc. <http://www.sgba.org> On-Site Classification System