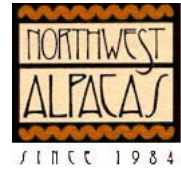




## **A Comparative Analysis Of Alpaca Breed Type And Standards**

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By Jude Anderson,  
Maggie Krieger,  
and Mike Safley



Breed standards for American alpacas have, in the past, been controversial. The leadership of the industry has, over time, uniformly opposed adopting breed standards. This article endeavors to look at breed standards analytically. The authors firmly believe that breed standards are an overwhelming positive for the alpaca breed, particularly regarding the health of future generations of alpacas. For you who endeavor to read the entirety of this article, which is a little long and admittedly dry, we would ask you to ask yourself: How could these standards hurt our industry and how might they benefit not only the industry, but also the breed? We would be interested in your thoughts.

Pacific Crest Alpacas recently hosted a Breed Type and Standards symposium at their annual sale and auction. The three authors, Jude, Maggie, and Mike, who are each alpaca judges who have all judged alpacas in the United States, Canada, Australia, and Peru, were the symposium panelists. They presented information on the difference between breed type and breed standards, how breed standards are used in the show ring, and offered analysis of the three different published alpaca breed standards: 1) the Australian Alpaca Association (AAA); 2) the International Alpaca Judging School (IAJS), and; 3) the standards contained in *Alpacas: Synthesis of a Miracle*.

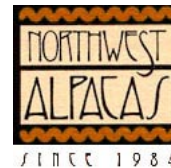
The symposium went on for several hours and there was considerable participation from the 150 plus breeders in attendance. This article presents the symposium subject matter and incorporates some of the points made by the audience during the presentation.

### AN OVERVIEW: WHAT ARE BREED STANDARDS AND WHY ARE THEY IMPORTANT?

Breed standards help define the ideal animal of a given breed. Standards often evolve over time. They provide goals for breeders who are trying to improve their stock. Standards become a breeder's objective in the form of a weighted combination of traits that help define the aggregate value or merit of an animal. They are a quantification of what constitutes the ideal animal. By having industry-wide written standards, breeders will always have a benchmark by which they can compare the individual alpacas in their herds.

Jude Anderson pointed out that if you go to the internet and do a word search on breed standards, you will immediately access hundreds, if not thousands, of standards for various breeds, ranging from Ibizan hounds and Jack Russell Terriers to Boer goats, Hereford cattle and British white cattle, plus every breed of horse, sheep, chicken, parakeet, and pot bellied pig.

By definition, breed standards are created by national or international breed associations, not by individuals. Since they are a quantification of what constitutes the ideal of the breed, they differ from what the alpaca community knows as screening standards, which simply acted to set minimum characteristics for the breed.



## A Comparative Analysis Of Alpaca Breed Type And Standards

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Here are a few points about breed standards which were made on the various websites for different breeds. These ideas are applicable to all breeds.

1. Breed standards evolve and should be continuously updated by breed associations.
2. They provide a benchmark for breeders when assessing individual animals whether for breeding or for purchase and they give judges guidance in the show ring.
3. Breed standards should place importance on the performance aspects of the breed in order to avoid the over development of unnecessary aesthetic characteristics or traits. For instance, standards differ with sheep according to their end use. You would find different emphasis being placed in breed standards on the ideal fleece sheep as opposed to the ideal meat sheep or even the ideal milk sheep, although, first and foremost, they are all sheep.
4. Breed standards should place more importance or priority on those characteristics that best satisfy the end user or the original utility of the breed. They should be related to performance over aesthetics, although some aesthetic descriptions are used.
5. Breed standards are an invaluable herd improvement tool in that they should be studied by all breeders when they are determining their breeding objectives. They are used in selection and/or retention of sires in the breeding program. The use of a breed standard is valuable in terms of bringing about genetic improvement within a single herd and across the whole industry.
6. Breed standards are also important because they ultimately have the interests of the welfare of the breed in mind. By concentrating more on the end use, less emphasis can be placed on traits which have no importance in terms of either conformation or utility that could be distorted over time and ultimately lead to the disadvantage of the animal. Both breeders and judges alike need to be aware of this, especially judges and the people who create the judging system.

### THE AUSTRALIAN EXPERIENCE

When alpaca show judging first started in Australia around ten years ago, the judges were trained by the first breeders in the industry and an expert from the Royal Show Society in Melbourne. The pioneer of the Australian alpaca industry and member of the AAA National Committee, Roger Haldane, wrote the alpaca breed standard for the new alpaca show guidelines. It was a very simple description that has since been expanded and developed by the AAA show committee and in recent times rewritten by Bill Robbins with contributions by Sandi Keane and the Australian Suri Club on the suri standard. The current standard can be found later in the article.

This standard is used in the training of judges in Australia. In fact, would-be judges are examined on their knowledge of the Breed Standard. Judges must keep the breed standard in mind at all times, especially in the Australian show system, which allows for single animal classes. To judge a single alpaca, the judge takes into account the general standard of alpacas at the show, as well as the written standard.

## A Comparative Analysis Of Alpaca Breed Type And Standards

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### THE ADVANTAGES AND DISADVANTAGES OF BREED STANDARDS

Maggie Krieger presented the following advantages and disadvantages of breed standards at the Pacific Crest symposium. The different ideas that follow are fairly representative to how advocates and adversaries view breed standards.

Breed standards provide a blue print for the breeder which indicates the quality of an animal and whether it will succeed in a breeding program or the show ring. They are a uniform ideal that all judges can use to compare an alpaca against in addition to comparing the animals in a class and they promote more consistency of judging from show to show. Standards discourage negative traits being perpetuated in the gene pool, and also discourages fashion or fad traits being established in the show ring. Breed standards help reinforce the best interests of the alpaca as a specific breed with a specific function, therefore setting it apart from other breeds. They specifically attempt to identify a “purebred” alpaca as opposed to a cross bred Llama/Alpaca (huarizo), thereby encouraging the maintenance of pure breeding. Finally, in the long term standards lead to more uniformity in fleece quality which will become extremely important in the classing of fiber lots for processing and the creation of high quality end products.

Some breeders believe that standards could affect the market by introducing a standard that would have an effect on the industry, or more specifically, the market, i.e. politics based on concerns that “My alpacas won’t make the grade of a standard.” (The standard simply defines what an ideal alpaca is. It starts out broadly based and does not define more specifically until scientific research is produced to allow a more precise definition.) Others believe that without careful monitoring standards could manipulate the species to conform to a standard that would cause change to suit the needs of humans resulting in a weakening of the species, i.e. poor conformation, unsound reproductive system, or poor quality fleece. Most unfounded concerns about standards suggest that they will have a negative impact on marketing strategies.

### BREED STANDARDS ENHANCE THE WELFARE OF THE BREED

The one aspect of breed standards that is often lost in the current discussions about alpaca standards (which tends to be political) is the beneficial effect that standards can have on the welfare of the breed as a whole. Breed standards educate the breeders about defects and provide a road map to negative traits that need to be selected against in their breed programs.

Later in the article, you will find an analysis of three alpaca breed standards. Each contains an exhaustive list of negative traits. Many of these traits are identified as the basis for culling animals from breeding programs. Others are simply traits that need to be corrected, such as overbite, but would not be the basis for culling a female from the breeding population. Other traits, such as size, proportion, testicular development, ear shape and size, spring of rib, etc. can all have long term effect on the overall health of the breed.

The value of breed standards is protecting and improving the general population of animals can not be overestimated. Breeders often complain of buying defective animals, but these complaints are difficult to sustain if the industry will not collectively decide on what is within the acceptable standard and what is not.

## A Comparative Analysis Of Alpaca Breed Type And Standards

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### DEVELOPING BREED STANDARDS

Regardless of species, the best animal should be the one that best suits the end user. When developing breed standards this is an important idea to keep in mind. Sometimes this concept gets lost in the effort to satisfy expectations that have little to do with end use. An example of distorted breeding standards can be found in the emphasis that meat and dairy cattle breeders place on a particular spotting pattern or shade of coat color. Coat color has little to do with production efficiency in these species.

Competition among breeders can also create distorted breed standards. In an effort to convince buyers that their animals are superior to those of their competitors, a breeder may find it profitable to emphasize the qualities in their animals that set them apart, even if they are not particularly important production traits. For example, if a breeder's animals are especially large, he or she may be tempted to promote the value of increased size whether or not size is inherently valuable. If their promotional efforts are successful, they will be rewarded for having large animals and begin to promote even larger animals. Soon the competition will react to the success of the first breeder and the race will be on.

To avoid these arbitrary variations in breed standards, alpaca breeders should simply remember the end user. By understanding the characteristics affecting the end use of our alpacas and defining the best animal accordingly, we will all have a valuable herd improvement tool. This goal could best be accomplished by establishing industry-wide breed standards as opposed to having individual standards that are set by individual breeders based on the alpacas they have in their pasture and the size of their advertising budget.

### THE USE OF A BREED STANDARD IN THE SHOW RING

The current alpaca show ring protocol in all countries uses comparative analysis to place animals. In other words, the alpacas in a given class are compared one to the other to determine their ranking or placing. When identifying the first place animal in a given class, the judge should choose the alpaca which most closely conforms to the ideal. A breed standard is invaluable to a judge in that it defines or quantifies the ideal.

Once the "best" alpaca of the class is chosen, the judge can place the rest of the alpacas in their relative order of merit. By defining the breed standard as an industry we will take a great step toward more uniform results in the show ring. If all judges are working from the same standard more consistent results will follow.

### BREED STANDARDS ARE ESSENTIAL FOR TRAINING ALPACA JUDGES

A judge must at least have some background in livestock breeding practices, preferably alpacas. A competent judge must have extensive experience in viewing and handling alpacas and their fleece (preferably thousands). Their experience should include all levels of quality and type.

Judges need a full understanding and appreciation of the ideal set by a breed standard. The above qualifications will provide a full understanding and knowledge of the difference between llama and alpaca without which a judge can not render competent judgement. Standards provide a judge with a mental picture or definition which is a constant reference during the judging process.

## A Comparative Analysis Of Alpaca Breed Type And Standards

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### WHAT IS BREED TYPE?

If a Hollywood producer needed an alpaca for his movie, he would call central casting. They would try to send him an alpaca that would look the part. Perfect type casting might be a national champion alpaca whom many breeders believe represents the ideal huacaya or suri type. The definition of breed type is created by the visual picture of the characteristics that are considered typical or ideal for a breed. The ideal breed types are often based on the details of conformation and color that are not related to the economic productivity of the animals. Examples include the shape of horns and the color pattern in cattle, the shape of ear in swine, and the color of the face and shape of the ear in sheep.

Breeders pay attention to breed type mainly because it is, in a sense, a trademark offering additional evidence that the animal in question conforms to the ideals of the breed. For example, Don Julio Barreda says that “the heads of Accoyo’s alpacas are my trademark.” Breed type is a matter of beauty to the breeders who have long been breeding and admiring a particular breed. But beauty is subjective. Most of us can bring ourselves to think that any particular type is beautiful if we work with it long enough, have our money invested in it, and find it profitable. The breeders of other breeds may not share our enthusiasm for alpacas, but that will never diminish our devotion to the beauty of our animals.

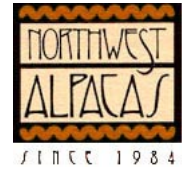
Breed type often originates unconsciously with breeders who embrace the traditional animal or their perception of the ancient purity of a breed. It is easy for breeders to persuade themselves that the best animals of the alpaca breed with the purest blood are thus and so, and to believe that any deviations from that description indicate impurity. This happened, to a certain extent, in the U.S. alpaca industry with the introduction of Peruvian imports.

The Hereford breed of cattle offers an example of how the insistence on a certain breed type changed a breed in a negative way. The original Herefords had red spots on their faces and red rings around their eyes. Many of the Herefords imported to America carried these red markings. At first, they were preferred and breeders called them “brown-eyed.” Later, the fashion became pure white faces; today few purebred Herefords have red rings around their eyes.

Why did Hereford breeders select the white-eyed type? The answer seems to be that among the first things to appear in the crosses of Herefords with other cattle were red spots on the face and red rings around the eyes. To many cattlemen this indicated impurity. When this perception became the breeders’ customers’ opinion, it was almost inevitable that the breeder of purebred Herefords would begin selecting for those animals which had the whitest faces and eyelids.

This would have been a relatively harmless change, except that in the southwestern part of the United States, Herefords with white eyelids are more susceptible to cancer of the eyelid. While it is true that a rancher usually has time to cull those affected and to ship them to market without suffering a complete loss, many ranchers today wish that they had kept to the original breed type of brown-eyed cattle.

There is a similar potential for problems today in the alpaca industry. Breeders, their buyers, and some judges seem to prefer huacaya alpacas that have faces entirely covered with fiber - the more, the better. But excess fiber on the face can inhibit vision and attract burrs and stickers that can cause eye infections. Excess fiber on the face is actually a fault. However, breeders preparing for the show ring often clip and shape the fleece on an alpaca’s head; they can make the alpaca’s head quite handsome in this fashion



## A Comparative Analysis Of Alpaca Breed Type And Standards

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and the judges respond. Will selection for heavy face fiber be a good thing in the future when alpacas are raised for commercial fiber? Probably not, if we carry it to extremes. Also remember that an alpaca's face "cleans up" as it gets older, but this is an example of a trait that could get out of hand for the sake of type.

### WHY IS BREED TYPE IMPORTANT?

Breeders pay attention to outward appearance or type in making their selections for two reasons. First, the breeder may want to breed a certain type because it has a market value. If a market demand exists for a certain type, the breeder may not care whether that type really will furnish the maximum production profit. The fact that the buying public wants it and is willing to pay for it is the thing of immediate practical importance. Second, breeders may believe that type and productiveness, in fleece or breeding, are closely correlated: If they select for type, they will get productivity. Type has some sale value in all classes of livestock. In extreme cases, beauty may be the main object. This is often encountered in pet and fancy stock, such as dogs, and is an important feature of horses. If breeders' customers center their demand on type, breeding for productivity becomes secondary. If breeders' customers are looking for productivity, breeders may only be interested in type if it helps them achieve productivity.

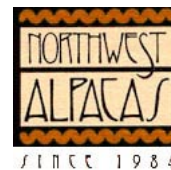
### ALPACA BREED TYPE

An ideal alpaca's look begins with the head, a dense top knot, well-covered cheeks converging with the wool cap to form a close V at the eyes, which are brown. The ears are shaped like an arrowhead and erect. The muzzle is soft and wedge shaped. The head and neck make up about one-third of an alpaca's height, with the neck connecting at a right angle to the back which is straight, dropping off a bit at the tail. The ideal alpaca has a squared-off appearance, with four strong legs setting squarely under it giving it a graceful stance which is completed by abundant coverage down the legs. The stars of any herd will catch your eye with an alert, erect appearance. Their fleece opens into well-organized locks of soft, bright, and lustrous fleece that handles like silk. Above all, an ideal alpaca will never be mistaken for a llama.

### COMPARISON OF ALPACA BREED STANDARDS

The following analysis compares the three breed standards for alpacas that are published in the English language. You will note that some sentences are underlined which indicates differences between the three standards. These standards were developed independently by three different authors, but they are remarkably similar. The Australian breed standards were developed for and approved by the Australian Alpaca Association, which is the equivalent of AOBA. The International Alpaca Judging School standards were developed by their certified alpaca judges. The standards from *Alpacas: Synthesis of a Miracle* were created by Mike Safley.

The following standards are grouped by category. For instance, each standard for head, legs, or fleece is presented with the same standard from each of the three formats. There is also a comment section (in italics) which reflects differences or individual comments which arose at the Breed Standard Symposium. These comments are not contained in the three individual standards.



## A Comparative Analysis Of Alpaca Breed Type And Standards

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### **GENERAL APPEARANCE - HUACAYAS**

#### INTERNATIONAL ALPACA JUDGING SCHOOL

The ideal Huacaya alpaca has a squared-off appearance with four strong legs. It is a graceful, well-proportioned animal with the neck being two-thirds of the length of the back and the legs matching the length of the neck. It is well covered with fiber from the top of the head to the toes. It has fiber characteristics that differ distinctly to the Suri alpaca.

### **GENERAL APPEARANCE - SURIS**

#### INTERNATIONAL ALPACA JUDGING SCHOOL

The ideal Suri alpaca has a squared off elegant appearance with four strong legs. It is a graceful, well-proportioned animal with the neck being two-thirds of the length of the back and the legs matching the length of the neck. It is well covered with fiber from the top of the head to the toes. It has fiber characteristics that differ distinctly to the Huacaya alpaca.

#### ALPACAS: SYNTHESIS OF A MIRACLE

See foregoing description of breed type.

### **HEAD - HUACAYAS**

#### INTERNATIONAL ALPACA JUDGING SCHOOL

The head is neatly formed of medium length with a square muzzle. It bears two upright spear-shaped ears between which there is a full fiber topknot or bonnet. The eyes protrude slightly from their sockets and are large and round. The eyes can be of several shades although 90% of the population have black eyes. The other acceptable color is brown. There are also various shades of blue eyes with or without colored flecks. The jaws fit together well, with the lower incisors meeting the upper dental pad. The upper lip is centrally divided and mobile to give them more dexterity in gathering food from certain plants. The nose has two well-defined flaring nostrils. Darker pigmentation to the skin is preferred around the mouth and eyes giving them added protection to ultra-violet light radiation and the environment.

#### Major Faults:

- Deafness in blue-eyed alpacas with lack of skin pigmentation and white fleece.
- Gopher ears.
- Superior and inferior prognathism.
- Wry face.
- Lump on the side of the face indicative of abscessing in the mouth.
- Eyes: cataracts, entropy, ectropy, blindness.

#### Minor Faults:

- A straight inside border or banana-type configuration of the ear (indicating llama traits).
- Forward set ears.
- Roman nose (llama tendency).
- Narrow head.
- Muffled face in the adult alpaca. (fiber or hair impeding the alpaca's vision).
- Open faced. (lack of fiber coverage over the face.)
- Lack of pigmentation on the lips and around the eyes.
- Retained or persistent deciduous teeth.

### HEAD - SURIS

#### INTERNATIONAL ALPACA JUDGING SCHOOL

The head is neatly formed of medium length with a square muzzle. Suris have more of a tapering shape to the muzzle. They bear two upright spear-shaped ears between which there is a full fiber topknot or bonnet that falls typically in a fringe over the brow. Suri ears are approximately 2cm longer than Huacaya ears. The eyes protrude slightly from their sockets and are large and round. The eyes can be of several shades although 90% of the population is black. Brown is also a desirable color. There are also various shades of blue with or without colored flecks. The jaws fit together well, with the lower incisors meeting the upper dental pad. The upper lip is centrally divided and mobile to give more dexterity for feeding off certain plants. The nose has two well-defined flaring nostrils. Darker pigmentation to the skin is preferred around the mouth and eyes giving them added protection to ultraviolet irradiation and the environment.

#### Comment:

The IAA standards are the only ones that suggest a different head shape and ear length for suri vs. huacaya. This specification was the result of research done by Dr. Julio Sumar in Peru.

#### Major Faults:

- Deafness in blue-eyed alpacas with lack of skin pigmentation and white fleece.
- Gopher ears.
- Superior and inferior prognathism.
- Wry face.
- Lump on the side of the face indicative of abscessing in the mouth.
- Eyes: cataracts, entropy, ectropy, blindness.

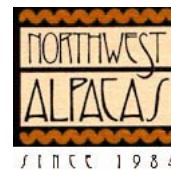
#### Minor Faults:

- A straight inside border or banana-type configuration of the ear indicating llama traits
- Forward set ears.
- Roman nose (llama tendency).
- Narrow head
- Muffled face in the Suri (fiber or hair impeding the alpaca's vision or retained on the adult face).
- Retained or persistent deciduous teeth
- Open faced with lack of fiber coverage over the face.
- Lack of pigmentation around the lips and eyes

### HEAD - HUACAYAS AND SURIS

#### AUSTRALIAN ALPACA ASSOCIATION

The head has a strong appearance and is not coarse. It is neatly formed, of medium length and with a square muzzle. The eyes are oval in shape, alert and set well apart. They protrude slightly from their sockets, giving the appearance of being large and round. They may be blue, brown or black. The nose has two well-defined nostrils. The upper lip is divided and mobile. The ears are of medium length, covered with short soft hair, erect and bayonet-shaped, pointing forward in the alert stance. The jaws fit together well, with the lower incisors meeting the upper dental pad.



## A Comparative Analysis Of Alpaca Breed Type And Standards

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### Faults:

- Muffled face (fibre or hair impeding the animal's vision - particularly after first shearing)
- Wry face
- Head very narrow
- Face hard & open
- Roman nose
- Lower jaw undershot or overshot

### ALPACAS: SYNTHESIS OF A MIRACLE

The ideal alpaca's head is compactly formed, of medium length, with a dense topknot and a wedge-shaped muzzle. The eyes should be oval, alert, and set well apart, protruding slightly from their sockets, giving the appearance of being large and round, and may be blue\*, brown, or black. The nose has two well-defined nostrils. The upper lip is divided and mobile. The ears are of medium length, covered with short, soft hair, erect and spear-shaped, pointing forward in the alert stance. The jaw should be well covered with fleece and should fit together correctly, with the lower incisors meeting the upper dental pad.

### Faults:

- Muffled face at 30 months of age (fiber or hair on the bridge of the nose impeding vision)
- Head very narrow or thick and llama-like
- Roman or long nose
- Lower jaw undershot or overshot
- Short or long ears
- Banana-shaped, rounded, or asymmetrical ears
- Incorrect bite

### Comment:

The International Alpaca Judging School (IAJS) is the only standard that suggests that blue eyes in non-pigmented white fleece deaf animals are less acceptable. The IAJS standards also take the position that darker skin pigmentation is preferable. (Editor's Note: Skin pigmentation may be linked to coat color and at least one of the authors believes that it is too early to prefer one skin pigmentation over another. The author of *Alpacas: Synthesis of a Miracle* also recommends that blue eyed males not be used as sires.)

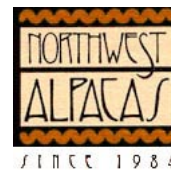
## HEIGHT AND WEIGHT

### INTERNATIONAL ALPACA JUDGING SCHOOL

The height at the withers of the adult alpaca is no less than 85cm (32") and the average weight of an adult alpaca is 60kg (140lbs).

### Faults:

- Small sized with less than 85cm (32") measurement at the withers.
- Oversized with llama characteristics.



## A Comparative Analysis Of Alpaca Breed Type And Standards

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### AUSTRALIAN ALPACA ASSOCIATION

A mature animal measures from approximately 90cm (34") at the wither and weighs from approximately 60kg (140 lbs) upwards.

#### Faults:

Oversized - particularly if llama like characteristics present

### ALPACAS: SYNTHESIS OF A MIRACLE

The ideal alpacas will exhibit good type at their optimum size. Animals exhibiting any llama characteristic should be avoided. Ideally, an alpaca should fit into an imaginary square, not too tall for their length, harmoniously proportioned. A mature animal should measure a minimum of approximately 33 inches for females and 35 inches for males at the wither, with a minimum weight of 130 pounds for fully-grown females and 150 pounds for fully-grown males. In general, appropriately sized females have fewer fertility and birthing problems.

#### Faults:

Underweight

Undersized

Overweight

Oversized, lacking good alpaca type, particularly if there are any llama-like characteristics present

#### Comment:

The weight on average are about the same in each standard.

## NECK

### AUSTRALIAN ALPACA ASSOCIATION

The neck is long and slender and continues directly from the line of the backbone, blending smoothly into the shoulder.

#### Faults:

Length of neck disproportionate to body size (too long or too short)

Neck bent

U-neck

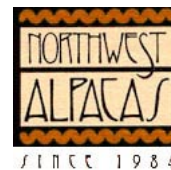
### ALPACAS: SYNTHESIS OF A MIRACLE

The neck of an alpaca is long and slender, with its length in proportion to its body and legs. The ideal proportion of neck to legs to body is one-third, one-third, and one-third. The transition from back to shoulder to neck should be smooth and elegant.

#### Faults:

Length of neck disproportionate to body size (too long or too short)

Crooked



## A Comparative Analysis Of Alpaca Breed Type And Standards

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### **FOREQUARTERS**

#### AUSTRALIAN ALPACA ASSOCIATION

The chest is broad and deep, well sprung in the fore-rib. The wither is relatively wide where the shoulders meet, well fleshed and set well into the shoulders forming a straight line with the back.

#### Faults:

- Narrow chest
- Loose shoulder blades
- In or out at the elbows
- Prominent wither

#### ALPACAS: SYNTHESIS OF A MIRACLE

The chest should be broad, deep, and well sprung in the rib. Ideally, the chest would be free of medullated fiber. The wither should be relatively wide where the shoulders meet, well fleshed, and well set into the shoulders forming a straight line with the back. The legs should stand square and be spaced adequately apart.

#### Faults:

- Narrow chest
- Loose shoulder blades
- In or out at the elbows or knees
- High or low wither

### **HINDQUARTERS**

#### AUSTRALIAN ALPACA ASSOCIATION

The rump is broad with a slightly convex top line. There is good space between the pin bones. The tail is straight, covered with quality fibre, set slightly lower than in other livestock and should cover the genitalia. The thighs are strong and well muscled. The height of the pin-bones equals that of the shoulders.

#### Faults:

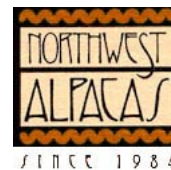
- Narrow hindquarters
- A bent or kinked tail that cannot be manually straightened or where there are no signs of a break calcification
- Steeply sloping rump

#### ALPACAS: SYNTHESIS OF A MIRACLE

The rump should be broad with a slightly convex top line. The tail should be straight, covered with quality fiber, and set slightly lower than in llamas. The thighs should be strong and well muscled. The height of the pin bones should equal that of the shoulders.

#### Faults:

- High tail set
- Narrow hindquarters
- Crooked tail



## A Comparative Analysis Of Alpaca Breed Type And Standards

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### LEGS

#### INTERNATIONAL ALPACA JUDGING SCHOOL

The legs are supported by four two-toed feet, with each toe supporting a long toenail. They should be straight with the joints aligned to a perpendicular plumb line from the hip posteriorly and shoulder anteriorly. The shoulder blade is attached by muscular tissue to the thoracic cage but should move freely as the animal strides. A leathery padded membrane, which lessens the impact on the environment where they tread, protects the feet.

#### Major Faults:

- Excessive angular limb deformity.
- Subluxing patellae.

#### Minor Faults:

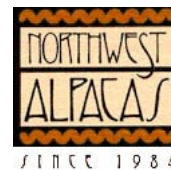
- Front Legs:
  - Knocked knees.
  - Calf knees/cocked pasterns.
  - Bucked knees/dropped pasterns.
  - Medially or laterally deviated pasterns.
  - Splay legs.
- Rear Legs:
  - Cow hocks.
  - Sickle hocks.
  - Bowlegs.
  - Cocked pasterns.
  - Dropped pasterns.
  - Poorly maintained toe nails.

#### AUSTRALIAN ALPACA ASSOCIATION

The forelegs are strong and straight. The hind legs are straight and parallel when viewed from behind. The pasterns are firm and upright. The feet are neat and well formed and bear two forward pointing toes each carrying a long strong toenail. The sole of the foot is covered with a callused membrane.

#### Faults:

- Weak pasterns
- Obvious carpal deviation
- Cow hocks
- Sickle hocks



## A Comparative Analysis Of Alpaca Breed Type And Standards

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### ALPACAS: SYNTHESIS OF A MIRACLE

The forelegs should be strong and straight. The hind legs should be straight and parallel when viewed from behind with heavy bone evident at the hock. The legs should be well covered with fleece. The pasterns should be firm and upright. The feet should be neat, well formed, and bear two forward-pointing toes, each carrying a long, strong toenail.

#### Faults:

- Weak or cocked pasterns
- Knock knees
- Cow hocks
- Sickle hocks
- Post-legged
- Splayed toes

### **BODY**

#### INTERNATIONAL ALPACA JUDGING SCHOOL

The neck of the alpaca is straight and upright and blends smoothly into the back, which is normally very slightly rounded in the Huacaya. The rear of the alpaca has a tucked-in tail appearance that is due to the angulation of its pelvis being more vertical than the llama, sitting at about 60 degrees from the horizontal. The resting position of the tail is such that it lies close to the body, covering the genitalia. The tail is raised away from the body during defecation and urination and for expression of temperament and mood. This gives the tail a noticeably lower set than that of the llama. The chest should have depth to allow adequate capacity for air exchange.

#### Major Faults:

- Lateral deviations of the spine.
- Herniated umbilicus.

#### Minor Faults:

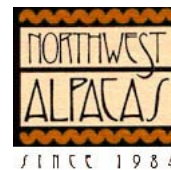
- Roach back.
- Sagging back
- U neck
- Lateral deviations of the neck
- Disproportionate length of neck (too long or too short).
- Deviations of the tail, broken tail.

#### AUSTRALIAN ALPACA ASSOCIATION

The body is deep through the girth, with well-sprung ribs. The back is strong and the top-line is slightly convex. The loins are broad, strong and flat, with the back barrel large and deep.

#### Faults:

- Roach back
- Sway back
- Over-long straight back



## A Comparative Analysis Of Alpaca Breed Type And Standards

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### ALPACAS: SYNTHESIS OF A MIRACLE

The back should be strong and the topline slightly convex. The loins should be broad, strong, and flat. The body condition should be well fleshed, not overweight nor underweight.

#### Faults:

- Sway or humpy back
- Too long or short

### GAIT

#### INTERNATIONAL ALPACA JUDGING SCHOOL

A free-flowing stride is characteristic of the alpaca. Its normal slow speed gait is a stable four-point gait where each foot is moved and planted separately. At a faster speed the alpaca has a pacing gait which is two-point, where the two feet on either side are moved together.

#### Major Faults:

- Excessive angular limb deformity causing excessively abnormal movement.
- Subluxing patellae causing abnormal rear gait.

#### Minor Faults:

- Joints tracking medially or laterally to the vertical plum line.
- Gaits associated with angular limb deformity such as winging, arcing, rope walking and throwing out of the front limbs where there is rotation at the joints of the front limb.

#### AUSTRALIAN ALPACA ASSOCIATION

Alpacas should exhibit an even stride length with two distinct tracks, the hind feet following the front ones.

#### Faults:

- Uneven stride length
- Paddling on the front feet

### ALPACAS: SYNTHESIS OF A MIRACLE

Alpacas should exhibit a fluent, free stride with two distinct tracks, the hind feet following the front ones.

#### Faults:

- Choppy, short stride
- Throwing rear or front feet out or in as they walk or run
- Pigeon-toed

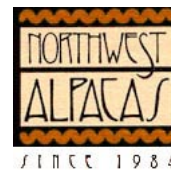
### UDDER

#### AUSTRALIAN ALPACA ASSOCIATION

The udder should show good capacity, with four working teats.

#### Faults:

- More or less than four working teats



## A Comparative Analysis Of Alpaca Breed Type And Standards

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### ALPACAS: SYNTHESIS OF A MIRACLE

The udder should produce abundant milk, adequate to foster strong and vigorous cria.

#### Faults:

- Nonfunctional teats
- More or less than four working teats

### **GENITALIA (Female)**

#### INTERNATIONAL ALPACA JUDGING SCHOOL

The genitalia of the female is protected internally and therefore not visible from the outside. However, the vaginal opening should be well covered by the tail, should not be too small and should be situated in a vertical rather than a horizontal plane.

#### Major Faults:

- Too small of a vaginal opening.
- Hemaphroditism.
- Lack of any part of the reproductive system.

#### Minor Faults:

- Horizontally situated pelvic floor.
- Tipped up clitoris.

### **GENITALIA (Male)**

#### INTERNATIONAL ALPACA JUDGING SCHOOL

The most visible part of the male genitalia is the testicles that are situated and protected underneath the tail. The scrotum is well attached, relatively small and carries the testicles, which are relatively even in size. The penis is also an external organ, which is situated under the belly between the rear legs. The normal size of fully developed testicles is: 4cm in length, 2.5cm in width in the adult male alpaca.

#### Major Faults:

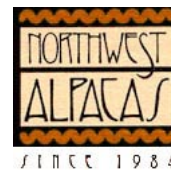
- Hermaphroditism.
- Ectopic testicles (these testes are located outside the abdominal cavity under the skin, sometimes migrating down the leg).
- Cryptorchidism of the testicles/unilateral or bilateral (the lack of one or more testicles in the scrotum).
- Too soft or too hard testicular consistency.
- Cystic testicles.
- Unilateral or bilateral hypoplasia of the testes (one or both testicles of abnormally small size for the age)

### AUSTRALIAN ALPACA ASSOCIATION

The scrotum is well attached, relatively small and carries two even sized testes.

#### Faults:

- Testes of uneven size



## A Comparative Analysis Of Alpaca Breed Type And Standards

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Testes too small (relative to age)

### ALPACAS: SYNTHESIS OF A MIRACLE

The scrotum should be well attached, relatively small, and carrying two large, even sized testes of good consistency.

Faults:

Testes of uneven size

Relatively smaller testes at 30 months of age

Undescended testes

One testicle

Soft testes

### COLOR - HUACAYAS AND SURIS

#### INTERNATIONAL ALPACA JUDGING SCHOOL

Huacaya fleece comes in varying shades of color: white, fawn, brown, gray, rose-gray, and black. The ideal alpaca should have a uniform solid color throughout the entire fleece. However they can be any combination of the above.

#### AUSTRALIAN ALPACA JUDGING SCHOOL

Alpaca fleece comes in varying shades of colour from white to black. In between there are shades of fawn, brown, and gray as well as rose gray. Animals may be solid in colour or be any combination of the above.

### ALPACAS: SYNTHESIS OF A MIRACLE

Alpacas occur in a range of colors from white and black to shades of fawn, brown, and gray. Ideally, alpacas should have a uniform color throughout the entire fleece.

### COLOR - SURIS

#### INTERNATIONAL ALPACA JUDGING SCHOOL

Suri fleece comes in varying shades of color white, fawn, brown, gray, rose-gray, and black. The ideal Suri alpaca should have a uniform solid color throughout the entire fleece. However they can be any combination of the above.

### FLEECE - HUACAYAS

#### INTERNATIONAL ALPACA JUDGING SCHOOL

Huacaya alpacas produce a fine soft fiber that grows perpendicular to the skin. In the ideal Huacaya alpaca there is marked crimp formation as the fiber grows out of the skin. The hair follicles are situated close together in the skin, giving density to the fleece with groups of fibers bunching together to form defined staples. The following fiber characteristics are applicable to Huacaya fiber:

1. Fineness - this is the thickness of the fiber that is measured in microns. The finest fiber on the alpaca is found in the blanket area, however it is desirable to have fine fiber on the neck, belly, legs and topknot. Fineness is important for both commercial processor and the fiber grower since premium prices are paid for fine fiber and fine fiber translates into fine end products. Crimp is also related to fineness and it is

## A Comparative Analysis Of Alpaca Breed Type And Standards

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desirable too to have a high number of waves per cm. or inch.

2. Density - is the number of fibers per square measurement of skin. Density is associated with fleece weight since the more fibers per square unit measurement, the more fleece will be grown and the heavier the fleece. A dense crimped fleece also acts as a barrier to dirt and weather.
3. Character - defined as strong crimp definition and staple formation.
4. Length of staple - is a very important factor in the amount of fleece shorn from the Huacaya alpaca. The more rapidly the length of staple that is grown the more weight of fleece there will be.
5. Brightness - is the amount of light that reflects from the fiber and is seen in the Huacaya. A brilliant appearance of the fleece is desirable.
6. Medulated fiber - is the coarse-microned fiber that grows in the lesser quality areas of the alpaca. Lack of medulated fiber in the prime or blanket area is desirable.
7. Uniformity of micron - processors require fleece of minimum variation in fiber diameter, therefore uniformity in fiber diameter is desirable across the blanket area of the alpaca. This also helps to eliminate fleece tenderness (fleece breakage) and prickle effect in the end product.

### Faults:

- Open fleece with no density
- Harsh handle
- Short staple length
- Guard hair in the blanket
- Lack of overall coverage
- Tenderness and stress breaks
- Felting and cotting

### AUSTRALIAN ALPACA ASSOCIATION

A guide for both breeders and judges that will evolve with time. Huacayas are distinguishable from suris in that they carry sheep like fleece, which stands at right angles to the body. The fleece should exhibit a strong wave or crimp across each fibre and have strong staple definition. The alpaca should be well covered with a rounded appearance. Coverage should extend down the legs and up to a bonnet on the head with a clean muzzle and ears. The most important characteristics of huacaya fleece are:

1. Density - this is perhaps the most important as it determines the commerciality of the fleece i.e. the quantity you have to sell. It also prevents dirt and moisture penetration.
2. Fineness & Handle - fineness sets the value of a fleece per unit weight. The finer the fleece the more per kilo it will make. Soft handle goes with fineness. The softer the handle the finer the micron.
3. Character - is closely related to density, as strong crimp definition and staple formation is necessary to achieve heavy fleece weights.
4. Lack of Medulation - fleece should not contain broad microned, straight medulated fibres, especially throughout the main blanket. The aim being to eliminate it completely.
5. Lustre - this is the amount of light reflected from the fibre, which enhances its appearance when processed into a garment.

## A Comparative Analysis Of Alpaca Breed Type And Standards

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Other determining factors are:-

1. Uniformity of micron - processors require fleece with minimum variation in fibre diameter. This also helps to eliminate fleece tenderness (fleece breakage).
2. Uniformity of colour - an even colour is preferred by processors, but allowances need to be made for grays and fawns that can have colour variation.
3. Uniformity of length - the fleece should be of the same length for 12 months growth. The ultimate aim is to have the neck fibre match the main blanket in length. Thus increasing the weight of the fleece.
4. Faults
  - Open fleece with no density
  - Chalkiness
  - Harsh handle
  - Short staple length
  - Medulated fibre
  - Lack of overall coverage
  - Tenderness

Comment:

In general, the Australian huacaya standards seem to value density over fineness.

### ALPACAS: SYNTHESIS OF A MIRACLE

The ideal huacaya's fleece should be fine, beginning with a soft muzzle and dense topknot and continuing through a dense, uniform blanket and ending with well-covered legs. The huacaya alpaca should be well covered with a soft, dense, crimped, uniform fleece, except on the ears and the bridge of the nose of mature animals.

Positive Huacaya Traits in Order of Importance:

Faults:

Fineness	30%
Density	30%
Crimp	10%
Staple length	10%
Uniformity	10%
Luster or brightness	10%

Coarse guard hair through the saddle or blanket of the fleece

A high proportion of medullated fleece

Tender breaks

Muffled face on adults

Lack of density

Lack of overall coverage

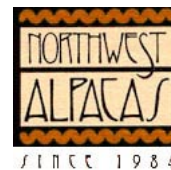
Chalkiness or lack of luster

Coarse handle

Short staple length for age of fleece

Comment:

The Alpacas: Synthesis of a Miracle standard is the only one which prioritizes fleece character.



## A Comparative Analysis Of Alpaca Breed Type And Standards

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### FLEECE - SURIS

#### INTERNATIONAL ALPACA JUDGING SCHOOL

The primary characteristics of the Suri fleece are its lock structure, high luster, silky handle and long staple length. The fleece falls close to the body, moves freely, and gives the Suri a flat-sided, lustrous appearance. The locks can have a penciled ringlet formation, curling to the left or right, or a wave structure that forms from the skin of the alpaca. The fleece locking should begin from the forelock and continue uniformly down the neck, across the blanket and through the legs. The following fiber characteristics are applicable to Suri fiber:

1. Fineness - this is the thickness of the fiber, which is measured in microns. The finest fiber on the alpaca is found in the blanket area, however it is desirable to have fine fiber on the neck, belly, legs and topknot. Fineness is important for both commercial processor and the fiber grower since premium prices are paid for fine fiber and fine fiber translated into fine end products.
2. Density - is the number of fibers per square measurement of skin. Density is associated with fleece weight since the more fibers per square unit measurement, the more fleece will be grown and the heavier the fleece.
3. Lock Structure - in the Suri lock structure is very important. The fibers group together to form ringlet type locks that turn to the right or to the left. Ideally, the lock should form a ringlet from the skin. However, it is common to find a lock structure that starts at the skin as a flat wave formation then continues out down the side of the alpaca in a ringlet.
4. Luster - is the sheen or shine that reflects from the fleece. This is a highly desirable trait in the Suri fleece and translates in the end product. The smooth flat structure of the outside cuticular layer of the individual fibers is responsible for this trait.
5. Length of staple - is a very important factor in the amount of fleece shorn from the Suri alpaca. The more length of staple that is grown the more weight of fleece there will be. A Suri will grow 60% longer fleece than Huacaya in one year's growth.
6. Medulation - there should be little or no evidence of medulated fibers in the fleece.

#### Faults:

- Open fleece lacking lock definition.
- Lack of density.
- Crimp.
- Harsh handle.
- Short staple length.
- Guard hair.
- Lack of overall coverage.
- Tenderness and stress breaks.
- Felting and cotting.

### AUSTRALIAN ALPACA ASSOCIATION

The Suri carries a silky, soft-handling, dense, locking fleece that moves freely, yet hug the body giving the animal a flat-sided appearance. The fleece hangs from a centre part - neck through to tail - with well-defined locks forming close to the skin and twisting uniformly to the ends. The overall effect is similar to the drape of a curtain of silk tassels. The primary characteristics that distinguish a Suri are its lock structure, high lustre, silky handle and long staple length. The Suri exhibits little medullation giving its fleece a more uniform look throughout.

Legs, apron and belly should be well covered and silky not coarse or “hairy”.

The most important characteristics of suri fleece are:

#### 1. Fineness

Fineness is of paramount importance (closely followed by attributes of high lustre and softness/silkiness of handle).

#### 2. Lustre

This is apparent as a “sheen” or “pearliness” in the fleece and is a highly desirable feature in the Suri.

#### 3. Handle

The handle of the Suri should have a silky, slippery feel and be evident throughout the body, including the ears, forelock, muzzle, apron, belly, neck and legs.

#### 4. Locks Architecture

The locks should be well-defined, narrow, independent, uniform and form close to the skin.

#### 5. Type

Locks may be twisted, curled or pencilled.

#### 6. Uniformity

Locks should be uniform across the body commencing from the forelock and continuing through to the hocks. When the fleece is opened to expose the inside layer, the inside locks should be uniformly well defined and hang in similarly well formed layers.

#### 7. Clockwise or Anticlockwise Spirals

Spirals in the locks may twist from either left or right.

#### 8. Wave/Crimp

Locks can be with or without a wave (not to be confused with crimp that is a fault).

#### 9. Overall Appearance

The locks should hang straight and hug the body, giving a draped appearance.

#### 10. Lock Definitions:

## A Comparative Analysis Of Alpaca Breed Type And Standards

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### Lock Architecture

The “lock definition” is also referred to as “architecture” and relates to the degree of twist or curl and the solidity in the lock. The best architecture has a tightly twisted lock.

### Uniformity

Locks should be uniform from the forelock and base of the ears to the hock, with particular attention to uniformity across the midline from shoulder to thigh.

### Independence of Lock

The fleece should swing out freely from the skin when the animal is in motion or the fleece disturbed.

### 11. Density

The hallmark of a good Suri is its compactness. This is synonymous with heaviness or weight in the fleece. A more rounded appearance can indicate volume (fluffiness) rather than density. Density is evident by gauging the solidity of lock (or thickness in terms of density, not broadness of lock), the number of locks over a relative area as well as the weight of the fleece.

### 12. Staple Length

The staple of a Suri is relatively long and its fibre should grow one to two centimetres per year longer than a Huacaya of similar age and micron.

### 13. Medullation

There should be little or no evidence of medullated fibres in the fleece.

### Faults:

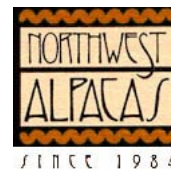
- Flat, open fleece with no lock definition (architecture)
- Medullation
- Chalkiness or lack of lustre
- Short staple length for age of fleece
- Coarse handle
- Lack of density
- Rounded appearance indicating fluffiness rather than density

### Comment:

The Australian Alpaca Association (AAA) does not seem to place the same emphasis on density in a suri as they do in a huacaya. Fineness is singled out as the paramount trait.

### ALPACAS: SYNTHESIS OF A MIRACLE

The primary characteristic which distinguishes a suri from a huacaya is the phenotype of its fleece, which is defined by its lock structure, high luster, silky handle, and longer staple length. The suri’s fleece falls close to the body, moves freely, and gives the animal a lustrous, flat-sided appearance. A more rounded or fluffy appearance can indicate volume rather than density in the fleece that is undesirable. Due to the compactness of the fleece, suris often give the appearance of being smaller than the huacaya, but this is an optical illusion. The suri should be every bit as big and robust as



## A Comparative Analysis Of Alpaca Breed Type And Standards

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a huacaya.

The luster found in the suri's fleece is the primary indication of the animal's quality. In addition, the fiber should have good handle (a more slippery feel than huacaya). Locks should be round, form close to the skin, and have uniform twist to the end. The fleece should display good architecture or definition of lock, and independence or free movement of the locks. The ideal lock should be uniform from the ear to the hock and particular attention should be paid to uniformity across the midside. Legs and underbelly should be well covered.

Positive Suri Fleece Traits in Order of Importance:

- Luster 30%
- Fineness 30%
- Density 30%
- Staple Length 5%
- Uniformity 5%

Faults:

- Crimp
- Medullation
- Guard hair
- Flat, open fleece with no lock definition
- Chalkiness or lack of luster
- Short staple length for age of fleece
- Coarse handle
- Lack of density
- Rounded appearance; indicates fluffiness rather than density
- Tender breaks

### LOCK - SURIS

#### SYNTHESIS OF A MIRACLE

The suri's locks should have a well-defined architecture, which relates to the degree of twist or curl and the solidity in the lock. Locks should be narrow, independent (swinging out freely from the skin when the animal is in motion or the fleece disturbed), uniform, and start close to the skin. Locks may be twisted, curled, or penciled and should start from the forelock and continue through to the hocks. Spirals in the locks may twist from either left or right. Locks can be with or without a wave that should not be confused with crimp, which is a fault. A suri, when compared to a huacaya of similar age and fiber micron size will have a longer lock (staple) in the fleece. The locks should hang straight and hug the body, giving a curtain like appearance. When the fleece is opened, the inside locks should be as well-formed as the outside layer and exhibit luster at their base.

## A Comparative Analysis Of Alpaca Breed Type And Standards

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### DISQUALIFYING FAULTS - HUACAYAS AND SURIS

#### AUSTRALIAN ALPACA ASSOCIATION

- Polydactylism (more than two toes on each foot)
- Syndactylism (fusion of the two toes of the same foot)
- Fused ears (short stubby ears or fused at the tips)
- Banana shaped ears
- Tail absent or abnormally short or bent
- Fewer than two testes
- Jaw not properly aligned
- Jaw excessively overshot
- Jaw excessively undershot

#### ALPACAS: SYNTHESIS OF A MIRACLE

##### Body:

- Tail absent or abnormally short, bent, or twisted
- Heart murmur
- Fewer than two testes
- Small, fused, or tipped vulva

##### Head:

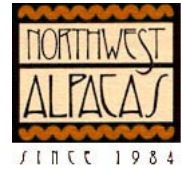
- Parrot mouth
- Wry face
- Cataracts
- Fused ears (short stubby ears or fused at the tips)
- Banana-shaped ears

##### Legs:

- Extremely sickle-hocked or cow-hocked
- Extremely knock-kneed
- Base extremely narrow
- Extremely splay-footed, buck-kneed, or calf-kneed
- Cocked ankles
- Luxating patellas
- Polydactylism (more than two toes on each foot)
- Syndactylism (fusion of the two toes of the same foot)

##### Dentition:

- Jaw not properly aligned
- Jaw overshot (bottom teeth extend considerably beyond top dental pad)
- Jaw undershot or parrot mouth (roots of the central incisors recessed substantially behind the top dental pad)



## A Comparative Analysis Of Alpaca Breed Type And Standards

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### Comment:

The IAJS standards list major faults section by section. These major faults would be considered disqualifying traits if they are inherited.

### CONCLUSION

The importance of breed standard to both the alpaca and our industry can not be overstated. The welfare of our alpacas, the consistency of judging in the show ring, and the confidence of the market place will all improve with the advent of alpaca breed standards in the United States. We can not be taken seriously by other alpaca breeding nations without them. They are a blue print to the future and our national herd will prosper under the guidance of well thought out standards.