



## Breeding better Boers - The reasoning behind the Breed Standard.

The first set of breed standards for the South African Boer goat was established around 1959 by the South African Boer Breeders Society. The primary reasons for establishing breed standards were to assist the Boer goat breeders in setting goals and guidelines to maintain and improve the breed and to provide for uniformity in production.

I first encountered the South African Boer Goat Breed Standards at an ABGA judging school in 1997. After reviewing the standards several times and reflecting upon their meaning it occurred to me that what the South Africans had done was a work of genius. On a single sheet of paper, they had set forth all the physical characteristics necessary for an efficient goat meat production system in the pasture. They described a goat that had survivability, adaptability, a calm disposition, fertility, good mothering ability, and made a living under harsh conditions with low quality food. I realized that each of the physical properties set forth in the standards contributed to one of the desirable properties mentioned above.

The standards described a robust animal that was healthy and thrifty. The animal had medium bone and a lot of meat on the carcass. The Boer goat was intended to be the meat goat of the world and has gained wide acceptance all over the world as just such an animal.

Recently a new publication has come from South Africa that enhances a discussion of the standards in that this book details what undesirable characteristics can be expected when an animal has certain undesirable traits. The experience that the South Africans have had raising Boer goats for perhaps a hundred years or more can provide us with insights to improve the Boer goat in the U.S.

The calm disposition of the Boer goat is reflected in the gentle brown eye and the soft pendulous ear. An animal with a calm disposition is easy to handle and manage. A goat with a wild eye and/or stiff protruding ears will be wild and hard to manage. The rounded dark horns with adequate separation also contribute to a calm disposition and a buck that will not break the legs of other bucks when sparring and will not get their horns caught in a tree and hang themselves. Flat or bladed horns that flare rapidly from the body indicate a wild animal that is hard to handle.

Horns that are too tight on the neck will rub the neck and can cause skin irritation, sores, and infections. In addition, horns that are too upright predict a rounded bulging forehead and a concave nose bridge that may result in an underdeveloped lower jaw. A flat sharp-edged horn is usually too heavy and the points of the horn bend outwards. The forehead is usually too prominent with a hollow between the eyes. Does with this type of horn tend to be too masculine in appearance and the buck's horns tend to be too close together.

Soft pendulous ears that flow down the head is desirable. An animal that has short, stiff protruding ears may produce an animal that is wild and difficult to maintain. A folded ear with the fold coming from the head is undesirable and can cause an unhealthy situation. If the animal is dipped for external parasites such as lice or mites the South Africans feel that this type of folded ear can hold moisture and create an environment for bacteria and infection. A flipped ear or one that is folded at the tip of the ear is not considered a cull fault because it can be fixed by cutting the ligament at the fold or pulling the ear straight shortly after birth. Both types of folded ears can be highly inheritable.

The wide set eyes, strong nostrils and powerful under jaw ensure that the animal will be wide in the shoulders and wide in the loin and possess a powerful presence. The width between the eyes is directly proportional to the width in the shoulders and the width in the loin.

A long powerful head with a Roman nose or oval shape from the tip of the horns to the muzzle is an indication of breed character. Since a goat does not have teeth in the upper jaw it is imperative that the teeth in the lower jaw match perfectly with the pad of the upper jaw. Since the primary diet of the Boer goat is leaves, twigs and weeds (they are browsers and eat primarily a meter and above the ground as opposed to grazers such as sheep and cattle that eat primarily a meter down to the ground) the teeth and pad must match for the animal to cut the weeds, leaves and twigs that consist of 80% or more of their diet in the pasture. Raising the goat in a pasture is desirable as the trace minerals in the browse help the goat get a more balanced and healthy diet. Too much separation between the teeth and upper jaw pad in either direction (underbite or overbite) produces an animal that cannot eat properly in the veldt or pasture.

The standards allow for a 5 mm separation between the teeth and the pad of the upper jaw with the lower jaw teeth extended out past the upper jaw (underbite or overshot jaw) when the animal is 24 months or older in the ABGA standard and a 6 mm separation when the goat is 36-month-old in the South African standard. In both cases 5mm or 6 mm is about the diameter of a cigarette filter or a pencil eraser. Prior to 24 months or 36 months in each respective case the jaws must match perfectly. (I saw a young buck dismissed from the ring at the national show in Sydney, Australia this year that had less than 1/64" space in the teeth and jaw separation – the standard says the jaws must match and even 1/64" is a separation. It was a shame to see this buck dismissed as he had the potential to be the champion if his jaw had not been misplaced.)

It is important that the body's depth has balance. If the body depth is too shallow the chest becomes smaller, and the flank becomes higher. If the body depth is too deep the neck will be too thick and the flank will be lower. Does with these characteristics are less fertile and poor breeders. When the body depth is cylindrical or too shallow the chest is weaker, the curve below the shoulder is too sharp and in many cases the goat has a serious devil's grip. Also, the legs are thinner, the back is slightly concave, the buttock is weaker and in some cases the muzzle is pointed which may result in parrot mouth or overbite in the jaw.

The legs to body ratio in immature or young animals should be 50 : 50 and in mature animals the ratio should be 60% body to 40% legs. Goats that are too cylindrical in the body may be too high in the chest floor and the legs to body ratio may still be 50 : 50 at two to three years of age.

The shape of the rump is important when considering the reproductive ability of the doe. If the rump is too steep the doe will have birthing problems as the kids cannot exit the birth canal successfully resulting in death of the kid and possibly the death of the doe. A buck with a steep rump may put this steep rump on his doe kids resulting in birthing problems in the herd in subsequent years. It should be remembered that the buck is one-half of every kid in the herd while the doe is only one-half of her kids. A steep rump seems to be highly inheritable. When the rump is sloping the tail is lower in the back, the back is hollow, and the buttocks are flatter. An animal with a sloping rump often has either a hollow or flat head. When the rump is too short the buttock becomes round like that of a pig, the hock straight like that of a chicken and the back is too straight. (Taken from the new South African publication, "*A Study of the SA Boer Goat*" or "*n Studie van die SA Boerbok*.")

When the buttock muscling is too short the flank becomes higher, the hock straighter and the front leg muscles disappear. When the goat is flat chested the neck is also thinner. A goat that is too heavy chested lacks angularity. The chest will be lower and more prominent, the stomach line will be straighter and the neck considerably thicker. The doe is less fertile than a more angular animal. When the chest is too sharp and too shallow the curve of the stomach line tends to go upwards, the chest is smaller, the neck is thinner, and the front leg muscle disappears.

When the neck of the doe is too fleshy and too masculine and there is too much dewlap around the throat, the doe is usually less fertile and will have weaker mothering characteristics than a more angular doe.

If the legs of the doe are too thick this indicates a tendency toward masculinity and reproductive problems. Also, this may result in lack of muscling on the front leg and a flat thigh on the hind legs. These characteristics are undesirable because they result in lower production of meat.

The requirement that the doe must have kidded or be visibly pregnant by 24 months is in the standard to insure that the goat is fertile and reproducing the species. An animal that cannot reproduce is of little value other than the meat it carries on its carcass. A doe with a well-defined wedge that reflects in the underline of the body being deeper in the rear than in the front is a sign of fertility and indicates a capacity to carry kids.

The shape of the testicles (two equal size testicles in a single sac of adequate circumference) with no more than a two-inch split insures that the reproductive organs of the male will have proper structure and that the male should be highly fertile. Perhaps someday a correlation may be made between the shape of the testicles and the shape of the udders on the doe kids the buck produces.

The shape of the udder being tight near the body with a teat structure with no more than two functional teats per side of the udder provides a situation where the newborn kids can effectively suck and survive. If a teat is split the split must be at least 50% split for ABGA so that the baby can nurse. If the teat is large with two orifices it may be so large that the newborn cannot get the teat in its mouth. If the udder is too pendulous and hangs near the ground a newborn kid will have difficulty getting its first drink. Until the kid is several days old it will not be athletic enough to nurse on a large pendulous udder. The udder cannot have multiple nonfunctional teats that distract a newborn and provide no nutrition. One of the more dangerous teat configurations is a long (about one to one- and one-half inches) nonfunctional teat that is about eye level of the kid.

The kid will latch onto this teat and suck until it is exhausted and eventually dies due to getting no milk.

The South African Standard requires that the teats be totally separated with no more than one non-functional teat located high, middle, or low on a functional teat. The proper teat requirement contributes to survivability of offspring.

Strong, powerful legs that properly support the body under all four corners are necessary so that the animal can get around the pasture and eat. Legs that are cow hocked, bandy or crooked will not function properly over time and the goat will break down. Legs that are too straight in the rear (posty legs) or too much angle (sickle hock) will create animals that break down in the pasture over time. Structural correctness set forth in the standards produces a goat that is mobile and adaptable to various range conditions. Pasterns that are too straight or too slanted indicates that the animal will eventually break down and not be able to move around effectively.

The breed standard suggests a medium size goat. Goats that grow to be too large are functionally ineffective as they may be unable to maintain themselves in a pasture setting. They are also prone to leg problems such as weak pasterns and may also develop a hollow back.

A round barrel with well sprung ribs are necessary for a healthy goat to carry considerable meat and have capacity for rapid growth. A goat with a big foreleg will typically be an animal that carries a lot of meat and muscle. The circumference of the foreleg is sometimes regarded as an indicator or predictor of mass and muscle as the goat matures. A goat that is too broad in the shoulders may produce kids that create difficult birthing. A goat that is too narrow in the back end will lack the desirable amount of meat.

Having dark pigment on the hairless parts of the body, that is, around the eyes, nose, udder and under the tail ensures a goat that will not be prone to skin cancer. In the semi-arid desert climate of South Africa, the sun can be hot and without pigment the goat could readily get skin cancer. The climate in Texas is particularly good for raising Boer goats as much of the terrain is like that found in South Africa. South Africa is the same distance south of the equator as Texas is north of the equator and both areas of the world are places where the clouds have given up most of their moisture and as a result have a semi-arid desert climate. It should be noted that Australia is approximately on the same latitude south of the equator as South Africa. That is why the Boer goat thrives in Australia as well. Boer goats are highly adaptable as they can survive at sea level in the desert and even at 12,000 feet in the mountains and snow in Europe.

It is desirable to have Boer goats with a long face from horn set to muzzle as this distance is directly proportional to the distance from the hook to pin bones of the rump and directly proportional to the longissimus dorsi muscle that runs down the length of the back. A goat with a long rump cannot have a short body. A short rumped goat will have a pig like butt where the muscle only comes down a short distance on the back leg. This may not be desirable.

The loose pleated skin on the front of the South African Boer goat provides a larger skin surface to cool the body in a radiator type fashion. The newer style American Boer goat with very tight skin on the front many do not cool the body as efficiently and it remains to be seen if this deviation from the South African standard produces the desired effects that were anticipated by this change.

A wide chest floor and a long cannon bone may be good predictors of growth capacity. Care should be taken not to have too much width in the chest floor as scapula problems and front-end assembly problems can arise where the shoulders do not tie in correctly with the body creating a bulldog-like appearance. This is sometimes called extruded scapula. Structural weakness eventually produces an animal that breaks down under pasture conditions.

Good skeletal dimensions with a large skull are desirable to produce a skeleton that supports meat and muscle. A large amount of muscle or meat is what makes the Boer goat desirable in the first place.

The standard that requires bucks to be masculine and does to be feminine provides for animals that fulfil their part of the procreation process. Bucks that are too feminine may tend to produce ultra-fragile does with light bone that may not have survivability in a pasture environment. Does that are too masculine, that is, too short in the neck, flat in the face or too deep in the body may be hard to breed and probably lack good mothering skills. The long, graceful neck and feminine head of the Boer doe would indicate that she can be readily bred and will be able to mother and raise multiple kids. A doe that produces and raises multiple kids per breeding is ultimately a greater red meat producer than a doe that raises only single kid per breeding.

In South Africa when the goats are gathered up from the mountains perhaps twice a year; if the doe is not trailing twin kids by her side she is sold for meat. Good maternal traits with multiple kid production annually are a very desirable property.

In South Africa it is all about efficient meat production and commercial viability of the animal. Eventually this will be the case in the United States as well.

So, there you have a quick discussion of why certain desirable physical traits are necessary in the South African Boer goat to ensure a goat that has survivability, adaptability, fertility, a calm disposition, good mothering ability and can make a living under harsh conditions with low quality food. When raised according to the South African Standards the Boer goat truly is an efficient meat production system in the pasture that is the meat goat of the world.

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