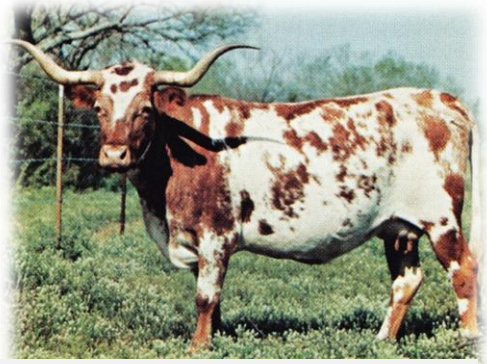
“A Shrinking Longhorn Gene Pool”

In the early days of the Texas Longhorn Breed registry and even before there was a breed registry (TLBAA) there was only a hand full of folks that were dedicated to preserving the Longhorn or at least their idea of the Longhorn. This in most cases was usually based on childhood memories. These individuals were located in different parts of the country but mostly Texas. These folks would gather together any cattle that they felt showed to be Longhorn or a strong Longhorn influence. They acquired these cattle by various means such as inherited from family, purchases at auction barns, slaughter houses and from individuals out in the country. As time went by these small isolated herds of Longhorns would become the foundation for preserving the Longhorn breed. These herds would be referred to by their owners’ last names…Marks, Yates, Butler, Phillips, Peeler, and Wright. Because these herds were mainly closed to outside influence they became known as a straight Longhorn bloodline or straight family of Longhorn cattle because their ancestry could be traced back to only cattle from that herd or the cattle that made up the foundation of that herd. They were not genetically closely related to any of the other herds. They are all Longhorns but exhibited slight variations from herd to herd in their phenotype and breeder selected traits. These variations were mainly based on that breeder’s particular preference for a particular look or trait. In the 1960’s the government sent out a group of inspectors to select cattle to establish a herd of Longhorns on the Wichita Wildlife Refuge in Oklahoma. This herd would take on the name of WR which is the brand they carried on their shoulder. The WR cattle would be added to the above list of foundation herds. Later on these seven herds would end up becoming known as the “Seven Families”. These herds would become the foundation of today’s modern day Longhorn herds. The term used to describe the cattle that trace back to only one of these herds throughout its pedigree was “Straight” and whatever the breeder or herd name. (Example: Straight Marks).

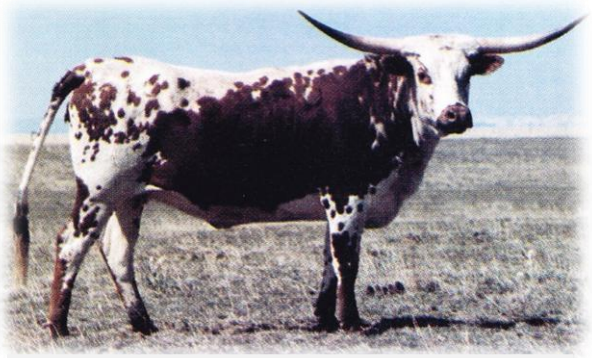
Texas Ranger JP is the animal that everyone thinks of when it comes to the Phillips Bloodline. Syndicated for $1.5



3S Luciana - Marks Bloodline

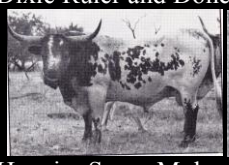
WR 26 – sold for $40,000 & straight WR

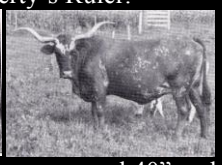
Let's talk about Longhorn genetics and the term "Blend Genetics". You must first start by crossing two animals of every different and distinct bloodlines or families with the results being an offspring that exhibits hybrid vigor, combining the best of both parents. The crossing of the resulting offspring with another different straight bloodline results in a three way cross which produces "blended" genetics in the offspring. A "Blend Genetic" cross consists of a cross using three or more of the "Seven Families" bloodlines. "This super cross, when it clicks, produces Longhorns with the complete package of size, horns and color without sacrificing the "internal" qualities and traits which has enabled the breed to thrive for centuries". The more you cross the "blended genetics" the more diluted the genetics of the "straight bloodlines" become on the next generation.



Sweet 'N Low – Butler Bloodline

Doherty 698, one of the most influential cows in Longhorn history is a classic example of crossing two straight bloodlines (WR sire X Wright dam). She went on to become a legendary producer with 60+" and the dam of legendary producers like Phenomenon, Overwhelmer, Dixie Ruler and Doherty's Ruler.





Her sire Senor Mulage measured 40" and her dam Wright 489 measured 49" at 13 yrs.

In 2012 "Blend Genetics" are the way most breeders are going about producing cattle for their herds and the Longhorn industry. However to keep producing "Blend" cattle with true "hybrid vigor" you need a distinct or predominantly pure bloodline to start with, which is what we had in the Longhorn breed with the original "Seven Families" but are lacking today. Today there are only a small number of breeders that are dedicated to producing non-blend or straight genetics that are traceable to only one of the original "Seven Families". The Butler bloodline is one of the few bloodlines from one of the original "Seven Families" that is still being preserved, protected and promoted today in 2012. Many of the other bloodlines from the other "Seven Families" (Marks, Wright, WR, Phillips, and Yates & Peeler) are falling to the way side. This is going to limit breeders' ability to continue to produce true "blend genetics" that will have a true hybrid vigor which is one of the factors that has led to the success of blend genetics. We are basically blending the "Seven Families" out of existence and thus limiting the genetic gene pool to extremely blended genetics.

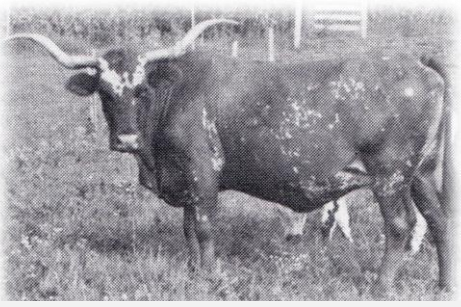
Phillips X WR

Butler X WR

Phillips X WR X Butler

Butler X Phillips

In my opinion, we are slowly limiting our Longhorn genetic base due to a couple of other factors. One is that we do not have enough breeders working to preserve the original “Seven Families” of WR, Wright, Phillips, Marks, Peeler, Yates and Butler. The other is the fact that most breeders today are focused on breeding for two single traits, LONG HORNS and BIG BASES. Everyone is breeding for the longest tip-to-tip horn measurement they can get and that measurement keeps getting higher. At one time the magic number was 50” then it was 60” then it was 70” and now it is 80 or more. The bigger the better is not always best because we are now producing cattle with non-functional horns that are almost completely incapable of fighting off predators. Breeders want a lot of flat straight out horn growth at a young age which has resulted in a decrease in the beautiful twisty horn cattle of yesteryear because you do not get twisty horns out of early straight horn growth. The development of twisty horns is a slow process. Also by focusing on these single traits breeders are also focusing on the same genetics or combination of genetics. Open any of the breed publications and you will see advertisements featuring offspring or cattle that trace back in one generation to the same five or six bulls.



Wright Bloodline
Wright 489 – Dam of Doherty 698

Attend any Longhorn sale and you will find that these same five or six sires will dominate the pedigrees of the animals in the sale. Some of these offspring will mostly likely be the high selling lots of the sale. The high prices for the offspring of these herd sires have increased other breeders’ interest in these genetics. I am not saying that these sires are not good bulls. I am saying, in my opinion, by focusing on single trait selection and an intense focus on the genetics for those traits we are limiting our genetic pool more every day.

We are breeding the twisty horns out of our breed.

The Angus breed is a good example of the problem of being focused on a single factor in animal selection. Angus breeders tend to focus on EPD numbers. (EPD's are the ***E****xpected* ***P****rogeny* ***D****ifference which is a measure of the expected difference in performance of a sire's progeny when compared to the average progeny of all sires evaluated within the same breed. This prediction is based on actual performance, progeny performance and relatives' performance. EPD's are used by many breeds.)* They use EPD's when selecting their animals and making mating selection rather than the animals themselves. They study EPD's for calving ease, birth weight, weaning weights, yearling weight and about 15 other traits. They make their selections based on these EPD's numbers. These EPD numbers were created as a tool to aide in cattle selects not to be the main focus of animal selection.

In recent years the Angus Association has been faced with dealing with a genetic defect, Arthrogryposis Multiplex (AM) or commonly known as "curly calf". This genetic defect is present in several of the more popular pedigrees with the best EPD's and can be found in herds located all across the US and even throughout the world. They have been able to control and limit the effect of this defect through the use of modern testing technology. However this has had an impact on the genetic diversity of the Angus breed but that impact is limited due to the sheer numbers of registered Angus cattle. To put this in perspective the Angus association registered over 500,000 head last year so if 50% of the animals where affected by this defect breeders would still have 250,000 head of that year's production to utilize in their breeding programs and thus the effect is limited. The TLBAA on the other hand has registered just a little over 500,000 head since its beginning in 1964. They registered around 9000 head last year so if we had a genetic defect that affected the most popular sires by 50% or more it would be much harder for our breed to recover. With most breeders using herd sires that are sons or grandsons of three or four of the most popular bulls their genetic impact on the breeds replacement females is huge. If one of these popular sires should have a genetic defect the spread of the defect would be widespread and hard to overcome.

King Ranch 398 – Peeler Bloodline

We as breeders need to focus on preserving and protecting the Longhorn gene pool from genetic defects as well as the influence of non-Longhorn genetics *(That's a subject for another day).* We also need to focus on keeping our genetic diversity so as not to lose our breeds unique and beneficial traits of hardiness, disease resistance, fertility, calving ease, longevity, milking and mothering ability.

Over the last couple of years I have began hearing cattlemen that buy Longhorns for cross breeding and/or roping calves talk about having to doctor the cattle more because it seems that they are not as hardy as they once were. When I questioned them about the genetics of the Longhorn cattle that they were seeing the most problems with we determined that most of the problem cattle were of "modern" genetics. They noted little too no problem with cattle that went back to old blood in the second generation of their pedigree. Granted this was not a scientific study but merely an observation of possible changes within our breed due to the narrowing of our breed's gene pool with breeders focusing on using a select group of bulls to increase a single trait. In the past weaker genetics were weeded out by the natural selection process. Those with a weaker immune system would die off due to their inability to withstand being exposed to the simplest of deceases or severe weather conditions. Today a lot of these weaker cattle are in production because of modern day vaccines that help them fight off

deceases and a “pampered” life style that keeps them out of the weather. In the past Longhorn cattle were know for their decease resistance and hardiness but today I am hearing and seeing a slight decrease in these areas in our cattle in part in my opinion to single trait selection, a weakening of our gene pool, over vaccinating and the “pampering” of the cattle.

We as Longhorn Breeders like to think that we are improving the breed but are we really improving the breed when we go to extremes to keep genetically weaker and in some case poor breeders in production because we want to keep these “superior genes” in our herds/breed because of their super record setting horn growth that is so very eye appealing to the big spenders. Are we simply stroking our own egos by breeding for the longest horns? Yes, it is my opinion

Yates bloodline

that egos and bragging rights have played a huge role in sending us in the direction of single trait selection for HORN. The length of the horns has nothing to do with the overall quality of our cattle but it is where some people are putting the value. They are convincing other buyers and breeders that horn length is the only way to truly judge the value of our cattle because they will only buy the ones with extreme horn. They are basically using their money to drive our Longhorn market in the direction of horn length having more value over other more important and functional traits. It is pretty hard to truly improve a breed of cattle like the Texas Longhorn that has been proven by the test of time and the survival of the fittest. I can promise you that adding more length of horn to the cattle in the Longhorn breed is NOT improving the breed. The Texas Longhorn is one of the few breeds of cattle that have had to pass the toughest test of all…by surviving on their own. They are not a breed developed by man but rather a breed that was created by God and developed by Mother Nature without the interference of man until recent years. It has been stated before that the Longhorn is a “Genetic Goldmine” and I believe it is but a lot that “Genetic Gold” is being wasted and tarnished with the single trait breeding selection that is being practiced by breeders today.