

THE SECRET METHOD FOR BREEDING BETTER CATTLE

Line breeding is the most effective tool a breeder has for making real progress in their herd. The Remitall polled Hereford line breeding program is living proof of this. So are the many other line bred programs that have been in existence for thousands of years. That's right, we are talking thousands of years, in fact the Egyptians were selectively and consciously maintaining domestic polled herds of cattle over five thousand years ago. The creation of all purebred breeds was a process of line breeding. Take for instance the Angus breed. Research shows that every purebred Angus alive today traces back to one original sire, Grey Breasted Jock. In fact every Angus alive traces to the next bull in line Old Jock. To create Old Jock, Grey Breasted Jock was mated back to his own dam producing a daughter called Favorite. Favorite was then in turn mated back again to Grey Breasted Jock and the result of this was Old Jock. A very intense start 'yes', but the point we are making is this. Line breeding built a foundation so genetically pure and strong there was no doubt the Angus breed would carry to this very day, the distinctive traits that make Angus uniquely Angus. The Hereford breed is very unique to, it's consistency for color pattern, temperament, structure, feed conversion, and quality of beef, prove it also started from a very select and intensely line bred base.

What makes a select line breeding program work and in the end prosper ahead of all other methods of breeding cattle are these three guidelines.

1. Your line breeding program is only as good as the individuals it is tied to, meaning those individuals that are stacked in a pedigree 2, 3, 4, or more times had better be of exceptional quality. They need to have the traits that you most want to breed on.

2. Your culling and selection process is also critical, because it is you who is going to keep your goals on track. If you continue selecting and line breeding to the individuals that most meet your requirements, success will come to your breeding program like you have never experienced before.

3. Once a line breeding program has in place a solid base combined with proper selection and culling procedures, your next step is to turn the generations. In this way you build and strengthen a pedigree, weeding out the variables that

do not meet your requirements and concentrating the genetics that do. Building a pedigree is how we have created all our sires like Olympian 262L and the newest models that sell in this sale. They are not necessarily direct descendants of Keynote 20X yet they will still trace to Keynote 20X two to seven times. As we intensify this gene pool of selected traits, the results we are getting for uniformity and consistency just keep getting better. Turning the generations speeds up your rate of progress.

We get asked a lot of questions on line breeding. Here are some of them and our response.

1. What is line breeding vs. inbreeding?

Most importantly a line breeding program is a managed program (by you). It is your guidance that keeps it heading in a certain direction. Your selection of desirable traits and the continual culling of non desirable ones are key. An inbreeding situation is the result of having no management or guidance, just simply the act of multiplying related cattle together with no regard for specific selection or culling.

Technically line breeding programs run along having no individual supplying more than 50% of the genetic influence in a pedigree. For example a sire mated back to his own daughter would result in the sire supplying 75% of the genetic influence on the offspring. Half brothers mated to half sisters (same sire but different dams) would make the resulting offspring have 50% genetic influence from the grandsire.

2. Is line breeding natural or nature's way?

Yes it is, and there are millions of examples. Everything in nature is line bred. That is why there are Pin Tail ducks and there are Mallard ducks, White Tail deer and Mule deer, Field mice and Deer mice etc., all living on the same pond, the same field, the same farm yard. They coexist but they don't interbreed, they choose to line breed their specific genetics because it guarantees they will produce the necessary traits vital to their survival. Most of them have had thousands of years or longer with mother nature culling any of the undesirables or less proficient out. The result is they are as close to perfection for their particular environment and needs as you could make

them. It is interesting to watch line breeding in progress even in things such as bacteria and insects. There is strength in numbers and that is one reason why bacteria and insects do so well. The other is they are such proficient line breeders. We can attack them with the greatest antibiotics or sprays and all they need to survive is just two, two that are by chance immune to the disaster that has befallen them. From two they can rebuild an entire new population all line bred and superior to previous generations. Forcing us to go back and invent new stronger antibiotics and field sprays.

3. What can I expect to improve by line breeding?

The most obvious is you will improve the consistency your program generates. The individuals you are line breeding to will have a better chance of leaving their type and kind on your herd and your customers. You will also see a lot of improvement on specific traits if your selection and guidance are focused and constant.

4. Won't line breeding just double the faults or produce serious genetic defects?

Let us start to answer this by saying if the individuals you would like to line breed your program to have faults, keeping in mind though there is a difference between faults and what we perceive as slight imperfections, I call these the wish club, I wish he was thicker, taller, darker, lighter, etc, these are not the kind of traits critical to the process. But back to the faults, if this individual has faults that you cannot live with and would not want to see through your entire herd then this is not the right individual to line breed to. Faults that are critical are ones like structural soundness, fertility, scrotal size, udder structure etc. As far as serious genetic defects are concerned line breeding is the only way to identify them and eliminate them. That is why the breed associations already have in place a technique for proving a sire is genetically clean of serious defects. They prove this by mating him to 20 or more of his own daughters. If a sire does this then it is pretty safe to say you won't have any trouble using him in a line breeding program.

5. Don't you get more performance through hybrid vigor by continuing to outcross as opposed to line breeding?

Hybrid vigor is the most over rated and abused theory used in the cattle business. Most perceived gains resulting from hybrid vigor are really the result of taking larger framed, higher performing bulls from one breed and mating them to moderate sized cows of another, and then proclaiming my cows just weaned off 50% of their body wt. all because of hybrid vigor. We will guarantee you this, large, high performance European breeds like Gelbvieh which we have raised mated back to Gelbvieh will produce heavier calves at weaning time than if you were to outcross these same Gelbvieh bulls on moderate sized Angus or Hereford cows. Within a purebred breed, if you take a sire that is truly an elite performance sire like Keynote 20X and line breed to him, those offspring will produce for you on average more performance than offspring not line bred to Keynote. Our purebred, line bred cows selected for milk give more milk and wean heavier calves than do the commercial crossbred cows that we have raising some of our E.T. calves.

6. Is the cattle industry better off with cross breeding?

The answer is no! Imagine if the Holstein breed had been on a cross breeding program, would they be in the position that they are today? We don't think so! They are so advanced on their milk production because of their selection and line breeding that they have eliminated all other breeds as competitors. Today you cannot out cross a Holstein to any other breed and have them produce as much milk as a pure line bred Holstein will. If you look at the big picture, the meat industry is about quality, costs and a lot about consistency. The nation's commercial cow herd is such a mongrelized mixture of genetics it is a huge challenge to sell groups or feed cattle that are genetically and physically on the same track. Most producers are constantly looking over the fence believing that changing breeds will solve their problem. This inconsistency is hard to get a handle on now because it is so varied and genetically diverse. The beef product the consumer eats today is not as consistent in quality as it was before the 70's after which crossbreeding became all the rage. Beef has not kept up with product consistency as compared to our competitors the chicken and pork industry. They have used line breeding

to their advantage a lot more proficiently than we have in the beef industry. Like the Holstein breed, chickens and hogs have through line breeding become very efficient in their production. With beef we have the greatest product, we just have to insure that "consistently," it is the greatest product.

7. Has Remitall always had a line breeding program?

The answer to that is like yes, no, yes. It is interesting to look back on the history of Remitall and there is a lot of it. History is a great teacher, nothing is learned or accomplished today without studying the past. If you don't learn from the past you are automatically starting from square one.

The Remitall program originally began in the 40's with Shorthorn cattle. Louis and his brother Carroll Latimer built a very successful herd of Shorthorns. Rising to the top by the late 50's and early 60's they had the high production sales in Canada and the US. They consistently had champions at all the major shows like Chicago, Brandon and at Denver where for instance they had the champion pen of five bulls five years in a row. "They were dominant"! The competition was tough, as Shorthorns were the most numerous breed at that time.

The herd they were working with was line bred and amazingly consistent. With the pressure to create a polled head and a leggier animal the herd shifted to an out crossing program. It did create these traits but it was never again able to produce animals with the same consistency of quality and dominance as it had under a line breeding program.

The Polled Herefords were brought in by the early 60's. The major acquisition was the purchase of the entire Four Square Herd. With it came the line bred herd sires Four Sq Modern Tone 42M and Four Sq Leonard 25L. For those of you too young to know, Leonard 25L is the sire of the dam of Enforcer 107H who like Keynote 20X is a major force in most of the Polled Hereford pedigrees of today. Keynote 20X himself is double bred to Enforcer 107H. Added to Modern Tone 42M and Leonard 25L was another line bred sire Craigview Mischief 26Y. These line bred sires quickly moved the Remitall program to the forefront with the top sales in Canada for many years. They consistently had

champions at the major shows like the Canadian Agribition where they had the Grand champion female three years in a row. Again the program was dominant and consistent. Looking back at some of those catalogs from the late 60's and early 70's Louis would have 30 to 35 bull calves right off the cows in the sale, you can see by the pictures these bull calves had the same muscle shape, stoutness and body type. It was all very consistent, and it was an easy sell.

The pressure of the 70's and 80's to drastically increase frame size put the Remitall program like most others in a chase to use the next hot AI sire. These bulls were unproven and single trait sires. Their pedigrees were a genetic hodge-podge of individuals. This system of breeding cattle was a total failure for all who used it including us. Everything about it was unpredictable. Even frame size which was the major trait they were to give you was inconsistent. So much overall quality was lost in all breeds at that time that it is kind of amazing that we are still operating today.

Luckily for us by the mid 80's we were taking a hard look at this picture and saying what is going on here. We went back and did some serious studying of history, not only on the Remitall breeding programs but also on the evolution of breeding domestic cattle. What we realized was this. All the successful breeding programs of the past and the creation of all breeds had one thing in common, they were selectively and purposely line bred. All other methods of breeding cattle produces mediocre results or failure.

By 1988 we had created Keynote 20X. Keynote is a direct descendant of three Remitall bred sires, Remitall Teamster 9T, Remitall Northlight152N, and Remitall Limelight 40L. Keynote is also double bred to Remitall Jamboree 89J and Enforcer 107H. With 107H's maternal grandsire being the line bred Four Sq Leonard 25L we were then able to reach through Keynote 20X the successes of our past, allowing us to build both to the present and for the future. The rest as they say is history. The Remitall program is now the single most influential supplier of genetics to the Hereford breed. It is for one reason . . . it has the genetic strength to get you results!