

SUPER GENETICS...WHERE DO WE GO FROM HERE?

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I WAS LOOKING THROUGH MY ARCHIVES RECENTLY WHEN I FOUND THE ARTICLE THAT OFFICIALLY ANNOUNCED MILO HANSON'S BUCK AS NEW WORLD RECORD TYPICAL WHITETAIL AT 213 5/8 INCHES, HARVESTED IN 1993. ALSO MENTIONED IN THAT SAME MAGAZINE WAS THE STANDING WORLD RECORD NON-TYPICAL AT 337 7/8 INCHES. NOW, 20 YEARS LATER, WE HAVE 600-INCH MATURE BUCKS OUT THERE AND TAKE 200+ INCH YEARLINGS FOR GRANTED.

Last 20 years have been a time of revolutionary change in the white-tailed deer breeding industry. Motivated by passion and driven by economic values, this rapid change has resulted from zealous attempts to produce bigger antlers, faster. It only takes a quick look around a deer breeder convention these days to realize these attempts have been broadly successful and that now, everyone has "big deer".

Not only have deer breeders been successful, but many have surpassed the greatest imagined expectations of all husbandry experts. By promoting desirable

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inter-regional semen, the entire US captive deer herd is reasonably small when compared to the diversity of wild deer populations. There has been a historical tendency to use relatively few males as sires in a deer herd, thereby producing an "overrepresentation" of respective genes derived from these most prolific sires. Repeated selective breeding of superior bucks to does sired by superior bucks has certainly accelerated our antler production agenda, but it has also greatly narrowed the available gene pool as reflected by today's homogenous antler size/symmetry patterns.

Breeding practices have run parallel with genetic improvement programs. When two reproductively capable individuals are related, there is a high probability that their offspring will receive two copies of the same gene from common ancestry. Popular methods used on deer farms to exploit this incidence are inbreeding and line-breeding. A cattleman friend of mine says the difference between the two is; "it's line-breeding if it works; and it's inbreeding if it don't".

Line-breeding may be better defined as "selective inbreeding" to perpetuate certain qualities or characteristics in a strain or variety of stock. In other words, line-breeding is the recurrent introduction of genes from a particular individual or "line" of individuals with highly desirable traits; like mating a



superior sire to his daughter, granddaughter, and great-granddaughter. A common example of inbreeding would be mating brothers to sisters of those same breedings.

Continued line-breeding intensifies traits, both desirable and undesirable, so an equally rigorous culling program is imperative to the total effect. Many deer farmers I have visited try to "keep them all" with the idea that even undesirable looking bucks can pass on desirable genetics. Too much line-breeding may result in an "inbreeding depression" which manifests itself in reduced fertility and vigor. In general, inbreeding programs tend to reduce heterozygosity and provide increased opportunity for expression of recessive genes/traits. Thus, most successful line-breeders will out-cross every third breeding to a totally unrelated animal. If you look at pedigrees on today's super deer, it's not easy to find totally unrelated genetics. Although highly successful in wholesale production of "big deer", there is little doubt that modern deer farming has led to widespread homogeneity and loss of genetic variability within our captive herds. This phenomenon, along with super nutrition and increased trauma from enclosure, has also caused antlers to become more non-typical and uncharacteristic of the species within a short period of time.

I believe the next great challenge for whitetail breeders is to consistently produce big, clean typicals. A real typical buck that scores 300 inches is going to steal the show! Since before 1900, recognition of "world class" trophy whitetails has been officially judged by size with symmetry and that is not going away; as demonstrated by endurance of the Hanson buck.

How to get there from here is probably going to involve reestablishing founding stock. All founder stock in any captive game animal program had to originally come from the wild. Due to limited access and ever-restrictive game laws, we have relied on the same basic founders and their progeny for many years. The "out-crosses" that we so desperately need to inject into our genetic line-up must ideally come from exceptional wild specimens.

I also highly recommend the utilization of pen-reared "super genetics" for infusion into native hunt

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pastures. Conversely, genetically managed captive-bred populations offer potential sources of unrelated individuals to native herds and so enhance the genetic variability of native animals. Infusion of superior genetics into the wild herd along with culling helps retain "local survivability" qualities of improved populations while supercharging genetic antler traits for trophy production. Most often, these two genetic strains or species complex are different enough to produce fertile F-1 hybrids (first filial generation offspring) that exhibit an impressive increase in antler characteristics as a result of hybrid vigor.

Like the quest for huge typicals in a breeder market, there doesn't seem to be any shortage in sight of high-end hunters seeking trophy bucks at a premium price. I am convinced that producing 180-200 inch mature shooter bucks in a native environment, on a regular basis, is the future of the whitetail industry in TX. Spreading some of the super genetics from deer pens to deer pasture is a great way to accomplish that.

