First Two Commercially Cloned U.S. Horses Thriving

in

- Human/Animal Cloning [1]

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ViaGen, Encore Launch International Horse Cloning Business with Announcement of Several Famous Mare Clones

DALLAS and AUSTIN, Texas, March 30 /PRNewswire/ -- Livestock cloning company ViaGen, Inc. is partnering with equine marketing firm Encore Genetics to create the first commercial horse cloning operation in the country. Today the companies launched the new entity with announcements about the births of two famous horse clones and news of other pregnancies.

The legendary cutting horse Royal Blue Boon, a registered American Quarter Horse, became the first mare to be commercially cloned when a foal was born to a recipient mare on Royal Vista Southwest farms in Purcell, Okla., on Feb. 19, 2006. The foal was born healthy and continues to thrive on the farm where she was born.

She was joined soon after by a clone of the mare Tap O Lena, born at the same farm on March 9, 2006. Two clones of the famous mare Bet Yer Blue Boons are expected to be born any day. Including the foals announced today, seven clones of famous horses will be born this year. Many other pregnant ViaGen/Encore mares are due next year. The companies have also gene banked over 75 champion horses from multiple breeds and disciplines.

The companies have sold horse clones worldwide. Several have been sold in Europe through one of Encore's marketing partners -- a French company named Cryozootech.

"From the time I transferred the embryo into the recipient mare, these pregnancies were normal in every way and the births followed suit," said Dr. Jim Bailey, DVM and manager of Royal Vista Southwest, a breeding technology center in the heart of Oklahoma horse country. "The resulting foals were born normally and immediately stood to nurse. They bonded well with the recipient mares and continue to grow and play in the sun."

The Cloning Process

"The process of cloning is a state-of-the-art reproductive technology, one that allows the breeder to preserve genetics and expand the reproductive potentials of their superior animals," says Dr. Irina Polejaeva, PhD, chief scientific officer for ViaGen, the company that provides the animal cloning technology.

Cloning is actually a simple process. The clone is produced by first taking a small tissue biopsy from the animal to be reproduced. This sample is shipped to ViaGen's lab where cells are grown in culture. Then, through a process called Nuclear Transfer, DNA from the donor's cells is
transferred into enucleated oocytes (eggs from which the genetic material has been removed). The new embryos are grown in an incubator for several days and then transferred to recipient females as with traditional embryo transfer. After a normal gestation period, the cloned foals are born.

Genetic Preservation

Until cloning became commercially viable, there was no way to duplicate a genetically superior animal to extend its influence on a breed or species. In commercial livestock production, cloning has been used in sheep, hogs and cattle. Until now, horse cloning has been a scientific experiment.

With Royal Blue Boon Too, ViaGen and Encore Genetics, have partnered to preserve some of the greatest genetics in cutting horse history. Royal Blue Boon, the donor mare, is the all-time leading producer of cutting horses in the world with personal lifetime earnings of $381,764 and produce earnings of well over $2.5 million dollars. It is this unique value of the mare that identified this registered American Quarter Horse as a specimen worthy of preservation. At 26, the old mare is seeing the end of her long and prosperous career and her reproductive days are well behind her. With that fact in mind, the owner of Royal Blue Boon made the decision to clone her cutting horse champion.

"This animal has created a legacy in the cutting arena that is unmatched by any other mare, and I simply could not imagine not being able to continue to breed this fine animal and improve the genetics of future generations of cutting horses," says Elaine Hall of Weatherford, Texas, the owner of Royal Blue Boon and Royal Blue Boon Too.

Mrs. Hall and her husband Larry created a legacy in the sport of cutting, first with Royal Blue Boon and later with the mare's own son, Peptoboonsmal by Peppy San Badger, the 1995 National Cutting Horse Association Futurity Open Champion, and an all-time leading cutting horse sire. Through the continued performance of her progeny, Royal Blue Boon proved her genetic value to Mrs. Hall.

"The idea that we can use the best genetics for specific breeding purpose makes cloning and gene banking very attractive options for reproductive purposes," says Mark Walton, PhD and president of ViaGen. "Horse breeders have always selected their genetics very carefully based upon the performance of the sire and dam, as well as the performance of the progeny of a bloodline. Using a cloned line for breeding will extend the time over which a superior individual can be used."

ViaGen

Based in Austin, Texas, ViaGen is a global provider of advanced livestock genetic technologies, including cloning. The company's unmatched expertise in animal genomics is setting new standards for high quality animals and high quality consumer products. ViaGen's industry-leading compilation of livestock genomic data and patented breeding and product identification processes are extensively used in the cattle, swine and equine industries to obtain verifiably superior genetics. ViaGen makes livestock genetic technology affordable and accessible to producers throughout the livestock production chain, from farm to fork, offering new opportunities for business to build revenue and for consumers to enjoy unprecedented quality and safety.
About Encore Genetics, Ltd.

Based in Weatherford, Texas, Encore Genetics serves a worldwide base of horse breeders interested in preserving the superior genetics of their stock and producing animals that are genetically identical to top performers in both the show arena and the breeding barn. Encore partners Jim Ware and Milt Bradford have extensive experience in the sales, marketing and promotion of performance horses, as well as breeding and pedigree analysis. Brad Stroud, DVM, is a pioneer and foremost authority in embryo transfer, commercial IVF and ultrasound.

For further information regarding horse cloning, contact an Encore Genetic partner at (817) 599-3017 or a ViaGen representative at (512) 401-5900.

Weatherford home to first cloned cutting horse

SOURCE: Wheatherford Democrat, USA, by Crystal Brown-McCoy
homepage/local=5Fstory=5F089173154.html=3Fkeyword=3Dleadpicturestory
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Parker County is soon to be home of Royal Blue Boon Too, the first genetically cloned horse in the United States.

Weatherford-based Encore Genetics, along with Austin-based ViaGen, announced the birth of the cloned horse Thursday.

Dr. Brad Stroud, of Encore, is the owner Stroud Veterinary Embryo Services located a few miles south of Weatherford.

His relationship with ViaGen began about two years ago while working on a potential embryo project with China. After seeing his work, ViaGen asked him to transport cattle clone embryos, of which he has done about 1,000 to date.

As a result of the success of cattle cloning and Stroud’s influence in the Cutting Capital of the World, the company asked him about cloning = horses.

Stroud discussed the opportunity with his Encore partners, Jim Ware and Milt Bradford. They determined which horses would be most appropriate, then Ware and Bradford approached the owners.

Elaine Hall was one of the Weatherford horse owners contacted. Her mare, Royal Blue Boon, is the all-time leading international producer of cutting horse champions, and has a personal lifetime earnings of $381,764 and offspring earnings of well over $2.5 million dollars, according to = ViaGen.

During a telephone press conference, Hall said her motivation to clone her winning mare was to preserve her superior genes.

"I thought it would be an injustice not to allow her this opportunity to go on and perpetuate the bloodline," Hall said. "It has all been a very exciting experience. It's history in the making."
Stroud explained how a small skin biopsy is performed on the animal to remove cells from the connective tissue to extract the donor DNA.

From the time an embryo is formed and transferred to a surrogate, the recipient mare remains in the transfer facility under the care of veterinarians throughout the gestational period.

Once the foal is born it is monitored in the facility until it is 60-days-old.

Assuming all is well with Royal Blue Boon Too, Hall will soon bring home her new filly from the monitoring location in Purcell, Okla.

Lindy Burch, of Parker County, is also awaiting the birth of her cloned horse, Bet Yer Blue Boons, in Purcell, who is due for delivery any day.

Stroud said he had no reservation in taking on this project after witnessing the high success rate in cattle clones first hand.

"Understanding the science and working with my own hands and eyes was convincing enough to me that this technology is real and the next line of reproductive technology," Stroud said. "The mystic of this being a new technology is over."

According to Stroud, the benefits are cloning ensures the genetic makeup of the animal. Whereas, breeding two champion horses does not guarantee a genetic champion in the offspring.

On the flip side, cloning animals gains no genetic ground, and the success of the animal still depends on environmental factors including nutrition, health and training.

"It is possible they could compete at a higher level than the original," Stroud said. "[I believe] most people cloning are going to use these horses for breeding stock and not to compete on."

Another benefited Stroud pointed out was the ability to breed more offspring using both a champion and it's clone.

Cloning doesn't come without a price, the first copy of a donor runs $150,000 in the United States and $90,000 for a second copy produced in the same year.

Mark Walton, president of ViaGen, said a wide range of horses are being cloned from cutting horses, dressage, hunter jumpers and barrel racers.

"Cloning creates an identical twin born separate in time," Walton said.

ViaGen has more than 30 orders for cloned horses and around 20 mares currently pregnant with clones.

Stroud said time and education will alleviate people's fears about cloning.

"What we don't know we tend to fear," he said. "In vitro fertilization was the worst thing in the world when it came along. There were nay sayers there. We're simply bypassing the fertilization process and then transferring that embryo like we do in vitro."
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