



Commercially Cloned Horses Raise Controversy

The perfect horse can live forever (in a duplicated body that is).

While cloning livestock has been in the news for a few years, it is now apparently being done successfully with horses.

Clones are genetic copies of the original, though they will not be exact replicas because of the environmental influences on the way genes act, researchers emphasized.

The highly scientific propagation is not without controversy and criticism.

A cloned horse was first born in Italy, and three cloned mules were born in Idaho for research projects three years ago. A research horse clone was also produced in Texas last year. The latest news regarding the procedure deals with commercial cloning of champion Quarter Horses.

Earlier this spring, the first two horses to be commercially cloned to recipient mares were born at Royal Vista Southwest Farms near Purcell, Okla.,

according to Jim Bailey, owner-manager of Royal Vista Southwest.

"The process of cloning is a state-of-the art reproductive technology, one that allows the breeder to preserve genetics and expand the reproduction potentials of their superior animals," explained Irina Polejaeva at ViaGen, an Austin, Texas-

based cloning company.

Clones of Royal Blue Boon, owned by Larry Hall Cutting Horses, and Tap O Lena, owned by Philip E. Rapp, are products of a partnership between ViaGen and Encore Genetics, a performance-horse marketing group. Hall, Rapp and Encore are all at Weatherford, Texas.

Royal Blue Boon, 26 years old, has lifetime cutting horse earnings of \$381,764 and is the all-time leading producer of over \$2.5 million in winnings. "It is the unique value of this Quarter Horse mare that identified her, and other horses, as worthy of preservation," said Jim Ware, Encore Genetics partner.

Both sexes as well as geldings can be cloned, and these clones could reproduce, it was noted.

According to ViaGen officials, cloning is a "simple process."

Polejaeva explained, "The clone is produced by first taking a small tissue biopsy from the animal to be reproduced. These cells are born in culture, and through a process called nuclear transfer, DNA from the cell is transferred into enucleat-

ed 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," Polejaeva continued.

"These first two cloned foals were born normally and immediately stood to nurse," Bailey commented. "They bonded well with the recipient mares and continue to grow and play in the sun."

At least seven cloned foals of famous horses are expected this year, and more pregnant mares are to have cloned foals next year, according to Bailey.

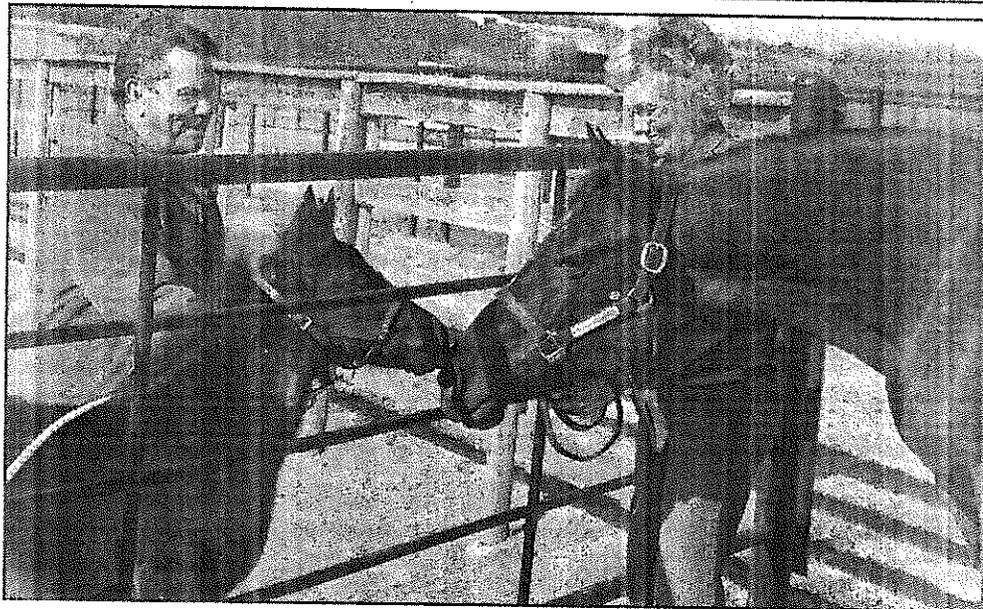
"Our companies have also banked over 75 "bank-

ed" horses from multiple breeds and disciplines. We have contracted to sell horse clones worldwide," Ware related.

The companies are charging \$150,000 for the first clone, and \$90,000 for the second clone of the same animal.

"Cloned horses are not eligible for registration with the American Quarter Horse Association," said Gary Griffith, executive director of registrations for the Amarillo, Texas, based registry.

The Jockey Club, the Thoroughbred registry, and a number of other breed associations have the same rules in place. "Our membership feels there are too many unknowns about cloning at this point," Griffith



The first commercially born horse clone is of Royal Blue Boon, a registered Quarter Horse with cutting horse earnings of \$381,764, and the all-time leading producer of earnings over \$2.5 million. She is shown with her clone at Royal Vista Southwest near Purcell, Okla.

fifth added. "Only a few cloned horses have been born, and most aren't old enough for them to have been fully studied to determine what effects the cloning process may have had."

He noted, however, that Quarter Horse staff members have been collecting information regarding cloning developments and providing that information to members of their Stud Book and Registration Committee, who makes recommendations regarding registration to their membership and the Board.

Cloning of meat animals, cattle, hogs and sheep has been stopped by the U.S.

Food and Drug Administration. A ruling is yet to be made by the government agency as to whether the milk and meat of cloned animals, and of their offspring, are safe to consume.

The Humane Society, headquartered in Washington, DC, noted that several scientific panels have said cloning raises serious concerns about animal welfare.

"In some species, notably cattle, clones have died in the womb or just after birth with dire health problems. Not enough data is available yet to know if that will be true in horses," stated Wayne Pacelle, chief executive of the Humane Society.

Registries and other seg-

ments of the horse industry were applauded by Pacelle for shunning cloning. He said, "The cloning advocates and practitioners are thinking of horses as a commodity. Those on my side of the fence think of horses as individual creatures who deserve respect and humane treatment."

Griffith at the Quarter Horse office said. "Some people feel cloning horses could create a reduction in the Quarter Horse gene pool when many breeders already think the gene pool is too narrow, and worry cloning could narrow that further."

"Members of the Quarter Horse association are sensitive to their fundamental responsibilities for the welfare and integrity of the breed in the long term," Griffith continued. "We do not know how this emerging technology will affect the breed, and we will continue to study it."

"We must bear in mind that decisions made today could have unanticipated effects on the breed many years down the road," he concluded.

Artificial insemination of horses was considered unethical and an improbability in horses 50 years ago, as was embryo transplanting of horses, just a couple of decades ago. Now both are commonplace.

Like it or not, in all likelihood, horse cloning will become a prevalent practice sometime in the future.

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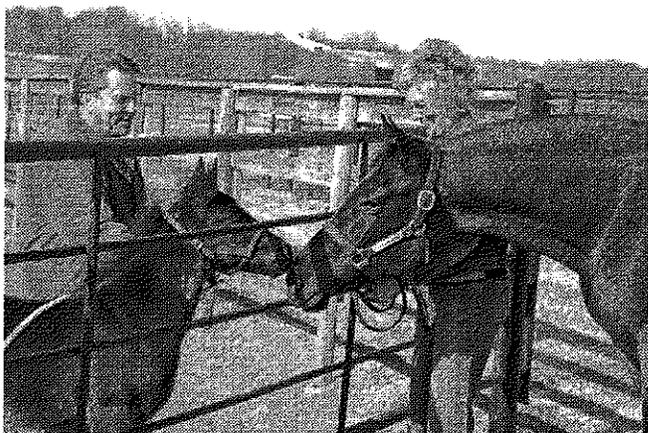
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