

It's A Cow. It's A Buffalo. No, it's A Beefalo!
Kansas 1886

By Nicole Armbrister
Kansas State University

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Dr. M. J. Morgan
Chapman Center for Rural Studies

This paper covers the history of the Beefalo in Kansas, a cross of between the *Bison bison* and domestic cattle. It explains the reasoning for breeding the two animals to make genetic progress. Extensive scientific and popular literature sources were used.

Introduction

1883 – Thomas Edison invents the light bulb. 1884 – Mark Twain completes his tale, *Adventures of Huckleberry Finn*.¹ 1885 – “Good Housekeeping” publishes its first magazine.² 1886 – Only a few hundred buffalo remain. In addition, nearly seventy-five to eighty percent of the Kansas cattle herds have been killed in the blizzards. At the same time, the country was experiencing a scientific revolution. During the late 1800s there were many new items being created to help with communication, ranging from the telephone to nationally known magazines. People were discovering new ways of transportation such as the bicycle and very early versions of the automobile. These were all important inventions that helped to address problems that strongly impacted rural people’s lives. But on the central prairies of Kansas, residents were also facing environmental and ranching problems. In the spirit of the times, talk of creating their own hybrid species began in the late 1880s.

Few people have ever heard of the Beefalo, let alone have any knowledge about the animal. This genetic cross between the American Buffalo and domestic cattle was one of the most innovative breedings, because these two animals were chosen not only for the traits that could pass on to their offspring, but also to keep one of the breeds alive. Without the creation of the Beefalo breed, bison may have been extinct by the 1900s. This paper explains the reasoning, benefits, and troubles faced during the experimental phase of breeding the buffalo to domestic cattle.

¹ “History in the 1880s.” http://www.1930census.com/1880_the_year_in_history.php n.d.

² “Historical Events for Year 1885.” <http://www.historyorb.com/events/date/1885> n.d.

Buffalo

They came out by the thousands and suddenly you would be surrounded by a herd of hulking animals that stretched further than the eye could see.³ This was a normal daily sight for the Native Americans and the very few white settlers in the vast area between the Mississippi River and the Rocky Mountains for many decades before 1850.⁴



The *Bison bison*, more commonly known as the

**Figure 1. A photograph of a *Bison bison* n.d.
SOURCE: Nature Works <http://www.nhptv.org/natureworks/americanbison.htm>
Note the freezing environment that the Buffalo could withstand.**

buffalo or American buffalo, was an extremely large, burly beast, as seen in Figure 1 above. They were almost entirely relied on for dietary needs by plains-dwelling Native Americans. Indians used every part of the animal, from the lean meat for food to the tallow (fat) for soaps and oils, leaving nothing to waste.⁵ Native Americans only killed what they could eat and use at a time and never in excess.

³ Kansas PBS. *American Buffalo: Spirit of a Nation*.
<http://www.pbs.org/wnet/nature/episodes/american-buffalo-spirit-of-a-nation/introduction/2183/>
November 1998

⁴ Ibid

⁵ Buffalo Groves Inc. *Buffalo History*. http://www.buffalogroves.com/buffalo_history.html n.d.

In the early 1800s, bison numbered around fifty million.⁶ The Indians and American Buffalo were living together in harmony, and the buffalo population was able to regenerate itself with the relatively few animals that the Indians killed. This lasted until the mid-1800s when white settlers started making their way into the Central Plains area.

This meant that buffalo hunters were moving in as well, bringing with them market hunting guns, which proved extremely detrimental to the bison population.⁷ The railroads also caused a big blow to the buffalo by cutting out a lot of their grazing lands and decreasing the space for them to roam. The arrival of these buffalo hunters and railways caused the population of American Buffalo to drop to *less than three hundred head* by 1883.⁸ This drastic drop in numbers created fear in many of the farmers on the Great Plains that if no actions were taken, bison would soon become extinct.

Cattle

Since around 1850, cattle had been driven up from Texas and Oklahoma to Kansas.⁹ Texas longhorn cattle, such as the one seen in Figure 2 on page 4, were being driven along established trails from cattle ranches by hired men to the railroads located in Kansas cow towns. These towns, such as Abilene and Dodge City, gained their livelihood from drovers bringing in the cattle and men working for the railroad companies.

⁶ National Wildlife Federation. "Buffalo Timeline!" <http://www.nwf-wcr.org/PDFs/wcr-BuffaloTimeline.pdf> n.d.

⁷ Kansas PBS. *American Buffalo: Spirit of a Nation*.

<http://www.pbs.org/wnet/nature/episodes/american-buffalo-spirit-of-a-nation/introduction/2183/>
November 1998

⁸ National Wildlife Federation. "Buffalo Timeline!" <http://www.nwf-wcr.org/PDFs/wcr-BuffaloTimeline.pdf> n.d.

⁹ "Timeline for the Long Drive and Cattle Ranching." <http://schools.newsok.com/trunks/LongDrive/timeline.pdf>
n.d.

Cowboys brought cattle up from Texas and Oklahoma year round, which meant that they were most likely going to encounter some sort of weather interference. Anything from a lightning strike causing the animals to stampede to a flood-swollen river after a big rainstorm were hazards that the cowboys had to look out for.¹⁰

Another weather related problem that the trail drivers and ranchers faced were blizzards with freezing temperatures. One of the most memorable occurrences was in 1886. This severe blizzard caused nearly one hundred human deaths in Kansas, but also had a significant effect on cattle being brought in on the trails, and also on family ranch operations.¹¹ Some areas faced livestock losses of around seventy-five percent.¹² The cattle would turn their tails to the wind and slowly drift along until they collapsed from starvation and exhaustion.¹³ Cattle trains were



Figure 2. A photograph of a Texas Longhorn similar to ones brought on the cattle drives to Kansas. n.d. SOURCE: Texas Longhorn Breeders Association.

freezing to the tracks, and livestock on board were dying from starvation because the feeding stations were frozen over and covered with snow.¹⁴

Cattle were also dying along the trails during the summer from heat stress and dehydration. Although this problem was not as prominent as the problems occurring because of the cold, it had just as big an effect on the cattle industry at the time.

¹⁰ Mary G. Ramos. *Texas Almanac*. <http://www.texasalmanac.com/topics/agriculture/cattle-drives-started-earnest-after-civil-war> 1990-1991

¹¹ Kansas Historical Society. *Blizzard of 1886*. <http://www.kshs.org/kansapedia/blizzard-of-1886/11982> June 2003

¹² *Ibid*

¹³ Jesse Lee. *January 1886 Blizzards – 125 Years Later*.

<http://kgynradio.net/news/weather/january-1886-blizzards-125-years-later/> 3 January 2011

¹⁴ *Ibid*

Many ranchers had started looking for a solution that would help them solve all of the problems they faced with extreme weather conditions on the Kansas prairies.

Beefalo

Thus, by the late 1880s, bison were on the brink of extinction. Cattle numbers in Kansas were extremely low, due to the 1886 blizzard. Both of the breeds were experiencing problems and needed something to help save them.



Figure 3. A photograph of the progeny of a cattle and buffalo cross, also known as a Beefalo. 1997. SOURCE: American Beefalo Association. Note the square frame of the *Bos taurus* and the strong burly front and head resembling the American Buffalo.

Charles “Buffalo” Jones had already been working on improving the buffalo

numbers by purchasing small herds here and there to build up a bigger herd. After the devastating blizzard, Jones had seen enough. He knew that the buffalo were able to withstand the extremely cold temperatures, and the cattle, though they had suffered some losses, were still in good numbers. The cattle were also already domesticated and docile, which was something that many ranchers had been striving for with the remaining bison in the Kansas area.

Jones saw these factors and came up with a plan to help both animals by breeding them with one another. This cross would come to be known as the Beefalo, as seen in Figure 3 above. He realized that crossing these two would produce an animal able to withstand extreme cold and that

was heavily muscled, very lean, calm, and docile.¹⁵ This was also a way for him to continue his work preserving the few American Buffalo that were left.

This idea that led to the breeding of *Bison bison* to the *Bos taurus* (domestic cattle). It is not known for sure what breed of *Bos taurus* was used, but any were able to be bred for the crossing. However, mixing these two breeds created a problem that was not first expected. The male progeny, or offspring, were born sterile, unable to reproduce. The only way that ranchers could produce a fertile offspring was by breeding female crosses back to a bovine bull. This process had to happen until the bison gene was only about 1/8 to 1/16, before the sire, male, could become fertile.¹⁶ This small percentage of bison genetics just was not enough to keep the expressible bison traits noticeable.

Although they were unable to breed any of the progeny with other progeny, not everything in these early crosses turned out negative. The Beefalo calves were born with much lower birth weights, just like the Buffalo, resulting in the mothers having easier births. The offspring inherited the docility from the cattle. They were also much more adapted to the extremely cold winter weather that they experienced in Kansas. Despite these traits that the ranchers had actually been breeding for, they considered the cross a failure because of the inability to breed one Beefalo to another.

These same results kept happening until breeders experimented enough to find the answer. In the late 1940s, Jim Burnell of Montana started breeding a full bison bull with a Beefalo female. This finally produced his first fertile male that was 3/4 *Bison bison* and 1/4 *Bos taurus*.¹⁷ Finally,

¹⁵ Scott Lindsay. *Internet Marketing and the History of the Beefalo*.

<http://weatherthe.com/wp/index.php/internet-marketing-and-the-history-of-beefalo/> 2 May 2011

¹⁶ *History of Beefalo*. <http://www.abacom.com/~gweller/hisofbef.htm> n.d.

¹⁷ *Ibid*.

the Beefalo had been successfully bred, and the cross was on its way to becoming an officially established crossbreed. The idea that arose on the Kansas prairies in the late 1880s became a national reality.

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