

## Video: Inside the quest to improve farm animal welfare by tweaking their genes

For nine nerve-racking months beginning in the summer of 2014, Dan Carlson waited for his lab experiments to be born. Carlson and his team at the biotechnology startup Recombinetics had made a small tweak in the genetic code of dairy cattle in an attempt to prevent the animals from growing horns.

...

...Buri and Spotigy, two calves born in April 2015, were free of the telltale bumps that eventually sprout into horns. That meant they would be spared the fate of millions of U.S.-raised cattle, whose horns are destroyed with a hot iron or toxic paste shortly after they're born or are sheared off when they're older...The painful procedure is done to prevent the cows from goring one another or their human overseers...

...

People like Carlson can do this work thanks to two methods...that have made gene editing cheaper and easier [TALEN and CRISPR]. Carlson is now involved in several projects that employ gene editing in animals, including one that keeps pigs from reaching puberty so they need not be castrated.

...

Carlson first became fascinated with genetics...when his father started planting genetically modified corn. "They were taller. They didn't have any problems standing up. They were essentially the best crop that I ever saw my dad produce," recalls Carlson..."From that moment on, I was like, 'This technology is for real. It can really make a difference.'"

**Read full, original article:** [This Man Rewrites the Genetic Code of Animals](#)