Gene editing could end cruelty to dehorned dairy cows–unless GMO opponents derail it

Most of the roughly 9 million dairy cows in the United States have been dehorned—with an iron, clippers, or caustic paste—to protect handlers and other cows. Scott Fahrenkrug, then a professor in the department of animal science at the University of Minnesota, decided to do something to stop it.

“I started talking to producers, and it became real clear to me that it wasn’t just me being touchy-feely,” he says. Dairy farmers told him they hated dehorning calves, and they were under pressure from animal welfare groups and customers, like General Mills and Nestlé, to phase it out.

Fahrenkrug knew that some breeds of cattle naturally don’t grow horns; the problem is that these “polled” cows traditionally have been lousy milk producers. But in 2012, animal geneticists identified a bit of bovine DNA that controls hornlessness. Fahrenkrug, who specializes in a newly developed genetic modification technique known as precision gene editing, realized it would be a snap to rewrite the corresponding DNA in an embryo of a dairy breed. Presto: Hornless cows that give a lot of milk.

Fahrenkrug thinks hornless milk cows are just the start. The company he founded, Recombinetics, is tweaking the DNA of a few high-performance cattle breeds so they are more heat tolerant and can thrive in a warming world. He has developed piglets that are resistant to common diseases, and has plans for meatier goats to feed a growing global population. His ultimate goal is animals with just the right mix of traits—and much less suffering.

Theoretically, these alterations are pretty straightforward. But Fahrenkrug still must contend with federal regulators who have never approved a genetically modified food animal. His biggest challenge, though, will be to change the minds of the public. Many people see GM foods as a symbol of all that’s wrong with the industrial food system. Fahrenkrug will have to convince them that it offers the surest and fastest route to more ethical and sustainable farming.

Fahrenkrug thinks that organic farmers have the most to gain from his technology, because it offers a path to healthy, high-producing animals without using hormones or antibiotics.

The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion and analysis. Read full, original post: This Scientist Might End Animal Cruelty—Unless GMO Hardliners Stop Him