

# LIVESTOCK

ers  
GENOMICS

Your connection  
to CRISPR/Cas9

Animal welfare, even more than climate change, will be the main challenge for the future of livestock farming<sup>1</sup>. Animal welfare will force the industry to evolve with speed. CRISPR technology will be part of this evolution. Gene editing allows for modifications that lead to improvements in livestock production traits, animal health, and welfare.

Diseases that have devastated the livestock industry in recent years:

- African swine fever impacted Chinese pork production (where over half the world's pig population is grown) by **30%**
- Porcine Reproductive and Respiratory disease cost the US pig industry **\$650 million** per year and the UK pig industry **\$150 million**
- Avian flu cost US farmers **\$225 million**

CRISPR/Cas9 is being used as a defense against these and similar diseases that threaten the worldwide livestock industry. Our licensees are using CRISPR/Cas9 gene editing to deliver true innovation and solutions in this area.

## FOR BEEF & DAIRY CATTLE



Problems tackled and solutions delivered:

- ✓ Disease resistance - bovine tuberculosis and foot-and-mouth disease
- ✓ Localized climate adaptation, including improved heat tolerance
- ✓ Polled (hornless trait)

## FOR SWINE



Problems tackled and solutions delivered:

- ✓ Disease resistance - porcine reproductive respiratory syndrome and foot-and-mouth disease
- ✓ Elimination of boar taint without castration

If your work involves addressing the challenges facing the livestock industry today and your solutions could benefit from CRISPR/Cas9 technology, contact us.

For information on access to CRISPR/Cas9 for Livestock health and welfare, please contact

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<sup>1</sup> <https://www.euractiv.com/section/agriculture-food/news/animal-health-the-biggest-challenge-in-livestock-farming-researcher-says/>