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News Release

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Survey seeks to gauge public opinion on gene-edited meat

People are being invited to share their views on the use of gene-editing technologies in animals through an online survey.

The questionnaire is focused on people's perceptions of gene editing in livestock, and whether they would eat meat from an animal that has had its DNA altered.

Their responses will be used to inform research at the University of Edinburgh's Roslin Institute, which has already used the technology to produce pigs that are resistant to a devastating disease.

Gene editing involves altering some of the individual letters that make up an organism's genetic code at precise points. The technology can be used to introduce characteristics into plants and animals, such as resistance to a specific disease or improved adaptation to different environments.

The changes introduced are the same as those that could occur spontaneously in nature. Most natural changes either have no impact or are harmful to the animal. With gene editing, precise changes that are likely to be beneficial can be introduced.

The approach does not involve transferring genes from one species to another and is different from transgenic techniques, which often do.

Researchers at The Roslin Institute have used gene editing to produce pigs that are resistant to a disease called Porcine Reproductive and Respiratory Syndrome – or PRRS – which causes pig producers significant losses worldwide.

Teams at Roslin are working with experts at the Centre for Tropical Livestock Genetics and Health in Edinburgh and in Africa to explore how the technology could be used to benefit production animals in tropical climates.

The goal is to improve the health and welfare of farmed animals around the world, and to improve the security of food supplies in low and middle-income countries.

Experts from the University are speaking about their work at the American Association for the Advancement of Science Annual Meeting in Washington DC.

Ranked among the top universities in the world

Professor Appolinaire Djikeng, Director of the Centre for Tropical Livestock Genetics and Health, said: “Livestock farming is a reliable source of food for people living in extreme poverty and creates economic opportunities for farmers in low and middle-income countries.

“With equitable partnerships and wider stakeholder engagement, gene editing could provide opportunities to produce healthier and more resilient animals for vulnerable farmers, and help address some of the challenges associated with rearing animals in tropical climates.”

Professor Bruce Whitelaw, of the University of Edinburgh’s Roslin Institute, said: “It is no longer a question of whether we can use gene editing technology to improve livestock health, but rather whether we should use it. We need to better understand public opinion to inform how these technologies are used and also how they should be regulated.”

The Roslin Institute receives strategic funding from the Biotechnology and Biological Sciences Research Council (BBSRC).

“The advances in genome editing approaches offer potential solutions to the global challenges we face in food security and animal welfare,” said Professor Melanie Welham, Executive Chair, BBSRC. “With bioscience transforming our ability to understand these challenges we are better equipped to develop new and innovative ways to address them and it is important that the public are engaged in the dialogue.”

The Centre for Tropical Livestock Genetics and Health is an alliance between the University of Edinburgh, Scotland’s Rural College (SRUC) and the Africa-based International Livestock Research Institute and is backed by the Bill & Melinda Gates Foundation, BBSRC and the UK Government’s Department for International Development.

The survey is being carried out by agribusiness consulting company AbacusBio.

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The survey is available at:

https://abacusbio.onlinesurveys.ac.uk/ge_consumerwtp_v2

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