



All-Party Parliamentary Group on Science and Technology in Agriculture

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Nuffield Council on Bioethics must revisit its report on genome editing in farmed animals, say leading scientists, vets, farmers and breeders

A coalition of leading scientists, vets, farmers and breeders are calling on the Nuffield Council on Bioethics to revise and update its 2021 report on the ethics of genome editing in farmed animals, warning that excessive regulation of the technology could stifle major opportunities to improve animal health and welfare outcomes.

In a letter sent on behalf the All-Party Parliamentary Group on Science & Technology in Agriculture, distinguished veterinarian Professor the Lord Trees and veteran farming champion Lord Curry of Kirkharle challenge the Nuffield report's characterisation of the modern food production system as 'morally indefensible and unsustainable', citing evidence of significant and ongoing improvements in livestock breeding and welfare standards, driven by science.

They also warn of the report's disproportionately negative impact on the political and public debate surrounding the use of genome editing in farmed animal breeding, and urge Nuffield to take greater account of the ethical implications of not embracing a technology with the potential to deliver solutions to previously intractable disease problems.

Significantly, the letter has been signed by many leading organisations and individuals across the scientific, veterinary, breeding, farming and input supply sectors. These include two members of the original steering group behind the Nuffield report, Roslin Institute director Professor Bruce Whitelaw, and NFU chief science adviser Dr Helen Ferrier.

"While all the evidence indicates that that the direction of travel for animal welfare is positive and improving, for example in terms of stocking densities, antibiotic use, live transport, housing conditions, biosecurity and training, the Nuffield report conveys a misleading impression that animal welfare standards on Britain's farms are poor and deteriorating, and that genome editing will be used by livestock scientists and breeders to exacerbate or accelerate those welfare problems," said Lord Trees.

"This is simply not supported by the evidence of how these new technologies are being used in practice. UK-based research is at the forefront of genetic advances which could help alleviate serious animal welfare problems caused by diseases such as Porcine Reproductive and Respiratory Disease (PRRS), Avian Influenza and African Swine Fever."

"Around the world, new gene editing research breakthroughs are emerging on a near weekly basis which could help drive further health and welfare gains in animal agriculture, including polled cattle, offering a major welfare benefit by avoiding the de-horning process, hens that lay eggs from which only female chicks hatch, potentially preventing the slaughter of billions of day-old male chicks each year, and cattle with resistance to the deadly and highly infectious bovine viral diarrhoea (BVD) virus," he said.

The letter also challenges the Nuffield report's outdated portrayal of conventional breeding as a major cause of poor welfare outcomes, and points to recent peer-reviewed evidence documenting significant long-term improvements in key welfare criteria, such as birth weight and piglet survival rates in pigs, leg strength and cardiovascular function in poultry, which have been delivered as a direct result of more balanced modern breeding programmes.

Importantly, these up-to-date studies emphasise that the rate of improvement has been most marked over the past 10 years, supported by an improved scientific understanding of animal biology, genomics and genetic function.

"The original Nuffield report may now be over two years old, but it is still being cited as an authoritative point of reference on the ethical considerations of genome editing in farmed animals. It therefore continues to mislead the public debate in relation to animal welfare standards on UK farms, in relation to the welfare objectives and outcomes of modern breeding programmes, and in relation to the prospective applications of genome editing techniques in farmed animals," said Lord Curry.

"We would strongly urge the Nuffield Council on Bioethics to update and revise its report to reflect recent positive developments in farmed animal breeding and welfare outcomes, as well as to take greater account of the ethical implications of adopting a disproportionately restrictive approach to the future regulation of genome editing in animals."

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Notes

A copy of the letter sent by Lord Trees and Lord Curry to Danielle Hamm, director of the Nuffield Council on Bioethics, is available on the APPGSTA website [here](#).

The All-Party Parliamentary Group on Science and Technology in Agriculture exists to promote debate among politicians and other stakeholders on the value and role of scientific innovation in UK agriculture. The Group works to ensure that the Government's support for agri-science is maintained and strengthened, that the regulatory environment is evidence-based and enabling, and that the contribution of modern agriculture to our society, economy and environment is valued and understood as widely as possible.

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