Quantifying public attitudes towards consumption of meat produced from genome edited animals

T.W.D. Kirk[1], J. Crowley[1], D. Martin-Collado[2] and C.B.A. Whitelaw[3]
[1]AbacusBio International Ltd., Roslin Innovation Centre, Easter Bush, Midlothian, EH25 9RG, United Kingdom, [2]CITA-Aragon, Avenida Montañana, 930, 50059, Zaragoza, Spain, [3]The Roslin Institute, University of Edinburgh, Easter Bush, Midlothian, EH25 9RG, United Kingdom; jcrowley@abacusbio.co.uk

Novel gene editing technologies offer exciting new opportunities not only to increase the productivity of agriculture, but also to tackle infectious diseases while minimising environmental impact. Thus, gene editing offers a potential solution to several sustainability and food security challenges. Gene editing is being regulated in different ways in different countries, its safety often questioned, and the moral aspects of use in the human food chain regularly politicised. These factors all create controversy and polarised public views, which are not always well informed or quantified. Previous research has focused on public acceptance of gene editing in plants, not animals. Given the potential positive impact of the technology on livestock production, it is important that researchers and potential users understand the level of public acceptance of gene editing animals for the human food chain. Arguably, acceptance of the technology outside the research world is the single largest barrier to commercialisation. We conducted a survey of over 1000 participants to quantify attitudes towards the use of gene edited animals in the human food chain. To gauge consumer's willingness to pay for gene edited meat (relative to 'regular' meat), respondents were asked to choose their preferred option between regular meat products and gene edited meat products at various price levels. Respondents were then asked the same question, but this time specific benefits relating to gene editing were highlighted. The potential characteristics of gene edited meat which were highlighted included improved environmental, health, and animal welfare benefits. Different consumer group's willingness to pay for gene edited meat, both with and without the characteristics described, were compared to the group's attitude towards both gene editing and traditional GMOs.

Farm and abattoir staff opinion regarding pig production systems

D.L. Teixeira[1], L.C. Salazar[2], P. Carrasco[1] and M.J. Hötzel[3]
[1]Universidad de O'Higgins, Instituto de Ciencias Agronómicas y Veterinarias, San Fernando, 00000, Chile, [2]University of Edinburgh, College of Veterinary Medicine, Edinburgh, EH259RG, United Kingdom, [3]Universidade Federal de Santa Catarina, Laboratório de Etologia Aplicada, Florianópolis, 88034, Brazil; dadaylt@hotmail.com

There is growing interest in the use of ante- (AM) and post-mortem (PM) inspection for the detection of animal welfare outcomes. Thus, it is important to understand the views of people directly associated with the pig industry towards the use of such tool. Staff members were recruited at one farm (n=124) and one abattoir (n=106). All participants filled the same survey, which asked their perception about prevalence of tail and ear lesions and severe lameness of pigs on their workplace, what they considered to be the main causes of these conditions, and if they considered that they can be detected at AM and PM inspections. In general, 48% of participants considered the prevalence of tail lesion, ear lesions and severe lameness of pigs to be low at their workplace. Participants considered that these conditions can be detected at AM (77%) and PM (53%) inspections. Density (11.7%), management (7.4%), lack of environmental enrichment (5.2%) and number of pens (4.3%) were considered the main causes of tail lesions. Density (12.7%), management (7.5%), diet (4.8%) and use of antibiotics (3.1%) were considered the main causes of ear lesion. Floor type (16.2%), management (15.7%), density (7.4%) and number of pens (3.9%) were considered the main causes of severe lameness in pigs. Considering the scientific evidence, the findings from this study show that staff members from the pig farm and the abattoir are well informed about these conditions. Therefore, being informed about meat inspection outcome could benefit animal health and welfare management plans on pig farms.