

Response to Committee on Animal Health and Welfare on animal cloning and its potential impact on animal health and welfare.

Prepared by:

Professor Mark Rogers (UCD Biology and Environmental Science)

Professor Michael Doherty (UCD Veterinary Sciences)

Dr Bernadette Earley (Teagasc, Grange, Beef Research Centre, Co. Meath)

BACKGROUND:

The Farm Animal Welfare Advisory Council (FAWAC) requested scientific advice from the Scientific Advisory Council for Animal Health and Welfare (SACAHW) in relation to animal cloning^[1]. Compassion in World Farming (CIWF) presented a paper to FAWAC and asked that they advise against this practice.

FAWAC requested that the SACAHW address the following questions in relation to animal cloning and the recent report of the European Food Safety Authority (EFSA) on the subject.

1. Is the EFSA Report based on valid scientific evidence?
2. Can you please advise as to what dangers, if any, are posed by animal cloning.
3. Are there animal welfare implications for this practice?

In considering the questions posed by FAWAC, the committee reviewed the specific documentation,

Scientific Opinion of the Scientific Committee on a request from the European Commission on Food Safety, Animal Health and Welfare and Environmental Impact of Animals derived from Cloning by Somatic Cell Nucleus Transfer (SCNT) and their Offspring and Products Obtained from those Animals. The EFSA Journal (2008) 767, 1-49 referred to by the FAWAC request.

[1] By definition, the term 'clone' is used to describe an animal born using somatic cell nuclear transfer (SCNT) where the nucleus of an unfertilised oocyte is replaced by the nucleus of a somatic cell derived from fetal or adult tissue, and the resultant 'embryo' is then activated to develop without fertilisation.

In addition the committee reviewed the EFSA update

Statement of EFSA prepared by the Scientific Committee and Advisory Forum Unit on Further Advice on the Implications of Animal Cloning (SCNT). The EFSA Journal (2009) RN 319, 1-15

The committee also undertook a brief review of the current scientific literature to determine if any additional evidence had emerged since the publication from EFSA (see appendix).

The committee noted that there is currently no cloning of animals of economic importance being undertaken in Ireland.

Question 1: Is the EFSA Report based on valid scientific evidence?

- •The EFSA report represents the considered opinion of a group of established experts following a comprehensive review of the literature and wide consultation process and the report is based on valid scientific evidence, though as the report states, this is a relatively new field so that the relevant scientific knowledge may be limited. EFSA has committed to keeping this area under review.
- •The Federation of Veterinarians of Europe (FVE) in their review on animal cloning come to similar conclusions as EFSA.
- •The committee undertook a review of current scientific literature and noted some additional work in the area. However, this work did not require a significant review of the conclusions of the EFSA report.

Question 2: Can you please advise as to what dangers, if any, are posed by animal cloning.

- •The EFSA report and subsequent Statement of further advice highlight a number of areas where consideration of potential dangers in this technology may be warranted and presents the current state of knowledge of these risks. In relation to issues of Food safety, the EFSA opinion concludes that

“based on current knowledge, and considering the fact that the primary DNA sequence is unchanged in clones, there is no indication that differences exist in terms of food safety between food products from healthy cattle and pig clones and their progeny, compared with those from healthy conventionally-bred animals.”

The committee concurs with this assessment but appreciates that new scientific knowledge **may** emerge to alter this view and notes again that EFSA has indicated that it will monitor this area and update its opinion when appropriate.

Question 3: Are there animal welfare implications for this practice?

- The committee noted that the EFSA report highlights areas of animal welfare concern that need to be monitored closely and notes that the FVE review of animal cloning identified similar animal welfare concerns.
- In particular, the EFSA report concludes that ‘the mortality rate of clones is considerably higher than in sexually produced animals’ and that ‘reduced welfare of clones can be assumed to occur as a consequence of adverse health outcomes’

CONCLUSION:

The committee would be of the opinion that EFSA was an appropriate body to provide a scientific opinion on the food safety, animal welfare and environmental impact of animals derived by cloning and to keep this matter under review. There is no evidence of any activity in this area of animal cloning using somatic cell nuclear transfer within Ireland.

APPENDIX:

1. Scientific Opinion of the Scientific Committee on a request from the European Commission on Food Safety, Animal Health and Welfare and Environmental Impact of Animals derived from Cloning by Somatic Cell Nucleus Transfer (SCNT) and their Offspring and Products Obtained from those Animals. *The EFSA Journal* (2008) 767, 1-49
2. Statement of EFSA prepared by the Scientific Committee and Advisory Forum Unit on Further Advice on the Implications of Animal Cloning (SCNT). *The EFSA Journal* (2009) RN 319, 1-15
3. FVE Review Paper – Animal Cloning Federation of Veterinarians of Europe (2009) FVE/09/pos/001
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