

Clones in the food chain

They are there, but we don't know where

A briefing for media and consumers

December 2008

British companies are failing to keep pace with the rapid development of cloning technology and the release of the products from clones and their offspring into the food chain.

There is no systematic testing or labelling for food from clones in the EU or the UK since the European Food Safety Authority called for more research earlier this year. Yet following the US Food and Drug Administration (FDA) finding in January 2008 that milk and meat from cloned animals and their offspring is "as safe to eat as food from conventionally bred animals", products from clones and their offspring have already entered the food chain both in the US and the EU.

GM Freeze wrote to 88 food manufacturers, retailers and others in 2008 asking them to outline their policy on using products from clones and their offspring. Of the 30 who responded, 7 do not reject these products or do not have a policy. More troubling, many companies who rely on animal products for their core business (eg, McDonald's, Burger King, Dairy Crest and Robert Wiseman Dairies) did not respond, so we have no way of knowing what goes into their products. Furthermore, several policies we were informed of did not appear to be sufficiently robust: some do not appear to prevent sale of eggs or milk from clones (Tesco) and some appear to leave the door open to changes in the future that would permit sale of food from clones (eg, Whitbread, Road Chef). Many do not explicitly exclude the use of products from the offspring of clones.ⁱ

GM Freeze believes that, given the current situation, the painstaking nature of the wording of corporate policies and the usually eager promotion of positive policies, UK food retailers are simply not ruling out selling food from clones and their offspring. Those who do have clear policies against cloning include Marks and Spencer, Musgrave Retail (Budgens, Londis, etc), Northern Foods (Goodfella's pizza, Fox's biscuits, ready meals and sandwiches for several supermarkets, etc), Premier Foods (Hovis, Mr Kipling, Quorn, etc), Sainsbury's and Waitrose.

The introduction of unlabelled food in the US food supply (see Background below) and the untraced sale of the offspring of clones in the UK is a significant threat to the ability of consumers to avoid such products, and for EU and UK regulators to monitor where they are or what impacts they may have on health. Lessons learned about the way unlabelled GM foods from the US contaminate supplies worldwide should have led to a faster, more robust response from regulators. The European Food Safety Authority (EFSA) says some products from clones are safe despite the rejection of cloning by the European Group on Ethics of science and new technologies, and the UK Food Standards Agency (FSA) still does not have a policy. This leaves consumers who do not wish to support this unacceptable technology in an impossible position.

GM Freeze is calling on all UK companies making or selling foods or other products that could contain products from clones or their offspring to urgently develop policies stating they will not use them. Companies with weak or patchy policies should update them in line with the wishes of 84% of Europeans who believe we don't have enough experience about the long-term health and safety effects of using cloned animals for food.ⁱⁱ

Background

What's wrong with cloning

Animal welfare

Most farmed clones (ie, born outside a lab) die - more than 90% of cloning attempts fail to produce viable offspring.ⁱⁱⁱ

Those that do survive reportedly suffer a wide variety of deformities and health problems including:

large babies that often die from complications at birth or kill the mother; placental, lung, kidney and cardiovascular problems; brain, liver, joint and immune dysfunction; enlarged tongues; squashed faces; intestinal blockages and diabetes.^{iv}

Other evidence on cloning includes:

- a study showing 27 out of 40 cloned piglets died in the period shortly before or after birth from a variety of health problems including diarrhoea, meningitis and heart abnormalities.
- a study showing a mean of 30 *per cent* of calf clones died before reaching six months of age due to a wide range of pathological causes, including respiratory failure, abnormal kidney development and liver disease.
- a study in 2007 summarising five years of commercial experience of cloning cattle in three countries showed that on average, 42 *per cent* of cattle clones died between delivery and 150 days of life.^v
- A 2002 study showing 23 *per cent* were unhealthy - three times the percentage among natural-born offspring.^{vi}

The Human Society of the US says, "Deaths and deformities in cloned animals are the norm, not the exception, and these studies make plain once again that these creatures are suffering terribly in the process."^{vii}

Environmental risks

A 2002 National Academy of Science report said cloned animals might pose an irreversible environmental risk that the regulatory structure is not equipped to handle.^{viii}

GM Freeze is very concerned about the lack of research into the possible environmental impacts of cloning animals. Of major concern would be the escape into the wild of cloned animals that were able to out compete their wild counterparts. Cloned GM farmed fish would be a particular concern. If they were larger and more powerful they might be able to compete more strongly for spawning sites thus preventing wild fish from reproducing. Escapes from fish farms are regularly reported in Scotland, for example at least 15,000 salmon parr escaped into Loch Shiel in the West of Scotland in 2007.^{ix} Subsequently, the cloned fish may turn out to be not well adapted to certain aspects of life in the wild and die out (eg, susceptible to disease or fungus). At this point the gene pool would already be contaminated and wild fish reduced in number because of being displaced from spawning grounds by larger cloned fish. Risks from escapes of cloned mammals and birds would also need to be thoroughly examined before commercial scale cloning is approved.^x

Agricultural risks

Cloning also represents a risk to sustainable agriculture. The selection and cloning of particular individuals for cloning could lead to a loss of genetic diversity and leave animals potentially weaker in resisting disease. The maintenance of genetic diversity within the breeds of farm animals is vital for the health of the breed and the long-term viability of livestock and poultry farming. GM Freeze believes that the conservation of generic resources should be a legal requirement for all those involved in cloning.^{xi}

What's wrong with the response to cloning

Regulation in the US

In January 2008 the US Food and Drug Administration (FDA) issued its opinion that milk and meat from cloned animals and their offspring is "as safe to eat as food from conventionally bred animals". FDA guidance to the food industry "does not recommend any special measures" (like labels) for products from cow, pig or goat clones or their offspring in the food chain, but suggests that due to "insufficient information" on other species, like sheep, such clones should not be used for food, but their offspring "are suitable to enter the food and feed supply."^{xii}

This guidance became operational before the Federal Cloned Food Labelling Act (requiring labels reading "This product is from a cloned animal or its progeny") was voted on in the Senate (it was referred to committee in January 2007 (with an identical bill in the House referred to committee in March 2007 - both remain there^{xiii}), so clones were free to enter the food chain unlabelled, despite a 2007 nationwide poll by the Consumers Union finding that 89% of Americans want cloned foods to be labelled.^{xiv}

Following the FDA findings, the US Department of Agriculture (USDA) asked farmers to observe a "voluntary moratorium", probably for a few years, on placing their clones on the market, fearing impacts on both domestic and export markets. The move effectively mixed the messages that while safe to eat, products from clones may have other dangers without "allowing the time for an orderly transition to occur."^{xv}

As early as January 2008 major US cattle cloning companies acknowledged that they have not kept track of how many offspring have already entered the food chain. One specialist cattleman said, "This is a fairy tale that this technology is not being used and is not already in the food chain... Anyone who tells you otherwise either doesn't know what they're talking about, or they're not being honest."^{xvi}

By June the FDA said they cannot be sure how much food from clones is in the food chain because they have no means of distinguishing such products from conventional ones. Finger printing technology has been developed to find meat affected by Mad Cow disease, and is used by Tesco in Ireland to test their beef.^{xvii} The company concerned say they already certifies more than three-quarters of organic beef sold by Ireland's three largest retailers and the costs of identifying meat or milk from clones is very low and has an accuracy of 1 in 10 million.^{xviii} The only thing preventing this from happening is legislation requiring it.

The food industry is said to be developing a purely voluntary tracking systems for clones, but not their offspring.^{xix} There are no official controls to prevent such unlabelled clones or their products being exported. The UK imported 2,558 tons of US meat in the year August 2000-July 2001.^{xx}

We may not need to wait of US imports, however. In March 2008 the first two of eight cattle born from a clone in the UK (Dundee Paradise and Dundee Paratrooper, whose mother was a clone of a prize milk-producing Holstein) was sold at public auction near Bristol with the intention of breeding them on.^{xxi}

Regulation in the EU and UK

In July 2008 the European Food Safety Authority (EFSA), after a study requested by the EC and prompted by moves to approve cloned products in the US, called for more research before any final decision on marketing in the EU is made.^{xxii} The Chair of EFSA's Scientific Committee said:

"It is clear there are significant animal health and welfare issues for surrogate mothers and clones that can be more frequent and severe than for conventionally bred animals... For cattle and pigs, food safety concerns are considered unlikely. But we must acknowledge that the evidence base is still small. We would like to have a broader data base and we need further clarification."

Another EFSA member asked about the safety of clones as food said, "There are possible concerns ... there is an impact of animal health and welfare on food safety. We need more data."^{xxiii}

The recommendations came as a surprise because EFSA's January 2008 draft opinion concluded, "Based on current knowledge there is no expectation that clones or their progeny would introduce any new food safety risks compared with conventionally bred animals," and that their offspring (the animals most likely to enter the food chain, as at US\$20,000 or more per head, the clones themselves are too expensive to eat) were to be considered fully normal.^{xxiv}

EFSA may have been influenced by findings released in January 2008 by the European Group on

Ethics of science and new technologies (EGE). Asked to give an opinion by the EC, EGE found after a study that:

“Considering the current level of suffering and health problems of surrogate dams and animal clones, the EGE has doubts as to whether cloning animals for food supply is ethically justified. Whether this applies also to progeny is open to further scientific research. At present, the EGE does not see convincing arguments to justify the production of food from clones and their offspring.”^{xxv}

EFSA did, however, say that there is no clear safety or environmental risks from clones and found that milk and meat from cloned cows and pigs was safe, raising allegations of “sitting on the fence” from the European Public Health Alliance and others.^{xxvi}

In June 2008, the UK’s Food Standards Agency (FSA) does not have a policy. They issued the findings of its research into “the views of the UK public” on cloning and the food chain, key findings of which included:

- food safety: “There was a major mismatch between the methods used by regulatory authorities to assess food safety and the public’s perception of what is needed. Participants wanted to see methods for assessing food safety that were similar to the approach used in clinical drugs trials.”
- animal welfare standards: as participants learned more about how cloning works, their concerns about animal welfare increased,

Furthermore, “Participants struggled to identify any tangible consumer benefits and were concerned that the main motive would be a financial one to biotech companies, livestock breeders, farmers or food retailers.”^{xxvii}

Defra has so far done nothing to prevent food from clones or their offspring reaching consumers.

ⁱ See www.gmfreeze.org/uploads/94F_clone_chart_final.pdf

ⁱⁱ See <http://europa.eu/rapid/pressReleasesAction.do?reference=IP/08/1478&format=HTML&aged=0&language=EN>

ⁱⁱⁱ See www.ornl.gov/sci/techresources/Human_Genome/elsi/cloning.shtml#risks

^{iv} See “Food Fight - Clones are In, Consumers Won’t Know”, 15 January 2008, www.injuryboard.com/national-news/food-fight--clones-are-in-consumers-won%E2%80%99t-know.aspx?googleid=29074 and “A Day Late and a Dollar Short, Osagie Obasogie”, *Biopolitical Times*, 22 February 2008 <http://biopoliticaltimes.org/article.php?id=3938>

^v For all three see www.ciwf.org.uk/news/factory_farming/europe_agrees_cloning_bad_news.aspx

^{vi} See www.ft.com/cms/s/0/e08c5aec-4185-11dd-9661-0000779fd2ac.html

^{vii} See www.hsus.org/press_and_publications/press_releases/cloned_animals_suffer_death_deformities_according_to_leading_journal_articles.html

^{viii} See injuryboard.com *op cit*

^{ix} <http://news.scotsman.com/fishfarmingindustry/The-15000-that-got-away.3470344.jp>

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- ^x See www.gmfreeze.org/uploads/cloning_consult_response.pdf
- ^{xi} *Ibid* See www.gmfreeze.org/uploads/cloning_consult_response.pdf
- ^{xii} See www.fda.gov/bbs/topics/NEWS/2008/NEW01776.html
- ^{xiii} See www.opencongress.org/bill/110-s414/show and www.govtrack.us/congress/bill.xpd?bill=h110-992
- ^{xiv} See www.centerforfoodsafety.org/CA_CloningPR9_14_07.cfm
- ^{xv} "USDA Recommends That Food From Clones Stay Off the Market", *Washington Post*, 16 January 2008
www.washingtonpost.com/wp-dyn/content/article/2008/01/15/AR2008011501555_2.html
- ^{xvi} *Ibid* "USDA Recommends That Food From Clones Stay Off the Market", *Washington Post*, 16 January 2008
www.washingtonpost.com/wp-dyn/content/article/2008/01/15/AR2008011501555_2.html
- ^{xvii} See http://findarticles.com/p/articles/mi_hb5570/is_ /ai_n23579462
- ^{xviii} "Scientists Find Way to Scan for Cloned Meat", *Toronto Star*, 15 February 2008
www.thestar.com/sciencetech/Science/article/303870
- ^{xix} "US consumers face advent of cloned food", *Financial Times*, 24 June 2008,
www.ft.com/cms/s/0/e08c5aec-4185-11dd-9661-0000779fd2ac.html , and "Animal Clones' Offspring Are in Food Supply With Removal Of Voluntary Ban, Meat, Milk on Rise", *Wall Street Journal*, 2 September 2008,
<http://online.wsj.com/article/SB122031044800588585.html> [subscription needed])
- ^{xx} See www.parliament.thestationeryoffice.co.uk/pa/cm200102/cmhansrd/vo011023/text/11023w14.htm
- ^{xxi} "The clones are coming - to a supermarket near you", *The Observer*, 2 March 2008,
www.guardian.co.uk/science/2008/mar/02/foodtech.food
- ^{xxii} See www.efsa.europa.eu/EFSA/efsa_locale-1178620753812_1211902019540.htm
- ^{xxiii} "Safety of cloned animal products uncertain: EU agency", 24 July 24 2008,
<http://in.reuters.com/article/scienceNews/idINL2310023020080724?pageNumber=2&virtualBrandChannel=0>
- ^{xxiv} "Animal Clones' Offspring Are in Food Supply With Removal Of Voluntary Ban, Meat, Milk on Rise", *Wall Street Journal*, 2 September 2008, <http://online.wsj.com/article/SB122031044800588585.html> [subscription needed] and "Food From Clones Safe, E.U. Draft Says Similar Conclusion Expected From FDA", *Washington Post*, 12 January 2008
- ^{xxv} See http://ec.europa.eu/european_group_ethics/avis/index_en.htm
- ^{xxvi} See www.eph.org/a/3172
- ^{xxvii} See www.food.gov.uk/news/newsarchive/2008/jun/clone