

Environmental, economic and safety case for the review of the ban on feeding meat-containing surplus food to omnivores

Summary of existing evidence and research activity. June 2017.

The Pig Idea campaign encourages the feeding to pigs and chickens of heat-treated surplus food no longer fit for human consumption to reduce the cost of pig feed for EU farmers and reduce demand for human-edible cereals currently used in pig feed and unsustainable feed protein such as Amazon soya and fishmeal.

Land use reductions from replacing conventional feed with heat-treated waste-based feed

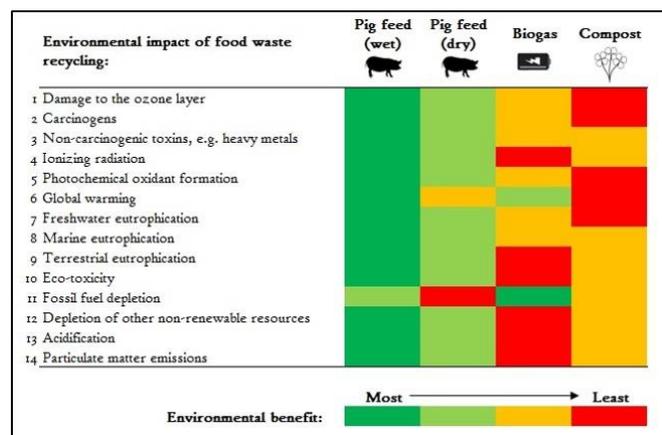
- Currently 3 million tonnes of former foodstuffs, such as bakery and confectionary foods that cannot be sold, are recycled into animal feedⁱ. It is estimated a further 2-4 million tonnes of former foodstuffs could be fed to livestock, reducing land use for feed crops by 1.2%ⁱⁱ.
- If the EU were to authorise the feeding of heat-treated meat-containing surplus food to omnivorous non-ruminants, such as pigs and chickens, and this heat-treated EU food waste was recycled into animal feed at rates similar to current practice in Japan and South Korea, “the land requirement of EU pork could shrink by 1.8 million hectares. This represents a 21.5% reduction in the current land use of industrial EU pork production”ⁱⁱⁱ.
- Feeding meat-containing surplus to pigs also could “reduce demand for up to 268,000 hectares of soybean production, which could “mitigate ca. 2.6% of the forecast expansion of soybean, reducing pressure on high-biodiversity tropical biomes accordingly”^{iv}.

Economic and animal welfare case

- In December 2015, feed costs in 7 EU pig producing countries made up between 56% and 69% of total production costs^v. Feed costs are one of the reasons EU pig farming is in crisis^{vi}. In Japan and South-Korea, however, industrial food-to-feed recycling plants deliver safe waste-based feed at 40-60% of the cost of conventional feed.^{vii}
- The use of food waste as animal feed as a percentage of the feed market has consistently grown in both countries (by 125% in Japan from 2003–2013, and by 35% in South Korea from 2001–06)^{viii}.
- Reducing cost pressures on EU pig farmers may help to improve animal welfare and reduce the overuse of antibiotics as the cost pressures driving the intensification of farming decrease.

Advantages of animal feed over anaerobic digestion

Using food waste as animal feed scores better on 12 out of 14 environmental (e.g. eutrophication and eco-toxicity) and health (e.g. carcinogens) indicators than anaerobic digestion or composting^{ix}. The calculations in the study were based on the current UK energy mix for the energy needed to render the food waste safe. If renewable energy was used, feed could potentially beat biogas and compost on all indicators.



Current legislation and safety risk management

- In the United States heat-treated meat-containing surplus food is fed to pigs. The practice is common for example in Las Vegas where large buffet-style restaurants and pig farms incorporate leftovers in their business model^x. For more information see the Harvard guide on feeding Leftovers to Livestock^{xi}. The US has been Foot and Mouth (“FMD”) free since 1929^{xii} and there has been no outbreak linked to the use of catering and retail waste in Japan^{xiii}.
- However, the disastrous 2001 FMD epidemic in the UK shows the critical importance of robust legislation and its effective enforcement. By robust, we do not mean an all-out ban on the feeding of any meat-containing by-products, surplus or waste food streams to all livestock. This may have been appropriate in the short term to address a disaster, but ten years after the ban, The Pig Idea campaign and others view this as an unnecessarily heavy-handed approach^{xiv}.
- Spanish authorities have confirmed to Feedback that the ban is not enforced with smallholders who breed pigs for domestic consumption only. We have reports of a similar situation in France, and even in the UK where there is a policy of strong enforcement, a survey of 313 smallholder farms found that 24% of smallholders fed uncooked household food waste to their pigs^{xv}.

TSE and intra-species recycling: EC Scientific Steering Committee (“SSC”) Opinion, 1999^{xvi}

- The EC SSC acknowledges that intra-species recycling used to be common practice in farm animals, especially pigs, poultry and fish. It is known that opportunistic cannibalism of deceased animals is commonplace in wild boar. The EC SSC also states that, “no scientific evidence exists to demonstrate the natural occurrence of Transmissible Spongiform Encephalopathy (“TSE”) in farmed pigs, poultry and fish, which may create a basis for an intra-species progression of a TSE infection due to intra-species recycling”. Chickens and pigs have never had prion disease, the only way researchers have made it happen in experiments is through injection in the brain, which is biologically impossible.^{xvii}
- In spite of the EC SSC opinion, intra-species recycling in non-ruminants has been prohibited. Given that the EC SCC opinion on intra-species recycling is 18 years old, and given the environmental and economic case described above, as well as EC commitments to reducing food waste under the Circular Economy package, it is important that a new scientific opinion is established. A new opinion would need to re-assess the risk in light of any new evidence, leaving risk-managers to consider how the precautionary principle should be applied to maximally reduce feed safety risks while considering the food security and climate risks associated with not feeding all possible surplus food to non-ruminants.

Research to support the assessment and optimal management of risk

- In 2016, the UK’s Animal and Plant Health Agency (APHA), in the Department for the Environment, Food and Rural Affairs (DEFRA) released their study on the risks of feeding food waste to non-ruminants^{xviii}. The study confirms the effectiveness of heat-treatment to inactivate dangerous pathogens in meat-containing surplus food, but points to the risks from potential errors in transport, storage or manufacturing that could allow for the re-introduction of pathogens through cross-contamination between treated and untreated product.
- In the framework of the Horizon 2020 funded REFRESH programme, Feedback is working with microbiologists at Wageningen University to further assess the risks of cross-contamination and propose risk management measures. We are also working to obtain a translation of the Japanese government risk management and assessment strategies, to help inform EU policy recommendations.
- Building on the DEFRA study, Feedback is bringing together academic risk experts to review the Ban on Feeding Meat to Omnivores (BFMO) by considering the specific animal health risks alongside the wider economic, social and environmental risks of not using all possible food waste for animal feed.

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ⁱ EFFPA, 2017. European Former Foodstuff Processors Association. <http://www.effpa.eu/> Accessed 17.01.2017

ⁱⁱ zu Ermgassen, E.K., Phalan, B., Green, R.E. and Balmford, A., 2016. Reducing the land use of EU pork production: where there's swill, there's a way. *Food Policy*, 58, pp.35-48.

ⁱⁱⁱ Ibid.

^{iv} Ibid.

^v <http://pork.ahdb.org.uk/prices-stats/costings-herd-performance/eu-cost-of-production/>

^{vi} <http://feedbackglobal.org/2016/05/starving-pigs-and-bankrupt-farmers-how-food-waste-can-help/>

See also JOINT STATEMENT OF THE MINISTERS OF AGRICULTURE OF THE CZECH REPUBLIC, POLAND, HUNGARY, SLOVAKIA, AUSTRIA, BULGARIA, ROMANIA AND SLOVENIA ON THE SITUATION ON COMMODITY MARKETS. Prague, 29th April 2016

^{vii} Zu Ermgassen (2016). Data provided by Japan Food Ecology Centre. <http://www.japan-fec.co.jp/english/index.html>

^{viii} Ibid.

^{ix} Salemdeeb, Ramy, et al. (2016) "Environmental and health impacts of using food waste as animal feed: a comparative analysis of food waste management options." *Journal of Cleaner Production*.

^x <https://www.eater.com/2017/5/16/15639952/las-vegas-buffet-waste-pigs-rc-farms>

^{xi} Broad Leib, E., Balkus, O., Rice, C., Maley, M., Taneja, R., Cheng, R., Civita, N., Alvoid, T. (2016) *Leftovers for Livestock: A Legal Guide for Using Food Scraps as Animal Feed*. Harvard Food Law and Policy Clinic, Food Recovery Project and University of Arkansas School of Law.

http://www.chlpi.org/wp-content/uploads/2013/12/Leftovers-for-Livestock_A-Legal-Guide_August-2016.pdf

^{xii} <http://www.footandmouthdiseaseinfo.org/>

^{xiii} Zu Ermgassen (2016)

^{xiv} Danby, G. (2015) *The Pig Swill Ban – A Sledgehammer to Crack a Nut?* Thesis published

online https://www.academia.edu/10739293/The_Pig_Swill_Ban_A_Sledgehammer_to_Crack_a_Nut

Zu Ermgassen (2016). Stuart, Tristram (2009) *Waste: Uncovering the global food scandal*. Penguin.

^{xv} Gillespie, A., Grove-White, D., Williams, H., 2015. Should cattle veterinarians be concerned about disease risk from smallholder and pet pigs? Presented at the Middle European Buiatric Congress 10th ECBHM Symposium, Maribor, Slovenia.

^{xvi} Intra-Species Recycling - Opinion on: the risk born by recycling animal by-products as feed with regard to propagating TSE in non-ruminant farmed animals. Adopted on 17 September 1999

https://ec.europa.eu/food/sites/food/files/safety/docs/sci-com_ssc_out60_en.pdf

^{xvii} Wells, Gerald AH, et al. "Studies of the transmissibility of the agent of bovine spongiform encephalopathy to pigs." *Journal of General Virology* 84.4 (2003): 1021-1031.

^{xviii} Adkin, A., Harris, D. C., Reaney, S., Dewé, T., Hill, A., Crooke, H., Drew, T., Kelly, L., (2014) *Assessment of risk management measures to reduce the exotic disease risk from the feeding of processed catering waste and certain other food waste to non-ruminants (Version 2.7)*. Department of Epidemiological Science, Animal & Plant Health Agency, Department for Environment, Food and Rural Affairs (DEFRA).

<http://randd.defra.gov.uk/Default.aspx?Menu=Menu&Module=More&Location=None&ProjectID=19239&FromSearch=Y&Publisher=1&SearchText=catering&SortString=ProjectCode&SortOrder=Asc&Paging=10#Description>