

National Food Strategy- Animal Rebellion References and Evidence:

Ref 1 / UK farm system is broken': Report pushes 'new deal' post-Brexit:

https://www.farminguk.com/news/-uk-farm-system-is-broken-report-pushes-new-deal-post-brexit_46621.html

Beyond 2020 - New farm policy:

Sustain presents principles and policies that would deliver better food and farming when we leave the European Common Agriculture Policy.

https://www.sustainweb.org/publications/beyond_2020_new_farm_policy/

Global food system is broken, say world's science academies:

Radical overhaul in farming and consumption, with less meat eating, needed to avoid hunger and climate catastrophe

Carrington, D. (2018, November 28). Global food system is broken, say world's science academies. Retrieved from

<https://www.theguardian.com/environment/2018/nov/28/global-food-system-is-broken-say-world-s-science-academies>

Ref 2 / Anthropogenic climate change:

IPCC. Summary for Policymakers. In: Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty [Masson-Delmotte, V., P. Zhai, H.-O. Pörtner, D. Roberts, J. Skea, P.R. Shukla, A. Pirani, W. Moufouma-Okia, C. Péan, R. Pidcock, S. Connors, J.B.R. Matthews, Y. Chen, X. Zhou, M.I. Gomis, E. Lonnoy, T. Maycock, M. Tignor, and T. Waterfield (eds.)]. World Meteorological Organization, Geneva, Switzerland, 32 pp.2018.

Public concern over climate change:

Smith, M. (2019) Concern for the environment at record highs. [Online] YouGov. Available at: www.yougov.co.uk/topics/politics/articles-reports/2019/06/05/concern-environment-record-highs

Ref 3 / Animal agriculture as a leading cause of climate change: 66% is agricultural methane" and "about 33% of global methane emissions" come from livestock:

IPCC (Report). Special Report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems (SRCCL). April 27, 2019. p. 186. https://www.ipcc.ch/site/assets/uploads/2019/08/2c.-Chapter-2_FINAL.pdf

Pelletier N, Tyedmers P. **Forecasting potential global environmental costs of livestock production 2000–2050**: Proceedings of the National Academy of Sciences 2010;107:18371-4: <https://www.pnas.org/content/107/43/18371>

Herrero M, Henderson B, Havlik P, et al. **Greenhouse gas mitigation potentials in the livestock sector**: Nature Clim Change 2016: <https://abdn.pure.elsevier.com/en/publications/greenhouse-gas-mitigation-potentials-in-the-livestock-sector>

Biodiversity and the meat industry:

Machovina B, Feeley KJ, Ripple WJ. Biodiversity conservation: The key is reducing meat consumption. Science of The Total Environment 2015;536:419-31: <https://www.sciencedirect.com/science/article/pii/S0048969715303697>

In the UK, farming accounts for 83 percent of ammonia emissions that contribute to air pollution:

Rural Payments Agency (2017) Guide to Farming Ammonia Reduction Scheme. Rural Payments Agency. Available at: <https://www.gov.uk/government/publications/farming-ammonia-reduction-grant-scheme-claim-form-and-offer-terms/guide-to-farming-ammonia-reduction-grant-scheme>

Greenpeace concluded that "Global meat and dairy production and consumption must be cut in half by 2050 to avoid dangerous climate change and keep the Paris Agreement on track.":

Greenpeace International. (2019, October 15). Greenpeace calls for decrease in meat and dairy production and consumption for a healthier planet. Retrieved from <https://www.greenpeace.org/international/press/15111/greenpeace-calls-for-decrease-in-meat-and-dairy-production-and-consumption-for-a-healthier-planet/>. <https://www.greenpeace.org/international/press/15111/greenpeace-calls-for-decrease-in-meat-and-dairy-production-and-consumption-for-a-healthier-planet/>

A report from the Natural Resources Defense Council (NRDC) and the Clean Water Network "documents how animal waste from factory farms threatens human health and our nation's rivers. Most factory farms store animal waste in open lagoons as large as several football fields. Lagoons routinely burst, sending millions of gallons of manure into waterways and spreading microbes that can cause gastroenteritis, fevers, kidney failure, and death."

<https://www.nrdc.org/resources/cesspools-shame-how-factory-farm-lagoons-and-sprayfields-thr-eaten-environmental-and-public>

The World Wildlife Fund concluded that meat-based diets are the leading cause of species extinction:

Appetite for destruction. (n.d.). Retrieved from

<https://www.wwf.org.uk/updates/appetite-for-destruction>

It takes about 2500 gallons of water to produce 1lb of beef and 896 gallons of water to produce 1lb of cheese:

Water. (n.d.). Retrieved from

<https://www.ewg.org/meateatersguide/interactive-graphic/water/>

The destruction of wild habitat for farming, logging and development has resulted in the start of the 6th Mass Extinction of Life to occur in the Earth's four billion year history:

IPBES. 2019. Summary for policymakers of the global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. S. Díaz, J. Settele, E. S. Brondizio E.S., H. T. Ngo, M. Guèze, J. Agard, A. Arneth, P. Balvanera, K. A. Brauman, S. H. M. Butchart, K. M. A. Chan, L. A. Garibaldi, K. Ichii, J. Liu, S. M. Subramanian, G. F. Midgley, P. Miloslavich, Z. Molnár, D. Obura, A. Pfaff, S. Polasky, A. Purvis, J. Razzaque, B. Reyers, R. Roy Chowdhury, Y. J. Shin, I. J. Visseren-Hamakers, K. J. Willis, and C. N. Zayas (eds.). IPBES secretariat, Bonn, Germany. XX pages :

<https://www.ipbes.net/global-assessment-report-biodiversity-ecosystem-services>

One in four species is at risk of extinction. 40% amphibians, 34% conifers, 33% coral reefs, 31% sharks and rays, 27% (selected) crustaceans, 25% mammals, 14% birds. Only 30% of all birds on the planet are wild, 70% of all birds are farmed:

International Union for Conservation of Species (IUCN) states in its published Red List of threatened species: <https://www.iucnredlist.org>

Meat and dairy companies to surpass oil industry as the world's biggest polluters :

Institute for Agriculture and Trade Policy & GRAIN (July 2018) 'Emissions impossible: How big meat and dairy are heating up the planet' :

<https://www.grain.org/article/entries/5976-emissions-impossible-how-big-meat-and-dairy-are-heating-up-the-planet>

The contribution of cattle urine and dung to nitrous oxide emissions:

Chadwick DR, Cardenas LM, Dhanoa MS, et al. The contribution of cattle urine and dung to nitrous oxide emissions: Quantification of country specific emission factors and implications for national inventories. *Sci Total Environ*. 2018;635:607–617.:

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6024564>

Every meat eater on the planet is helping to fuel the Amazon forest fires

Lockwood, Alex (July 2019):

<https://www.independent.co.uk/voices/amazon-forest-fire-brazil-beef-meat-vegan-vegetarian-brazil-a9076236.html>

Ref 4 / UK greenhouse gas emissions: fast progress but not yet enough to meet future targets: Full Fact. (2019, June 21).

<https://fullfact.org/environment/uk-greenhouse-gas-emissions-fast-progress-not-yet-enough-meet-future-targets/>.

UK farming accounts for 11 percent of GHG emissions:

Department for Business, Energy and Industrial Strategy (2017) 2017 UK Greenhouse Gas Emissions. [Online] BEIS. Available at:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/776083/2017_Final_emissions_statistics_one_page_summary.pdf

UK action to curb greenhouse gas emissions is lagging behind what is needed to meet legally-binding emissions targets:

<https://www.theccc.org.uk/publication/reducing-uk-emissions-2019-progress-report-to-parliament/>

Ref 5 / Every year in the UK approximately 2.6 million cattle, 10 million pigs, 14.5 million sheep and lambs, 80 million fish and 950 million birds are slaughtered for human consumption:

<https://www.hsa.org.uk/faqs/general#n1>

<https://www.viva.org.uk/what-we-do/slaughter/slaughter-farmed-animals-uk>

FAO, 2018. FAOSTAT. Food and Agriculture Organization of the United Nations, Rome, Italy:

<http://www.fao.org/faostat/en/#home>

The Rise of the Mega-Farm:

Tesco, Sainsbury's, Morrisons, Asda, McDonalds, and Nando's source meat from megafarms. 1,700 intensive poultry and pig farms are licensed by the Environment Agency. The biggest house more than a million chickens, 20,000 pigs or 2,000 dairy cows. In Herefordshire, intensively-farmed animals outnumber the human population by

88 to one. Critics say factory farms blight communities and subject animals to prolonged distress. Behind the data lies fundamental debate about what we want to eat, and what price we are prepared to pay for it:

Wasley, A., & Davies, M. (2019, July 16). The rise of the "megafarm": How British meat is made. Retrieved from:

<https://www.thebureauinvestigates.com/stories/2017-07-17/megafarms-uk-intensive-farming-me-at>

Ref 6 / Animals are the main victims of history, and the treatment of domesticated animals in industrial farms is perhaps the worst crime in history:

Tens of billions of sentient beings, each with complex sensations and emotions, live and die on a production line:

Yuval Noah Harari (2015) 'Industrial farming is one of the worst crimes in history' :

<https://www.theguardian.com/books/2015/sep/25/industrial-farming-one-worst-crimes-history-ethical-question>

Animal Resistance to Oppression:

A cow set for a slaughterhouse has instead escaped, by ramming a fence and swimming to an island. The runaway bovine has sought sanctuary on the islands of Lake Nyskie in southern Poland for the past few weeks: Runaway cow escapes slaughterhouse to live on Polish island. (2018, February 19): <https://www.bbc.co.uk/news/world-europe-43112770>

“Animals consistently voice preferences and ask for freedom. They speak to us every day when they cry out in pain or try to move away from our prods, electrodes, knives, and stun guns. Animals tell us constantly that they want to be out of their cages, that they want to be reunited with their families, or that they don’t want to walk down the kill chute. Animals express themselves all the time, and many of us know it. If we didn’t, factory farms and slaughterhouses would not be designed to constrain any choices an animal might have. We deliberately have to choose not to hear when the lobster bangs on the walls from inside a pot of boiling water or when the hen who is past her egg-laying prime struggles against the human hands that enclose her legs and neck. We have to choose not to recognize the preference expressed when the fish spasms and gasps for oxygen in her last few minutes alive.”

Taylor, S. (2017). Beasts of burden: animal and disability liberation. New York: New Press.

Ref 7 / The Problem with Farming Animals:

New research suggests that the livestock industry is responsible for at least 37 percent of all GHG emissions. This new number more than doubles the United Nations' latest estimate of 14.5 percent:

Carter Nicholas, N. (2019, October 13). The Climate Crisis Secret. Retrieved from

<https://sentientmedia.org/the-climate-crisis-secret/>

The End of Animal Farming- How Scientists, Entrepreneurs, and Activists Are Building an Animal-Free Food:

Reese presents a practical vision of how technology and social change are creating a food system in which we no longer use animals to produce meat, dairy, or eggs. He places the issue of factory farming in the context of human progress and says that people are now aware of the giant environmental footprint of producing meat, and ethical problems with factory farms. It's becoming more practical to actually replace meat and dairy as food technology, and commercial infrastructure develop. He predicts all forms of animal farming will seem outdated and barbaric by 2100.

Jacy Reese (2018) Penguin Random House

<https://www.penguinrandomhouse.com/books/567165/the-end-of-animal-farming-by-jacy-reese/>

Ref 8 / A report from the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystems Services states that more than 33 percent of marine mammal species are now threatened with extinction:

Media Release: Nature's Dangerous Decline 'Unprecedented'; Species Extinction Rates 'Accelerating'. (n.d.). Retrieved from

<https://www.ipbes.net/news/Media-Release-Global-Assessment>.

Overfishing presents a catastrophic threat to the health of the oceans. Over 90 per cent of predatory species like cod and tuna have already been caught. Fish are being killed faster than they can reproduce:

Sustainable Fishing. (n.d.). Retrieved from

<https://www.greenpeace.org.uk/challenges/sustainable-fishing/>

60% of fisheries are fully exploited, 33% are over exploited, only 7% under exploited:

How many Fisheries are Overfished? (n.d.). Retrieved from

<https://sustainablefisheries-uw.org/fact-check/how-many-fisheries-are-overfished/>

Experts have predicted fishless oceans by 2048, but it's not too late to turn the tide:

Sea change: time to rethink eating fish writes @TheVeganSociety. (2019, February 11).

Retrieved from

<https://theecologist.org/2019/feb/11/sea-change-time-rethink-eating-fish-writes-thevegansociety>

“The health of ecosystems on which we and all other species depend is deteriorating more rapidly than ever. We are eroding the very foundations of our economies, livelihoods, food security, health and quality of life worldwide.” IPBES Chair, Sir Robert Watson:

Media Release: Nature's Dangerous Decline 'Unprecedented'; Species Extinction Rates 'Accelerating'. (n.d.). Retrieved from <https://www.ipbes.net/news/Media-Release-Global-Assessment>

Ref 9 / Fishing communities can suffer profound deprivation. 61% of the ports are deprived (using the same measure, by contrast, only 25% of the UK is deprived overall):

Seafarers UK (2018) 'Fishing for a Future':

<https://www.seafarers.uk/wp-content/uploads/2018/01/Fishing-for-a-Future.pdf>

Exodus from coastal areas due to climate change:

Environment Agency (2019) Draft National Flood and Coastal Erosion Risk Management Strategy for England. [Online] Environment Agency. Available at:

https://consult.environment-agency.gov.uk/fcrm/national-strategy-public/user_uploads/fcrm-strategy-draft-final-1-may-v0.13-as-accessible-as-possible.pdf

Ref 10 / Industrial fishing means small-scale fishers are suffering. The way the UK government allocates fishing quotas plays a big part in this. Quotas have become concentrated in the hands of a small number of multi-million pound companies:

Sustainable Fishing. (n.d.). Retrieved from

<https://www.greenpeace.org.uk/challenges/sustainable-fishing/>

Ref 11 / Global meat and dairy production and consumption must be cut in half by 2050 to avoid dangerous climate change and keep the Paris climate agreement on track:

Greenpeace. (n.d.). Halve meat and dairy production to protect climate, nature and health.

Retrieved from

<https://www.greenpeace.org/eu-unit/issues/nature-food/1100/halve-meat-and-dairy-production-to-protect-climate-nature-and-health/>

Ref 12 / Urgent action needed to support British beef sector:

National Farmers Union. (n.d.). Urgent action needed to support British beef sector. Retrieved from

<https://www.nfuonline.com/news/latest-news/urgent-action-needed-to-support-british-beef-sector/>

Brexit and bad weather puts UK farmers at risk of suicide, say charities:

Nazia Parveen -

Parveen, N. (2019, March 3). Brexit and bad weather puts UK farmers at risk of suicide, say charities. Retrieved from

<https://www.theguardian.com/environment/2019/mar/03/brexit-and-bad-weather-puts-uk-farmers-at-risk-of-suicide-say-charities>

The UK dairy industry is in crisis. Falling prices have forced many farmers out of business and left others in a desperate situation:

Sustainablefoodtrust.org (2015). Explaining Britain's dairy crisis. Retrieved from

<https://sustainablefoodtrust.org/articles/explaining-britains-dairy-crisis/>

Modern farmers in Britain are finding it hard to make a living, with 62% having to diversify alongside running a traditional working farm:

How Britain's farmers are diversifying. (2019, February 26). Retrieved from

<https://www.countryfile.com/how-to/outdoor-skills/how-britains-farmers-are-diversifying/>

The cash flow crisis in farming and its implications for the wider rural economy:

The UK agricultural industry is experiencing its third year of declining farm gate prices.

The decline in prices is likely to continue for most commodities in 2016 and potentially beyond.

The worst affected sectors are cereals, milk and pigs where incomes are dropping sharply.

The cash flow crisis in farming. (n.d.). Retrieved from

<https://www.princescountrysidefund.org.uk/research/the-cash-flow-crisis-in-farming>

Opportunities for future research and innovation on food and nutrition security and agriculture The InterAcademy Partnership's global perspective:

Latest data from the United Nations indicate worrying trends in global food and nutrition security that must be tackled:

<http://www.interacademies.org/48898/Opportunities-for-future-research-and-innovation-on-food-and-nutrition-security-and-agriculture-The-InterAcademy-Partnerships-global-perspective>

Ref 13/ Meat consumption, health, and the environment: Global meat production is growing at an unsustainable pace:

<https://science.sciencemag.org/content/361/6399/eaam5324>

H. Charles J. Godfray Paul Aveyard Tara Garnett Jim W. Hall Timothy J. Key Jamie Lorimer Ray T. Pierrehumbert Peter Scarborough Marco Springmann Susan A. Jebb (July 2018)

Ref 14/ Options for keeping the food system within environmental limits:

Springmann, M. et al. 2018- Nature Research:

The food system is a major driver of climate change, changes in land use, depletion of freshwater resources, and pollution of aquatic and terrestrial ecosystems through excessive nitrogen and phosphorus inputs. Here we show that between 2010 and 2050, as a result of expected changes in population and income levels, the environmental effects of the food system could increase by 50–90% in the absence of technological changes and dedicated mitigation measures, reaching levels that are beyond the planetary boundaries that define a safe operating space for humanity.

https://www.researchgate.net/publication/328200342_Options_for_keeping_the_food_system_within_environmental_limit

Ref 15 / Future food insecurity due to climate change risks societal breakdown, mass displacement and poverty and climate change is already affecting food security:

https://www.ipcc.ch/site/assets/uploads/2019/08/2f.-Chapter-5_FINAL.pdf

Ref 16 / The consumption of healthy, sustainable diets present major opportunities for reducing GHG emissions:

Willetts, W. et al. 2019. 'Food in the Anthropocene: the EAT–Lancet Commission on healthy diets from sustainable food systems'. The Lancet Commissions. Volume 393, Issue 10170, pages 447-492, 2 February, 2019. <https://www.thelancet.com/commissions/EAT>

Helen Harwatt (2019) **Including animal to plant protein shifts in climate change mitigation policy:** a proposed three-step strategy, Climate Policy, 19:5, 533-541,

<https://www.tandfonline.com/doi/abs/10.1080/14693062.2018.1528965?journalCode=tcpo20>

Bryngelsson D, Wirsenius S, Hedenus F, Sonesson U. **How can the EU climate targets be met? A combined analysis of technological and demand-side changes in food and agriculture:** Food Policy 2016;59:152-64:

<https://www.sciencedirect.com/science/article/pii/S0306919216000129>

There is a strong case that livestock are already outside sustainable limits for GHG emissions, nutrient flows and genetic biodiversity loss. Given expected population and income growth, and the dietary transition involving higher livestock product consumption, the judgement is that this certainly pushes livestock outside feasible and acceptable boundaries:

Key publications have been FAO's Livestock's Long Shadow (2006)², and the assessments of nitrogen and phosphorus flows by Sutton et al. (2011)³ and van Dijk et al. (2015)⁴.

http://www.risefoundation.eu/images/files/2018/2018_RISE_LIVESTOCK_FULLL.pdf

The consumption of healthy, sustainable diets present major opportunities for reducing GHG emissions: <https://www.ipcc.ch/report/srccl/>

Avoiding meat, dairy, and eggs would reduce food-related greenhouse gas emissions by 70%: Springmann, M. et al. 2018. 'Options for keeping the food system within environmental limits'. Nature. 562, pages 519–525 (2018). <https://www.nature.com/articles/s41586-018-0594-0>

Poore, J., & Nemecek, T. (2018). **Reducing food's environmental impacts through producers and consumers:** Science, 360(6392), 987–992.

<https://science.sciencemag.org/content/360/6392/987>

Ref 17 / Animal Rebellion:

Animal Rebellion was formed on June 2019 to demand a citizens' assembly that is given the power to legislate and act in an attempt to halt mass extinction and minimise the risk of social collapse. Animal Rebellion demands an end to the industries of animal agriculture and fishing, and to transition the UK to a sustainable and just plant-based food system by 2025. This will involve the provision of justice for farmed animals, to include recognition of their resistance to exploitation and their liberation from animal agriculture, fishing and other unjust practices.

Animal Rebellion's Demands:

1. Tell the truth: Government must tell the truth by declaring a climate and ecological emergency, working with other institutions to communicate the urgency for change.
2. Act now: Government must act now to halt biodiversity loss and reduce greenhouse gas emissions to net zero by 2025.
3. Beyond politics: Government must create and be led by the decisions of a Citizens' Assembly on climate and ecological justice. www.animalrebellion.org

Ref 18 / In 2018 there were 600,000 vegans, or 1.16% of the population; 276,000 (0.46%) in 2016; and 150,000 (0.25%) in 2014: Ipsos Mori survey, commissioned by The Vegan Society, 2018, and The Food & You surveys, organised by the Food Standards Agency (FSA) and the National Centre for Social Science Research (Natcen).

<https://www.vegansociety.com/news/media/statistics>

A quarter of EU consumers expects to eat less meat in five years' time, mainly because of the concerns about the associated negative health effects:

ING Bank (2017) 'The Protein Shift: will Europeans change their diet?':

https://think.ing.com/uploads/reports/ING_-_The_protein_shift_-_will_Europeans_change_their_diet.pdf

Ref 19 / The UK plant based market worth £443m in 2018:

http://www.publicsectorcatering.co.uk/sites/default/files/attachment/pages_plant-based_profits_alpro_and_bb_foodservice_insight.final_pages.pdf

The UK market for meat-free foods was worth £572m in 2017:

<https://www.bbc.co.uk/news/business-44488051>

The power of the plant-based market in the UK is rocketing. Its value is predicted to reach £1.1bn in value by 2023, according to Mintel - while a new report from Barclays suggests the global market will grow more than tenfold to \$140bn within a decade:

<https://www.thegrocer.co.uk/power-list/plant-based-power-list-whos-driving-the-meat-free-revolution/593700.article>

Greggs raised its profit guidance for the third time in 2019, boosted by demand for its vegan sausage rolls:

<https://www.theguardian.com/business/2019/may/14/greggs-vegan-sausage-rolls-fuel-profit-boom>

With the rise in veganism and people increasingly choosing a plant-based lifestyle, more startups in the sector are mushrooming across the globe:

<http://elitebusinessmagazine.co.uk/global/item/from-lab-grown-food-startups-to-3d-meat-the-vegan-industry-is-exploding-is-the-food-of-the-future>

Beyond Meat substitute burger company's diverse team of tech, health, and chem experts want to make Beyond Meat products taste like the real thing:

<https://www.fastcompany.com/90202590/exclusive-inside-beyond-meats-innovative-future-food-lab>

China signs a \$300m deal to purchase meat grown in a laboratory in a deal that could open a lucrative floodgate for vegan food manufacturers into the world's most populous country:

<https://www.independent.co.uk/news/world/asia/china-israel-trade-deal-lab-grown-meat-veganism-vegetarianism-a7950901.html>

(September 2017)

By 2040, 60% of meat we eat will not come from slaughtered animals, but will be either grown in vats or replaced by plant-based products that look and taste like meat:

<https://www.atkearney.com/retail/article/?/a/how-will-cultured-meat-and-meat-alternatives-disrupt-the-agricultural-and-food-industry>

Ref 20 / Heather Mill's Vegan Northern Powerhouse:

Sandiford, J. (2019, September 13). Heather Mills launches UK 'vegan northern powerhouse'.

Retrieved from

<https://www.theguardian.com/lifeandstyle/2019/sep/13/heather-mills-launches-uk-vegan-northern-powerhouse>

Ref 21 / Vegan Startups to Watch:

<https://techround.co.uk/startups/top-10-vegan-startups-to-watch/>

Ten European Startups Serving the Vegan Community:

<https://www.eu-startups.com/2019/09/10-european-startups-serving-the-vegan-community/>

Vegan Markets offer Ethical, Innovative and Sustainable Choice:

<https://www.veganmarkets.co.uk/>

Plant Based Food Association: has 161 company members:

<https://plantbasedfoods.org/our-members/>

Meat and dairy companies investing in plant-based alternatives:

After Ditching Beyond Meat, Tyson Foods Announces Plant-based Brand Of Its Own

Joe Fassler

<https://newfoodeconomy.org/after-backing-out-of-beyond-meat-tyson-foods-announces-a-new-plant-based-brand-of-its-own>

Multinational food giant Danone CEO Says Plant-Based Could Become as Big as Dairy in U.S:

<https://www.bloomberg.com/news/articles/2019-05-08/danone-ceo-says-plant-based-could-become-as-big-as-dairy-in-u-s>

Ref 22 / £70 million paid to intensive, factory farms:

Intensive Farmers Get £70m in Government Subsidies in Two Years

Andrew Wasley-Alexandra Heal-Emma Snaith -

<https://www.thebureauinvestigates.com/stories/2018-12-28/intensive-farms-get-70m-subsidies>

55% of total income in the farming sector comes from unsustainable subsidies:

Financial Times. (2016). Many British farms not viable without EU support, says NFU. Financial Times. <https://www.ft.com/content/2bcfea78-fffb-11e5-99cb-83242733f755>

\$1,000,000 a minute; the farming subsidies destroying the world:

<https://www.foodandlandusecoalition.org/global-report>

Ref 23 / Farms grazing livestock rely on subsidies for 90% of profits while the figure is only 10% for fruit farms:

Abboud, L. (2018, October 7). UK farmers prepare for overhaul to farm subsidies after Brexit.

Retrieved from <https://www.ft.com/content/db2a28e2-c175-11e8-95b1-d36dfef1b89a>

Ref 24 / Urgent action needed to support British beef sector:

National Farmers Union. (n.d.). Urgent action needed to support British beef sector. Retrieved from

<https://www.nfuonline.com/news/latest-news/urgent-action-needed-to-support-british-beef-sector/>

The UK dairy industry is in crisis. Falling prices have forced many farmers out of business and left others in a desperate situation:

Sustainablefoodtrust.org (2015). Explaining Britain's dairy crisis. Retrieved from

<https://sustainablefoodtrust.org/articles/explaining-britains-dairy-crisis/>

Ref 25 / UK farm productivity is falling behind international competitors:

Agriculture and Horticulture Development Board (2018) Driving Productivity Growth Together.

[Online] AHDB. Available at:

https://projectblue.blob.core.windows.net/media/Default/Market%20Insight/Horizon_Driving%20Productivity_Jan2018.pdf

Brexit and the loss of these subsidies threatens farming sector:

Brexit: Eu Subsidy Loss 'Could Wipe Out Farms'

David Rhodes-Hugo Barbieux - <https://www.bbc.co.uk/news/uk-england-48880939>

Springmann M, Freund F. The impacts of Brexit on agricultural trade, food consumption, and diet-related mortality in the UK:

Oxford Martin School Working Paper. 22 October 2018:

https://www.oxfordmartin.ox.ac.uk/downloads/academic/201810_Springmann_Freund_Brexit_WP.pdf

Ref 26 / The Vegan Society's Grow Green Campaign:

The Vegan Society's Grow Green campaign: solutions for the farm of the future. (n.d.).

Retrieved from <https://www.vegansociety.com/take-action/campaigns/grow-green>.

UK 10 year transition plan to a plant-based agricultural system:

Harwatt, H. and Hayek, M. 2019. Eating away at climate change with negative emissions:

Repurposing UK agricultural land to meet climate goals. Boston: Harvard Law School

<https://animal.law.harvard.edu/wp-content/uploads/Eating-Away-at-Climate-Change-with-Negative-Emissions%E2%80%93Harwatt-Hayek.pdf>

Royal Society for the encouragement of Arts, Manufactures and Commerce (2019) 'Our Future in the Land'. London.

<https://www.thersa.org/globalassets/reports/rsa-ffcc-our-future-in-the-land.pdf>

Ref 27 / Tolhurst Organic Farm

Tolhurst Organic. (2019, September 27). Home. Retrieved from

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Ref 28 / Whilst it is often claimed that the UK has the highest standards of animal welfare world-wide, around 70% of the UK's farm animals are kept in factory farms every year:

Interactive map exposes UK factory farming hotspots. (n.d.). Retrieved from

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Intensive farming; The Reality: A Viva Investigation:

In Britain, most chickens, ducks and turkeys are factory farmed in massive industrial sheds. Very few ever go outside and are killed at just weeks or months old. Millions of male chicks are gassed or thrown alive into electric mincers because they can't lay eggs. The majority of sows in Britain are confined to crates so small they can't even turn around for five weeks at a time. Most of their baby piglets are painfully mutilated without anaesthetic. Dairy cows suffer the dual burden of being pregnant and milked – as well as having her baby taken away from her year on year so people can drink her milk. If her baby is the wrong sex to produce milk then the chances are he will be shot in the head at a few days old. His mother will be sent to the slaughterhouse at around 5 years old as soon as she is no longer profitable.

Anonymous. (2019, July 9). Cruel Britannia: Life and Death on UK Factory Farms. Retrieved from <https://www.viva.org.uk/what-we-do/cruel-britannia-life-and-death-uk-factory-farms>.

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Harvey, F., Wasley, A., & Davies, M. (2017, July 17). UK has nearly 800 livestock mega farms, investigation reveals. Retrieved from

<https://www.theguardian.com/environment/2017/jul/17/uk-has-nearly-800-livestock-mega-farms-investigation-reveals>

Ref 30 / The Rise of the Mega Farm- How British Meat is Made:

There are 1,700 intensive poultry and pig farms licensed by the Environment Agency in the UK. The biggest house more than a million chickens, 20,000 pigs or 2,000 dairy cows and subject animals to prolonged distress and push out small producers.

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The End of Animal Farming- How Scientists, Entrepreneurs, and Activists Are Building an Animal-Free Food:

Reese contextualizes how factory farming is increasingly becoming a moral issue, as legislators, organizations, and the public push for more humane treatment of animals. Other issues such as animal agriculture's sustainability, will push us towards the end of factory farming. "Animals are terribly inefficient at producing food; it takes around ten calories of plant-based food to produce one calorie of animal-based food. This means we're wasting billions of dollars and vast natural resources on animal agriculture. Given that we can produce meat, dairy, and eggs without animals—either via plants or cell culture—it seems very likely that humanity will transition to an animal-free food system, even if it's just for the benefit of humans." **Jacy Reese (2018) Penguin Random House**

<https://www.penguinrandomhouse.com/books/567165/the-end-of-animal-farming-by-jacy-reese/>

Ref 32 / Household food insecurity is rising:

Environmental Audit Committee (2019) Sustainable Development Goals in the UK follow up: hunger, malnutrition and food insecurity in the UK. [Online] January. Available at:<https://publications.parliament.uk/pa/cm201719/cmselect/cmenvaud/1491/149105.htm>

Ref 33 / January 2019, the Environmental Audit Committee published their [latest report](#) on the Sustainable Development Goals in the UK follow-up: Hunger, malnutrition and food insecurity in the UK:

Food insecurity is significant and growing in the UK, with levels among the worst in Europe, especially for children.

<https://www.parliament.uk/business/committees/committees-a-z/commons-select/environmental-audit-committee/inquiries/parliament-2017/sustainable-development-goals-follow-up-17-19/>

Ref 34 / We Already Grow Enough Food for 10 Billion People ... and Still Can't End Hunger:

https://www.researchgate.net/publication/241746569_We_Already_Grow_Enough_Food_for_10_Billion_People_and_Still_Can't_End_Hunger/citation/download

According to the United Nations Environment Programme, the calories that are lost by feeding soy, vegetables, and grains to animals instead of using them directly as human food, could feed an additional 3.5 billion people:

<http://www.globalagriculture.org/report-topics/meat-and-animal-feed.html>

Ref 35 / Food Statistics in your pocket 2017 - Global and UK supply:

Updated 9 October 2018

<https://www.gov.uk/government/publications/food-statistics-pocketbook-2017/food-statistics-in-your-pocket-2017-global-and-uk-supply>

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Repurposing UK agricultural land to meet climate goals. pg 1 Boston: Harvard Law School

<https://animal.law.harvard.edu/wp-content/uploads/Eating-Away-at-Climate-Change-with-Negative-Emissions%E2%80%93Harwatt-Hayek.pdf>

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<http://www.greenpeace.org/international/en/news/features/cattle-mapping/>

Yale University -80% of Amazon Rainforest destruction is caused by animal agriculture.

<http://globalforestatlas.yale.edu/amazon/land-use/cattle-ranching>

Ref 38 / A high consumption of red and processed meat represent the second biggest risk factor for mortality in the UK:

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~National Academy of Sciences. First published March 21, 2016

Marco Springmann, H. Charles J. Godfray, Mike Rayner, and Peter Scarborough

<http://www.ox.ac.uk/news/2016-03-22-veggie-based-diets-could-save-8-million-lives-2050-and-cut-global-warming>

American Dietetic Association states that appropriately planned vegetarian diets, including total vegetarian or vegan diets, are healthful, nutritionally adequate, and may provide health benefits in the prevention and treatment of certain diseases:

<https://www.ncbi.nlm.nih.gov/pubmed/19562864>

A study out of Loma Linda University reported that vegans have lower rates of cancer than both meat-eaters and vegetarians. Vegan women, for example, had 34% lower rates of female-specific cancers such as breast, cervical, and ovarian cancer:

<https://www.ncbi.nlm.nih.gov/pubmed/23169929>

Vegan diets can reverse diabetes much better than diets created by the American Diabetes Association ~ ABA Diabetes Care:

<http://care.diabetesjournals.org/content/29/8/1777>

Vegans have a 78% lower risk of diabetes and a 75% lower risk of hypertension:

~ National Centre for Biotechnology Information

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4073139>

Vegan diets can reduce inflammation much more than diets created by the American Heart Association: American Heart Association, November 2018

<https://www.ahajournals.org/doi/10.1161/JAHA.118.011367>

Vegans are the only dietary group with a normal BMI range, according to a peer-reviewed study published by the American Diabetes Association:

~ National Centre for Biotechnology Information

<https://www.ncbi.nlm.nih.gov/pubmed/19351712>

According to a peer-reviewed study published in the British Medical Journal, red meat consumption increased the rate of dying from cancer, heart disease, respiratory disease, stroke, diabetes, infections, kidney disease and liver disease:

~ British Medical Journal

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A whole-food, vegan diet has been proven to reverse heart disease:

http://www.mdedge.com/sites/default/files/Document/September-2017/JFP_06307_Article1.pdf

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~ National Centre for Biotechnology Information

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HM Government (2012) Public Services (Social Value) Act 2012. [Online] Available at: <http://www.legislation.gov.uk/ukpga/2012/3/enacted>

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Ref 46 / A new report for the Committee on Climate Change is urging the government to do more to promote vegan diets to help fight climate change:

The behaviour change paper, written by an Imperial College London academic Dr Richard Carmichael, recommends plant-based diets as one of the big three changes we must make, alongside lowering emissions produced by transport and heating. <https://www.theccc.org.uk/publication/behaviour-change-public-engagement-and-net-zero-imperial-college-london/>

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Sortition Foundation. (n.d.). Retrieved from <https://www.sortitionfoundation.org/>

Ref 48/ The NAO found that Defra “has not provided the necessary guidance to enable farmers to plan how to adapt their businesses or how to work collaboratively with other farmers”:

National Audit Office (2019) Early review of the new farming programme. [Online]. NAO.

Available at: <https://www.nao.org.uk/press-release/early-review-of-the-new-farming-programme/>

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Retrieved from <https://www.vegansociety.com/take-action/campaigns/grow-green>.

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Change the source from meat to plants. (n.d.). Retrieved from <https://farmtransformers.org/>

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<http://www.ecifm.rdg.ac.uk/habitat.htm>

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Harwatt, H. and Hayek, M. 2019. Eating away at climate change with negative emissions:

Repurposing UK agricultural land to meet climate goals. pg 1 Boston: Harvard Law School

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Report: Eating Away at Climate Change with Negative Emissions:

Restoring agricultural land currently used for farmed animals back to native forest would contribute substantially to aligning UK GHGs with the Paris Agreement.

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