

Why didn't the UK media report the documentary on Mad Cow Disease?

Mad Cow Disease is a fatal epidemic neurological syndrome created by the agricultural industry, farmers and food processors	2
Living with GMOs: Citizen to Citizen	5
The State of Nature in the UK is shockingly low	9
Monsanto said that glyphosate was not metabolised in the body but excreted unchanged. The assessment showed ¹⁴C labelled glyphosate is distributed to every organ of the body	12
Genetically Engineered Foods: The Biggest Fraud in the History of Science	13
NFU and Defra plan for GM Roundup Ready Crops after Brexit, despite ADAS reporting weed resistance to Roundup	15
Genetically-engineered crops, glyphosate and the deterioration of health in the United States of America	18
The UK media have not reported the US Court cases against Monsanto	20
The British Government collaborated with Monsanto and Bayer after WW2	24
The European Glyphosate Task Force reassessed their own products	25

Why didn't the UK media report the documentary on Mad Cow Disease?

Mad Cow Disease is a fatal epidemic neurological syndrome created by the agricultural industry, farmers and food processors

In the documentary Mad Cow Disease: the Great British Beef Scandal first broadcast on BBC 2 11 July 2019, Tim Lang, a Professor of Food Policy at the City University London said:

"New Variant CJD is not a natural disease. It is an epidemic we have created. If the agricultural industry hadn't decided to feed cattle with meat and bone meal, if the food processors hadn't decided to scrape every last bit of flesh off the carcass, and if MAFF (now Defra) hadn't prioritised farming over food safety, all of the people who died would still be alive. This is the tragedy." The present funding from the government for food safety is pitifully small.

How Thatcher and Murdoch made their secret deal²⁰

Harold Evans former Editor-in-Chief of the *Sunday Times* wrote in the Long Read:

*"Documents released by the **Thatcher Archive Trust**, now housed at Churchill College, Cambridge, give the lie to a litany of Murdoch-Thatcher denials about collusion during the bidding for Times Newspapers.*

The fact that they met at all, on 4 January 1981, was vehemently denied for 30 years. Since their lie was revealed, it has been possible to uncover how the greatest extension of monopoly power in modern press history was planned and executed with such furtive brilliance.

*All the wretches in the subsequent hacking sagas – the predators in the red-tops, the scavengers and sleaze merchants, the blackmailers and bribers, the liars, the bullies, the cowed politicians and the bent coppers – were but the detritus of a collapse of integrity in British journalism and political life. At the root of the cruelties and extortions exposed in the recent criminal trials at the Old Bailey, was Margaret Thatcher's reckless engorgement of the media power of her guest that January Sunday. The simple genesis of the hacking outrages is that Murdoch's News International came to think it was above the law, because it was. ...Murdoch was able to acquire **both publications in 1981** only because he began making solemn pledges that he would maintain the tradition of independence. He broke every one of those promises in the first years."*

ADAS recommended pre-harvest crop spraying with Roundup® in 1980¹ and spraying on grassland in 1985. Researches showed two Monsanto scientists wrote the first papers (without declaring it)

In 1980 UK ADAS² (at that time the science and advisory branch of Ministry of Agriculture, Fisheries and Food (MAFF) but now privatised) was recommending that arable farmers use pre-harvest application of glyphosate on cereal crops. M.G. O'Keeffe, a Monsanto scientist³ wrote three articles about it, the first at a Crop Protection conference.⁴ They do not appear to have been peer-reviewed. By 1985 ADAS was advocating the use of glyphosate on grassland. They declared it to be good

¹ <http://www.hgca.com/media/185527/is02-pre-harvest-glyphosate-application-to-wheat-and-barley.pdf>

² ADAS is now the UK's largest independent provider of agricultural and environmental consultancy, rural development services and policy advice; formerly a branch of Ministry of Agriculture, Fisheries & Food. (MAFF)

³ https://books.google.co.uk/books?id=objYBAAAQBAJ&pg=PA555&lpg=PA555&dq=Monsanto+O%27Keeffe+M+G&source=bl&ots=3k7GWMRWZ3&sig=wg0ZhiNFMTY86cNp_cp3jV4Dz3A&hl=en&sa=X&ei=Twz-VPmWA8mBU93GgggP&ved=0CEkQ6AEwBg#v=onepage&q=Monsanto%20O'Keeffe%20MG&f=false Chemical Manipulation of Crop Growth and Development Proceedings of Previous Easter Schools in Agricultural Science by J. S. McLaren

⁴ O'Keeffe MG. The control of *Agropyron repens* and broad-leaved weeds pre-harvest of wheat and barley with the isopropylamine salt of glyphosate; 1980. pp. 53–60. Proceedings of British Crop Protection Conference-Weeds.

practice to graze the grass or preserve it as hay or silage after treatment.⁵ However, the main author of the paper was another Monsanto scientist, Colin D Stride.⁶ He later joined Exponent®, a firm that provides services for industry, governments and for EU regulatory bodies.

In a 4-month project starting in the UK in January 2007: Pre-harvest glyphosate for weed control and as a harvest aid in cereals⁷ the authors stated in their introduction:

“Concern over residues, as expressed by the Food Safety Authority Report, appears to relate to the incidence of residues rather than to the levels of the residues. Data from Monsanto and Cessna et al. (1994 & 2002) suggest that the level of residues is associated with dose but that even the lower doses used for harvest aid will leave detectable levels at harvest. Hence, any initiative to reduce the incidence of residues must be to reduce the proportion of the crop sprayed rather than to reduce the dose of the individual applications.” However, the authors do not appear to have performed any glyphosate residue measurements.

Mad Cow Disease: The Great British Beef Scandal⁸

In 1987, 32 years ago, an epidemic of a fatal neurological disease in cows suddenly appeared in Britain. It was similar to scrapie in sheep. Cows became uncoordinated, staggered around, collapsed and finally died. The disease was called Bovine Spongiform Encephalopathy (BSE) because there were holes in the brain where prion protein cells became folded, had linked up and then split to cover the surface of the brain. There were more than 1300 cases of BSE spread over 6,000 farms. For at least 40 years, infected slaughter house carcasses had been rendered down and recycled into animal feed. Not wanting to waste anything, pressure cooking of the spinal cord and brain produced a sludge known as ‘mechanically-recovered meat’. The regulators allowed it to go into meat products. This processed meat and bone-meal was turned into a coarse powder and was fed back to cows. Cows are herbivores and this way they were turned into cannibals. By 1990 BSE had spread into 14 other species, including cats. When Dr Steve Dealler from York appeared on Upfront TV with an audience of farmers to say this was a new disease, he got moved by MAFF to somewhere in which he couldn’t continue his work. In 1980, Margaret Thatcher passed a new Education Act which abolished the minimum nutrition standards for school meals. She said: *“Let the market rip”*

For more than 8 years, the government, food industry, media, MAFF (today’s Defra), farmers and the Veterinary services claimed BSE couldn’t jump species

Politicians, the food industry, media, MAFF (today’s Defra), farmers and the Veterinary Services said BSE couldn’t jump species to affect humans and it was safe to eat beef. Advertisements were taken out in newspapers and politicians were shown eating steak tartare in the Houses of Parliament to boost the sales of beef. At an agricultural show, the Agriculture Minister John Gummer was seen offering a beef-burger to his daughter.

In 1995, the first human under 40 contracted what became known as new variant Creutzfeldt-Jacob Disease (new vCJD). By March 1996, there were 5 cases and the government were forced to alter its advice. Kevin Maguire, a *Mirror* journalist was lunching with someone in Westminster who said that scientists had discovered that Mad Cow Disease could jump species and had been found in humans. Maguire said: It was a scandal in an effort to get every penny out of a carcass. The *Mirror* was the first to break the news to the public. **Exclusive: “Humans could catch Mad Cow Disease from eating infected beef, the government will admit today. The Health Secretary Stephen Dorrell will accept for the first time that the brain wasting disease may have been passed to people. This U-turn by Ministers – who for 10 years have insisted it was impossible – will spark tough new curbs on**

⁵ Stride CD, Edwards RV, Seddon JC. Sward destruction by application of glyphosate before cutting or grazing; 1985. pp. 771–778. British Crop Protection Conference – Weeds 7B–6.

⁶ http://www.exponent.com/files/Attorney/2f28f368-0f2c-48d0-91c2-60589cce38f1/Presentation/ceExpertCVUpload/stride,c_full.pdf

⁷ http://archive.hgca.com/publications/documents/cropresearch/RR65_Final_Research_Review.pdf

⁸ <https://www.bbc.co.uk/programmes/m0006p49>

suspect meat.” Jeremy Paxman said to the Health Minister: *“Three months ago, you said there was no conceivable risk.”* There were angry members of the public in the audience.

Andrew Marr said: *“This is a devastating indictment of the British Government. Probably one of the worst examples of government since the war.”*

During 1996, 10 more cases of new variant CJD in people under 40 were diagnosed. All died within 13 months and there was no cure. In 1998, John Collinge, Professor of Neurology, discovered the prion protein in every organ of the body and in the immune system and blood, so white cells were filtered from all blood. Dr Collinge went to Papua New Guinea to study kuru, a similar disease in tribes who ate the brains of their relatives who had died from the disease. Scientists found that sometimes the incubation period could be 30-50 years.

In 2005, the authorities thought the disease was over (they were genetically MM), but in 2009, a case was discovered in a 30-year-old man. He had the M form as well as the V form. Another one appeared 4 years later. People are living with uncertainty, not knowing if they are incubating new vCJD.

No-one who lived in the UK between 1980 and 1996 is allowed to donate blood in any other country because they might be incubating vCJD.

The parents of children who had died from new Variant CJD said *“We trusted government advice.”* Each Christmas one mother sent an email to those she thought responsible with a photograph of her daughter and said your actions have deprived me of my daughter. I hope that next time you will consider those actions when you make a decision in Parliament. Another parent from Scotland who had lost his 30-year-old son who had the M form and the V form of the disease had tattooed on his arm the name of his son followed by: **Murdered by greed and corruption.**

The scandal was published in the *Daily Telegraph*, the *Independent*, the *Daily Express*, *The Times*, the *Guardian*, the *Daily Mail* in 1996.

Tim Lang, a Professor of Food Policy said: *“New Variant CJD is not a natural disease. It is an epidemic we have created. If the agricultural industry hadn’t decided to feed cattle with meat and bone meal, if the food processors hadn’t decided to scrape every last bit of flesh off the carcass, and if MAFF hadn’t prioritised farming over food safety, all of the people who died would still be alive. This is the tragedy.”*

Chapter 15: Mad Cow Disease 1980s-2000s: how reassurances undermined precaution⁹

This was from a publication compiled by the European Environment Agency: Late lessons from early warnings. Patrick van Zwanenberg and Erik Millstone.

“Many of the UK policy-makers who were directly responsible for taking policy decisions on bovine spongiform encephalopathy (BSE) prior to March 1996 claim that, at the time, their approach exemplified the application of an ultra-precautionary approach and of rigorous science-based policy-making. We argue that these claims are not convincing because government policies were not genuinely precautionary and did not properly take into account the implications of the available scientific evidence.

The BSE saga is enormously complex and this account is necessarily selective. It is, however, essential to appreciate that UK public policy-making was handicapped by a fundamental tension. The department responsible for dealing with BSE has been the Ministry of Agriculture, Fisheries and Food (MAFF), and it was expected simultaneously to promote the economic interests of farmers and the food industry whilst also protecting public health from food-borne hazards. The evidence cited here suggests that because MAFF was expected simultaneously to meet two contradictory objectives it failed to meet either.”

⁹ https://www.eea.europa.eu/publications/environmental_issue_report_2001_22/issue-22-part-15.pdf/view

In 2001, under Tony Blair's government, the Department of the Environment was merged with the Ministry of Agriculture, Food and Fisheries to become 'Defra' the Department of the Environment, Farming and Rural Affairs.

The UK introduced legislation banning the use of contaminated ruminant protein for use in ruminant feed in 1988

However, the UK continued to export meat and bone meal to Europe. In 1988 it exported 12,553 tonnes and 25,005 tonnes in 1989. The Commission asked the UK to introduce an export ban on feedstuffs, but the UK refused to do so. Not until 1996 did the European Commission ban the export.

But none of these papers (or the BBC) have breathed a word about **The Scandal of GMOs and Glyphosate** from 1980 – 2019 because the wealthy owners of these papers have banned it.

Living with GMOs: Citizen to Citizen

Living with GMOs: Citizen to Citizen ¹⁰ From more than 60 million citizens in the US to citizens, politicians, and regulators in the UK and the rest of the EU about the hazards of genetically modified crops

We, the undersigned, are sharing our experience and what we have learned with you so that you don't make our mistakes. Signatories include NGOs, groups, academics, scientists, farmers, food manufactures, and high-profile individuals representing some 60 million Americans.

Extracts: "A recent review found that between 1996 and 2011, farmers who planted Roundup Ready crops used 24% more herbicide than non-GMO farmers planting the same crops. This pesticide treadmill means that in the last decade in the US at least 14 new glyphosate-resistant weed species have emerged, and over half of US farms are plagued with herbicide-resistant weeds." **They outlined eight independent papers describing Environmental Harm and six papers about the Threat to Human Health.** "Americans are reaping the detrimental impacts of this risky and unproven agricultural technology. **EU countries should take note: there are no benefits from GM crops great enough to offset these impacts. Officials who continue to ignore this fact are guilty of a gross dereliction of duty.**

We strongly urge you to resist the approval of genetically modified crops, to refuse to plant those crops that have been approved, to reject the import and/or sale of GM-containing animal feeds and foods intended for human consumption, and to speak out against the corporate influence over politics, regulation and science. If the UK and the rest of Europe becomes the new market for genetically modified crops and food our own efforts to label and regulate GMOs will be all the more difficult, if not impossible. If our efforts fail, your attempts to keep GMOs out of Europe will also fail. If we work together, however, we can revitalize our global food system, ensuring healthy soil, healthy fields, healthy food and healthy people."

Most countries in the EU took that advice and opted out of GM (including Scotland, Wales and Ireland). **David Cameron, Defra and the European Regulators ignored the warning. The European Commission and the European Food Safety Authority continued to authorise GM Crops for feed and animal food.** The Open letter from America was passed secretly from the Prime Minister's Office to Defra.

Extracts from the reply from Lord de Mauley, Defra Minister, "to Directors of Beyond GM."

It was clear that the Minister hadn't read the letter, or realised that it was an Open letter from 60 million citizens from the US, but relied on signing Defra's letter of denial ¹¹

¹⁰ <http://www.theletterfromamerica.org/>

¹¹ http://beyond-gm.org/wp-content/uploads/2015/01/BGM_Defra-letter_151214.pdf

Extract: “However, to pick up on your point on contamination, cross-pollination is, again, a normal process between compatible plant species and there is nothing different about GM crops in this respect... The UK Government regards safety as paramount and we will only agree to planting of GM crops or the marketing of GM foods **if it is clear that people and the environment will not be harmed.**”

Dr. Don Huber, an agricultural scientist and expert in microbial ecology, wrote to Tom Vilsack the then USDA Secretary of Agriculture in 2011

*“A team of senior plant and animal scientists have recently brought to my attention the discovery of an electron microscopic pathogen that appears to significantly impact the health of plants, animals, and probably human beings. Based on a review of the data, it is widespread, very serious, and is in much higher concentrations in Roundup Ready (RR) soybeans and corn—suggesting a link with the RR gene or more likely the presence of Roundup. This organism appears NEW to science! This is highly sensitive information that could result in a collapse of U.S. soy and corn export markets and significant disruption of domestic food and feed supplies. On the other hand, this new organism may already be responsible for significant harm (see below). My colleagues and I are therefore moving our investigation forward with speed and discretion, and seek assistance from the USDA and other entities to identify the pathogen’s source, prevalence, implications, and remedies. This organism that has since been clearly linked to infertility and miscarriage in cattle, horses, pigs, sheep, and poultry. The organism is prolific in plants infected with two pervasive diseases that are driving down yields and farmer income—sudden death syndrome (SDS) in soy, and Goss’ wilt in corn. The pathogen is also found in the fungal causative agent of SDS (*Fusarium solani fsp glycines*). Herbicides and pesticides are metal chelators, which means they immobilize specific nutrients, rendering them unavailable to the plant and any animal or human who consumes that plant. The nutritional efficiency of genetically engineered (GE) plants is profoundly compromised. Micronutrients such as iron, manganese and zinc can be reduced by as much as 80-90 percent in GE plants.¹² Vilsack ignored Professor Huber’s advice and approved Roundup Ready GM alfalfa.*

The British public is unaware that glyphosate (and other pesticide) residues are present in food despite the fact that pre-harvest spraying began in 1980. Defra Expert Committee on Pesticide Residues in Food:¹³ Monsanto is responsible for humans and animals having glyphosate residues in their bodies: it is in all staple, non-organic foods

The results from monitoring of Pesticide Residues in Food (PRiF) have been published quarterly in the UK since 2000, but pre-harvest application to crops had already been authorised 20 years before. Bread and breakfast cereals are staple foods but there are no maximum residue levels (MRLs) for bread or breakfast cereals. Residues in bread are tested twice a year.

e.g. 2002 3rd Quarter: Comments from PRiF: “Residues of chlormequat,¹⁴ glyphosate and pirimiphos-methyl¹⁵ were found (in bread). These pesticides are commonly used on cereal crops, and residues have been found in other cereal products, therefore these findings are not unexpected. None of the residues found were of concern for consumer health. “

2011 3rd/4th Quarters for Lentils: Comments: “Sixteen samples of lentils contained glyphosate above the MRL. A new higher level of glyphosate is expected to come into force in summer 2012. None of the residues detected in this survey would be above the new proposed MRL.”

When the CRD Head of Regulatory Policy replied on 28/02/2014 to defend the authorisation of glyphosate, he told me that the capability to detect individual pesticides in food had increased from

¹² <http://farmandranchfreedom.org/letter-dr-huber-roundup-animal-miscarriage-infertility/>

¹³ <http://www.pesticides.gov.uk/guidance/industries/pesticides/advisory-groups/PRiF/about-PRiF>

¹⁴ Chlormequat, a plant growth regulator was present consistently throughout.

¹⁵ pirimiphos-methyl, is an organophosphate insecticide for use in storage. The approval was revoked on 24/03/2011, but it was only finally banned 31/03/2013, presumably to allow stocks to be used up.

150 in 2003 to 393 in 2012. He stated: *“In the 2012 Report, although there were a large number of residues found in bread, none of these were at a level to suggest a risk to consumer health.”*

However, he failed to reply to my question as to why EFSA was regularly increasing the Maximum Residue Levels (MRLs) of glyphosate in foods at the request of Monsanto to accommodate their practice of desiccation of crops and to protect their imports into Europe.¹⁶

Roundup (shown to be carcinogenic and to affect human brains) is sprayed to kill weeds on pavements, open spaces, City Parks, playgrounds and playing fields in all Boroughs but one

Only the London Borough of Hammersmith and Fulham has agreed to ban Roundup and try other non-chemicals methods.¹⁷ All the Councils in Wales use Roundup.¹⁸

Shockingly high levels of weedkiller found in popular breakfast cereals marketed for British children

There was an article in the *Guardian* about oat-based cereals marketed for children in the US having weedkiller in them. **The UK Guardian reported:** *“There was no indication that the claims related to products sold outside the US.”* In view of this statement by the *Guardian*, we sent samples of four oat-based breakfast cereals marketed for children in the UK to the Health Research Institute, Fairfield, Iowa, an accredited laboratory for glyphosate testing. Dr Fagan the Director says: *“These results are consistently concerning. The levels consumed in a single daily helping of any one of these cereals, even the one with the lowest level of contamination, is sufficient to put the person’s glyphosate levels above the levels that cause fatty liver disease in rats (and likely in people).”*

Type of breakfast cereal marketed for children Product description	Glyphosate level ng/g	AMPA ng/g	Effective glyphosate level ng/g
Kelloggs No added sugar granola with Apricot & pumpkin seeds	499.90	ND	499.90
Quaker/Oat So simple/Original Microwaveable Oats	464.23	24.04	500.28
Weetibix Oatibix 100% wholegrain oats	318.85	16.96	344.28
Nestle Multigrain Cheerios Whole Grain Oat Flour 29.6% Whole Grain Wheat 29.6% Whole Grain Barley Flour 17.9% Whole Grain Corn Flour 2.1% Whole Grain Rice Flour 2.1%.	137.29	ND	137.29

We sent the results to the Editor of *Guardian* Letters, Paul Chadwick, so the public would be informed, but he never published it. However, the *Daily Mail* did report it.¹⁹

The fields where Roundup Ready GM crops are grown in the US are biological deserts

The German Rapporteur Member State Federal Institute for Pesticides Risk Assessment (BfR) Renewal Assessment Report (RAR) on Ecotoxicity²⁰ broadly concluded that glyphosate is not harmful to the environment. I challenged the European Food Safety Authority about this discrepancy from reality. I quoted from Craig Childs’ book, *Apocalyptic Planet*.²¹ Chapter 6 Species Vanish: Page 185.

¹⁶ <http://www.efsa.europa.eu/en/efsajournal/pub/2550.htm>

¹⁷ <https://www.hortweek.com/london-council-bans-contractor-use-glyphosate-parks/parks-and-gardens/article/1398373>

¹⁸ <https://www.walesonline.co.uk/news/local-news/welsh-councils-use-carcinogenic-weedkiller-15086510>

¹⁹ <https://www.dailymail.co.uk/health/article-6315209/Revealed-UK-cereals-contain-potentially-harmful-amounts-WEEDKILLER.html>

²⁰ Renewal Assessment Report Vol 3 Annex B9. Evaluation of peer-reviewed literature regarding ecotoxicity

²¹ Childs, C. *Apocalyptic Planet. Field Guide to the Future of the Earth*, New York: Vintage Books (2013).

Grundy County, Iowa was where Craig Childs spent a long weekend in a monoculture of GM-Roundup® Ready Corn looking for wildlife.

Page 187: "In this cornfield, I had come to a different kind of planetary evolution. I listened and heard nothing, no bird, no click of an insect ... Page 188: Mr Owen was the farmer who had given us permission to backpack across his cornfields. He grew a combination of DuPont and Monsanto stock. We were in DuPont now. It didn't look any different to me." Page 192: Childs said: "I chose Iowa for a mass-extinction analogue because it is the most thorough picture of genetic exhaustion, the many organs of what was once tallgrass prairie removed and replaced with this."

Robert Krulwich's blog commented on Craig Child's description: ²² "Corn farmers champion corn. Anything that might eat corn, hurt corn, bother corn, is killed. Their corn is bred to fight pests. The ground is sprayed. The stalks are sprayed again. So, Craig wondered, "What will I find?" The answer amazed me. He found almost nothing. There were no bees. The air, the ground, seemed vacant. He found one ant "so small you couldn't pin it to a specimen board." A little later, crawling to a different row, he found one mushroom, "the size of an apple seed." Then, later, a cobweb spider eating a crane fly (only one). A single red mite "the size of a dust mote hurrying across the barren earth," some grasshoppers, and that's it." Though he crawled and crawled, he found nothing else. "It felt like another planet entirely," he said, a world denuded.

Yet, 100 years ago, these same fields, these prairies, were home to 300 species of plants, 60 mammals, 300 birds, hundreds and hundreds of insects. This soil was the richest, the loamiest in the state. And now, in these patches, there is almost literally nothing but one kind of living thing. We've erased everything else. There's something strange about a farm that intentionally creates a biological desert to produce food for one species: us. It's efficient, yes. But it's so efficient that the ants are missing, the bees are missing, and even the birds stay away. Something's not right here. Our cornfields are too quiet."

Iowa was just one state in which the US Geological Survey said: "Glyphosate and AMPA were detected frequently in soils and sediment, ditches and drains, precipitation, rivers, and streams; and less frequently in lakes, ponds, and wetlands; soil water; and groundwater."²³

Monsanto claims that glyphosate only poisons plants, bacteria and fungi²⁴

Plants absorb glyphosate through their leaves and other green parts. From here, the glyphosate moves to the growing points of shoots and roots, where it interferes with the enzymatic production of certain amino acids that are essential for plant growth. This pathway exists only in plants, fungi and bacteria, so the toxicity to animals is low.

We can only absorb nutrients by courtesy of the bacteria in our gut, the gut microbiome

This is the term for the collective genome of organisms inhabiting our bodies. Glyphosate disrupts the shikimate pathway within these gut bacteria, without which we cannot survive. Glyphosate is a strong chelator of essential minerals, such as cobalt, zinc, manganese, calcium, molybdenum and sulphate. In addition, it kills off beneficial gut bacteria and allows toxic bacteria such as *Clostridium difficile* to flourish. Two key problems caused by glyphosate residues in our diet are nutritional deficiencies, especially minerals and essential amino-acids, and systemic toxicity.²⁵

²² <https://www.npr.org/sections/krulwich/2012/11/29/166156242/cornstalks-everywhere-but-nothing-else-not-even-a-bee>

²³ <http://onlinelibrary.wiley.com/doi/10.1111/jawr.12159/abstract>

²⁴ <http://www.glyphosate.eu/glyphosate-basics/how-glyphosate-works>

²⁵ <https://www.mdpi.com/1099-4300/15/4/1416>

The gut microbiome; the collective genome of organisms inhabiting our body

Chatelier, E.L. *et al.* Richness of human gut microbiome correlates with metabolic markers *Nature* 29 August 2013; 500: 541-550.²⁶

"We are facing a global metabolic health crisis provoked by an obesity epidemic." In a multi-author study of obese and non-obese individuals, those with "low bacterial richness in the gut (23% of the population) are characterized by more marked overall adiposity, insulin resistance and dyslipidaemia and a more pronounced inflammatory phenotype when compared with those with high bacterial richness." "Low richness of gut microbiota has been reported in patients with inflammatory bowel disorder". "Also, notable diversity differences were observed between the urban US population and rural populations from two developing countries."

The microbiome of uncontacted Amerindians has the highest diversity of bacteria²⁷

"We characterize the fecal, oral, and skin bacterial microbiome and resistome of members of an isolated Yanomami Amerindian village with no documented previous contact with Western people. These Yanomami harbor a microbiome with the highest diversity of bacteria and genetic functions ever reported in a human group."

The State of Nature in the UK is shockingly low

The UK State of Nature 2016 is 'knackered'

Mark Eaton of the RSPB, the Report's first author said: *"The report includes a new "biodiversity intactness index", which analyses the loss of species over centuries. The UK has lost significantly more nature over the long term than the global average with the UK the 29th lowest out of 218 countries. "It is quite shocking where we stand compared to the rest of the world, even compared to other western European countries: France and Germany are quite a way above us in the rankings," said Eaton. "The index gives an idea of where we have got to over the centuries, and we are pretty knackered."*²⁸

Most UK farmers who manage '75% of UK land' are drowning their crops in pesticides

The National Farmers' Union (NFU), the Crop Protection Association (CPA) and the Agricultural Industries Confederation (AIC) combine to lobby the EU not to restrict the 320+ pesticides available to them. The publication is called: **HEALTHY HARVEST**.²⁹ The countries that have even lower Biodiversity Intactness Indices are similarly working with the Agrochemical Corporations. These are the Republic of Ireland and the USA.

Complete denial that farming was responsible

It was therefore astounding to hear the complete denial of the NFU and Defra about The State of Nature Report. NFU vice-president Guy Smith said *"intensification of farming had ended in the early 1990s."* that farmers *"were using less fertiliser and pesticides than ever"* and a spokeswoman from Defra said: *"Protecting our precious environment and supporting our world-leading farmers, a cornerstone of our economy, will form an important part of our EU exit negotiations."*

The Soil Association found more pesticides than ever were being used by farmers

November 2017: At the Royal Society of Medicine Conference on pesticides safety the Soil Association presented alarming figures. Under FOI request FERA Science (previously a government agency, now privatized) provided figures that showed that the number of active ingredients applied

²⁶ <http://www.nature.com/nature/journal/v500/n7464/abs/nature12506.html>

²⁷ <http://advances.sciencemag.org/content/1/3/e1500183.short>

²⁸ <https://www.rspb.org.uk/our-work/stateofnature2016/>

²⁹ Healthy Harvest: The impact of losing plant protection products on UK food and plant production. <http://www.nfuonline.com/assets/30597>

to wheat had risen **12-fold** from 1.7 in 1974 to 20.7 in 2014; that those applied to potatoes had risen **5.8** times from 5.3 in 1975 to 30.8 in 2014; that those applied to onions and leeks had risen **18-fold** from 5.3 in 1975 to 30.8 in 2014. Pesticides are tested individually but no one tests the cocktail of pesticides to which humans and the environment are exposed. **The Chief Scientist for Defra Professor Ian Boyd** pointed out that once a pesticide is approved there is no follow up. Dr. Michael Antoniou, head of the Gene Expression and Therapy Group at King's College London, (and lead author of the 2011 Report: "Roundup and Birth Defects: Is the public being kept in the dark?") told the Royal Society of Medicine conference that the adjuvants in commercial pesticide formulations can be toxic in their own right and in some cases more toxic than the declared active ingredients. Yet only the active ingredients are tested and assessed for long-term health effects in the regulatory process. Dr. Antoniou also said that research on hormone-disrupting chemicals, including pesticides, shows that very low realistic doses can be more toxic than higher doses. Professor Carl Leifert talked about pesticides linked to low sperm quality. In a recent study, published in JAMA Internal Medicine, Harvard researchers followed 325 women at an infertility clinic and found that women who regularly ate pesticide-treated fruits and vegetables had lower success rates getting pregnant with IVF, while women who ate organic food had reduced risk of pregnancy loss and increased fertility. Dave Bench Head of UK Chemicals Regulation Division described the regulatory system for pesticides *as robust and as balancing the risks of pesticides against the benefits to society.* Fera statistics show that in 2014 glyphosate was used on Wheat (601,330 kg) Winter barley, Spring barley, Oats, Rye, Triticale, Oilseed rape (577,969 kg), Linseed, All potatoes, Peas, Beans, Sugar beet, with a total of 1,765,465 kg glyphosate on all crops. The total weight of pesticides (herbicides and desiccants, fungicides, growth regulators, molluscicides and repellants, insecticides and seed treatments) applied to farmland in 2014 was in excess of 16,000 tonnes.³⁰

Global insect apocalypse due to intensive agriculture and pesticides³¹

The analysis, published in the journal Biological Conservation, says intensive agriculture is the main driver of the declines, particularly the heavy use of pesticides. Urbanisation and climate change are also significant factors. "*If insect species losses cannot be halted, this will have catastrophic consequences for both the planet's ecosystems and for the survival of mankind,*" said Francisco Sánchez-Bayo, at the University of Sydney, Australia, who wrote the review with Kris Wyckhuys at the China Academy of Agricultural Sciences in Beijing. The 2.5% rate of annual loss over the last 25-30 years is "shocking", Sánchez-Bayo told the *Guardian*: "*It is very rapid. In 10 years, you will have a quarter less, in 50 years only half left and in 100 years you will have none.*" One of the biggest impacts of insect loss is on the many birds, reptiles, amphibians and fish that eat insects. "*If this food source is taken away, all these animals starve to death,*" he said. Such cascading effects have already been seen in Puerto Rico, where a recent study revealed a 98% fall in ground insects over 35 years. The new analysis selected the 73 best studies done to date to assess the insect decline. Butterflies and moths are among the worst hit. For example, the number of widespread butterfly species fell by 58% on farmed land in England between 2000 and 2009. **The UK has suffered the biggest recorded insect falls overall**, though that is probably a result of being more intensely studied than most places. He thinks new classes of insecticides introduced in the last 20 years, including neonicotinoids and fipronil, have been particularly damaging as they are used routinely and persist in the environment: "*They sterilise the soil, killing all the grubs.*" This has effects even in nature reserves nearby; the 75% insect losses recorded in Germany were in protected areas.

³⁰ <http://gmwatch.org/en/news/latest-news/17988-scientists-warn-of-toxic-chemical-cocktail-in-food>

³¹ <https://www.theguardian.com/environment/2019/feb/10/plummeting-insect-numbers-threaten-collapse-of-nature>

UK's Science Media Centre lambasted for pushing corporate science³²

The meeting of global science writers in Bath in 2014 concluded: "*Journalists who uncritically report on SMC briefings and quotes sent by the centre are being taken for a ride by a lobby organisation instead of a neutral science information provider.*" Connie St Louis, former president of the Association of British Science Writers and a senior lecturer at City University, London said: "*I would close down the UK Science Media Centre.*" She conducted a small study on the centre's impact on UK science reporting in the 12 national newspapers in 2011 and 2012. The SMC's main activities include sending out 'expert reactions' — quotes on issues in the news — and holding media briefings, essentially small press conferences with a few experts. She found that more than half the SMC's expert reactions were covered in the press and, in 23 per cent of the stories that included these, the only quotes were those that came from the centre.

David Miller, a professor of sociology from the University of Bath, United Kingdom, presented a scathing analysis of the SMC, based on a combination of methods, such as analysing the SMC's website content and sending out freedom of information requests. He looked at which experts the centre uses — given that its mission is to get scientists' views across. What he found was that some 20 of the 100 most quoted experts were not scientists, as defined by having a PhD and working at a research institution or a top learned society. Instead they were lobbyists for and CEOs of industry groups. In 2012, the UK SMC, EFSA, Monsanto and GMO lobbyists set about discrediting and destroying the paper by Séralini and his team. After a year, Wallace Hayes, the Editor of *Food and Chemical Toxicology* retracted the paper under pressure from Monsanto, but it was republished.

Cancer Research UK protects the Agrochemical Industry: the CRUK website claims '*there is little evidence that pesticides cause cancer*'

Michael Pragnell former Chairman of Cancer Research UK (2010-2017), founder of Syngenta and former Chairman of CropLife International was awarded a CBE in 2017 for services to cancer research. CropLife International was founded in 2001.³³ As of 2015 CropLife International's member list includes the following 8 companies: [BASF](#), [Bayer CropScience](#), [Dow AgroSciences](#), [DuPont](#), [FMC Corp.](#), [Monsanto](#), [Sumitomo](#) and [Syngenta](#). Many of these make their own formulated glyphosate. CRUK said that there was little evidence that pesticides caused cancer. CRUK, the CMO England and PHE, linked cancer to alcohol, obesity and smoking. They blamed the people for 'lifestyle choices'.

In the UK there were 13,605 new cases of Non-Hodgkin Lymphoma in 2015 (and 4,920 deaths in 2016)³⁴

There were 41,804 new cases of bowel cancer in 2015 (and 16,384 deaths in 2016); 12,547 new cases of kidney cancer in 2015 (and 4,619 deaths in 2016); 5,736 new cases of liver cancer in 2015 (5,417 deaths in 2016); 15,906 new cases of melanoma in 2015 (2,285 deaths in 2016); 3,528 new cases of thyroid cancer in 2015 (382 deaths in 2016); 10,171 new cases of bladder cancer in 2015 (5,383 deaths in 2016); 8,984 new cases of uterine cancer in 2015 (2,360 deaths in 2016); 7,270 cases of ovarian cancer in 2015 (4,227 deaths in 2016); 9,900 new cases of leukaemia in 2015 (4,712 deaths in 2016); 55,122 new cases of invasive breast cancer in 2015 (11,563 deaths in 2016); 46,388 new cases of lung cancer in 2015 (and 35,620 deaths in 2016); 47,151 new cases of prostate cancer in 2015 (11,631 deaths in 2016); 9,211 new cases of oesophageal cancer in 2015 (8,004 deaths in 2016) and 5,540 new cases of myeloma in 2015 (3,079 deaths in 2016); 2,288 new cases of testicular cancer in 2015 (57 deaths in 2016); 9,921 new cases of pancreatic cancer in 2015 (9,263 deaths in 2016); 11,432 new cases of brain cancer in 2015 (5,250 deaths in 2016). In the US in 2014 there were 24,050 new cases of myeloma.

³² <https://www.scidev.net/global/journalism/feature/uk-s-science-media-centre-lambasted-for-pushing-corporate-science.html>

³³ https://www.vinci.com/vinci.nsf/en/management-board-directors/pages/michael_pragnell.htm

³⁴ <https://www.cancerresearchuk.org/health-professional/cancer-statistics/statistics-by-cancer-type/non-hodgkin-lymphoma>

Each year there are steady increases in the numbers of new cancers, and increases in deaths from the same cancers, with no treatments making any difference to the numbers.

In 2011, CRUK began donating money (£450 million/year) to the Government's Strategy for UK Life Sciences and AstraZeneca provided 22 compounds to academic research to develop medicines.³⁵

Monsanto said that glyphosate was not metabolised in the body but excreted unchanged. The assessment showed ¹⁴C labelled glyphosate is distributed to every organ of the body

Professor Alan Boobis, who chaired the UN's joint FAO/WHO meeting in 2016 on glyphosate claimed he had no conflicts of interest, but *The Guardian's* European Environment Editor showed that his organisation had received industry money

Professor Alan Boobis, who claimed he had no conflicts of interest, is Vice President of the International Life Science Institute (ILSI) Europe, an organisation that had received money from both Monsanto and CropLife International. The following report was from *Guardian* journalist Arthur Neslen.³⁶ "A UN panel that on Tuesday ruled that glyphosate was *probably not carcinogenic to humans* has now become embroiled in a bitter row about potential conflicts of interests. It has emerged that an institute co-run by the chairman of the UN's joint meeting on pesticide residues (JMPR) received a six-figure donation from Monsanto, which uses the substance as a core ingredient in its bestselling Roundup weedkiller. *Professor Alan Boobis, who chaired the UN's joint FAO/WHO meeting on glyphosate, also works as the Vice-president of the International Life Science Institute (ILSI) Europe. The co-chair of the sessions was Professor Angelo Moretto, a board member of ILSI's Health and Environmental Services Institute, and of its Risk21 steering group too, which Boobis also co-chairs. In 2012, the ILSI group took a \$500,000 (£344,234) donation from Monsanto and a \$528,500 donation from the industry group CropLife International, which represents Monsanto, Dow, Syngenta and others, according to documents obtained by the US right to know campaign.*"

Joint Meeting of the FAO Panel of Experts on Pesticide Residues in Food and the Environment and the WHO Core Assessment Group Rome, Italy, 20–29 September 2004³⁷

When Glyphosate was reassessed in 2004, Professor Alan Boobis was also Chairman of the UN's JMPR meeting on pesticide residues.

The presentation on re-assessment of glyphosate data was done by two members of the German Rapporteur Member State Federal Institute of Risk Assessment (BfR) Dr Rudolf Pfeil and Dr Lars Niemann and two other members of the BfR were present Dr Roland Solecki and Dr Ursula Banasiak. Why did the BfR declare beforehand that since they carried out the original work it would be improper for them to be involved in the JMPR discussions?

On page 98, the Ridley and Mirly paper on ¹⁴C labelled glyphosate showed it was distributed to every organ in the body. So why did [Dan Goldstein](#), Senior Science Fellow and Lead, Medical Sciences and Outreach, Monsanto on Friday, 12/20/2013 3:16 pm: claim: "*If ingested, glyphosate is excreted rapidly, does not accumulate in body fat or tissues, and does not undergo metabolism in humans. Rather, it is excreted unchanged in the urine (EU Review Report of the active substance glyphosate, 2002)*"³⁸ and refer back to the 2002 (sic) assessment?

³⁵ <https://www.gov.uk/government/publications/uk-life-sciences-strategy>

³⁶ <https://www.theguardian.com/environment/2016/may/17/unwho-panel-in-conflict-of-interest-row-over-glyphosates-cancer-risk>

³⁷

https://apps.who.int/iris/bitstream/handle/10665/43624/9241665203_eng.pdf;jsessionid=B0AAD3975D65BB30FFFE902DD40DF27C?sequence=1

³⁸ http://ec.europa.eu/food/plant/protection/evaluation/existactive/list1_glyphosate_en.pdf

Page 98 Table 3. Mean tissue concentration of radioactivity (ppm) at 168 h in rats given ¹⁴C-labelled glyphosate as single or repeated doses. **Glyphosate was present in whole blood, liver, brain, kidney, spleen, lung, heart, testes/ovary, stomach, small intestine, colon, bone, bone marrow, abdominal muscles, shoulder muscles and the eye.**

Page 125 The ophthalmic examination before study termination revealed a statistically significant difference ($p < 0.05$) between the incidences of cataractous lens changes in males in the control group and in the group receiving the highest dose (none out of 15 compared with five out of 20). The occurrence of cataractous lens changes in males at the lowest and intermediate doses, as well as in all treated groups of females, were comparable to that of their respective controls. The observed incidence for this finding of 25% for male CD rats at the highest dose was within the range (0–33%) observed in previously conducted studies at this laboratory, but a treatment-related impact could not be excluded. An independent pathologist's examination confirmed a statistically significant increase ($p < 0.05$) in the incidence of cataractous lens changes in males at the highest dose (one out of 14 compared with eight out of 19) and concluded that there appeared to be a treatment-related occurrence of lens changes affecting males at the highest dose. Histological examination of the eyes at study termination revealed the incidences of cataract and/or lens fibre degeneration (Table 19). The results of histopathology also suggested that there was an increase in cataractous lesions in male rats at 20 000 ppm, although the difference in incidences in the control group and at the lowest and intermediate doses was less pronounced than suggested by ophthalmoscopy. (Stout and Ruecker 1990).

Conclusions of the UN's JPMR meeting

Page 158 *In view of the absence of a carcinogenic potential in animals and the lack of genotoxicity in standard tests, the Meeting concluded that glyphosate is unlikely to pose a carcinogenic risk to humans.*

Page 159 *The Meeting concluded that glyphosate is not teratogenic. The Meeting concluded that the existing database on glyphosate was adequate to characterize the potential hazards to fetuses, infants, and children.*

On the basis of the new toxicological data, the present Joint Meeting concluded that AMPA is of no greater toxicological concern than its parent compound, thus confirming the conclusion of the 1997 JMPR.

In 1994 the Joint FAO/WHO/JMPR Panel had granted Monsanto increased Maximum Residue Levels (MRLs) for glyphosate on soya (from 5 mg/kg to 20 mg/kg) and soya bean fodder (from 20 mg/kg to 200 mg/kg).³⁹

Genetically Engineered Foods: The Biggest Fraud in the History of Science

Governments and leading scientific institutions have systematically misrepresented the facts about GMOs and the scientific research that casts doubt on their safety⁴⁰

On 4 March 2015 the Organisation Beyond GM facilitated the Press Release of American public interest attorney Steven Druker's acclaimed new book, Altered Genes, Twisted Truth: How the Venture to Genetically Engineer Our Food Has Subverted Science, Corrupted Government and Systematically Deceived the Public.⁴¹

³⁹

http://www.fao.org/fileadmin/templates/agphome/documents/Pests_Pesticides/JMPR/Evaluation94/glyphos.pdf

⁴⁰ Altered Genes, Twisted Truth: Steven M Druker. How the Venture to Genetically Engineer Our Food Has Subverted Science, Corrupted Government and Systematically Deceived the Public. 2015 Clear River Press.

⁴¹ <http://beyond-gm.org/new-book-exposes-systematic-government-and-scientific-fraud-over-gm-food/>

His book reveals how governments and leading scientific institutions have systematically misrepresented the facts about GMOs and the scientific research that casts doubt on their safety.⁴² GM Watch reported: “The book features a foreword by the renowned primatologist Dame Jane Goodall, who will also speak at the conference, hailing it as “without doubt one of the most important books of the last 50 years.”

The book’s revelations come at a crucial time when the UK is considering the commercial planting of GM crops following the European Parliament’s decision to allow member states to opt out of the blockade that has barred them from the EU until now. Based on the evidence presented in the book, Druker and Goodall will assert that it would be foolhardy to push forward with a technology that is unacceptably risky and should never have been allowed on the market in the first place. The book is the result of more than 15 years of intensive research and investigation by Druker, who came to prominence for initiating a lawsuit against the US Food and Drug Administration (FDA).

Steven Druker initiated a lawsuit against the US Food and Drug Administration (FDA) that forced it to open its files on GM foods

Those files revealed that GM foods first achieved commercialisation in 1992 only because the FDA:

- * Covered up the extensive warnings of its own scientists about their dangers*
- * Lied about the facts*
- * And then violated federal food safety law by permitting these foods to be marketed without having been proven safe through standard testing*

“Druker’s well-referenced book points out that if the FDA had actually heeded its own experts’ advice, told the truth, and obeyed the law, the GM food venture would have imploded and never gained traction anywhere.” There were extensive media resources⁴³ but the launch failed to be reported in the newspapers. It is not surprising since many august bodies, scientific journals and philanthropists in the UK & US are supporting GM.⁴⁴

Druker challenges UK Royal Society over misleading statements made about GM foods

Open Letter to the UK Royal Society can be read here.⁴⁵

Extracts: “Because clarifying the facts about GM foods is crucial for developing an intelligent, science-based policy on the future of agriculture, and because the Royal Society has significantly contributed to the confusion that currently surrounds this issue, it is imperative that remedial action be promptly initiated. This is especially so considering that:

- *The European Commission is about to approve substantial regulatory changes in regard to GM crops.*
- *The UK is seriously considering allowing them to be commercially planted.*
- *The Society and other proponents of GM foods have inculcated the widespread illusion that there is an overwhelming scientific consensus that the safety of these products has been established through rigorous testing...”*

Unless you promptly take these steps, it will demonstrate that your commitment to promoting GM foods is stronger than your commitment to honoring the truth and upholding the integrity of science. FURTHER, whether or not you own up to your irresponsible actions and take the steps specified above, I challenge you to read my book and specifically list any inaccurate statements of

⁴² <http://www.gmwatch.org/index.php/news/archive/2015-articles/15973>

⁴³ <http://beyond-gm.org/altered-genes-twisted-truth-media-resources/>

⁴⁴ Royal Society, Wellcome Foundation, Bill & Melinda Gates, Lord David Sainsbury and the Gatsby Foundation, Rothamsted Research, John Innes Centre, Sainsbury Laboratory, Civil Servants from Defra, NFU, James Hutton Institute, BIS, Offices of Life Sciences, Centre for Food Security, Food Standards Agency, etc.

⁴⁵ http://beyond-gm.org/wp-content/uploads/2015/03/DRUKER_OPEN-LETTER-TO-THE-ROYAL-SOCIETY_Final.pdf

fact that you find in it, accompanied by an explanation of why the statement is erroneous and a reference to the evidence that corroborates your assertion."

In 1998, Clinton and Blair conspired with Monsanto to suppress information about the side effects of GM Crops

Monsanto had contributed money to the Clinton presidential campaign. On 10 August 1998 in a Granada 'World in Action' broadcast⁴⁶ Dr Árpád Pusztai (a GM expert leading the team at the Rowett Institute) explained his research that showed that rats fed with genetically modified potatoes had suffered immune damage. He raised questions about the safety of GM food in the human diet on the basis of the study. Monsanto contacted Clinton, who phoned Blair and as a result, Dr Pusztai lost his job and his Laboratory in the Rowett Institute was closed down. Just like Steve Dealler, who said on television in 1990 that BSE was a new disease and was moved to another Department.

NFU and Defra plan for GM Roundup Ready Crops after Brexit, despite ADAS reporting weed resistance to Roundup

Georgina Downs writes on the Government's Agriculture Bill after Brexit⁴⁷

Extracts: "The long-awaited Agriculture Bill finally made its first appearance this week when it was introduced before Parliament. This is the UK Government's plan on what UK farming will look like post Brexit. There is no reference to the protection of human health or public health in the Agriculture Bill as regards to farmers, the main users of pesticides - despite the DEFRA Consultation that preceded the publication of the Agriculture Bill being called Health and Harmony.

The widespread use of pesticides and other toxic chemicals in our existing farming system appears to be the Government's 'elephant in the room' because of DEFRA's reluctance to mention it - let alone focus on it. Therefore, there is no recognition or even any specific reference in the Agriculture Bill - or Mr Gove's statements - to the continued risks associated with the continued use of pesticides and other agrochemicals on crop fields across the UK. Latest Government statistics show that regarding just pesticides alone (i.e. not including chemical fertilisers and all the other agrochemicals used in conventional farming), in 2014 the total area treated with pesticides on agricultural and horticultural crops was 80,107,993 hectares, with the total weight applied 17,757,242 kg."

Ms Downs has appealed to Theresa May to stop multiple pesticides from being sprayed on rural residents, but she has been silent on the matter.

The UK Farming Minister was interviewed by Arthur Neslen on 30/05/2016 about Brexit

He said: *"The birds and habitats directives would go. But the directives' framework is so rigid that it is spirit-crushing."* On **pesticides**, he said *"the EU's precautionary principle needed to be reformed in favour of a US-style risk-based approach, allowing faster authorisation."*

Defra is quoted as saying that after Brexit: "The most promising crops suitable for introducing to England would be Roundup Ready GA21 glyphosate tolerant crops, which synergises well with herbicides already widely used in the UK. Empowering farmers to use the cutting-edge crop science innovations that are available is certainly one opportunity presented by shifting the responsibility for licencing domestically post-Brexit. Although the blanket spraying of herbicides like Roundup present challenges regarding their impact on the environment and animals, the more obvious solution would be to regulate the technique, not the actual product because it would make that possible."⁴⁸

The alleged 'first' glyphosate-resistant weed in Britain has just been reported by scientists from ADAS, the body that endorsed Monsanto's suggestion of spraying pre-harvest glyphosate in 1980

⁴⁶ <http://news.bbc.co.uk/1/hi/health/149882.stm>

⁴⁷ <https://theecologist.org/2018/sep/14/new-uk-agriculture-bill-triumph-or-travesty>

⁴⁸ <https://www.politicshome.com/news/uk/foreign-affairs/brexit/opinion/dods-monitoring/95900/future-food-will-defra-embrace-gmos>

*Poverty brome (Bromus sterilis L.) [sterile or barren brome, syn. Anisantha sterilis (L.) Nevski] is a problematic UK arable weed. There are currently no confirmed cases of glyphosate resistance in any weed species in the United Kingdom or in B. sterilis worldwide... This, coupled with increasing glyphosate use, highlights the need for increased vigilance and monitoring for glyphosate resistance in the United Kingdom.*⁴⁹

Has anyone looked at Black Grass, (*Alopecurus agrestis* L.)? Herbicide-resistant black grass, first seen in 1982 (only two years after farmers started spraying glyphosate pre-harvest) and is now found on 16,000 farms in 34 counties. This was the reason Guy Gagen gave for an increase in Roundup sprayed between 2012 and 2014. Ben Webster of the Times reported: “Farmers have sharply increased their use of a weedkiller that has been classified as “probably carcinogenic to humans”.⁵⁰ More than 1,700 tonnes of glyphosate were sprayed on crops last year, up a third on 2012, according to the Department for Environment, Food and Rural Affairs (Defra). The total area sprayed with the weedkiller grew by almost 500,000 hectares to 2.1 million hectares, an area the size of Wales.” Guy Gagen said: “No farmer would be wanting to put a chemical on a crop when he doesn’t need to.” He added that spraying wheat could result in traces of glyphosate ending up in bread sold in supermarkets but the amount was well below the maximum residue level set by the EU. A Defra spokesman said: “There are extensive regulations in place so that people and the environment are protected from pesticides. The approval of glyphosate for use across Europe is being reviewed by the EU Commission.”

Herbicide-Resistant weeds in the US

International Survey of Herbicide-Resistant Weeds⁵¹ Updated to July 2018. Run the cursor over the map and it will tell you how many herbicide-resistant weeds each US State has. The number of herbicide-resistant weeds in the US vary from one (Massachusetts) to 30 (California). California is the fruit-growing capital of the US.

Massive amounts of glyphosate used globally

‘In 2016, Charles Benbrook reported Trends in glyphosate use in the US and globally: 1974-2014. Between 1994 and 2014 the estimated global use of glyphosate was 8.6 billion kilograms and nearly 0.53 kg/ha (0.47 pounds/acre) on all cropland worldwide.’⁵² That doesn’t include amenity use.

According to Defra, 13 March 2018, European Regulatory assessments found no safety concerns that would prevent continuing approval of glyphosate

----- Forwarded Message -----

Subject: Request for information - Ref: TO2018/05500

Date: Tue, 13 Mar 2018 13:45:53 +0000

From: correspondence.section@defra.gsi.gov.uk on behalf of Ministerial Contact Unit
[<correspondence.section@defra.gsi.gov.uk>](mailto:correspondence.section@defra.gsi.gov.uk)

Reply-To: Ministerial Contact Unit [<correspondence.section@defra.gsi.gov.uk>](mailto:correspondence.section@defra.gsi.gov.uk)

To: rosemary.mason01@btinternet.com

Dear Ms Mason,

Thank you for your recent emails to Clare Moriarty. I have been asked to reply on behalf of Defra. Pesticide active substances such as glyphosate are assessed at EU level and the European Commission takes the decision on whether each active substance should be approved. Products containing approved active substances are assessed and decisions on authorisation are taken at

⁴⁹ <https://www.cambridge.org/core/journals/weed-science/article/first-cases-of-evolving-glyphosate-resistance-in-uk-poverty-brome-bromus-sterilis-populations/2EC536244FC205586290731EF1BE4593>

⁵⁰ <https://www.thetimes.co.uk/article/farmers-using-more-carcinogenic-weed-killer-76bl8lw95t5>

⁵¹ <http://weedsience.org/vmap/statemap.aspx>

⁵² <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5044953/>

national level. Applicants for authorisation must show that their products are effective and **have no harmful effects to people or unacceptable effects on the environment**. If their products were to pose such risks, they would not be authorised; or if such effects were discovered later, they would be withdrawn.

As you point out, the European Commission has renewed the approval of glyphosate until December 2022. This followed reviews of the scientific data by the European Food Safety Authority and the European Chemicals Agency's Committee for Risk Assessment. **Those reviews found no safety concerns that would prevent continuing approval.**

Following the Commission decision, the UK and all other Member States will review the authorisations of **every product containing glyphosate to ensure that they meet the current legal requirements and safety standards**. The rules for this review are set out in EU legislation and guidance documents. The review will be carried out by the Health and Safety Executive as the UK competent authority.

Yours sincerely,

Defra

Ministerial Contact Unit

The UK Government and the GM Industry: colluding to promote GM crops and foods, undermine consumer choice and ignore environmental harm (published by Genewatch UK, May 2014)⁵³

"This briefing summarises information collected by GeneWatch UK using requests under the Freedom of Information Act and the Environmental Information Regulations (known as Fols). It demonstrates close co-operation between the GM industry and the UK Government, including a joint strategy to promote GM crops and foods in the press and media.

The documents:

Reveal how foreign multinational GM companies are running the Government's PR strategy on GM crops by controlling how public and private money will be invested in research;

Show that taxpayers' money is being spent on PR for the GM industry rather than delivering better food and farming;

Suggest close co-operation with GM soya importers to pressure retailers to allow meat and dairy suppliers to use Monsanto's RoundUp® Ready GM soya for animal feed and prevent consumers from accessing GM-free fed meat and dairy products;

Highlight the extent to which the GM industry's role in Government policy is being kept hidden from the public."

Field studies on Danish Dairy cows fed GM soya

Studies in Danish Dairy cattle fed GM soya.⁵⁴ Farm animals such as high yielding dairy cows ingest concentrated feeds like soy, corn, and other grains contaminated with the herbicide glyphosate. This contamination is especially high in genetically modified crops (GMO) with resistance to glyphosate or in those crops treated pre-harvest with glyphosate to desiccate grain or kill late-emerging weeds. This is the first report of glyphosate in the urine of dairy cows chronically contaminated with glyphosate in their feed. The cows had:

- Glyphosate in the urine
- Blood parameter indicative of cytotoxicity (Increased alkaline phosphatase (AP), glutamate dehydrogenase (GLDH), glutamate oxaloacetate transaminase (GOT), creatinine kinase (CK)
- Signs of nephrotoxicity (raised urea and creatine)
- Increased serum cholesterol (the first statin, simvastatin, was trialled by Merck in 1994).
- Trace elements: very low levels of manganese and cobalt.

⁵³ http://www.genewatch.org/uploads/f03c6d66a9b354535738483c1c3d49e4/Fol_summary_May14.pdf

⁵⁴ <http://dx.doi.org/10.4172/2161-0525.1000186>

Birth defects in piglets in Denmark correlated with glyphosate residues in organs

Detection of Glyphosate in 38 malformed Piglets⁵⁵

Glyphosate residues were found in different organs and tissues (lungs, liver, kidney, brain, gut wall and heart) of malformed euthanized one-day-old Danish piglets (N= 38). They were tested using an enzyme-linked immunosorbent assay (ELISA).

- The highest concentrations were seen in the lungs (Range 0.4-80 µg/ml) and hearts (Range 0.15-80 µg/ml)
- The lowest concentrations were detected in muscles (4.4- 6.4 µg/g).

The authors gave an overview of reports of malformations in children of families living a few metres from where this herbicide was sprayed. The risk of malformation in human embryos is very high when their mothers are contaminated at 2 to 8 weeks of pregnancy.

Diseases in cattle in Germany shown to be related to glyphosate residues in feed

Krüger *et al.* have studied the damaging effects of glyphosate on the beneficial gut biota of poultry.⁵⁶

In another paper: Visceral botulism at dairy farms in Schleswig Holstein, Germany the authors show that the farmers who look after sick cattle with botulism often have botulism too. *C. botulinum* occurs in cows' and farmers' faeces and in cattle feeds.⁵⁷ The researchers show that the humans are most likely contracting their infections, not from the cattle but from the feeds, because the same type of botulinum is present in both humans and feeds, but the type of botulinum in the cattle is different. There is now a strong probability that glyphosate residues in animal feeds result in botulism in the cattle and also in related ailments in poultry.

In a mega dairy in Wales 160 cows died from an outbreak of botulism in May 2014.⁵⁸ "About 20 incidents of botulism in the UK are recorded each year," the Agency added, "but because botulism is **not** a notifiable disease, this figure is unlikely to be truly representative of the disease's incidence.

Genetically-engineered crops, glyphosate and the deterioration of health in the United States of America⁵⁹

Abstract: A huge increase in the incidence and prevalence of chronic diseases has been reported in the United States (US) over the last 20 years. Similar increases have been seen globally. The herbicide glyphosate was introduced in 1974 and its use is accelerating with the advent of herbicide-tolerant genetically engineered (GE) crops. Evidence is mounting that glyphosate interferes with many metabolic processes in plants and animals and glyphosate residues have been detected in both. Glyphosate disrupts the endocrine system and the balance of gut bacteria, it damages DNA and is a driver of mutations that lead to cancer.

In the present study, US government databases were searched for GE crop data, glyphosate application data and disease epidemiological data. Correlation analyses were then performed on a total of 22 diseases in these time-series data sets. The Pearson correlation coefficients are highly significant ($< 10^{-5}$) between glyphosate applications and **hypertension** ($R = 0.923$), **stroke** ($R = 0.925$), **diabetes prevalence** ($R = 0.971$), **diabetes incidence** ($R = 0.935$), **obesity** ($R = 0.962$), **lipoprotein metabolism disorder** ($R = 0.973$), **Alzheimer's** ($R = 0.917$), **senile dementia** ($R = 0.994$), **Parkinson's** ($R = 0.875$), **multiple sclerosis** ($R = 0.828$), **autism** ($R = 0.989$), **inflammatory bowel disease** ($R = 0.938$), **intestinal infections** ($R = 0.974$), **end stage renal disease** ($R = 0.975$), **acute kidney failure** ($R = 0.978$) cancers of the **thyroid** ($R = 0.988$), **liver** ($R = 0.960$), **bladder** ($R = 0.981$), **pancreas** ($R = 0.918$), **kidney** ($R = 0.973$) and **myeloid leukaemia** ($R = 0.878$).

⁵⁵ <https://www.omicsonline.org/open-access/detection-of-glyphosate-in-malformed-piglets-2161-0525.1000230.pdf>

⁵⁶ <http://www.ncbi.nlm.nih.gov/pubmed/23224412>

⁵⁷ <http://www.ncbi.nlm.nih.gov/pubmed/22200452>

⁵⁸ <https://www.fwi.co.uk/news/rare-botulism-outbreak-kills-160-dairy-cows>

⁵⁹ http://www.organic-systems.org/journal/92/JOS_Volume-9_Number-2_Nov_2014-Swanson-et-al.pdf

The Pearson correlation coefficients are highly significant ($< 10^{-4}$) between the percentage of GE corn and soy planted in the US and **hypertension** ($R = 0.961$), **stroke** ($R = 0.983$), **diabetes prevalence** ($R = 0.983$), **diabetes incidence** ($R = 0.955$), **obesity** ($R = 0.962$), **lipoprotein metabolism disorder** ($R = 0.955$), **Alzheimer's** ($R = 0.937$), **Parkinson's** ($R = 0.952$), **multiple sclerosis** ($R = 0.876$), **hepatitis C** ($R = 0.946$), **end stage renal disease** ($R = 0.958$), **acute kidney failure** ($R = 0.967$), **cancers of the thyroid** ($R = 0.938$), **liver** ($R = 0.911$), **bladder** ($R = 0.945$), **pancreas** ($R = 0.841$), **kidney** ($R = 0.940$) and **myeloid leukaemia** ($R = 0.889$). The significance and strength of the correlations show that the effects of glyphosate and GE crops on human health should be further investigated.

Declines in educational attainment in Britain over recent years; children in the UK have had maximum exposure to pesticides under the British Government's collusion with industry

The Programme for International Student Assessment (PISA) is a worldwide study by the Organisation for Economic Co-operation and Development (OECD) in member and non-member nations of 15-year-old school pupils' scholastic performance on mathematics, science, and reading.⁶⁰ It is done with a view to improving education policies and outcomes. It measures problem solving and cognition in daily life. PISA was first performed in 2000 and then repeated every three years. In 2000 the UK was ranked 4th. By 2013 the UK failed to make the top 20 in mathematics, reading and science (3 December 2013). Although not directly comparable, because there have been different numbers of countries taking part, this marks a sustained decline. The UK has made little progress and remains among the average, middle-ranking countries, in 26th place for mathematics and 23rd for reading, broadly similar to three years ago. In 2016 an OECD study showed that in England the young have lower basic skills than their counterparts in Europe.⁶¹ But adults approaching retirement age (55-65 years) in England compare reasonably well with their counterparts in other countries. The study says: *"The priority of priorities is therefore to improve the standard of basic schooling in England, improving both average and minimum standards (which are especially weak in England)."*

British women live shorter lives than most other Europeans and nearly 20 years in poor health⁶² Spanish women live the longest, with UK longevity ranked 17th out of 28 EU nations, according to Public Health England's annual health profile

"There is no reason why we shouldn't be as healthy as anywhere in Europe," said Prof John Newton, director of health improvement at PHE.⁶³ *"Many of the causes of chronic, long-term diseases in the UK which shorten lives are preventable. **Obesity** is causing a big surge in the numbers of people developing type 2 diabetes. The report shows the numbers with diabetes are expected to rise swiftly, from just under four million last year to nearly five million in 2035. Along with alcohol, obesity is also one of the factors behind the rise in breast cancer. Apart from the human cost, the bill for the NHS will be huge... The list of the most common site-specific cancers remained unchanged from 2015 in both sexes. Lung cancer, colorectal and anal cancer, and leukaemia and lymphomas were all in the top ten leading causes of death in 2016... Prostate cancer and breast cancer remained amongst the top ten leading causes of death for males and females respectively, both ranked seventh, the same as in 2015. Lung cancer deaths remained the third most common cause of death for males and sixth most common for females in 2016. There has also been an increase in the death rate from lung cancer (8%), kidney disease and other diseases of the urinary system (38%) and chronic lower respiratory disease (18%). When deaths from all cancers are grouped together, cancer accounted for*

⁶⁰ [http://www.cmec.ca/252/Programs-and-Initiatives/Assessment/Programme-for-International-Student-Assessment-\(PISA\)/PISA-2012/index.html](http://www.cmec.ca/252/Programs-and-Initiatives/Assessment/Programme-for-International-Student-Assessment-(PISA)/PISA-2012/index.html)

⁶¹ <http://www.oecd.org/unitedkingdom/building-skills-for-all-review-of-england.pdf>

⁶²

<http://click.mail.theguardian.com/?qs=bd4bb2980cde506285bbd7433f46e1dcb58fad37ae94d5a5d26dba313aef8ec8b4af965a3c4068bc7770cb3208949b39>

⁶³ <https://www.gov.uk/government/publications/health-profile-for-england-2018/chapter-2-trends-in-mortality>

25.6% of all deaths in females and 30.3% of all deaths in males in 2016. This would make it the leading cause, in 2016, for both sexes. The leading cause of death for women is dementia and Alzheimer's disease, responsible for 15.8% of deaths, with heart disease second at 8.3%. There has been an increase in the death rate from dementia and Alzheimer's of more than 60% and deaths from liver disease have increased by 12%.

Women in 2014-16 were spending nearly 20 years of their life in poor health (19.3 years), while men spent just over 16 years in poor health, according to data from the Office for National Statistics included in the report. The leading cause of poor health, responsible for more than 22% of the pain and suffering, is low back and neck pain, which can be caused by a number of things, including injury and rheumatoid arthritis. After that come skin diseases such as acne and psoriasis, says the report. Third for men is sight and hearing loss, while for women it is migraine. Fourth for both is depressive disorders. Long-term conditions such as diabetes, high blood pressure and cancers underlie some of these problems."

The WHO JMPR assessment found ¹⁴C labelled glyphosate detected in cartilage; is it responsible for degeneration of cartilage and knee arthritis?

Recent anatomical studies of knee arthritis from Harvard show, that when the team factored out the effects of weight and age in the two modern groups, **knee arthritis was still more than twice as common in the group of people who died after 1976, 'suggesting other factors are involved'**.⁶⁴ In England in July 2017 the NHS waiting list for hip replacement and cataract surgery exceeded 4 million. **In Wales in 2019: Almost 35,000 people at risk of permanent sight loss are waiting too long for eye care**, according to new statistics from the Welsh Government.⁶⁵

The UK media have not reported the US Court cases against Monsanto

Third trial and largest fine against Monsanto to a couple over Roundup: for the first time the Attorneys were able to reveal Monsanto's criminal strategy for keeping Roundup on the market

A [California](#) jury has ordered Monsanto to pay more than \$2bn to a couple that got cancer after using its weedkiller, marking the third and largest verdict against the company over Roundup.⁶⁶ A jury in Oakland ruled Monday that [Monsanto](#), now owned by the German pharmaceutical corporation Bayer, was liable for the non-Hodgkin's lymphoma (NHL) cancer of Alva and Alberta Pilliod. The jury ordered the company to pay \$1bn in damages to each of them, and more than \$55m total in compensatory damages (13/05/2019).

Breaking News: Monsanto hit with \$2 billion verdict in 3rd Roundup trial⁶⁷

Law360 (May 13, 2019, 5:04 pm EDT). Excerpts: Other experts called by the Pilliods testified that the US EPA approved Roundup, based on fraudulent studies by Industrial Bio-test Laboratories. They said the company kept selling the product, even after the fraud was exposed, and refused for decades to conduct certain studies of its Roundup formula, despite requests from the EPA and its own toxicologist. During closings, the Pilliod's counsel, Brent Wisner, argued that Monsanto spent decades suppressing science linking its product to cancer, by ghost-writing academic articles and feeding the EPA "bad science". He asked the jury to 'punish' Monsanto with a \$1 billion punitive damages award. On Monday 13th May the jury sided with the Pilliods and found Monsanto liable for failure to warn claims, design defect claims, negligence claims and negligent failure to warn claims.

⁶⁴ <http://www.sciencemag.org/news/2017/08/knee-arthritis-americans-has-doubled-1940>

⁶⁵ <https://www.bbc.co.uk/news/uk-wales-48585767>

⁶⁶ <https://www.theguardian.com/business/2019/may/13/monsanto-cancer-trial-bayer-roundup-couple>

⁶⁷ <https://www.law360.com>

On 28/08/2018 Robert F Kennedy Jr. one of the US Attorney's fighting Bayer, said: Bayer Needs More Than an Aspirin to Cure Its Monsanto-Sized Headache⁶⁸

"In a special telephone meeting on Thursday, August 23, Bayer AG's CEO Werner Bauman tried to reassure the German conglomerate's principal shareholders who were concerned about the recent [drop](#) in the company's stock. Bayer's stock fell dramatically after an unfavorable [verdict](#) against Bayer's St. Louis subsidiary, Monsanto.

Bauman expressed his confidence in [Monsanto](#) and predicted a sunny future for its flagship herbicide, Roundup. He told his top-tier investors that Bayer had performed an adequate due-diligence on Monsanto before [purchasing](#) the troubled company for \$66 billion this past June. At the time of its purchase, Monsanto told its German suitors that a \$270-million set-aside would cover all its outstanding liabilities arising from Monsanto's 5,000 Roundup cancer lawsuits.

Bauman did concede to anxious shareholders that Monsanto had withheld [internal papers](#) relevant to the case. Bayer never saw those internal Monsanto documents prior to the purchase.

It's no surprise that Monsanto kept secrets from Bayer. Johnson's jury [heard evidence](#) that for four decades Monsanto maneuvered to conceal Roundup's carcinogenicity by capturing regulatory agencies, corrupting public officials, bribing scientists and engaging in scientific fraud to delay its day of reckoning. The jury found that these activities constituted "malice, fraud and oppression" warranting \$250 million in punitive damages.

I am one of several attorneys representing, collectively, now some 8,000 clients with similar cases. I attended the two-month trial and worked with the trial team led by two young and exceptionally gifted lawyers, Brent Wisner of Baum Hedlund Aristei & Goldman and Dave Dickens of The Miller Firm. For Bayer the worst is yet to come.

Despite Monsanto's efforts, the science [linking glyphosate](#)—Roundup's active ingredient—to non-Hodgkin's lymphoma has passed the critical inflection point. European nations are [moving](#) to ban or restrict the chemical, and California regulators and courts have [ordered](#) Monsanto to warn consumers of Roundup's carcinogenicity at all points of sale. Both federal and state courts across the country have agreed that the question can be sent to juries. Hundreds of new inquiries have flooded our offices since the Johnson verdict.

Perhaps more ominously for Bayer, Monsanto also faces cascading scientific evidence [linking glyphosate](#) to a constellation of other injuries that have become prevalent since its introduction, including obesity, depression, Alzheimer's, ADHD, autism, multiple sclerosis, Parkinson's, kidney disease, and inflammatory bowel disease, brain, breast and prostate cancer, miscarriage, birth defects and declining sperm counts. Strong science suggests glyphosate is the culprit in the exploding epidemics of celiac disease, colitis, gluten sensitivities, diabetes and non-alcoholic liver cancer which, for the first time, is attacking children as young as 10.

Researchers peg glyphosate as a potent endocrine disruptor, which interferes with sexual development in children. The chemical compound is certainly a chelator that removes important minerals from the body, including iron, magnesium, zinc, selenium and molybdenum.

Roundup [disrupts the microbiome](#) destroying beneficial bacteria in the human gut and triggering brain inflammation and other ill effects.

The public's growing concerns with Roundup are, in part, due to Monsanto's overreaching.

For two decades following its licensing in 1974, farmers and gardeners used Roundup as a conventional weedkiller. After Monsanto's introduction of Roundup Ready seeds in the 1990s, farmers began aerial spraying of the herbicide on entire fields, including newly planted corn, canola and soy genetically altered to thrive in the toxic mist that killed all neighboring weeds.

Then, around 2006, Monsanto started marketing Roundup as a [desiccant](#) to dry up oats and wheat immediately before harvest. For the first time, farmers were spraying the chemical directly on food. Roundup sales rose dramatically to 300 million pounds annually in the U.S., with farmers spraying enough to cover every tillable acre in America with a gallon of Roundup.

⁶⁸ <https://www.organicconsumers.org/blog/kennedy-monsanto-roundup-verdict-bayer-stock>

Glyphosate now accounts for about [50% of all herbicide use](#) in the U.S. About [75% of glyphosate use](#) has occurred since 2006, with [the global glyphosate market](#) projected to reach \$11.74 billion by 2023. Never in history has a chemical been [used](#) so pervasively. Glyphosate is in our air, water, plants, animals, grains, vegetables and meats. It's in beer and wine, children's [breakfast cereal and snack bars](#) and mother's breast milk. It's even in our vaccines.

Children among the cancer victims suing Monsanto and Bayer

A 12-year-old boy suffering from cancer is among the newest plaintiffs taking on Monsanto and its German owner Bayer AG in growing litigation over the safety of Roundup herbicides and Monsanto's handling of scientific concerns about the products.⁶⁹

Lawyers for Jake Bellah were in court Monday in Lake County Superior Court in Lakeport, California arguing that Bellah's young age and diagnosis of non-Hodgkin lymphoma (NHL) qualified him for "trial preference," or a speedy trial. [In their motion](#), lawyers for the Baum Hedlund law firm of Los Angeles asked for a trial that would begin before the end of this year, within 120 days after a judge's order if their motion is granted. Monsanto lawyers opposed the request, arguing that the company would need more time to prepare a defense given the unusual scientific issues of surrounding alleged causation of cancer in a child. The four plaintiffs who have already had trials against Monsanto were all adults diagnosed with non-Hodgkin lymphoma, and all were victorious. Bellah would likely be the first case of a child with cancer to challenge Monsanto before a jury.

Lawyers representing Bellah said the child was exposed to Monsanto's glyphosate-based herbicide products repeatedly over many years as he played in his family's yard and around their garden area where his father frequently sprayed the chemicals. Bellah developed B-cell lymphoma and has been hospitalized and treated with chemotherapy and is currently in remission, according to Pedram Efsandiary, one of the family's attorneys.

Monsanto emails showed that scientists knew that 'the formulated product does the damage'⁷⁰

This document is an email correspondence between Drs. William Heydens and Donna Farmer, wherein the two discuss various studies which observed adverse effects by the formulated Roundup product. Specifically, Dr. Farmer acknowledges: "*[t]he interest point is glyphosate all basically [sic] had no effect the formulated product did – does this point us to the coformulants – surfactants? [sic]*" at *2. Dr. Heydens also admits, after discussing with Monsanto consultant John Desesso, that "*we are in pretty good shape with glyphosate but vulnerable with surfactants. . . What I've been hearing from you is that this continues to be the case with these studies – Glyphosate is OK but the formulated product (and thus the surfactant) does the damage.*" at *1.

One of the Court Documents released was an email from Donna Farmer, Monsanto Senior Toxicologist: "*The terms glyphosate and Roundup cannot be used interchangeably nor can you use "Roundup" for all glyphosate-based herbicides any more. For example, you cannot say that Roundup is not a carcinogen...**we have not done the necessary testing on the formulation to make that statement.***"

Donna Farmer's 1/11/2017 deposition details Monsanto's reaction to Dr. James Parry's review of glyphosate. Specifically, the deposition covers Monsanto's reluctance to conduct studies suggested by Dr. Parry after being unhappy with Parry's conclusions. Likewise, it appears that Monsanto never submitted Dr. Parry's work on glyphosate to the US EPA, even though internal emails describe him as a renowned expert.

⁶⁹ <https://usrtk.org/monsanto-roundup-trial-tacker/sick-children-among-cancer-victims-suing-monsanto-over-roundup/>

⁷⁰ <https://www.baumhedlundlaw.com/toxic-tort-law/monsanto-roundup-lawsuit/monsanto-secret-documents-page-six/>

Key documents that were uncovered by the Courts are here⁷¹

Jess Rowlands US EPA allegedly bragged he could kill off the cancer risk

It included emails in which an [Environmental Protection Agency](#) official Jess Rowlands who was in charge of evaluating the cancer risk of [Monsanto Co.](#)'s Roundup allegedly bragged to a company executive that he deserved a medal if he could kill another agency's investigation into the herbicide's key chemical.

Monsanto sought academics to sign a ghost-written Report

They cited an email from a Monsanto executive proposing to ghost-write parts of the 2013 report, saying, "we would be keeping the cost down by us doing the writing" while researchers "would just edit & sign their names so to speak."

A letter written by the late Marion Copley US EPA toxicologist to her colleague Jess Rowland⁷²

It's been four years since Marion Copley, a toxicologist who had worked for 30 years for the EPA, wrote this letter to her then-colleague, Jess Rowland, accusing him of conniving with Monsanto to bury the agency's own hard scientific evidence that it is "essentially certain" that glyphosate, the key ingredient in Monsanto's Roundup weed killer, causes cancer. The date of the letter comes after Copley left the EPA in 2012 and shortly before she died from breast cancer at the age of 66 in January 2014. She accuses Rowland of having "intimidated staff" to change reports to favor industry, and writes that research on glyphosate, the key ingredient in Monsanto's Roundup, shows the pesticide should be categorized as a "probable human carcinogen."

"Jess,

Since I left the agency with cancer [breast] I have studied the tumor process extensively and I have some mechanism comments which may be very valuable to CARC based on my decades of pathology experience. Glyphosate was originally designed as a chelating agent and I strongly believe that is the identical process involved in tumor formation."

In a 1-page letter Dr Copley makes 14 observations about chelators and/or glyphosate, including that they are endocrine disruptors, suppress the immune system, damage the kidneys or pancreas which can lead to clinical chemistry changes that favor tumor growth; glyphosate kills bacteria in the gut, the gastrointestinal system is 80% of the immune system making the body susceptible to tumors.

She goes on to say: "**It is essentially certain that glyphosate causes cancer.**"

Dr Copley ends with the statement: "*I have cancer, and I don't want these serious issues in HED [EPA's Health Effects Division] to go unaddressed before I go to my grave. I have done my duty.*"

Marion Copley

March 4, 2013"

Glyphosate causes serious multi-generational health damage to rats

Washington State University (WSU) researchers have found a variety of diseases and other health problems in the second- and third-generation offspring of rats exposed to glyphosate, the world's most used weed killer. In the first study of its kind, the researchers saw descendants of exposed rats developing prostate, kidney and ovarian diseases, obesity and birth abnormalities.⁷³

Michael Skinner, a WSU professor of biological sciences, and his colleagues exposed pregnant rats to the herbicide between their eighth and 14th days of gestation. The dose—half the amount expected to show no adverse effect—produced no apparent ill effects on either the parents or the first generation of offspring.

⁷¹ <https://usrtk.org/pesticides/mdl-monsanto-glyphosate-cancer-case-key-documents-analysis/>

⁷² <https://www.organicconsumers.org/sites/default/files/marioncopleyletter.pdf>

⁷³ <https://www.nature.com/articles/s41598-019-42860-0>

But writing in the journal *Scientific Reports*, the researchers say they saw “dramatic increases” in several pathologies affecting the second and third generations. The second generation had “significant increases” in testis, ovary and mammary gland diseases, as well as obesity. In third-generation males, the researchers saw a 30 percent increase in prostate disease – three times that of a control population. The third generation of females had a 40 percent increase in kidney disease, or four times that of the controls.

More than one-third of the second-generation mothers had unsuccessful pregnancies, with most of those affected dying. Two out of five males and females in the third generation were obese. Skinner and his colleagues call this phenomenon “generational toxicology” and they’ve seen it over the years in fungicides, pesticides, jet fuel, the plastics compound bisphenol A, the insect repellent DEET and the herbicide atrazine. At work are epigenetic changes that turn genes on and off, often because of environmental influences.

The British Government collaborated with Monsanto and Bayer after WW2

After WW2, in 1949, following the Nuremberg trials, the Westminster Government invited Monsanto to set up a chemical factory in Newport, Wales, as far away from London as possible. They also worked with Bayer, the former IG Farben, the private chemical company that collaborated with the Nazis.⁷⁴ *“It built a factory next to Auschwitz, Poland, so it could exploit Jewish slave labour in its oil and rubber production plant. In total, some 300,000 detainees from Auschwitz were employed in IG Farben’s workforce, supplying the company with free labour. The company housed the workers in its own concentration camp, with the horrendous conditions there and in the factory leading to an estimated 30,000 deaths. On top of this, an unknown number of workers deemed unfit to continue working at the factory were sent to the death camp at Auschwitz. Alongside the brutal conditions of the labour camp, IG Farben also sanctioned drug experiments on live, healthy inmates. IG Farben was probably the most well-known corporate participant in the Holocaust, and the company’s history sheds a chilling light on how genocide became tied in with economics and business.”*

Both companies used factories that had made chemical weapons in the war to make chemicals for agriculture from the same ingredients. From then on, Monsanto’s factory in Wales manufactured PCBs until 1977 and a number of other dangerous chemicals. Monsanto was found to be dumping toxic waste in the River Severn, public waterways and sewerage. After that they paid a contractor to illegally dump “thousands of tons of cancer-causing chemicals - among them PCBs, dioxins and Agent Orange derivatives” at two quarries in Wales: Brofiscin (80,000 tonnes) and Maendy (42,000 tonnes) between 1965 and 1972. In 1968 US documents showed that Monsanto tried to decide whether or not to come clean about the dangers of the chemicals. They stopped making PCBs in Anniston US in 1971 because of scandals about PCBs on the health of the population and wildlife. However, the British government led by Ted Heath agreed to ramp up production at the Monsanto plant in Newport. Alabama is more than 50 million square miles: Wales is 8,000 square miles. In 2003 when toxic effluent from the quarry started leaking into people’s streams in Grosfaen just outside Cardiff, the Environment Agency - a government agency concerned with flooding and pollution – was hired to clean up the site in 2005.⁷⁵

“Firstly, the Agency repeatedly failed to hold Monsanto accountable for its role in the pollution (a role that Monsanto denied from the outset). Secondly, the Agency consistently downplayed the dangers of the chemicals themselves, even claiming that they offered no “identifiable harm or immediate danger to human health” in their official report.”

According to engineering company WS Atkins, in a report prepared for the agency and the local authority in 2005 **but never made public**, the site contains at least 67 toxic chemicals. Seven PCBs have been identified, along with vinyl chlorides and naphthalene. The unlined quarry is still leaking,

⁷⁴ <https://www.newhistorian.com/ig-farben-opens-factory-at-auschwitz/3822/>

⁷⁵ <https://theecologist.org/2007/oct/11/burying-truth-origanal-ecologist-investigation-monsanto-and-brofiscin-quarry>

the report says. "Pollution of water has been occurring since the 1970s, the waste and groundwater has been shown to contain significant quantities of poisonous, noxious and polluting material, pollution of ... waters will continue to occur.

The European Glyphosate Task Force reassessed their own products

Documents reveal European Commission bowed to demands of pesticide lobbies

An environmental non-profit has obtained documents showing the extent to which the European Commission has been lobbied by pesticide producers seeking to protect their interests, leading to a more lenient regulation of these controversial substances⁷⁶

The environmental group, Pesticide Action Network Europe (PAN), has obtained over 600 documents from the Commission showing top EU officials fighting to "cripple" the bloc's pesticide protection legislation. "The Commission has chosen the side of the industry," PAN's Chemicals Coordinator Hans Muilerman told De Morgen.⁷⁷

The haul of over 600 documents was obtained after a two-year legal battle won by the Pesticide Action Network Europe (PAN). They show top officials trying to protect chemical and farming interests from incoming European rules that were expected to directly ban up to 32 (page 115) endocrine disrupting (EDC) pesticides. The law set out specifically to protect human, animal health and the environment and followed 25 years of mounting scientific evidence linking EDC pesticides to severe human health impacts and gender-bending effects on animals. They may be the cause of birth defects that shocked France last year and made international news headlines.

The secret papers, released by order of European Court of Justice, show an internal struggle to define scientific criteria for identifying and banning EDC pesticides. Outnumbered environment and research department officials are seen resisting attempts by agriculture, enterprise, industry and even health department officials to water down the criteria by introducing non-scientific factors, such as farming profitability. They were joined by the Commission Secretary General who orchestrated [documents 42, 559] a flawed impact assessment process. Its bizarre early results downplayed health impacts [document 258]; found that the more pesticides that remained in use, the less the impact on health and the environment [document 560]; and that the fewer EDC pesticides identified, the better [document 273].

A new report for the Commission, written together with industry-linked experts and supporters of anti-regulation pressure groups, recommends scrapping the hazards approach. This is the Report.

Scientific advice in the area of authorisation processes of plant protection products⁷⁸

Following a request from the College of Commissioners, led by Commissioner Andriukaitis, the European Commission's Group of Chief Scientific Advisors (former High-Level Group of Scientific Advisors) adopted at their 7th meeting (23-24 March 2017) a scoping paper (see below) confirming their intention to produce a Scientific Opinion on "Authorisation processes of Plant Protection Products in Europe from a scientific point of view".

Experts from across Europe nominated by SAPEA (Science Advice for Policy by European Academies) contributed with their knowledge and expertise to this topic. A co-ordination group was established by the Group of Chief Scientific Advisors to which SAPEA experts Professors David N. Coggon, Jean Golding, Paul Miller, Evangelia Ntzani, Dominique Parent-Massin, Colin Ockleford, Susanne Hougaard Bennekou and Alan Boobis were invited. The Group of Chief Scientific Advisors also established a sounding board to which experts Thomas Backhaus, Hubert Deluyker, Daniel

⁷⁶ <http://www.brusselstimes.com/eu-affairs/15496/documents-lobbies-attempts-cripple-undermine-pesticide-regulation-eu>

⁷⁷ <https://www.pan-europe.info/press-releases/2019/05/top-eu-officials-fought-higher-pesticide-exposure-secret-documents-show>

⁷⁸ <https://ec.europa.eu/research/sam/index.cfm?pg=pesticides>

Dietrich and Jørgen Schlundt, were invited and were involved in fact checking the draft final scientific opinion. Their aim was to **increase** the use of pesticides.

Experts' declarations of interest were examined by the Commission and no declared interests were found to constitute a conflict of interest. These declarations of interest were published at the same time as the Group of Chief Scientific Advisors' scientific advice and remained available for consultation for six months.

Harmonised Classification of glyphosate by the European Chemicals Agency

EFSA said that glyphosate was not ecotoxic even though ECHA classified it as a substance that is toxic to aquatic invertebrates with long lasting effects (and causes serious eye damage).⁷⁹

The EU Commission only assesses the active ingredient glyphosate. "While active substances are approved at EU level, plant protection products are authorised by national authorities in each EU Member State taking into account their agricultural and environmental conditions."⁸⁰

The European regulators had simply cut and pasted what Monsanto had chosen for them.⁸¹ No scientific papers from Latin America, where Roundup Ready Crops had been forced on them in 1996, were selected.

The Glyphosate Task Force omitted studies from South America where GM crops are grown

The 3rd National Conference of Physicians of Crop-sprayed Towns of Argentina⁸²

The paper by Dr Ávila-Vázquez is titled: Cancer and detrimental reproductive effects in an Argentine agricultural community environmentally exposed to glyphosate.⁸³

Extracts: Birth defects and increasing cancer

After 18 years of systematic sprayings, health teams in fumigated towns detect a change in the pattern of diseases in their populations: respiratory problems are much more common and are linked to the application of agricultural poisons, as is chronic dermatitis. Similarly, during fumigation, epileptic patients convulse much more frequently, and depression, immune and endocrine disorders are more frequent. High rates of miscarriages are recorded (up to 23 % of women of reproductive age had at least one abortion in the past 5 years) and consultations for infertility in men and women have significantly increased. Herds of goats belonging to farmers and indigenous people in some areas record up to 100 % of abortions or premature deaths due to malformations linked to pesticide exposure. Increased thyroid disorders and diabetes are also detected in local people.

More and more children are born with defects in these areas, especially if the first months of pregnancy coincide with the time of spraying. Down's syndrome, spina bifida, myelomeningocele (neural tube defect), congenital heart disease, etc. are diagnosed more frequently in those areas; in some towns and during some years, at triple the normal rates, and directly linked to increased pesticide applications around the towns [3, 4] (see Figure 1). Neural tube defects are among the most common developmental birth defects observed, which is consistent with lab studies and farm observations. ...Increasing pesticide residues in foods made with grains are a growing concern in Europe, and its danger has become evident especially after investigations by the French researcher Gilles-Eric Séralini [27]. Recently, glyphosate was detected in urine of students from the University of Berlin and other Europeans from 18 different countries, and was less high in those on organic diets; in cattle and rabbits similar results were obtained: higher levels of glyphosate in urine and tissues from those fed GM fodder [28]. The export market to Europe is poised to shrink as consumers reject GMOs and glyphosate tainted food. To overcome the problems caused by the resistance of weeds and insects, the biotech industry (Monsanto, Bayer, Dow, Dupont, etc.) is providing more of the

⁷⁹ <https://echa.europa.eu/-/glyphosate-not-classified-as-a-carcinogen-by-echa>

⁸⁰ https://ec.europa.eu/food/sites/food/files/plant/docs/pesticides_glyphosate_eci_final.pdf

⁸¹ <https://www.theguardian.com/environment/2017/sep/15/eu-report-on-weedkiller-safety-copied-text-from-monsanto-study>

⁸² <http://reduas.com.ar/3rd-national-conference-of-physicians-of-crop-sprayed-towns/>

⁸³ http://www.i-sis.org.uk/Devastating_Impacts_of_Glyphosate_Argentina.php

same. New transgenic seeds are promoted, which are tolerant to glyphosate, glufosinate and 2,4-D [29]. Do we want yet higher levels of more and more dangerous herbicides in our food, when the existing burden on health is already intolerable?"

Neurotransmitter changes in the brain from exposure to Glyphosate-based herbicides

Many papers come from Latin American countries where they grow almost exclusively GM Roundup Ready Crops that Monsanto forced on them in 1996. Here are three papers.

Behavioral impairments following repeated intranasal glyphosate-based herbicide administration in mice.⁸⁴

Taken together, our findings demonstrate that intranasal (IN) exposure to commercial Gly-BH produces alterations in locomotor activity, anxiety and memory in adult mice. These observations could be a consequence of alterations in neurotransmission systems comprising the GABAergic, dopaminergic, serotonergic and/or cholinergic systems." In this research paper there are references to many papers from around the world that confirm the glyphosate-based herbicides are damaging to the development of the foetal brain and that repeated exposure is toxic to the adult human brain and may result in alterations in locomotor activity, feelings of anxiety and memory impairment.

Martínez, M. A., Ares, I., Rodríguez, J. L., Martínez, M., Martínez-Larrañaga, M. R., & Anadón, A. (2018). Neurotransmitter changes in rat brain regions following glyphosate exposure. *Environmental Research*, 161, 212-219.⁸⁵

Highlights:

- Glyphosate oral exposure caused neurotoxicity in rats.
- Brain regions were susceptible to changes in CNS monoamine levels.
- Glyphosate reduced 5-HT, DA, NE levels in a brain regional- and dose-related manner.
- Glyphosate altered the serotonergic, dopaminergic and noradrenergic systems.

Mechanisms underlying the neurotoxicity induced by glyphosate-based herbicide in immature rat hippocampus: Involvement of glutamate excitotoxicity.⁸⁶

This is why there are so many mental health and psychiatric disorders, depression, suicides, anxiety and violence among children and adults, (politicians included)

The UN expert on Toxics, Baskut Tuncak wrote in the *Guardian* on 06/11/2017: The EU and glyphosate: it's time to put children's health before pesticides⁸⁷

"A pending decision on Monsanto's ubiquitous weedkiller is a crucial opportunity to protect our children from the toxic cocktail of pesticides polluting their food, water and play areas."

"Our children are growing up exposed to a toxic cocktail of weedkillers, insecticides, and fungicides. It's on their food and in their water, and it's even doused over their parks and playgrounds. Many governments insist that our standards of protection from these pesticides are strong enough. But as a scientist and a lawyer who specialises in chemicals and their potential impact on people's fundamental rights, I beg to differ. Last month it was revealed that in recommending that glyphosate – the world's most widely-used pesticide – was safe, the [EU's food safety watchdog copied and pasted pages of a report directly from Monsanto](#), the pesticide's manufacturer. Revelations like these are simply shocking.

The UN Convention on the Rights of the Child, the most ratified international human rights treaty in the world (only the US is not a party), makes it clear that states have an explicit obligation to protect children from exposure to toxic chemicals, from contaminated food and polluted water, and to ensure that every child can realise their right to the highest attainable standard of health. These and

⁸⁴ <https://www.sciencedirect.com/science/article/pii/S0892036217301526>

⁸⁵ <https://www.sciencedirect.com/science/article/pii/S0013935117316730>

⁸⁶ <https://www.sciencedirect.com/science/article/pii/S0300483X14000493>

⁸⁷ <https://www.theguardian.com/environment/2017/nov/06/the-eu-and-glyphosate-its-time-to-put-childrens-health-before-pesticides>

many other rights of the child are abused by the current pesticide regime. These chemicals are everywhere and they are invisible. The only way to protect citizens, especially those disproportionately at risk from exposure, is for governments to regulate them effectively, in large part by adhering to the highest standards of scientific integrity.

Paediatricians have referred to childhood exposure to pesticides as creating a “silent pandemic” of disease and disability. Exposure in pregnancy and childhood is linked to birth defects, diabetes, and cancer. Because a child’s developing body is more sensitive to exposure than adults and takes in more of everything – relative to their size, children eat, breathe, and drink much more than adults – they are particularly vulnerable to these toxic chemicals. Increasing evidence shows that even at “low” doses of childhood exposure, irreversible health impacts can result. But, most victims cannot prove the cause of their disability or disease, limiting our ability to hold those responsible to account. In light of revelations such as the copy-and-paste scandal, a careful re-examination of the performance of states is required. The overwhelming reliance of regulators on industry-funded studies, the exclusion of independent science from assessments, and the confidentiality of studies relied upon by authorities must change.”

ECHA's Committee for Risk Assessment (RAC) agrees to maintain the current harmonised classification of glyphosate as a substance causing serious eye damage and being toxic to aquatic life with long-lasting effects. RAC concluded that the available scientific evidence did not meet the criteria to classify glyphosate as a carcinogen, as a mutagen or as toxic for reproduction.⁸⁸

Helsinki, 15 March 2017 – RAC assessed glyphosate’s hazardousness against the criteria in the Classification, Labelling and Packaging Regulation. They considered extensive scientific data in coming to their opinion.

The committee concluded that the scientific evidence available at the moment warrants the following classifications for glyphosate according to the CLP Regulation:

- Eye Damage 1; H318 (Causes serious eye damage)
- Aquatic Chronic 2; H411 (Toxic to aquatic life with long lasting effects)

RAC concluded that the available scientific evidence did not meet the criteria in the CLP Regulation to classify glyphosate for specific target organ toxicity, or as a carcinogen, as a mutagen or for reproductive toxicity.

In 2017, there were more than 1.3 million European citizens petitions for a ban on glyphosate.⁸⁹

The President of the European Commission, Jean-Claude Juncker, signed the Final version of the commission proposal. It says: *“In its opinion, the Committee for Risk Assessment of the Agency (European Chemicals Agency) concluded by consensus that on the basis of the information currently available, no hazard classification for carcinogenicity is justified for glyphosate.”*⁹⁰

The omission of the full classification would appear to be intentionally fraudulent. “ECHA's Committee for Risk Assessment (RAC) agrees to maintain the current harmonised classification of glyphosate as a substance causing serious eye damage and being toxic to aquatic life with long-lasting effects. RAC concluded that the available scientific evidence did not meet the criteria to classify glyphosate as a carcinogen, as a mutagen or as toxic for reproduction.”

⁸⁸ <https://echa.europa.eu/-/glyphosate-not-classified-as-a-carcinogen-by-echa>

⁸⁹ <https://euobserver.com/science/139951>

⁹⁰

https://ec.europa.eu/food/sites/food/files/plant/docs/pesticides_glyphosate_commission_proposal_final_version.pdf

Global Agricultural Corporations are severely criticised by Hilal Elver the UN Special Rapporteur on the right to food⁹¹

The Report presented to the UN human rights council on 08/03/2017 is severely critical of the global corporations that manufacture pesticides, accusing them of the “*systematic denial of harms*”, “*aggressive, unethical marketing tactics*” and heavy lobbying of governments which has “*obstructed reforms and paralysed global pesticide restrictions*”.

The report authored by Hilal Elver the UN Special Rapporteur on the right to food and co-authored by Baskut Tuncak, the UN’s special rapporteur on toxics, says pesticides have “*catastrophic impacts on the environment, human health and society as a whole*”, including an estimated 200,000 deaths a year from acute poisoning. Its authors said: “*It is time to create a global process to transition toward safer and healthier food and agricultural production.*”

“*It is a myth,*” said Hilal Elver. “*Using more pesticides is nothing to do with getting rid of hunger.*”⁹² According to the UN Food and Agriculture Organisation (FAO), we are able to feed 9 billion people today. Production is definitely increasing, but the problem is poverty, inequality and distribution.” Elver said many of the pesticides are used on commodity crops, such as palm oil and soy, not the food needed by the world’s hungry people: “*The corporations are not dealing with world hunger, they are dealing with more agricultural activity on large scales.*”

The Report says: “*excessive use of pesticides is very dangerous to human health, to the environment and it is misleading to claim they are vital to ensuring food security.*” Chronic exposure to pesticides has been linked to **cancer, Alzheimer’s and Parkinson’s diseases, hormone disruption, developmental disorders and sterility.** Farmers and agricultural workers, communities living near plantations, indigenous communities and pregnant women and children are particularly vulnerable to pesticide exposure and require special protections. The experts warn that certain pesticides can persist in the environment for decades and pose a threat to the entire ecological system on which food production depends. The excessive use of pesticides contaminates soil and water sources, causing loss of biodiversity, destroying the natural enemies of pests, and reducing the nutritional value of food. The impact of such overuse also imposes staggering costs on national economies around the world. The experts say the use of neonicotinoid pesticides is particularly worrying because they are accused of being responsible for a systematic collapse in the number of bees around the world. **For example, heavy use of these insecticides has been blamed for the 50 per cent decline over 25 years in honeybee populations in both the United States and the United Kingdom of Great Britain and Northern Ireland.** Such a collapse, they say, threatens the very basis of agriculture as 71% of crop species are bee-pollinated.

Proof that obesity is a problem related to glyphosate: a study showed that by 2025, the UK will have the highest obesity rates among both men and women in Europe, at 38%: in contrast in France women have had virtually no increase in BMI over 40 years

A study on obesity published in *The Lancet* in March 2016 says: “*About a fifth of all adults around the world and a third of those in the UK will be obese by 2025, with potentially disastrous consequences for their health.*”⁹³ *The Lancet* Study says there is zero chance that the world can meet the target set by the UN for halting the climbing obesity rate by 2025.

“*Over the past 40 years, we have changed from a world in which underweight prevalence was more than double that of obesity, to one in which more people are obese than underweight,*” said senior author Prof Majid Ezzati from the School of Public Health at Imperial College London. “*The English-*

⁹¹ <http://www.pan-uk.org/site/wp-content/uploads/United-Nations-Report-of-the-Special-Rapporteur-on-the-right-to-food.pdf>

⁹² <https://www.theguardian.com/environment/2017/mar/07/un-experts-denounce-myth-pesticides-are-necessary-to-feed-the-world>

⁹³ <http://www.theguardian.com/society/2016/mar/31/one-fifth-of-worlds-adults-will-be-obese-by-2025-study-predicts>

speaking world is particularly badly affected. **The UK will have the highest obesity among both men and women in Europe, at 38%.**

In contrast: "Against the trend of steadily rising weight, women in some countries had virtually no increase in BMI over the 40 years – in Singapore, Japan, and a few European countries including Czech Republic, Belgium, **France**, and Switzerland."

Dr. Don Huber, Emeritus Professor of Plant Pathology at Purdue University Indiana said:

"When future historians come to write about our era they are not going to write about the tons of chemicals we did or didn't apply. When it comes to glyphosate they are going to write about our willingness to sacrifice our children and to jeopardize our very existence by risking the sustainability of our agriculture; all based upon failed promises and flawed science.

The only benefit is that it affects the bottom-line of a few companies. There's no nutritional value."⁹⁴

The agrochemical industry has created a toxic environment from which none can escape

The devastating effects of these silent killers in our environment do not distinguish between farmers or city dwellers, the wealthy or the poor, between media moguls, editors or their reporters, Monsanto or Syngenta Executives, Prime Ministers or Presidents. Many people in the UK are no longer reaching the biblical age of three-score-years-and ten because they are dying of cancers.

Rosemary Mason MB ChB FRCA 17 July 2019

⁹⁴ <https://articles.mercola.com/sites/articles/archive/2013/10/06/dr-huber-gmo-foods.aspx>