

# From the Green Revolution to GMOs: Toxic Agriculture Is the Problem Not the Solution

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*Why did the European Food Safety Authority claim that glyphosate was not ecotoxic? This is the question environmentalist **Dr Rosemary Mason** poses in her new 23-page report which can be accessed in [full here](#). In places, the report reads like a compilation of peer-reviewed studies and official reports that have documented the adverse impacts of chemicals used in modern agriculture.*

Only a brief outline of Mason's report is possible here. Readers are urged to consult the document to grasp more detailed insight into the issues she discusses as well as the evidence cited in support of her arguments and claims.

Mason argues that the European Commission has consistently bowed to the demands of the pesticide lobby. In turn, she notes the fraudulent nature of the assessment of glyphosate which led to its relicensing in Europe and thus the continued use of Monsanto's glyphosate-based herbicide Roundup. This ongoing support for the pesticide lobby flies in the face of so much evidence pointing to the detrimental effects of Roundup and other agrochemicals on the environment, living organisms, soil, water and human health.

These chemicals have become integral to an increasingly globalised process of agro-industrialisation. Mason discusses the nature of modern farming by referring to the endless corn fields of Iowa. One hundred years ago, these fields were home to 300 species of plants, 60 mammals, 300 birds and thousands of insects. Now, there is almost literally nothing - except corn - in what amounts to a biological desert. The birds, bees and insects have gone.

It's a type of farming where so much toxic agrochemicals are used that they have ended up in soils and sediment, ditches and drains, precipitation, rivers and streams and even in seas, lakes, ponds, wetlands and groundwater. A type of agriculture that is responsible for undermining essential biodiversity, human health and diverse, nutritious diets.

The report takes us further afield, to the Great Barrier Reef to discuss the destruction of coral by Monsanto's Roundup and Bayer's insecticide clothianidin. It is interesting that the pesticide industry and the media tend to blame global warming for the degradation of the reef. Although there have been efforts to grow new corals, Mason states that pesticide run off from farmland means that corals will continue to be destroyed.

She touches on the role of agrochemicals in relation to the decline of the Monarch butterfly and the now well-documented ecological Armageddon due to the dramatic plunge in insect numbers: insects which are vital to soil health and the food web. Numerous studies and reports are presented as well as warnings from scientists and whistleblowers like Henk

Tennekes and Evaggelos Vallianatos about the impacts of toxic chemicals in food and agriculture.

Indeed, since the late 1990s, Mason notes that various scientists have written in increasingly desperate tones about biodiversity loss and the impact on humanity as well as the emerging fungal threats to animal, plant and ecosystem health.

Mason also reveals insight into her own struggles with a local authority in Wales over the destruction of her nature reserve due to the council's spraying of Roundup in the vicinity. Despite numerous open letters and e-mails to UK and European agencies documenting the impacts of this herbicide (some of this correspondence is contained in the report, with responses), her evidence has been ignored and it remains 'business as usual'.

That's because global agrochemical conglomerates exert huge political influence at state and international levels. For instance, back in 2017, [the Report of the UN Special Rapporteur on the right to food](#) was heavily critical of these companies and accused 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 authors noted the catastrophic impacts on the environment, human health and society in general.

At the time, [one of the report's authors, the UN special rapporteur on the right to food, Hilal Elver, said:](#)

"The power of the corporations over governments and over the scientific community is extremely important. If you want to deal with pesticides, you have to deal with the companies..."

Her co-author, **Baskut Tuncak**, the UN's special rapporteur on toxics, added:

"While scientific research confirms the adverse effects of pesticides, proving a definitive link between exposure and human diseases or conditions or harm to the ecosystem presents a considerable challenge. This challenge has been exacerbated by a systematic denial, fuelled by the pesticide and agro-industry, of the magnitude of the damage inflicted by these chemicals, and aggressive, unethical marketing tactics."

In noting the severity of the issue and the driving forces that perpetuate and profit from the chemical-intensive corporatised global food regime, Mason quotes **Vandana Shiva:**

"The ecological crisis, the agrarian crisis, the food crisis, the health and nutrition crisis, the crisis of democracy and sovereignty are not separate crises. They are one. And they are connected through food. The web of life is a food web. When it is ruptured by chemicals and poisons that come from war, and rules of 'free trade' that is a war declared by corporations against the earth and humanity, biodiversity is wiped out, farmers are killed through debt, and people die either because of hunger or because of cancer, diabetes, heart problems, hypertension and other environment and food related chronic diseases. Everyone is paying a very high price for corporate greed and dictatorship and collusion of corporate states to spread the toxic empire of corporations in the name of 'reforms'."

Pesticides include herbicides, insecticides, termiticides, nematocides, rodenticides and fungicides. Today, the pesticide industry is valued at over \$50 billion and there are around 600 active ingredients. Herbicides account for approximately 80 per cent of all pesticide use.

Of course, Vandana Shiva's main focus is on India and the ongoing undermining of its indigenous agriculture by foreign corporations. The potential market for herbicide growth alone in India is huge: [sales have probably now reached over \\$800 million](#) per year in that country, with scope for even greater expansion. And have no doubt the global agrochemical industry has made India a priority.

From cotton to soybean, little wonder we see the appearance of illegal genetically modified (GM) herbicide-tolerant seeds in the country. These seeds are designed not only to push GM into India across a range of food crops but, ultimately, to drive the growth of the herbicide market in India, as they have in South America. The detrimental health impacts there as a result of the widespread use of Roundup are now well documented along with the displacement of indigenous peasant agriculture to make way for commodity monocropping agro-exports. At the same time, in certain cotton cultivation areas of India, we have seen [a push to break traditional weeding practices](#) ('double-lining' ox ploughing), seemingly with the intention on nudging farmers towards taking up herbicide-tolerant seeds.

Little wonder too that we currently see industry-connected lobbyists (masquerading as objective scientists or independent 'science communicators') residing abroad and encouraging farmers in India to plant these illegal GM seeds in what appears to be an orchestrated campaign. Numerous high-level reports have stated that GM is unsuitable for India. Having lost the debate, the GM/agrochemical lobby has now resorted to a tactic of illegal cultivation.

While touting the supposed virtues of GM agriculture, these lobbyists also spend much of their time promoting the merits of its godparent, the Green Revolution, in an attempt to justify the roll-out of GM seeds and associated herbicides. But [emerging academic research indicates](#) that the Green Revolution in India did next to nothing in terms of increasing productivity, despite the well-perpetuated myth that it saved lives and helped avert famine. In fact, in Punjab, the cradle of the Green Revolution in India, this 'green dream' has turned into a [toxic environmental and human health nightmare](#).

India produces enough food to feed its population. It does so without GM and [could do so agroecologically](#) without synthetic chemicals – without 'nuking' nature and without destroying human health. While the agrochemical lobby continues to spin the message that India and the world need its proprietary inputs to feed the world and eradicate hunger, [the reality is – as noted by Hilal Elver and Baskut Tuncak – that we do not](#).

If we want to look at the causes of hunger and malnutrition, we must first address the deleterious impacts of the water-guzzling, chemical-dependent Green Revolution, so eloquently [described by Bhaskar Save](#) in his open letter to officials in 2006 and extremely pertinent given India's current water emergency; the [global capitalist food regime](#) and its undermining of regional food security and food sovereignty; the lack of income to purchase sufficient food; and various other issues, including an erosion of land rights, debt, poverty and food distribution problems.

No amount of genetic engineering or chemicals can address these issues. And no amount of

industry-inspired spin can divert attention from the root causes of malnutrition and hunger and genuine (agroecological) solutions.

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