

Background on glyphosate

Glyphosate-based herbicides are widely used in agriculture, forests, public areas and private gardens. The use of this substance is so extensive that it is now detected in food, drinks and in the human body (including babies and young children).

New sensitive laboratory methods revealed recently that we are much more exposed to glyphosate than previously anticipated. A recent study analysed 2009 urine samples of Germans with a highly sensitive method and found glyphosate residues in 99.6% of the samples.

Glyphosate residues have been found food products including [bread](#) and [beer](#). EFSA has [stated](#) that existing monitoring efforts are insufficient to reliably measure glyphosate residue levels in food.

HEALTH CONCERNS

In March 2015, the independent **International Agency for Research on Cancer (IARC)** of the World Health Organisation (WHO) **classified glyphosate as a ‘[probable carcinogen](#)’** based on ‘limited evidence’ in humans and ‘sufficient evidence’ in animals that glyphosate can cause cancer in humans. IARC has also found ‘strong evidence’ that glyphosate exhibits two characteristics associated with carcinogens, namely genotoxicity and the ability to induce oxidative stress. While IARC has no regulatory power in the EU, it is the world’s top expert agency on cancer, and works to more rigorous data quality and transparency conditions than the European Food Safety Authority. (IARC does not review any studies that are not publicly available.)

In November 2015, the **European Food Safety Agency (EFSA)** arrived at the [opposite conclusion](#). It stated that evidence in humans is ‘very limited’ and that there is ‘no evidence’ of carcinogenicity in animals. EFSA also dismissed the evidence of genotoxicity and oxidative stress, as well as most evidence in humans. EFSA had access to at least three [additional industry studies](#) that IARC had not seen, and that José Tarazona, head of EFSA’s Pesticides Unit, described as “key” and “pivotal”. However, **94 independent scientists** – including 8 out of 17 members of the IARC Working Group – argue in a recent [editorial](#) that: *“Serious flaws in the scientific evaluation ... incorrectly characterise the potential for a carcinogenic hazard from exposure to glyphosate.”*

The Risk Assessment Committee of the **European Chemicals Agency (ECHA)**, which is formally responsible for the EU carcinogen classification, is about to review the possible [carcinogenicity, germ cell mutagenicity and reproductive toxicity](#) of glyphosate. That process will not be finalised before end of 2017.

Glyphosate may also **disrupt the human hormone system** – EFSA and [leading scientists](#) have called for further investigation. Hormone disruption is linked to many chronic diseases, including cancer, fertility problems, learning disabilities and behavioral problems (Attention Deficity / Hyperactivity Disorder; Autism Spectrum Disorder), and obesity and diabetes.

The Commission’s current proposal would allow glyphosate producers to submit data on the absence of hormone disruption *after* obtaining approval (by 1 August 2016, whereas the current EU approval ends on 30 June 2016), a practice deemed inappropriate by the [EU Ombudsman for this sort of case](#). The **EU Ombudsman** said the practice should be applied “restrictively” and only “*where there is no risk that the conclusion on the safety of the active substance could be flawed*”.

Both its probable cancer causing and possible hormone disrupting properties would disqualify glyphosate from EU market approval under EU pesticides law.

ENVIRONMENT CONCERNS & FARMING ALTERNATIVES

Prolonged use of glyphosate reduces soil nutrients and promotes pathogenic bacteria, suggesting negative effects on plant health and the future of agriculture, which have not been addressed in the European glyphosate assessment.

Widespread use of glyphosate has led to the emergence and spread of **glyphosate-resistant weeds**, causing farmers to spray additional herbicides. It can also “significantly increase the severity of various plant diseases, impair plant defense to pathogens and diseases, and immobilize soil and plant nutrients rendering them unavailable for plant use,” according to [Johal and Huber, 2009](#). The scientists warned that “ignoring potential non-target detrimental side effects of any chemical, especially used as heavily as glyphosate, may have **direct consequences for agriculture** such as rendering soils infertile, crops non-productive, and plants less nutritious”.

Germany’s Federal Research Centre for Cultivated Plants has shown that in time municipalities, gardeners and farmers [can do without glyphosate](#). Glyphosate can be significantly reduced without economic losses.

The **Sustainable Use Directive** (Directive 2009/128/EC) aims to reduce the dangers that pesticides pose to human health, the environment and the future of agriculture. Since January 2014, all Member States are obliged to apply the Integrated Pest Management and use pesticides as a last resource, only when all other possible alternatives have been applied without success. This implies a fundamental change in agriculture, starting by overcoming the “herbicide dependency” that industrial farming has developed that last decades. Wild weeds can be removed by mechanical weeding, precision farming or by using less toxic alternatives such as acetic acid (vinegar), phytotoxic oils (e.g. clove), herbicidal soaps and salt-based herbicides.