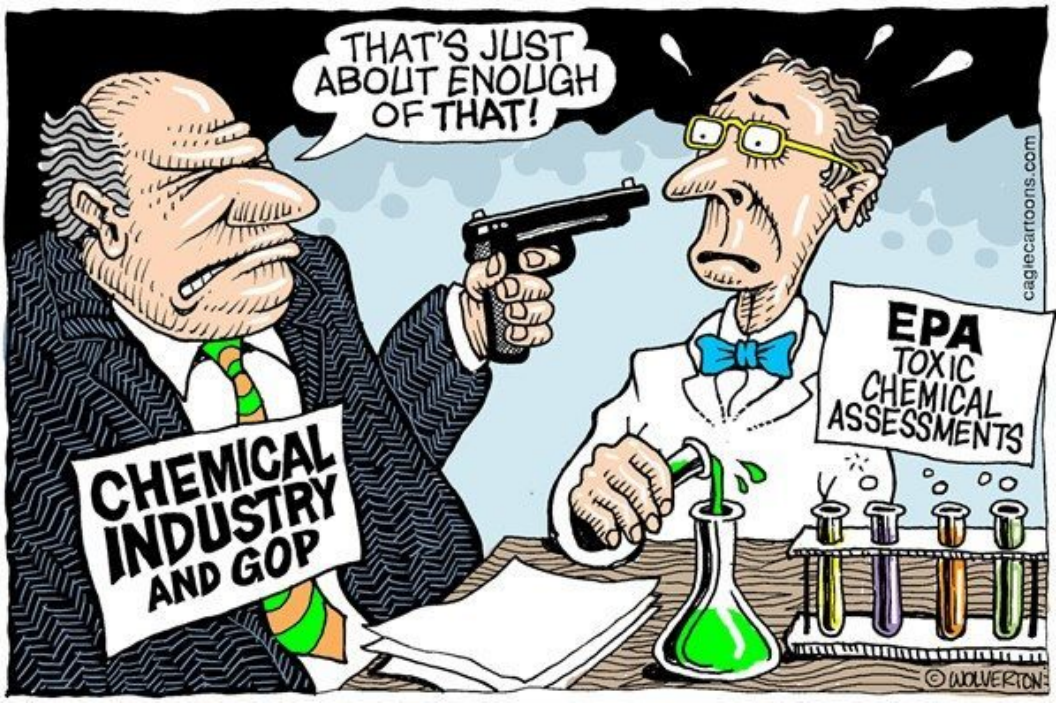
15 septembre 2022

Even what you don't know can hurt you: the case of glyphosate

A study by two Swedish researchers quoted in the media [read in French], identifies lacunas in the market approval system for products from the chemical industry, some of which had already been flagged earlier on hungerexplained.org [read here and here].

In the case of the European Union, the safety evaluation of pesticides required before market approval relies on toxicity studies commissioned and funded by the industries that produce them. These studies are supposed to test the product's ability to control pests and its possible collateral effects on other species (including humans) as well as its environmental fate and behaviour.

It is based on the analysis of these studies that the European Food Safety Authority (EFSA) makes its recommendations and that competent authorities in member countries of the Union take their decision. EU regulation also specifies that the information provided in the dossier must "be sufficient to evaluate the foreseeable risks, whether immediate or delayed, which the active substance may entail for humans, including vulnerable groups, animals and the environment and contain at least the information and results of studies".



As it happens, the safety of glyphosate - the most widely utilized herbicide in the world - and of four of its salts is currently being reexamined in Europe, and the Swedish researchers note that the documentation submitted by the concerned companies (including Syngenta, according to the French newspaper Le Monde) is incomplete, as it

does not comprise an analysis of toxicity of glyphosate and its salt on the neural development during the prenatal phase, contrarily to what is required by EU rules.

Indeed, the fact is that a study of this type had been conducted in 2001 for a fifth salt that is not part of the authorization renewal request (glyphosate trimesium). It had then been established that this substance had an effect on a neurobehavioural function, motor activity, in rat offspring at a dose previously not known to have adverse consequences. Contrarily to rules, these results had not been communicated to the authorities of countries in which this salt was being used.

This outcome should have been followed by complementary analyses in order to determine if the effect observed was due to glyphosate itself or to other components of this salt (trimethylsulfonium). Moreover, in a directive of the European Commission of 2005 [read] mentioning the toxicological risk of this salt, it is written that “It is therefore necessary to set MRLs[1] for that cation”, a recommendation that seems not to have been implemented and to have been completely forgotten.

This recommendation was probably a consequence of the glyphosate evaluation conducted in the US in the same year (2005) which, as noted by the Swedish researchers, had concluded that this salt had a toxic effect but at doses higher than those envisaged by European authorities, a confirmation of the results of the 2001 study which had then been considered as “incidental” by European authorities.

In this matter, the Swedish authors list several violations of European rules due to, in particular, the lack of provision of information to authorities regarding a potential danger of the product and the non-submission of the study to EFSA in 2001, and the absence of inclusion of an analysis of this effect in the current market renewal request (in contradiction with the what had been requested in the 2005 directive - our addition).

The researchers explain this absence by the fact that EFSA had not been informed of the result of earlier studies. It is, however, quite unlikely that EFSA had not been aware of them (this is nevertheless that the Agency claims), when the Commission mentioned explicitly the toxicity of this glyphosate salt in the 2005 directive! Although this particular salt is no more on sale in Europe, according to the Swedish authors, EFSA should have asked that the possible effect on neural development of glyphosate and its various salts be specifically analysed.

On the contrary, the preliminary report published by EFSA in June 2022 claims that such studies are not necessary as, it says, “There is no neurotoxic potential” of glyphosate. This statement contradicts a review of literature on the topic conducted in April 2022 [read] that was later challenged by scientists paid by the industry. EFSA’s claim is therefore most surprising!

The Swedish researchers conclude that while the existing European rules are clear, they are not respected as all the information available was not submitted to the authorities, and in particular, to EFSA (at least not officially - our addition). In fact, the implementation of these rules rests on the trust of authorities that the industry provides them will all the knowledge and results they have, and it supposes a good communication among various relevant authorities as well as the reliability of the latter. None of these three conditions seems to have been respected in this case.

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[1] MRL : maximum residue levels.

The example of glyphosate shows that trusting the industry is not a realistic option, as it have withheld information that could have led to the denial of the authorization requested. It also demonstrates the dysfunction of competent authorities, or even their possible collusion with industry.

Let's recall here that the widespread contamination by glyphosate of the French population was recently established on the basis of 6848 samples [read]. This proves, if need be, how urgent it is to evaluate the effect of glyphosate based on exhaustive and reliable studies of its impacts on health and the environment.

The malfunctioning observed in case of glyphosate is confirming what had already been occurring with other products (tobacco and PFAS[2], in particular). Many will link this with the important role that industrial lobbies are playing in Brussels [read].

In fact, one can wonder what the EU is waiting for to change its rules and decide that it must be an independent agency (maybe EFSA, under the scrutiny of the European Parliament and civil society?) that commissions the studies required to grant the authorization to market specific products, funding being provided by those companies that make them.

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To know more :

- Foucart, S., Glyphosate : des experts indépendants mettent en doute l'intégrité des travaux d'homologation, Le Monde, 2022 (in French).
- Mie A. et C. Rudén, What you don't know can still hurt you - underreporting in EU pesticide regulation, Environmental Health, 2022.
- Costas-Ferreira C. Durán R. and L.R.F. Faro, Toxic Effects of Glyphosate on the Nervous System: A Systematic Review, 2022.
- European Union, COMMISSION DIRECTIVE 2005/70/EC of 20 October 2005 amending Council Directives 76/895/EEC, 86/362/EEC, 86/363/EEC and 90/642/EEC as regards maximum residue levels for certain pesticides in and on cereals and certain products of animal and plant origin, 2005.

Selection of past articles on hungerexplained.org related to the topic:

- A new study shows the widespread contamination of the French by glyphosate, 2022.
- Being a lobbyist : accept to accuse sustainable agriculture in order to help develop profits of firms that fund you, 2019.

[2] PFAS are widely used, long lasting chemicals, components of which break down very slowly over time. Because of their widespread use and their persistence in the environment, many PFAS are found in the blood of people and animals all over the world and are present at low levels in a variety of food products and in the environment. PFAS are found in water, air, fish, and soil at locations across the nation and the globe. Scientific studies have shown that exposure to some PFAS in the environment may be linked to harmful health effects in humans and animals. There are thousands of PFAS chemicals, and they are found in many different consumer, commercial, and industrial products. This makes it challenging to study and assess the potential human health and environmental risks. [read].

- The wheelings and dealings of the sugar industry revealed by three Californian researchers, 2017.
- Food, Environment and Health, 2017.